# A.S.D.Government Degree College for Women An Autonomous Institution 

Jagannaickpur, Kakinada, Andhra Pradesh-533002
Affiliated to Adikavi Nannaya University, Rajamahendravaram

## INTERNAL QUALITY ASSURANCE CELL

2.2.1 The Institution assesses the learning levels of the students and organizes special Programmes to cater to differential learning needs of the student

$$
2022-2023
$$

## Bridge Course

# A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN ( A ) 

 KAKINADA

# Bridge Courses for the Academic Year 2022-23 

A.S.D. GOVT. DEGREE COLLEGE FOR WOMEN (A)KAKINADA,

## EAST GODAVARI, A.P.



# DEPARTMENT OF ENGLISH BRIDGE COURSE 

For all UG 1st Years 2022-2023

## Staff coordinators:

This course is conducted by the Staff Members and scholars of the Department of English.

1. Dr.P.Sanjotha, Lecturer in English
2. Ms.Y.SwarnaSri, Lecturer in English
3. Dr.P.Santhi, Lecturer in English

A Bridge Course was offered to I-Sem students from 31st Oct '22 to 17 th Nov'22 on the topic "Functional Grammar" \& LSRW Skills by the Department of English. The syllabus for the bridge course included Parts of Speech, Forms of Verbs, Tenses Articles, and Prepositions. An online exam was conducted for 20 marks. Total 186 students enrolled their names to the course and gave their exam

Class hours: 10.00 am $\mathbf{- 1 1 . 0 0}$ pm Everyday

## BRIDGE COURSE

"The essence of education lies in drawing out the very best that is in you." A bridge course for newly admitted students is conducted every year before the commencement of the first semester classes. The main objective of the course is to bridge the gap between subjects studied at Pre-university level and subjects they would be studying in Graduation. The syllabus for the course is framed in such a way that they get basic knowledge on the subjects which they would be learning through graduation.

## Objectives

> To Improve and broaden the knowledge of students in grammar and enhance their LSRWskills.
$>$ To give the students confidence and skills successfully transition to college and newcurriculum.

## Methodology

A Curriculum is framed separately in each of the subjects, for Bridge Course. During the first week after the commencement of the classes, the bridge course curriculum is delivered to the students in various disciplines. A post bridge course test is conducted after the completion of bridge course syllabus to assess the ability of student's suggestions are given to students for improvisation.

## WHY DO WE NEED BRIDGE COURSE?

* It is offered to mature students as a means of preparing for the intellectual challenges.
* Offers more attention to grammar.

Designed especially for students taking anadvanced course for the first time.

To communicate effectively in English.
Helps us to be better prepared and moresuccessful.

## CONTENTS

## $\sum$ PARTS OF SPEECH

Nouns Verbs
Adverbs
Adjectives
Prepositions
Pronouns
Conjunctions
Interjections


## Revision and TEST

$\sum$ PARTS OF SPEECH
Nouns Verbs
Adverbs
Adjectives
Prepositions
Pronouns
Conjunctions
Interjections
Each part of speech explains not what the word is but howthe word is used
$\sum$ Nouns
Noun is a name of a person, place, animal or things.


> E.g.- Person - John, Teacher Place - America, OfficeThings - Table, Car Animal- Dog, Monkey
$\sum$ Verbs

Action words or are called verbs
E.g.- sings, drives, eats


## Adverbs

Modifies or qualifies an adjective, verb, expressing arelation of place, time, circumstance, manner
E.g.- Quickly, well, softly

$\sum \underline{\text { Adjectives }}$
Describing nouns are called adjectives
E.g.- Colours, NumbersKala is a
beautiful girl
I have three pens.

$\sum$ Pronouns
Pronouns are words that takes place instead of nouns.
E.g.- Jack and Jill went up the hill.

Jack fell down and broke his crown.

## $\sum$ Prepositions

It says the relationship between the nouns or between thevarious words with in a sentence
E.g.- In, on, at, about, between

$\sum$ Conjunctions
Connecting words or joining words are called conjunctions
E.g.- but, and, yet, while,

She bought a shirt and a book.


An interjection is a word, phrase or sentence thatexpresses emotion, meaning or feeling.
E.g.- oh, wow, hurrah, alas, oops

shucterstocic.com - 1166238847
$\sum$ Be forms of Modals $\rangle$ Be forms

- auxiliaries

Both are there in Ripples English Book.
$\sum$
Wh - Questions
What, When, Where, Who, Whom, Which, Whose, Why,How
E.g.- Where do they live ?

What is your name?
Which colour do you want?
Who opened the door ?
Whom did you see?
$\sum$ NEGATIVES
Declarative statements
Typically formed by adding the word 'not' after thehelping verb.
Necessary to express and opposing idea
E.g.- They practise yoga. (Positive)

They do not practise yoga.
( Negative)

## ) WORD BUILDING

Its an act or process of spelling out words with the use ofonly letters
It is a fun spelling game for young learners.
Its designed to teach kids how to spell simple words andto improve their vocabulary
$\sum$ WORD GAMES
Used as a source of entertainment, but can additionallyserve and educational purpose.

1) 'Et'- Words finish with et met, get, let, bet, pet, wet, yet,
2) Middle word

Cot, man, pot, hot, son, dog, gum
3) Preposition worksheet

I saw many butterflies $\qquad$ The kittens sat $\qquad$ me.

Prefix the garden Trisha can swim_for over 1 minute

## $\sum$ READING ENHANCENENT

Remediate the word, fluency, vocabulary, comprehensionHow to enrich reading?

1) Read aloud
2) Retell
3) Clear reading goals
4) Read in portions
5) takes time, patience and practice
$\sum$ vocabulary
6) Use new words
7) Read Every day
8) Make use of new words
9) Use dictionary
10) Play word Games
$\sum_{\text {LSRW }}$
Listening skills, Speaking Skills, Reading Skills, WritingSkills
$\sum$ LISTENING SKILLS
Ability to accurately receive

## $\sum$ SPEAKING SKILLS

To enhance the clarity of speech for effectivecommunication

## $\sum$ READING SKILLS

To accomplish success one needs to have good readingand comprehension skills
$\sum$ WRITING SKILLS
It is an important part of communication.

## DEPARTMENT OF ENGLISH 2022-2023

## SYLLABUS FOR BRIDGE COURSE

Department Of English Offers Bridge Course to the first-year students in order to assimilate with higher education system.

It primarily focuses on communication skills, soft skills and basic awareness of collegiate education.

This course is designed for 15 hours in which three modules have to be covered.
Total Hours: 15 Hours Theory: 10 Hours Practical: 5 Hours

## Aims and Objectives

- To develop students' sense of understanding, appreciation and ability of expression
- To understand the basics of higher education system and modes of communication
- To develop soft skill and personality traits among students

Bridge Course in English
The Objectives:

* To bridge the gap between school and collegiate education to meet the students communicative requirements
* To prepare the students for a classroom atmosphere in which English is the medium of instruction.
* To help the students acquire the basic LSRW skills.

Activities for the Students:

* Students exhibited their communicative skills through enactment of drama. Each team consisted of more than 10 students, and this activity enabled the students to overcome their stage fear and enhance their confidence.
* Declamation is one of the most significant activities which played a major role in making the students appear before larger audience and speak in English with
courage and confidence. Though the students were initially reluctant to take part in the activity owing to their stage fear, their participation made them more confident and more skillful in their communicative skills in English.
* In addition to participation in declamation, the students were also encouraged to take part in debate whereby they were able to learn the art of systematic argumentation in English language. The students were very vibrant to put forth their viewpoints. They also actively took part in role plays, which enabled them to improve their fluency and body language.
* Students were made to listen to the stories in the language lab and they were asked questions based on the stories. This activity improved the listening and comprehension skills of the students.
* Students were involved in skit, declamation and debate. In spite of the reluctant attitude of the students, teachers encouraged the students to take part in these activities. The students began to gradually shed their inhibitions and participate voluntarily. They showed a significant progress in gaining confidence and improving their communicative skills in English. The students were encouraged to think creatively to complete the tasks given in the book.


## Outcomes:

After the completion of the course, there was a significant progress in the Listening, Speaking, Reading and Writing skills of the students. Students who had tremendous stage fear were able to overcome it and speak fluently in English. They could easily take part in Group Discussions and exhibit their views in English. Students who had Telugu as the medium of instruction at the school level gained confidence to speak and write in English.

## Module 1: Basic Grammar

$>$ Parts of speech and sentence
$>$ Fundamentals of Verb
$>$ Tense, Tense forms and applications
$>$ Subject Verb agreement (Concord)
$>$ Vocabulary Building
$>$ Phrasal verb
$>$ Question Tag
$>$ Active and Passive Voice
> Module 2: (Soft Skills)
$>$ Inter Personal Skills, Emotional Skill and Public Skills
$>$ Critical Thinking and Problem Solving
$>$ Interviews and Group Discussion

## MODULE 1 - ENGLISH FOR COMMUNICATION

$>$ Communication and Language.
$>$ English as a Global Language.
MODULE 2 - PRIMARY SKILLS LISTENING
$>$ Listening to a Conversation.
$>$ Listening to a Speech.
$>$ Listening to a Lecture.
$>$ SPEAKING
$>$ Greeting
$>$ Thanking
$>$ Requesting
$>$ Enquiring
$>$ Reporting
$>$ Permission READING
$>$ Reading News Reports
$>$ Reading Advertisements.
$>$ Reading Official Letters, Official Documents and Official Profiles.
$>$ Reading Online Content.
$>$ Reading Poems.
$>$ Reading Essays.
WRITING
$>$ Writing Sentences
$>$ Writing Email
$>$ Writing Resumes and Cover Letters.
$>$ Making Notes.
MODULE -3 GRAMMAR
$>$ Word Class
$>$ Subject - Verb - Agreement
$>$ Tenses
$>$ Articles and Prepositions
$>$ Phrases, Clauses and Sentence
$>$ Voices
$>$ Idioms
$>$ Question Tags
$>$ Direct And Indirect Speech.
$>$ Simple, Complex, and Compound
MODULE -4 PRONUNCIATION
$>$ Topics for Spontaneous Speech
$>$ Introduction to Phonetics
$>$ Vowels and Consonants
$>$ Received Pronunciation

## Focused Group Discussion cum Feedback Session

The focused Group Discussion cum Feedback Sessions was organized for Course teachers and Course coordinators, who were invited for the individual sharing. The team described the study's goal to the students, as well as the course professors and organizers, and ensured that they were able to freely and fairly shared their thoughts and experiences. To collect input on the bridge course, the team employed distinct Interview Schedules for course coordinators, professors, and students.

## OBSERVATIONS

$>$ Timing and Duration: The students welcomed the idea of the conduct of the course before the commencement of the classes.
$>$ They felt that it helped them in getting accustomed to the place and persons and subsequently on the reopening day they could be free from the usual sort of jitters rising over strange and unknown ambience. As the admissions continued till

November, for a considerable number of students admitted at the end of the month of June, the course had to be conducted again.
$>$ The students who attended the programme during the second spell felt that it lacked continuity as the classes were held only during the weekends.
$>$ Both the course teachers and the students opined that it was not as effective as that of the first spell. The external team also admitted the same.
$>$ The students of the second spell also said that there was no focus on grammar. Some faculty felt that the admissions could be closed earlier or the classes could be incorporated in the regular working hours. Many had felt the duration of 7 days was short .Some students were of the opinion that the number of days could be increased with three hours per day.
>A few staff felt that the programme could have been wholly residential as the evening hours could be utilized for further learning by means of watching movies and video clippings in English.

## Course Content In 2022-23

There was a day plan of the course and its content given by the team. Though the students were satisfied with the language inputs, they were disappointed in not receiving the course contents in a book form. Many said that mail IDs were collected for sending the course content but did not receive any material. A majority of the students expressed that more exposure on basic components of grammar like form and usage of verbs and parts of speech like adjectives and adverbs could have been taught. The external team admitted that the four skills LSRW could not be given much thrust and the learners were helped with only tips to enhance them. Owing to financial constraints the team of trainers could not provide any worksheets to the students. The writing materials were only projected and that too for a few sections for want of infrastructural facilities.

Mode of Teaching Most of the students shared that the mode of teaching was interesting and activity based. Play way method was used in all the classes. The teachers had to be bilingual in their communication with students while teaching the lessons as most of the learners were from vernacular medium. In online mode the teachers used interactive online
tools to make learning more delightful and meaningful. Students' Strength Every year the students will be grouped into batches with strength of 40-50 and it varies in accordance to the total strength of the students every year.

The strength of the class is an important factor to be considered for effective learning. The attention that a student gets to a large extent depends on the student-teacher ratio.
Infrastructural Facilities: The external team felt that the physical ambience of the classrooms was quite conducive for learning. Both the external and local teams felt that the number of smart classrooms was insufficient and hence using of audio visual aids was not viable for all batches of students.

## Assessment

The student respondents said both a diagnostic and an achievement test were givenfor a maximum of 50 marks each. It tested their writing and speaking skills. The respondents admitted that home assignments were given to recall the components learntin the class rooms. They also said that apart from the diagnostic and achievement tests no periodical tests were given. It was the suggestion of the faculty that the diagnostic test in order to stream line could be given on the basic components of English and after the completion of the course an achievement test on four skills is mandatory. Periodical assessment of the students' performance is indispensable for their enhanced learning. Hence at least two or three periodical tests could be given in addition to the achievement test in the end.

## A.S.D. Government Degree College for women's Autonomous

## Department of English <br> Bridge Course Exam Question paper

Class: B.A, B..COM, B.Sc
Total Marks

Name of the Student: $\qquad$ Roll No.

Name of the Group $\qquad$ Date : $\qquad$
Q. 1) Do as directed.
A) Complete the following sentences by choosing correct options.
(10 Marks)

1) He walked barefoot in the summer. He should put on a. $\qquad$
a) cap
b) shirt
c) shoes
2) She was so happy to know her result. She may have got $\qquad$ marks inthe class.
a) highest
b) lowest
c) worst
3) The baby bird was afraid of. $\qquad$
a) flew
b) fly
c) flying
4) She likes $\qquad$ fairy tales.
a) to read
b) reads
c) read
5) You may $\qquad$ tomorrow this time.
a) came
b) coming
c) come
6) Children go for $\qquad$ classes after and before the school.
a) tution
b) tuition
c) tusion
7) Action $\qquad$ louder than words.
a) speaks
b) speechs
c) spokes
8) Ganesh and his friend $\qquad$ going to a fair.
a) was
b) were
c) will
9) I went home $\qquad$ it was getting dark.
a) but
b) because
c) so
10) Oh God! Help me!

The figures of speech in the above sentence is $\qquad$
a) Personification
b) Simile
c) Apostrophe
Q. 2) Do as directed.
A) Complete the dialogue.

A : Do you like to hear bedtime stories?
B: $\qquad$
A: Which stories do you like to listen?
B: $\qquad$
A: Who usually tells you a story?
B: $\qquad$
A: Tell the name of your favourite story.
B: $\qquad$
B) Write the name of figures of speech in the following lines.
A) Water, water everywhere, nor any drop to drink.
B) She sells sea-shells on the sea shore.
C) Frame 'Wh' question to get the underlined part as an answer. (02 Marks)

1) Mr. Prasad is in the hospital.
2) Shubhman Gill was declared as Man of the match.
D) Match the following words with their meaning.

| Coulmn 'A' |  | Coulmn 'B' |  |  |  |
| :--- | :--- | :--- | :---: | :---: | :---: |
| 1) Distraught |  | a) border |  |  |  |
| 2) Edge |  |  |  |  | b) leave |
| 3) Depart |  | c) start |  |  |  |
| 4) Begin |  | d) worried |  |  |  |

E) Underline the subordinate clause in the following sentences.
A) It was the house which was haunted.
B) What I say is true.
Q. 3) Read the passage and do as directed.

I was born and brought up in a village in northern Karnataka. Things were very simple in those days. If you didn't like a person, you could just tell him to his face why you were upset with him. If somebody helped you, you could show your gratitude without any reservation. If somebody did wrong, we asked for justice. There was no hide and seek when it came to feelings. Maybe it was not civilized or polished behaviour, but it was definitely a straightforward society and a simple life.

## 1) Complete the following sentences.

a) The writer was born in
b) If somebody helped you, you could show you
2) Find out the adjectives for following nouns.
(01 Mark)
a)
Karnataka
b).
behaviour
3) Things were very simple. (Turn the sentence into simple present tense) (01 Mark)
4) If somebody helps you, how do you react?
$\qquad$
$\qquad$
$\qquad$
Q. 4) Summarize the following passage and suggest a suitable title. (05 Marks)

Interpol is an international criminal police organization. The word 'Interpol' derived from the two words 'International' and 'Police'. Interpol is a strictly non-political, nonreligious, non- racial organization in which the police forces of more than hundred nations co-operate with each other. Its headquarters are situated in Paris.

The job of Interpol is to trace criminals. According to international law,police of one country cannot enter the territory of another country to apprehend a criminal who, after committing a crime, has absconded there. Interpol helps in situations to trace out the criminals. Every country has its representative in Interpol. Interpol makes use of the most modern scientific means to catch the criminals. To trace and arrest criminals is the only function of this organization. It cannot be used for any political, military or religious activity.

## Feedback Analysis

The feedback received from the faculty and the students on the course content, course delivery and evaluation was analyzed and presented as follows

## FACULTY FEEDBACK

The course content meets the needs of the learners


STRONGLY AGREE $\bullet_{\text {AGREE }}$

## 2.The time duration of the classes are sufficient



The activities related to listening are sufficient


## Special focus has to be given to enhance the



Remedial measures based on periodical assessment have to be strengthened


## The activities of speaking are good



The evaluation pattern is good.


## The course content needs revision.



1. The student's participation was good.

2. The students were able to come out of their fear in course of time.


STUDENT FEEDBACK

1. The syllabus of the course is good

2. The time duration of the bridge course class was sufficient

3. The faculty facilitated the learning of course content

4. The classes were interesting and interactive

5.The faculty presented advanced learning materials

5. The activities of listening were good

7.The activities of Speaking made me come out of my fear

6. The activities of Reading were helpful.


## 9. The activities of writing improved the skill of presenting my ideas clearly



The knowledge acquisition of grammar and its usage was up to the expectedlevel


## Recommended Options

The committee from the opinions and views collected from the respondents would like to give the following options for its kind consideration:

The Department of English may be asked to take it up again on the following terms of conditions:

- The course can be intensively planned for about one week before the commencement of the classes.
- The follow up may be planned during Part II English classes or during the weekends.
- Senior most faculty of English should co-ordinate both for shift I and shift II.
- The department incase seeks the assistance of faculty from other disciplines an orientation by an ELT
expert either from the department itself or from out is advised.


## PICTORIAL PROOFS RELATED TO BRIDGE COURSE




## Attendance related to the students who were attended to Bridge course



## $\sum$ CONCLUSION

The Bridge Course Made the process of traditionalsystem of learning, to more innovative methods of learning which is smoother for the students

The Bridge Courses have been prepared so that studentsfeel more confident about switching from Telugu to English Medium.


## ) conclusion

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The Bridge Courses have been prepared so that studentsfeel more confident about iwitching from Telugu to English Medium.

Batch (2022-23)



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4. Eotnf musu సహ 2000
5. Dots stapporb


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2. Sentrow dob ...
3. Geojんraper ...
4. Con tho it prscu...






C. ने०్ర broserso fogrosolm




#  ese to <br> コలుగు ซాఖ- อ్ర్న్ 50 

1. సుషుతి چపక \$థ పురు?
※.
2. సస్నయకు భారళ రనసలో సపాయం చేసిన నారు ఎవరు?
※.
3.ઉక్కన ఎవరి అస్థాన కవి?
æ.
4.దషాలయం సంధినామూ?

జ.
5.

జ.
6.గుర్రం జాషునా ప్రముఖ రునన?

జ.
7.రామాయణః సంస్కృయంలే రచించిన కవి?

జ.
8. బాగవత.లేని స్కందాలు ఎన్ని

జ.
9.హాలాక్తులు పదమును పడదయయుు.

జ.
10.సాండపుల బార్య పేరు?

జ.
11. నన్నయ ఎవర కారిక మెరకు మహాబారఁన సెశారు?

జ.
12.మా తలుగు తల్లిక మల్లపూడండ గ్య రచయిత ఎవరు?

జ.
13. బిచెకవర్ని పల్రికా ష్యవశిపకుడు ఎవరు?

జ.
14.కన్రాపుల్కం సాడక రపయయల?
as.
15. మWు సuల కావ్ రచయud?
as.

$\approx$.
$17.0^{\text {nutu}}$
జ.
18. సంగస్్క్రద పదానికి సొదు రూపాన్ని రాయుము.

జ.
19.wలుకల కెలకేల కలకల రావలు ఇందులో बన్న ఱలంకారం?

జ.
20. ఎర్రన మూాబారతం కావ్రంలో ప్ బాగాన్ని పూర్తి ెశారు?

జ.
21. శ్రమ్రామాయణ కలృృృృష కావ్ర రచయిత?

జ.
22. ఎ్్వంబర గ్రంఠకర్?

జ.
$23.5^{4} ట$ రాజులు పे సమాసం?
జ.
24. गాకుడుయాల్ళ నవల రుయిర?

జ.
25. 2 ふృ $\omega$ むे స 0 ?

జ.


ASD GOUT. DEGREE COLLEGE FOR WOMEN(A) KAKINAC DEPARTMENT OF HINDI
BRIDGE COURSE FOR 2022-2023
31-10-2022
to $10-11-2022$.
[B.A., B.com. B.SC.]


NAME:-N.MOONIKa
GROUP:-B.A ECONOMICS

## ASD WOMAN'S DEGREE COLLEGE KAKINADA DEPARTMENT OF HINDI <br> हिंदी ब्रिज कोर्स पूर्व परीक्षा

1. हिंदी वर्णमाला में कितने वर्ण होते हैं? 49
2. हिंदी वर्णमाला में स्वरों की संख्या कितने हैं? 13
3. शब्द भेद कितने प्रकार के होते हैं? 09
4. नाम बताने वाले शब्द को क्या कहते हैं? स्व्वनाम
5. गीता ने रीतु के_लिए फ़ल लाए। (रेखांकित शब्द कौन सा सर्वनाम है) गीत
6. You जा रहे हो? ( रेखांकित शब्द को हिंदी अनुवाद कीजिए) मै
7. यह का बहुवचन रूप क्या है? थे
8. सर्वनाम कितने प्रकार के होते हैं? $०$
9. सकर्मक क्रिया के एक उदाहरण दीजिए। पुधुना, खिलाना
10. मैं हंसा । (रेखांकित शब्द कौन सा क्रिया है) हंसा
11. चरिष्मा बहुत सुंदर लड़की हैं। (वाक्य में विशेषण क्या है) बहुत सुंदर
12. तुम 10 रुपए लाओ। (वाक्य में विशेषण क्या है) 10 रुप्रा
13. खरगोश तेज दौड़ता है। (में रेखांकित शब्द क्या है)
14. शीतल कल मेरा घर आएगी। (में रेखांकित शब्द क्या है)
15. की ओर, के बाद,. की तरह जैसे शब्दों को शब्द भेद में क्या कहते?
1) $a y=1$

TOPRC- संज्ञा (31/10/2022)




विशेषण, क्रिया विशेषण 03-11-2022


संबंध बोधक समुच्छय बोधक, विश्मयाद्विबोधक



Daj-F
" कारक चिद्न 08-91-2022





## DEPARTMENT OF HINDI

हिंदी ब्रिज कोर्स उत्तर परीक्षा

Student Name:
Class:

Time: 30 Minutes

## Date:

1. हिंदी वर्णमाला में कितने वर्ण होते हैं? - 49
2. हिंदी वर्णमाला में स्वरों की संख्या कितने हैं? - 13
3. शब्द भेद कितने प्रकार के होते हैं? - 8
4. नाम बताने वाले शब्द को क्या कहते हैं? - सइझ
5. गीता ने रीतु के_लिए फल लाए। (रेखांकित शब्द कौन सा सर्वनाम है) जातिवाचक सर्वर्नमम
6. You जा रहे हो? (रेखांकित शब्द को हिंदी अनुवाद कीजिए)

## तुम

7. यह का बहुवचन रूप क्या है? - चै
8. सर्वनाम कितने प्रकार के होते हैं? -
9. सकर्मक क्रिया के एक उदाहरण दीजिए। - शाना
10. मैं हंसा। ( रेखांकित शब्द कौन सा क्रिया है) - अकर्मरक
11. चरिष्मा बहुत सुंदर लडकी हैं। (वाक्य में विशेषण क्या है)- संदर
12. तुम 10 रुपए लाओ(वाक्य में विशेषण क्या है)- 10
13. खरगोश तेज दौड़ता है।(में रेखांकित शब्द क्या है)- क्रिया विश्शन
14. शीतल कल मेरा घर आएगी। (में रेखांकित शब्द क्या है)- कबर
15. की ओर, के बाद, की तरह जैसे शब्दों को शब्द भेद में क्या कहते?
16. सीता और गीता दोनों सहेलियां हैं। रेखांकित शब्द क्या है?समुच्छय भोदक
17. वाह! क्या बात है। (इसमें विश्मयादि शब्द क्या है)- वाह!
18. श्वेता को फूल चाहिए। (कौन सा कारक चिन्ह है)- कर्म
19. माधुरी के लिए आइसक्रीम लाई (तेलुगु में अनुवाद-कीजिए)

20. ऊरे बच्चो! जरा सुनिए ( रेखांकित शब्द क्या है?)-
21. काल कितने प्रकार के हैं? तीन
22. वह किताब पढ़ता है- वाक्य कौन सा काल में है?- वर्तमान काल
23. मैं कल सिनेमा देखूंगी- वाक्य कौन सा काल में है?- भविष्यत काल
24. मेरी मां कल बिरयानी बनाया वाक्य कौन सा काल में है?-

25. हिंदी दिवस कब मनाते हैं?- सितम्बर -14


## A.S.D.GOVERNMENT DEGREE COLLEGE FOR WOMEN ( 1 ) KAKINADA

DEPARTMENT OF SANSKRIT

| Date | 1.11.2022 |
| :---: | :---: |
| Conducted through <br> (DRC/JKC/ELF/NSS Departments etc.) | Department of Sanskrit |
| Nature of Activity <br> (Seminar /Work shop/Extent lecture etc.) | literary Activity |
| Title of the Activity | BRIDGE-COURSE |
| Name of the Department/Committee | Department of Sanskrit |
| Details of resources persons(Name, Designation etc.,) | DR.R.Aruna devi |
| No. of. Students Participated . | 40 |
| Brief Report on the Activity | Bridge courses are quite important in a str fent's academic life, and it is essential to make tl en attend them for a better understanding of I iei future prospects and goals. This course is want for beginners who want to learn Sanskrit I on the basics. This course focuses on spoken Sanskrit as well as basic grammar of the language. It is seen that students can read $n$ ite and understand simple Sanskrit by this cor rse. This course can be joined by anybody whi it interested to learn Sanskrit and standard 3: lih is the basic eligibility of this course. Course, $s$ nim 10 DAYS |
| Name of the Lecturers who planned \& conducted the Activity | DR.R.Aruna devi. Guest facuilty in Sanskrit |
| Signature of the dept.in charge /Convener of The Committee | K.Madhavi <br> Lec.inc.Lecturer in Telugy |
| Signature of the Principal | $V \cdot N \mathrm{O}$ |
| Remarks | PriNCipd2 <br> A.S.D.GMT.DEGREE COLLEGF T- |




## BRIDGE-COURSE PRE TEST CONDUCTED

IST YEAR B.A/BCOM/BSC

## BRIDGE-COURSE PRE TEST CONDUCTED

## IST YEAR B.A/BCOM/BSC

© GPS Map Camera

## Kakinada, Andhra Pradesh, India

1, near Womens College, Jagannaickpur, Kakinada, Andhra Pradesh 533002, India Lat $16.940035^{\circ}$
Long $82.238037^{\circ}$
01/11/22 03:03 PM GMT +05:30


BRIDGE-COURSE PRE TEST CONDUCTED
IST YEAR B.A/BCOM/BSC

## Feedback on the topic

## Bridge Courses

Bridge courses are classes that give information from a basic course, to prepare students for a more advanced course, thus bridging between the basic and advanced courses. As we transit from the pre-university level towards the specialised advanced programmes the teaching methodology as well as the studying pattern undergoes a drastic change.This course bridges the gap in between. The Bridge Courses also focus on the students with different learning abilities, academic standards and performances. Through the bridge course, the self-confidence of the students enhances to face questions/exams and create awareness about self learning.

# A.S.D GOVT. DEGREE COLLEGE FOR WOMEN (AUTONOMOUS) 

 (Re - Accredited by NAAC with 'B' Grade) KAKINADA, E.G. Dt., A.P.
## DEPARTMENT OF SANSKRIT



## BRIDGE-COURSE <br> 2022-23

I B.A/BCOM/BSC

* BRIDGE COURSE *RE TEST *

The Department of Mathematics has conducted pretest on Derivatives
Integral fromulas on $4 / 11 / 22$ for
IBSC MPC,MPC's \& MSCS students at
Room No: 24
This topic consists of Introduction of thenerderivatives, definition of it hen differential equations, Types and solutions of the
Aiftherential equations. All derivatives: $\&$
integral formulas.
formulas:-




* bridar courgle post test

The depentiment of mathematics has conduted post test of Bridge course on Desivectives and integral fumilue of 11-11-2022. PI IBSC mpl; mpas, mSCS sudent at Room No. 24
this topic consist of intraduction of the denvatives degree and shler of the Difterential Equations: variable sepcirable muthod, Hamogeneous muthod; Reducible to Komageneaus mithod.



## A .S.D. Govt Degree College for Women(A) KAKINADA-533002

## Accredited by NAAC with B grade in Cycle - $\mathbf{3}$

(Under the Jurisdiction of Adikavi Nannaya University Rajamahendravaram)


Faculty :
Sri. K. Venkateswara Rao
In-charge
Sri .B. Surya Narayana Devara ----- Lecturer
Smt. K. Kranthi
Lecturer


The department of physics has conducted online quiz using advanced tool called PLICKERS. The topics are so chosen that they are very common but somewhat need careful attention to answer. This was done to increase awareness among the students to carefully observe the things around us and with a view to increasing their general knowledge for various competitive examinations.

Some of the Questions (Excerpts from Plickers Website )


## Bridge Course:

"The aim of education is to guide young persons in the process through which they shape themselves as human persons-armed with knowledge, strength of judgment, and moral virtues-while at the same time conveying to them the spiritual heritage of the nation and the civilization in which they are involved". Jacques Maritain

With this aim in mind department of physics has conducted bridge course to newly joined students. Along with bridging the gap between intermediate and undergraduate course, We have emphasised the fact that the degree is a 3 year course which must bring a holistic all round personality development in them. By the time they go out of this college they should be equipped with the skills that are necessary for employment / higher studies/ Self-employment.

Attandance :



## Glossary of physics

This glossary of physics is a list of definitions of terms and concepts relevant to physics, its subdisciplines, and related fields, including mechanics, materials science, nuclear physics, particle physics, and thermodynamics. For more inclusive glossaries concerning related fields of science and technology, see Glossary of chemistry terms, Glossary of astronomy, Glossary of areas of mathematics, and Glossary of engineering.

## A

## ab initio

A mathematical model which seeks to describe atomic nuclei by solving the non-relativistic Schrödinger equation for all constituent nucleons and the forces that exist between them. Such methods yield precise results for very light nuclei but become more approximate for heavier nuclei.

## Abbe number

In optics and lens design, a measure of a transparent material's dispersion (a variation of refractive index versus wavelength). High values of V indicate low dispersion.

## absolute electrode potential

In electrochemistry, the electrode potential of a metal measured with respect to a universal reference system (without any additional metal-solution interface).

## absolute humidity

The ratio of the water vapor in a sample of air to the volume of the sample.

## absolute motion

## absolute pressure

Is zero-referenced against a perfect vacuum, using an absolute scale, so it is equal to gauge pressure plus atmospheric pressure.

## absolute scale

Any system of measurement that begins at a minimum, or zero point, and progresses in only one direction. The zero point of an absolute scale is a natural minimum, leaving only one direction in which to progress, whereas an arbitrary or "relative" scale begins at some point selected by a person and can progress in both directions.

## absolute zero

The theoretical lowest possible temperature, understood by international agreement as equivalent to 0 Kelvin or $-273.15^{\circ} \mathrm{C}\left(-459.67^{\circ} \mathrm{F}\right)$. More formally, it is the theoretical lower limit of the thermodynamic temperature scale, at which enthalpy and entropy of a cooled ideal gas reach their minimum values and the fundamental particles of nature have minimal vibrational motion.

## absorption spectroscopy

Any of various spectroscopic techniques that measure the absorption of electromagnetic radiation due to its interaction with a sample. The sample absorbs energy, i.e. photons, from the radiating field. The intensity of the absorption varies as a function of frequency or wavelength,
and this variation is the absorption spectrum. Absorption spectroscopy is performed across the electromagnetic spectrum.

## absorptivity

## accelerating expansion of the universe

The observation that the expansion of the universe is such that the velocity at which a distant galaxy is receding from the observer is continuously increasing with time. ${ }^{[1][2][3][4]}$

## acceleration

The rate at which the velocity of a body changes with time, also the rate of change of the rate at which the position of a body changes with time.

## acceleration due to gravity

The acceleration on an object caused by the force of gravitation.

## accelerometer

An instrument used to measure the proper acceleration of a body irrespective of other forces.

## acoustics

The branch of physics dealing with the production, transmission, and effects of sound.

## adhesion

adhesion is what makes things stick together. It's the force that allows tape to stick to a surface or glue to hold two objects together. Contrast cohesion.

## adiabatic cooling

adiabatic heating

## adiabatic process

A process which occurs without transfer of heat or mass of substances between a thermodynamic system and its surroundings. In an adiabatic process, energy is transferred to the surroundings only as work. ${ }^{[5][6]}$ The adiabatic process provides a rigorous conceptual basis for the theory used to expound the first law of thermodynamics, and as such it is a key concept in thermodynamics.

## aerodynamics

The study of the motion of air, particularly its interaction with a solid object, such as an airplane wing. It is a sub-field of fluid dynamics and gas dynamics, and many aspects of aerodynamics theory are common to these fields.

## afocal system

An optical system that produces no net convergence or divergence of the beam, i.e. has an infinite effective focal length. ${ }^{[7]}$ This type of system can be created with a pair of optical elements where the distance between the elements is equal to the sum of each element's focal length $\left(d=f_{1}+f_{2}\right)$.

## air mass

1. In meteorology, a volume of air that is defined by its temperature and water vapor content. Air masses may cover many hundreds or thousands of square miles and generally adapt to the characteristics of the surface below them. They are often classified according to their latitude and their source regions.
2. In astronomy, the "amount of air that one is looking through" ${ }^{[8]}$ when observing a star or other celestial source from a vantage point that is within Earth's atmosphere. It is formulated as the integral of air density along the light ray.

## air mass coefficient

Defines the direct optical path length through the Earth's atmosphere, expressed as a ratio relative to the path length vertically upwards, i.e. at the zenith. The air mass coefficient can be used to help characterize the solar spectrum after solar radiation has traveled through the atmosphere.

## albedo

The fraction of the total light incident on a reflecting surface, especially a celestial body, which is reflected back in all directions.

## alloy

A chemical mixture of a metal with one or more other metals or other elements.

## alpha decay

A type of radioactive decay in which an atomic nucleus emits an alpha particle and thereby transforms or "decays" into a different atomic nucleus, with a mass number that is reduced by four and an atomic number that is reduced by two.

## alpha particle ( $\alpha$ )

A type of subatomic particle consisting of two protons and two neutrons bound together into a particle identical to the nucleus of a helium- 4 ion. It has a charge of $+2 \underline{e}$ and a mass of $4 \underline{u}$. Alpha particles are classically produced in the process of radioactive alpha decay, but may also be produced in other ways and given the same name.

## alternating current (AC)

A form of electric current in which the movement of electric charge periodically reverses direction. Contrast direct current.

## ammeter

An instrument that is used to measure electric current.

## amorphous solid

A type of solid which does not have a definite geometric shape.

## ampere (A)

The SI base unit of electric current, defined as one coulomb of electric charge per second.

## amplifier

An electronic device that can increase the power of a signal (a time-varying voltage or current). It is a two-port electronic circuit that uses electric power from a power supply to increase the amplitude of a signal applied to its input terminals, producing a proportionally greater amplitude signal at its output. The amount of amplification provided by an amplifier is measured by its gain: the ratio of output voltage, current, or power to input. An amplifier is a circuit that has a power gain greater than one. 9 [9][10][11]

## amplitude

The height of a wave as measured from its center (normal) position.

## angle of incidence

In geometric optics, the angle between a ray incident on a surface and the line perpendicular to the surface at the point of incidence, called the normal. The ray can be formed by any wave: optical, acoustic, microwave, X-ray, etc.

## angle of reflection

The change in direction of a wavefront at an interface between two different media so that the wavefront returns into the medium from which it originated. Common examples include the reflection of light, sound, and water waves. The law of reflection says that for specular reflection the angle at which the wave is incident on the surface equals the angle at which it is reflected. Mirrors exhibit specular reflection.

## ångström (Å)

A unit of length primarily used to measure subatomic particles that is equal to $10^{-10}$ metres (one ten-billionth of a metre) or 0.1 nanometres.

## angular acceleration

The time rate of change of angular velocity. In three dimensions, it is a pseudovector. In SI units, it is measured in radians per second squared ( $\mathrm{rad} / \mathrm{s}^{2}$ ), and is usually denoted by the Greek letter alpha ( $\alpha$ ). ${ }^{[12]}$ Just like angular velocity, there are two types of angular acceleration: spin angular acceleration and orbital angular acceleration, representing the time rate of change of spin angular velocity and orbital angular velocity, respectively. Unlike linear acceleration, angular acceleration need not be caused by a net external torque. For example, a figure skater can speed up her rotation (thereby obtaining an angular acceleration) simply by contracting her arms inwards, which involves no external torque.

## angular displacement

The angle (in radians, degrees, or revolutions) through which a point revolving around a centre or line has been rotated in a specified sense about a specified axis.

## angular frequency ( $\omega$ )

A scalar measure of rotation rate. It refers to the angular displacement per unit time (e.g. in rotation) or the rate of change of the phase of a sinusoidal waveform (e.g. in oscillations and waves), or as the rate of change of the argument of the sine function. Angular frequency (or angular speed) is the magnitude of the vector quantity that is angular velocity. The term angular frequency vector $\vec{\omega}$ is sometimes used as a synonym for the vector quantity angular velocity. ${ }^{[13]}$ One revolution is equal to $2 \pi$ radians, hence ${ }^{[13][14]}$

$$
\omega=\frac{2 \pi}{T}=2 \pi f
$$

where:
$\omega$ is the angular frequency or angular speed (measured in radians per second), $T$ is the period (measured in seconds), $f$ is the ordinary frequency (measured in hertz) (sometimes symbolised with $\underline{v}$ ).

## angular momentum

The rotational equivalent of linear momentum. It is an important quantity in physics because it is a conserved quantity-that is, the total angular momentum of a closed system remains constant.

## angular velocity ( $\omega$ )

How fast an object rotates or revolves relative to another point, i.e. how fast the angular position or orientation of an object changes with time. There are two types of angular velocity: orbital angular velocity and spin angular velocity. Spin angular velocity refers to how fast a rigid body rotates with respect to its centre of rotation. Orbital angular velocity refers to how fast a rigid body's centre of rotation revolves about a fixed origin, i.e. the time rate of change of its angular position relative to the origin. In general, angular velocity is measured in angle per unit time, e.g. radians per second. The SI unit of angular velocity is expressed as radians/sec with the radian having a dimensionless value of unity, thus the SI units of angular velocity are listed as $1 / \mathrm{sec}$. Angular velocity is usually represented by the Greek letter omega ( $\omega$, sometimes $\Omega$ ). By convention, positive angular velocity indicates counter-clockwise rotation, while negative is clockwise.

## anion

A negatively charged ion. Contrast cation.

## annihilation

In particle physics, the process that occurs when a subatomic particle collides with its respective antiparticle to produce other particles, such as an electron colliding with a positron to produce two photons. ${ }^{[15]}$ The total energy and momentum of the initial pair are conserved in the process and distributed among a set of other particles in the final state. Antiparticles have exactly opposite additive quantum numbers from particles, so the sums of all quantum numbers of such an original pair are zero. Hence, any set of particles may be produced whose total quantum numbers are also zero as long as conservation of energy and conservation of momentum are obeyed. ${ }^{\text {[16] }}$

## anode

The electrode through which a conventional electric current flows into a polarized electrical device; the direction of current flow is, by convention, opposite to the direction of electron flow, and so electrons flow out of the anode. In a galvanic cell, the anode is the negative terminal or pole which emits electrons toward the external part of an electrical circuit. However, in an electrolytic cell, the anode is the wire or plate having excess positive charge, so named because negatively charged anions tend to move towards it. Contrast cathode.

## anti-gravity

A theory of creating a place or object that is free from the force of gravity. It does not refer to the lack of weight under gravity experienced in free fall or orbit, or to balancing the force of gravity with some other force, such as electromagnetism or aerodynamic lift.

## antimatter

## antineutron

The antiparticle of the neutron, with symbol $\overline{\mathrm{n}}$. It differs from the neutron only in that some of its properties have equal magnitude but opposite sign. It has the same mass as the neutron, and no net electric charge, but has opposite baryon number ( +1 for neutron, -1 for the antineutron). This is because the antineutron is composed of antiquarks, while neutrons are composed of quarks. The antineutron consists of one up antiquark and two down antiquarks.

## antiparticle

In particle physics, every type of particle has an associated antiparticle with the same mass but with opposite physical charges such as electric charge. For example, the antiparticle of the electron is the antielectron (which is often referred to as the positron). While the electron has a negative electric charge, the positron has a positive electric charge, and is produced naturally in certain types of radioactive decay. Some particles, such as the photon, are their own antiparticle. Otherwise, for each pair of antiparticle partners, one is designated as "normal" matter (the kind comprising all matter with which humans usually interact), and the other (usually given the prefix "anti-") as antimatter.

## antiproton

It is a subatomic particle of the same mass as a proton but having a negative electric charge and oppositely directed magnetic moment. It is the proton's antiparticle. Antiprotons were first produced and identified in 1955 by Emilio Segrè, Owen Chamberlain ${ }^{[17]}$

## antiquark

For every quark flavor there is a corresponding type of antiparticle known as an antiquark that differs from the quark only in that some of its properties (such as the electric charge) have equal magnitude but opposite sign.

## arc length

## Archimedes' principle

A physical principle which states that the upward buoyant force that is exerted on a body immersed in a fluid, whether fully or partially submerged, is equal to the weight of the fluid that
the body displaces and acts in the upward direction at the center of mass of the displaced fluid. ${ }^{[18]}$

## area moment of inertia

## astrophysics

The branch of astronomy that deals with the physics of the Universe, especially with the compositional nature of celestial bodies rather than their positions or motions in space.

## attenuation coefficient

The measure of how much the incident energy beam (e.g. ultrasound or x -rays) is weakened by the material it is passing through. ${ }^{[19]}$

## atom

A basic unit of matter that consists of a dense central nucleus surrounded by a cloud of negatively charged electrons. The atomic nucleus contains a mix of positively charged protons and electrically neutral neutrons.

## atomic line filter

## atomic mass

## atomic mass unit

A deprecated term, usually referring to the unified atomic mass unit, a carbon-based standard, but historically referring to an oxygen-based standard.

## atomic number ( $Z$ )

The number of protons found in the nucleus of an atom. It is most often used to classify elements within the periodic table.

## atomic orbital

## atomic packing factor

atomic physics
A branch of physics that studies atoms as isolated systems of electrons and an atomic nucleus. Compare nuclear physics.

## atomic structure

## atomic weight (A)

The sum total of protons (or electrons) and neutrons within an atom.

## audio frequency

A periodic vibration whose frequency is in the band audible to the average human, the human hearing range. It is the property of sound that most determines pitch, with a generally accepted standard hearing range for humans is 20 to $20,000 \mathrm{~Hz}$. Also known as audible frequency (AF)

## Avogadro constant

The ratio of the number of constituent particles in a substance, usually atoms or molecules, to the amount of substance, of which the SI unit is the mole. It is defined as exactly
$6.02214076 \times 10^{23} \mathrm{~mol}^{-1}$.

## Avogadro number

The total number of individual molecules in one mole of a substance, by definition equaling exactly $6.02214076 \times 10^{23}$.

## Avogadro's law

A physical law which states that volumes of gases which are equal to each other at the same temperature and pressure will contain equal numbers of molecules.

## axion

A hypothetical subatomic particle postulated to account for the rarity of processes that break charge-parity symmetry. It is very light, electrically neutral, and pseudoscalar.

## azimuthal quantum number

A quantum number for an atomic orbital that determines its orbital angular momentum and describes the shape of the orbital.

## B

## Babinet's principle

A theorem concerning diffraction which states that the diffraction pattern from an opaque body is identical to that from a hole of the same size and shape except for the overall forward beam intensity.

## background radiation

The ubiquitous ionizing radiation to which the general human population is exposed.

## Balanced Forces

When all the forces acting upon an object balance each other, the object will be at equilibrium; it will not accelerate.

## ballistics

## Balmer series

In atomic physics, one of a set of six named series describing the spectral line emissions of the hydrogen atom. The Balmer series is calculated using the Balmer formula, an empirical equation discovered by Johann Balmer in 1885.

## barometer

A scientific instrument used in meteorology to measure atmospheric pressure. Pressure tendency can forecast short-term changes in the weather.

## baryon

A subatomic particle such as a proton or a neutron, each of which is made of (usually) three quarks. Nearly all matter humans are likely to encounter is baryonic matter.

## battery

A combination of two or more electrical cells which produces electricity.

## beam

A structural element that is capable of withstanding load primarily by resisting bending. Beams are traditionally descriptions of building or civil engineering structural elements, but smaller structures such as truck or automobile frames, machine frames, and other mechanical or structural systems contain beam structures that are designed and analyzed in a similar fashion.

## bending

The behavior of a slender structural element subjected to an external load applied perpendicularly to a longitudinal axis of the element.

## bending moment

The reaction induced in a structural element when an external force or moment is applied to the element, causing the element to bend.[20][21] The simplest structural element subjected to bending moments is the beam.

## Bernoulli equation

## Bernoulli's principle

In fluid dynamics, a principle which states that an increase in the speed of a fluid occurs simultaneously with a decrease in pressure or a decrease in the fluid's potential energy.[22]: Ch.3[23]: 156-164,§ 3.5

## Bessel function

A canonical solution $y(x)$ of Friedrich Bessel's differential equation

$$
x^{2} \frac{d^{2} y}{d x^{2}}+x \frac{d y}{d x}+\left(x^{2}-\alpha^{2}\right) y=0
$$

for an arbitrary complex number $\alpha$, the order of the Bessel function. Although $\alpha$ and $-\alpha$ produce the same differential equation, it is conventional to define different Bessel functions for these two values in such a way that the Bessel functions are mostly smooth functions of $\alpha$. The most important cases are when $\alpha$ is an integer or half-integer. Bessel functions for integer $\alpha$ are also known as cylinder functions or the cylindrical harmonics because they appear in the solution to Laplace's equation in cylindrical coordinates. Spherical Bessel functions with half-integer $\alpha$ are obtained when the Helmholtz equation is solved in spherical coordinates.

## beta decay

In nuclear physics, a type of radioactive decay in which a beta particle is emitted from an atomic nucleus, transforming the original nuclide to its isobar.

## beta particle

A high-energy, high-speed electron or positron emitted by certain types of radioactive atomic nuclei.

## Big Bang

The prevailing cosmological model that describes the early development of the Universe.

## binding energy

The mechanical energy required to disassemble a whole into separate parts. A bound system typically has a lower potential energy than the sum of its constituent parts.

## binomial random variable

## biocatalysis

## biophysics

An interdisciplinary science using methods of and theories from physics to study biological systems.

## black body

A hypothetical idealized physical body that completely absorbs all incident electromagnetic radiation, regardless of frequency or angle of incidence. Perfect black bodies are imagined as substitutes for actual physical bodies in many theoretical discussions of thermodynamics, and the construction of nearly perfect black bodies in the real world remains a topic of interest for materials engineers. Contrast white body.

## black-body radiation

The type of electromagnetic radiation within or surrounding a body in thermodynamic equilibrium with its environment, or emitted by a black body (an opaque and non-reflective body) held at constant, uniform temperature. The radiation has a specific spectrum and intensity that depends only on the temperature of the body.

## block and tackle

A system of two or more pulleys with a rope or cable threaded between them, usually used to lift or pull heavy loads.

## Bohr model

## boiling point

The temperature at which a liquid undergoes a phase change into a gas; the vapour pressure of liquid and gas are equal at this temperature.

## boiling point elevation

The phenomenon by which the boiling point of a liquid (a solvent) increases when another compound is added, meaning that the resulting solution has a higher boiling point than the pure solvent. This happens whenever a non-volatile solute, such as a salt, is added to a pure solvent, such as water. The boiling point can be measured accurately using an ebullioscope.

## Boltzmann constant

A physical constant relating the average kinetic energy of the particles in a gas with the temperature of the gas. It is the gas constant R divided by the Avogadro constant NA.

## Bose-Einstein condensate (BEC)

## boson

A type of subatomic particle that behaves according to Bose-Einstein statistics and possesses integer spin. Bosons include elementary particles such as photons, gluons, $W$ and $Z$ bosons, Higgs bosons, and the hypothetical graviton, as well as certain composite particles such as mesons and stable nuclides of even mass number. Bosons constitute one of two main classes of particles, the other being fermions. Unlike fermions, there is no limit to the number of bosons that can occupy the same quantum state.

## Boyle's law

A chemical law which states that the volume of a given mass of a gas at constant temperature is inversely proportional to its pressure.

## Bra-ket notation

## Bragg's law

## bremsstrahlung

Radiation emitted by the acceleration of unbound charged particles.

## Brewster's angle

The angle of incidence at which light with a particular polarization is completely transmitted through a transparent dielectric surface, with no reflection. When unpolarized light is incident at this angle, the light that is reflected is consequently perfectly polarized.

## british thermal unit (btu)

An Imperial unit of energy defined as the amount of energy needed to heat one pound of water by one degree Fahrenheit; 1 btu is equal to about 1,055 joules. In scientific contexts the btu has largely been replaced by the SI unit of energy, the joule.

## brittleness

The tendency of a material to break without significant plastic deformation when subjected to stress. Brittle materials absorb relatively little energy prior to fracture, even those of high strength. Breaking is often accompanied by a snapping sound.

## Brownian motion

The presumably random movement of particles suspended in a fluid (liquid or gas) resulting from their bombardment by fast-moving atoms or molecules in the gas or liquid.

## Bulk modulus

A measure of a substance's resistance to uniform compression defined as the ratio of the infinitesimal pressure increase to the resulting relative decrease of the volume. Its base unit is the pascal.

## buoyancy

An upward force exerted by a fluid that opposes the weight of an immersed object.

## calculus

A branch of mathematics that studies change and has two major sub-fields: differential calculus (concerning rates of change and slopes of curves), and integral calculus (concerning accumulation of quantities and the areas under and between curves). These two branches are related to each other by the fundamental theorem of calculus.

## capacitance

The ratio of the change in the electric charge of a system to the corresponding change in its electric potential. There are two closely related notions of capacitance: self capacitance and mutual capacitance. Any object that can be electrically charged exhibits self capacitance. A material with a large self capacitance holds more electric charge at a given voltage than one with low capacitance. The notion of mutual capacitance is particularly important for understanding the operations of the capacitor, one of the three elementary linear electronic components (along with resistors and inductors).

## capacitive reactance

An opposition to the change of voltage across an electrical circuit element. Capacitive reactance $X_{C}$ is inversely proportional to the signal frequency $f$ (or angular frequency, $\omega$ ) and the capacitance $C$. ${ }^{[24]}$

## capacitor

An electrical circuit element consisting of two conductors separated by an insulator (also known as a dielectric).

## Carnot cycle

A theoretical ideal thermodynamic cycle proposed by French physicist Nicolas Léonard Sadi Carnot in 1824 and expanded upon by others in the 1830 s and 1840s. It provides an upper limit on the efficiency that any classical thermodynamic engine can achieve during the conversion of heat into work, or conversely, the efficiency of a refrigeration system in creating a temperature difference by the application of work to the system. It is not an actual thermodynamic cycle but is a theoretical construct.

## Cartesian coordinate system

A coordinate system that specifies each point uniquely in a plane by a set of numerical coordinates, which are the signed distances to the point from two fixed perpendicular oriented lines, measured in the same unit of length. Each reference line is called a coordinate axis or just axis (plural axes) of the system, and the point where they meet is called the origin, at ordered pair ( 0,0 ). The coordinates can also be defined as the positions of the perpendicular projections of the point onto the two axes, expressed as signed distances from the origin.

## cathode

The electrode through which a conventional electric current flows out of a polarized electrical device; the direction of current flow is, by convention, opposite to the direction of electron flow, and so electrons flow into the cathode. In a galvanic cell, the cathode is the positive terminal or pole which accepts electrons flowing from the external part of an electrical circuit. However, in an electrolytic cell, the cathode is the wire or plate having excess negative charge, so named because positively charged cations tend to move towards it. Contrast anode.

## cathode ray

cation
A positively charged ion. Contrast anion.

## celestial mechanics

## Celsius scale

A scale and unit of measurement of temperature.

## center of curvature

## center of gravity

The point in a body around which the resultant torque due to gravity forces vanish. Near the surface of the earth, where gravity acts downward as a parallel force field, the center of gravity and the center of mass are the same.

## center of mass

Within a given distribution of mass, the unique point in space at which the weighted relative position of the distributed mass sums to zero.

## center of pressure

## centigrade

See Celsius scale.

## central-force problem

A classic problem in potential theory involving the determination of the motion of a particle in a single central potential field. The solutions to such problems are important in classical mechanics, since many naturally occurring forces, such as gravity and electromagnetism, are central forces.

## centrifugal force

The apparent outward force that draws a rotating body away from the centre of rotation. It is caused by the inertia of the body as the body's path is continually redirected.

## centripetal force

A force which keeps a body moving with a uniform speed along a circular path and is directed along the radius towards the centre.

## cGh physics

Any attempt in mainstream physics to unify existing theories of relativity, gravitation, and quantum mechanics, particularly by envisioning the three universal constants fundamental to each field - the speed of light $(c)$, the gravitational constant $(G)$, and the Planck constant $(h)$ as the edges of a three-dimensional cube, at each corner of which is positioned a major subfield within theoretical physics according to which of the three constants are accounted for by that sub-field and which are ignored. One corner of this so-called "cube of theoretical physics", where all three constants are accounted for simultaneously, has not yet been satisfactorily described: quantum gravity.

## chain reaction

A sequence of reactions in which a reactive product or byproduct causes additional similar reactions to take place.

## change of base rule

## charge carrier

## chemical physics

A branch of chemistry and physics that studies chemical processes from the point of view of physics by investigating physicochemical phenomena using techniques from atomic and molecular physics and condensed matter physics.

## chromatic aberration

## circular motion

## classical mechanics

A sub-field of mechanics concerned with the set of physical laws describing the motion of bodies under the collective actions of a system of forces.

## coefficient of friction

coherence
cohesion
The tendency of similar particles or surfaces to cling to one another. Contrast adhesion.
cold fusion
complex harmonic motion
composite particle

## Compton scattering

A type of light-matter interaction in which a photon is scattered by a charged particle, usually an electron, which results in part of the energy of the photon being transferred to the recoiling electron; a resulting decrease in the energy of the photon is called the Compton effect. The opposite phenomenon occurs in inverse Compton scattering, when a charged particle transfers part of its energy to a photon.

## concave lens

condensation point
condensed matter physics
A branch of physics that studies the physical properties of condensed phases of matter.

## conservation of momentum

## conservation law

constructive interference

## continuous spectrum

## continuum mechanics

## convection

The transfer of heat by the actual transfer of matter.

## convex lens

coulomb (C)
The SI derived unit of electric charge, defined as the charge transported by a constant current of one ampere in one second.

## Coulomb's law

## converging lens

## cosmic background radiation

## creep

crest
The point on a wave with the maximum value or upward displacement within a cycle.

## crest factor

## critical angle

## critical mass

The smallest amount of fissile material needed for a sustained nuclear chain reaction.

## cube of theoretical physics

See cGh physics.

## Curie temperature

current density
current length
curvilinear motion

The motion of a moving particle or object that conforms to a known or fixed curve. Such motion is studied with two coordinate systems: planar motion and cylindrical motion.

## cyclotron

A type of particle accelerator in which charged particles accelerate outwards from the center along a spiral path.

D

## Dalton's law

## damped vibration

## Damping ratio

Any influence upon or within an oscillatory system that has the effect of reducing, restricting, or preventing its oscillations. Damping is a result of processes that dissipate the energy stored in the oscillation.

## Darcy-Weisbach equation

## dark energy

## dark matter

## DC motor

A mechanically commutated electric motor powered by direct current.

## decibel

## definite integral

## deflection

The degree to which a structural element is displaced under a load. It may refer to an angle or a distance.

## deformation

1. (mechanics)
2. (engineering)

## density

A physical property of a substance defined as its mass per unit volume.

## derivative

For a mathematical function of a real variable, a measurement of the sensitivity to change of the function value (output) with respect to a change in its argument (input); e.g. the derivative of the position of a moving object with respect to time is the object's velocity and measures how quickly the position of the object changes as time changes. Derivatives are a fundamental tool of calculus.

## destructive interference

## diamagnetism

## dielectric

An electrical insulator that can be polarized by an applied electric field. When a dielectric material is placed in an electric field, electric charges do not flow through the material as they would in a conductor but only shift slightly from their equilibrium positions, with positive charges displaced in the direction of the field's flow and negative charges displaced in the opposite direction; this creates an internal electric field that reduces the larger field within the dielectric material.

## diffraction

## direct current (DC)

## dispersion

## displacement

1. (fluid) Occurs when an object is immersed in a fluid, pushing it out of the way and taking its place. The volume of the immersed object will be exactly equal to the volume of the displaced fluid, so that the volume of the immersed object can be deduced if the volume of the displaced fluid is measured.
2. (vector) The shortest distance from the initial to the final position of a point. Thus, it is the length of an imaginary straight path, typically distinct from the path actually travelled by.

## distance

A numerical description of how far apart objects are.

## drift velocity

## Doppler effect

The change in frequency of a wave (or other periodic event) for an observer moving relative to its source. Compared to the emitted frequency, the received frequency is higher during the approach, identical at the instant of passing by, and lower during the recession.
drag
Forces which act on a solid object in the direction of the relative fluid flow velocity. Unlike other resistive forces, such as dry friction, which is nearly independent of velocity, drag forces depend on velocity.

## ductility

A solid material's ability to deform under tensile stress; this is often characterized by the material's ability to be stretched into a wire.

## dynamics

The branch of classical mechanics that studies forces and torques and their effects on motion, as opposed to kinematics, which studies motion without reference to these forces.

## dyne

## E

## econophysics

## elastic collision

elastic energy

## elastic instability

## elastic modulus

## elasticity

The tendency of a material to return to its original shape after it is deformed.

## electric charge

A physical property of matter that causes it to experience a force when near other electrically charged matter. There are two types of electric charge: positive and negative.

## electric circuit

An electrical network consisting of a closed loop, giving a return path for the current.

## electric current

A flow of electric charge through a conductive medium.

## electric displacement field

## electric field

The region of space surrounding electrically charged particles and time-varying magnetic fields. The electric field represents the force exerted on other electrically charged objects by the
electrically charged particle the field is surrounding.

## electric field gradient <br> electric field intensity <br> electric generator <br> electric motor <br> electric potential <br> electric power

The rate at which electric energy is transferred by an electric circuit.

## electrical conductor

Any material which contains movable electric charges and therefore can conduct an electric current under the influence of an electric field.

## electrical insulator

Any material whose internal electric charges do not flow freely and which therefore does not conduct an electric current under the influence of an electric field.

## electrical potential energy

## electrical and electronics engineering

## electrical network

An interconnection of electrical elements such as resistors, inductors, capacitors, voltage sources, current sources, and switches.
electrical resistance
The opposition to the passage of an electric current through an electrical element.
electricity
The set of physical phenomena associated with the presence and flow of electric charges.
electro-optic effect
electrochemical cell
electrodynamics
electrolytic cell
electromagnet
A type of magnet in which the magnetic field is produced by the flow of electric current.
electromagnetic field

A physical field produced by moving electrically charged objects.

## electromagnetic induction

electromagnetic radiation
A form of energy emitted and absorbed by charged particles, which exhibits wave-like behavior as it travels through space.

## electromagnetic spectrum

## electromagnetic wave equation

electromagnetism
electromechanics
electromotive force $(\mathcal{E})$

The electrical intensity or "pressure" developed by a source of electrical energy such as a battery or generator and measured in volts. Any device that converts other forms of energy into electrical energy provides electromotive force as its output.

## electron

A subatomic particle with a negative elementary electric charge.

## electron capture

## electron cloud

## electron pair

## electron paramagnetic resonance

A method for studying materials with unpaired electrons which makes use of the Zeeman effect. It shares some basic principles with nuclear magnetic resonance (NMR).

## electronvolt (eV)

A unit of energy equal to approximately $1.6 \times 10^{-19}$ joule. By definition, it is the amount of energy gained by the charge of a single electron moved across an electric potential difference of one volt.

## electronegativity

A chemical property that describes the tendency of an atom or a functional group to attract electrons (or electron density) towards itself.

## electronics

A field that deals with electrical circuits that involve active electrical components such as vacuum tubes, transistors, diodes, and integrated circuits as well as associated passive interconnection technologies.

## electrostatics

## electrostriction

## elementary charge

## elementary particle

emission spectrum
emissivity
energy
The ability to do work.

## energy level

## endothermic

An adjective used to refer to a process or reaction in which a system absorbs energy from its surroundings, usually in the form of heat but also in the form of light, electricity, or sound. Contrast exothermic.

## engineering physics

## enthalpy

## entropy

A quantity which describes the randomness of a substance or system.

## equilibrant force

## equipartition

## escape velocity

The velocity at which the kinetic energy plus the gravitational potential energy of an object is zero. It is the speed needed to "escape" from a gravitational field without further propulsion.

## excited state

## exothermic

An adjective used to refer to a process or reaction that releases energy from a system, usually in the form of heat but also in the form of light, electricity, or sound. Contrast endothermic.

## experimental physics

## F

## farad

## falling bodies

Objects that are moving towards a body with greater gravitational influence, such as a planet.

## faraday

## Faraday constant

## Fermat's principle

## Fermi surface

## fermion

A type of particle that behaves according to Fermi-Dirac statistics, obeys the Pauli exclusion principle, and possesses half-integer spin. Fermions include all quarks and leptons, as well as all composite particles made of an odd number of these (such as all baryons and many atoms and nuclei). Fermions constitute one of two main classes of particles, the other being bosons.

## ferrimagnetism

## ferromagnetism

## field line

## first law of thermodynamics

## fission

Either a nuclear reaction or a radioactive decay process in which the nucleus of an atom splits into smaller parts (lighter nuclei), often producing free neutrons and photons (in the form of gamma rays) and releasing relatively large amounts of energy.

## flavour

fluid
fluid mechanics
fluid physics
fluid statics
fluorescence
flux
flux density

## focal length

## focus

## force (F)

A push or pull. Any interaction that, when unopposed, will change the motion of a physical body. A force has both magnitude and direction, making it a vector quantity. The SI unit used to measure force is the newton.

## force carrier

Force field (physics)

## frame of reference

## Fraunhofer lines

## free body diagram

frequency
frequency modulation

## free fall

Any motion of a body where its own weight is the only force acting upon it.
freezing point
The temperature at which a substance changes state from liquid to solid.

## friction

## function

## fundamental forces

## fundamental frequency

fundamental theorem of calculus

## fusion

A nuclear reaction in which two or more atomic nuclei join together, or "fuse", to form a single heavier nucleus.

G

## gamma ray

A form of electromagnetic radiation of very high frequency and therefore very high energy.

## gas

general relativity
geophysics
gluon
Graham's law of diffusion
gravitation
A natural phenomenon by which physical bodies attract each other with a force proportional to their masses.

## gravitational constant (G)

A physical constant involved in the calculation of gravitational force between two bodies.

## gravitational energy

The potential energy associated with the gravitational field.

## gravitational field

A model used to explain the influence that a massive body extends into the space around itself, producing a force (gravity) on another massive body. Thus, a gravitational field is used to explain and represent gravitational phenomena. It is measured in newtons per kilogram (N/kg).

## gravitational potential

The gravitational potential at a location is equal to the work (energy transferred) per unit mass that is done by the force of gravity to move an object to a fixed reference location.

## gravitational wave

A ripple in the curvature of spacetime that propagates as a wave and is generated in certain gravitational interactions, travelling outward from their source.

## graviton

gravity
See gravitation.

## ground

## ground reaction force

## ground state

group velocity

## H

## hadron

A composite particle made from three quarks or three antiquarks baryon, or one quark and one antiquark meson.

## half-life

The time required for a quantity to fall to half its value as measured at the beginning of the time period. In physics, half-life typically refers to a property of radioactive decay, but may refer to any quantity which follows an exponential decay.

## Hamilton's principle

## Hamiltonian mechanics

## harmonic mean

## heat

A form of energy transferred from one body to another by thermal interaction.

## heat transfer

## Helmholtz free energy

## hertz

The SI unit of frequency, defined as the number of cycles per second of a periodic phenomenon.

## Higgs boson

## homeokinetics

The physics of complex, self-organizing systems.
horsepower (hp)
Huygens-Fresnel principle
hydrostatics

## I

## ice point

A physical process that results in the phase transition of a substance from a liquid to a solid. impedance

The measure of the opposition that a circuit presents to a current when a voltage is applied.

## impulse

The change in momentum, which is equal to the average net external force multiplied by the time this force acts.

## inductance

## infrasound

## inertia

The resistance of any physical object to a change in its state of motion or rest, or the tendency of an object to resist any change in its motion.

## inductive reactance

## integral

## integral transform

## International System of Units (SI)

The modern form of the metric system, comprising a system of units of measurement devised around seven base units and the convenience of the number ten.

## invariant mass

## ion

An atom or molecule in which the total number of electrons is not equal to the total number of protons, giving the atom a net positive or negative electric charge.

## ionic bond

A type of chemical bond formed through an electrostatic attraction between two oppositely charged ions.

## ionization

The process of converting an atom or molecule into an ion by adding or removing charged particles such as electrons or other ions.

## ionization chamber

## ionizing radiation

## isotope

A variant of a particular chemical element. While all isotopes of a given element share the same number of protons, each isotope differs from the others in its number of neutrons.

## J

## Josephson effect

joule
A derived unit of energy, work, or amount of heat in the International System of Units.

## K

## Kelvin

A scale and unit of measurement of temperature. The Kelvin scale is an absolute thermodynamic temperature scale which uses absolute zero as its null point.

## kinematics

The branch of classical mechanics that describes the motion of points, bodies (objects), and systems of bodies (groups of objects) without consideration of the causes of motion. The study of kinematics is often referred to as the "geometry of motion".

## kinetic energy

The energy that a physical body possesses due to its motion, defined as the work needed to accelerate a body of a given mass from rest to its stated velocity. The body continues to
maintain this kinetic energy unless its velocity changes. Contrast potential energy.

## Kirchhoff's circuit laws

Two approximate equalities that deal with the current and voltage in electrical circuits. See Kirchhoff's laws for other meanings of the term.

## Kirchhoff's equations

In fluid dynamics, a set of equations which describe the motion of a rigid body in an ideal fluid.

## L

## Lagrangian mechanics

## laminar flow

Occurs when a fluid flows in parallel layers with no disruption between the layers.

## Laplace transform

## Laplace-Runge-Lenz vector

A vector used chiefly to describe the shape and orientation of the orbit of one astronomical body around another, such as a planet revolving around a star. For two bodies interacting by Newtonian gravity, the LRL vector is a constant of motion, meaning that it is the same no matter where it is calculated on the orbit; equivalently, the LRL vector is said to be conserved.

## laser

A device that emits light through a process of optical amplification based on the stimulated emission of electromagnetic radiation. The word "laser" is an acronym for "light amplification by stimulated emission of radiation"

## law of universal gravitation

## LC circuit

A circuit consisting of an inductor (with inductance L ) and a capacitor (with capacitance C ).

## Lenz's law

## lepton

An elementary particle which does not undergo strong interactions but is subject to the Pauli exclusion principle. Two main classes of leptons exist: charged leptons (also known as the electron-like leptons) and neutral leptons (better known as neutrinos).

## lever

A type of machine consisting of a beam or rigid rod pivoted at a fixed hinge or fulcrum; one of six classical simple machines.

## levitation (physics)

## light

A form of electromagnetic radiation that occupies a certain range of wavelengths within the electromagnetic spectrum. In physics, the term sometimes refers collectively to electromagnetic radiation of any wavelength, in which case light includes gamma rays, X-rays, microwaves, and radio waves, but in common usage "light" more often refers specifically to visible light.

## linear actuator

A form of motor that generates a linear movement directly.

## linear algebra

The branch of mathematics concerning vector spaces, often finite or countably infinite dimensional, as well as linear mappings between such spaces.

## line of force

## linear elasticity

The mathematical study of how solid objects deform and become internally stressed due to prescribed loading conditions. Linear elasticity is a simplification of the more general nonlinear theory of elasticity and is a branch of continuum mechanics.

## Liouville's theorem

Phase space volume is conserved.

## liquid

One of four classical states of matter having a definite volume but no fixed shape.

## liquid crystal (LC)

A state of matter which has properties between those of a conventional liquid and those of a solid crystal. For instance, an LC may flow like a liquid, but its molecules may be oriented in a crystal-like way.

## longitudinal wave

## M

## M-theory

An extension of string theory that attempts to unify seemingly contradictory mathematical formulations and which identifies 11 dimensions.

## Mach number

A dimensionless quantity representing the ratio of the speed of an object moving through a fluid to the local speed of sound.

## Mach's principle

The proposition that the existence of absolute rotation (the distinction of local inertial frames vs. rotating reference frames) is determined by the large-scale distribution of matter.

## machine

Any powered tool consisting of one or more parts that is constructed to achieve a particular goal. Machines are usually powered by mechanical, chemical, thermal or electrical means, and are frequently motorised.

## machine element

An elementary component of a machine. There are three basic types: structural components, mechanisms, and control components.

## Maclaurin series

A representation of a function as an infinite sum of terms that are calculated from the values of the function's derivatives at a single point.

## magnetic field

A mathematical description of the magnetic influence of electric currents and magnetic materials. The magnetic field at any given point is specified by both a direction and a magnitude (or strength); as such it is a vector field.

## magnetism

A property of materials that respond to an applied magnetic field.

## magnetostatics

## mass

## mass balance

An application of the law of conservation of mass to the analysis of physical systems.

## mass density

See density.

## mass flux

The rate of mass flow per unit area. The common symbols are $\mathrm{j}, \mathrm{J}, \varphi$, or $\Phi$, sometimes with subscript m to indicate mass is the flowing quantity. Its SI units are $\mathrm{kg} \mathrm{s}-1 \mathrm{~m}-2$.

## mass moment of inertia

A property of a distribution of mass in space that measures its resistance to rotational acceleration about an axis.

## mass number

The total number of protons and neutrons (together known as nucleons) in an atomic nucleus.

## mass spectrometry

material properties

## materials science

An interdisciplinary field incorporating elements of physics, chemistry, and engineering that is concerned with the design and discovery of new materials, particularly solids.

## mathematical physics

The application of mathematics to problems in physics and the development of mathematical methods suitable for such applications and for the formulation of physical theories.

## mathematics

The abstract study of topics encompassing quantity, structure, space, change, and other properties.

## matrix

A rectangular array of numbers, symbols, or expressions arranged in rows and columns. The individual items in a matrix are called its elements or entries.

## matter

Any substance (often a particle) that has rest mass and (usually) also volume.

## Maxwell's equations

A set of partial differential equations that, together with the Lorentz force law, form the foundation of classical electrodynamics, classical optics, and electric circuits. Maxwell's equations describe how electric and magnetic fields are generated and altered by each other and by charges and currents.

## measure of central tendency

A term which relates to the way in which quantitative data tend to cluster around some value. A measure of central tendency is any of a number of ways of specifying this "central value".

## mechanical energy

mechanical filter
mechanical equilibrium
mechanical wave
mechanics
The branch of science concerned with the behaviour of physical bodies when subjected to forces or displacements and the subsequent effects of the bodies on their environment.

## melting

A physical process that results in the phase transition of a substance from a solid to a liquid.

## meson

A type of hadronic subatomic particle composed of one quark and one antiquark bound together by the strong interaction. All mesons are unstable, with the longest-lived lasting for only a few hundredths of a microsecond.

## modulus of elasticity

The mathematical description of an object's or substance's tendency to be deformed elastically (i.e. non-permanently) when a force is applied to it. The elastic modulus of an object is defined as the slope of its stress-strain curve in the elastic deformation region. As such, a stiffer material will have a higher elastic modulus.

## molar concentration

## molar mass

A physical property of matter defined as the mass of a given substance divided by the amount of substance and expressed in grams per mole.

## molecule

An electrically neutral group of two or more atoms held together by covalent chemical bonds. Molecules are distinguished from ions by having a net electric charge equal to zero.

## molecular physics

A branch of physics that studies the physical properties of molecules and the chemical bonds between atoms as well as their molecular dynamics. It is closely related to atomic physics and overlaps greatly with theoretical chemistry, physical chemistry and chemical physics.

## moment

## moment of inertia

A property of a distribution of mass in space that measures its resistance to rotational acceleration about an axis.

## momentum

A vector quantity consisting of the product of the mass and velocity of an object.

## monochromatic light

## motion

Any change in the position of an object over time. Motion can be mathematically described in terms of displacement, distance, velocity, speed, acceleration, and momentum, and is observed by attaching a frame of reference to an observer and measuring the change in an object's position relative to that frame. An object's motion cannot change unless it is acted upon by a force.

## muon

An elementary particle, technically classified as a lepton, that is similar to the electron, with unitary negative electric charge ( -1 ) and a spin of $1 / 2$. Muons are not believed to have any substructure.

## $\mathbf{N}$

## nanoengineering

The practice of engineering on the nanoscale. Nanoengineering is largely a synonym for nanotechnology, but emphasizes the applied rather the field.

## nanotechnology

The manipulation of matter on an atomic and molecular scale; a more generalized description by the National Nanotechnology Initiative is "the manipulation of matter with at least one dimension sized from 1 to 100 nanometres".

## Navier-Stokes equations

## neurophysics

neutrino
A type of electrically neutral subatomic particle denoted by the Greek letter v (nu). All evidence suggests that neutrinos have mass but that their mass is tiny even by the standards of subatomic particles. Their mass has never been measured accurately.

## neutron

Subatomic particle with no charge

- prompt neutron

Immediate emission of neutrons after a nuclear fission event

- delayed neutron

Delayed emission of neutrons after a nuclear fission event, by one of the fission products (actually, a fission product daughter after beta decay)

## neutron cross-section

newton ( N )

## Newton's laws of motion

A set of three physical laws which describe the relationship between the forces acting on a body and its motion due to those forces. Together they form the basis for classical or Newtonian mechanics.

## Newton's law of universal gravitation

## Newtonian fluid

## Newtonian mechanics

## normal force

nuclear force

## nuclear physics

The branch of physics that studies the constituents and interactions of atomic nuclei.

## nuclear reaction

## nuclear transmutation

## nucleon

Either a proton or a neutron in its role as a component of an atomic nucleus.

## nucleus

## nuclide

An atomic species characterized by the specific composition of its nucleus, i.e. by its number of protons, its number of neutrons, and its nuclear energy state.

## 0

## Ohm

The SI derived unit of electrical resistance.

## Ohm's law

The electric current through a conductor between two points is directly proportional to the potential difference across the two points.

## optical tweezers

An optomechanical device used for the capture, analysis, and manipulation of dielectric objects or particles, which operates via the application of force by the electric field of light.

## optically detected magnetic resonance

An optical technique for the initialisation and readout of quantum spin in some crystal defects.

## optics

The branch of physics which involves the behaviour and properties of light, including its interactions with matter and the construction of instruments that use or detect it. Optics usually describes the behaviour of visible, ultraviolet, and infrared light; however, other forms of electromagnetic radiation such as X-rays, microwaves, and radio waves exhibit similar properties.

## $\mathbf{P}$

paraffin
parallel circuit
parity

1. (mathematics)
2. (physics)
particle
particle accelerator
particle displacement

## particle physics

A branch of physics that studies the nature of particles, which are the constituents of what is usually referred to as matter and radiation.

## Pascal's law

A principle in fluid mechanics which states that pressure exerted anywhere in a confined incompressible fluid is transmitted equally in all directions throughout the fluid such that the initial pressure variations remain the same.

## Pauli exclusion principle

## pendulum

## periodic table of the elements

A tabular display of the chemical elements organised on the basis of their atomic numbers, electron configurations, and recurring chemical properties. Elements are presented in order of increasing atomic number (number of protons).

## phase (matter)

phase (waves)

## phase equilibrium

phenomenology

## phosphorescence

photoelectric effect

## photon

An elementary particle, the quantum of light and all other forms of electromagnetic radiation, and the force carrier for the electromagnetic force.

## photonics

## physical chemistry

The study of macroscopic, atomic, subatomic, and particulate phenomena in chemical systems in terms of laws and concepts of physics.

## physical constant

## physical quantity

## physics

The natural science that involves the study of matter and its motion through space and time, along with related concepts such as energy and force. More broadly, it is the general analysis of nature, conducted in order to understand how the universe behaves.

## piezoelectricity

## pion

Planck constant ( $h$ )
A fundamental universal physical constant that is the quantum of action in quantum mechanics.

## Planck units

Planck's law
plasma
plasma physics
plasticity

## pneumatics

The study and control of mechanical force and movement generated by the application of compressed gas.

## positron

potential energy
power
pressure
The ratio of force to the area over which that force is distributed.
principle of relativity
probability
A measure of the expectation that an event will occur or that a statement is true. Probabilities are given a value between 0 (will not occur) and 1 (will occur). The higher the probability of an event, the more certain one can be that the event will occur.

## probability distribution

probability theory
proton
psi particle
pulley
A wheel on an axle that is designed to support movement of a cable or belt along its circumference; one of six classical simple machines. Pulleys are used in a variety of ways to lift loads, apply forces, and transmit power.
pulse
pulse wave

## quantization

quantum

## quantum chromodynamics

quantum electrodynamics (QED)
The relativistic quantum field theory of electrodynamics. In essence, it describes how light and matter interact and is the first theory where full agreement between quantum mechanics and special relativity is achieved. QED mathematically describes all phenomena involving electrically charged particles interacting by means of exchange of photons and represents the quantum counterpart of classical electromagnetism, giving a complete account of matter and light interaction.

## quantum field theory

A theoretical framework for constructing quantum mechanical models of subatomic particles in particle physics and quasiparticles in condensed matter physics.

## quantum gravity

## quantum mechanics

A branch of physics dealing with physical phenomena at microscopic scales, where the action is on the order of the Planck constant. Quantum mechanics departs from classical mechanics primarily at the quantum realm of atomic and subatomic length scales, and provides a mathematical description of much of the dual particle-like and wave-like behavior and interactions of energy and matter that occur at this scale.
quantum number
quantum physics
quantum state

## quark

An elementary particle and a fundamental constituent of matter. Quarks combine to form composite particles called hadrons, the most stable of which are protons and neutrons, the components of atomic nuclei.
quasiparticle
R
radiant energy
radiation
radioactive decay

## radionuclide

Any nuclide possessing excess nuclear energy to the point that it is unstable. Such excess energy is emitted through any of several processes of radioactive decay, resulting in a stable nuclide or sometimes another unstable radionuclide which can then undergo further decay. Certain radionuclides occur naturally; many others can be produced artificially in nuclear reactors, cyclotrons, particle accelerators, or radionuclide generators.

## radius of curvature

redshift
A phenomenon which occurs when light seen coming from an object that is moving away from the observer is proportionally increased in wavelength or "shifted" to the red end of the visible light spectrum.
refraction

The change in direction of a wave as it passes from one transmission medium to another or as a result of a gradual change in the medium. Though most commonly used in the context of refraction of light, other waves such as sound waves and fluid waves also experience refraction.

## refractive index

## relative atomic mass

relativistic mechanics
relativity
rest frame
rigid body
An idealization of a solid body in which deformation is neglected. In other words, the distance between any two given points of a rigid body remains constant in time regardless of the external forces exerted on it. Even though such an object cannot physically exist due to relativity, objects can normally be assumed to be perfectly rigid if they are not moving near the speed of light.

## rotational energy

The kinetic energy due to the rotation of an object, which forms part of its total kinetic energy.

## rotational speed

The number of complete rotations or revolutions a rotating body makes per unit time.

## Rydberg formula

A formula used in atomic physics to describe the wavelengths of spectral lines of many chemical elements.

## S

## scalar

Any simple physical quantity that can be described by a single number (as opposed to vectors, tensors, etc., which are described by several numbers such as magnitude and direction) and is unchanged by coordinate system rotations or translations (in Newtonian mechanics) or by Lorentz transformations or central-time translations (in relativity).

## scattering

The general physical process by which some forms of radiation, such as light, sound, or moving particles, are forced to deviate from a straight trajectory by one or more localised nonuniformities in the medium through which they pass.

## science

A systematic enterprise that builds and organises knowledge in the form of testable explanations and predictions about the universe.

## screw

A mechanism that converts rotational motion to linear motion, and a torque (rotational force) to a linear force; one of six classical simple machines.

## second law of thermodynamics

## Seebeck effect

series circuit
shadow matter
shear modulus

## shear strength

## shear stress

## shortwave radiation (SW)

Radiant energy of the electromagnetic spectrum with wavelengths in the visible, near-ultraviolet, and near-infrared spectra, the broadest definition of which includes all radiation with a wavelength between $0.1 \mu \mathrm{~m}$ and $5.0 \mu \mathrm{~m}$.

## Schrödinger equation

A mathematical equation which describes the time evolution of wave functions in quantum mechanics.

## simple harmonic motion

## simple machine

A mechanical device that changes the direction or magnitude of a force. In general, a set of six classical simple machines identified by Renaissance scientists drawing from Greek texts on technology are collectively defined as the simplest mechanisms that can provide mechanical advantage (also called leverage).

## siphon

A tube in an inverted $U$ shape that causes a liquid to flow uphill without pumps, powered by the fall of the liquid as it flows down the tube under the pull of gravity. The term may also more generally refer to a wide variety of devices involving the flow of liquids through tubes.

## Snell's law

## solar cell

## solid

## solid mechanics

## solid-state physics

## solubility

The tendency of a solid, liquid, or gaseous chemical substance (called a solute) to dissolve in another solid, liquid, or gaseous substance (called a solvent) to form a homogeneous solution of the solute in the solvent. The solubility of a solute fundamentally depends on the specific solvent as well as on temperature and pressure.

## sound

A mechanical wave that is an oscillation of pressure transmitted through a solid, liquid, or gas and composed of frequencies within the range of human hearing.

## special relativity

specific activity
speed
speed of light ( $c$ )
A fundamental universal physical constant defined as exactly 299,792,458 metres per second, a figure that is exact because the length of the metre is defined from this constant and the international standard for time. When not otherwise qualified, the term "speed of light" usually refers to the speed of light in vacuum, as opposed to the speed of light through some physical medium.

## speed of sound

## spherical aberration

spin quantum number

## stable isotope ratio

The relative abundances of the atomically stable isotopes of a given element as they occur in nature or in a particular experimental context.

## stable nuclide

Any nuclide that is not radioactive and does not spontaneously undergo radioactive decay, as opposed to a radionuclide. When such nuclides are referred to in relation to specific elements, they are usually termed stable isotopes.

## standard atomic weight

## Standard Model

The theory of particle physics which describes three of the four known fundamental forces (the electromagnetic force, the weak force, and the strong force, but not the gravitational force) and classifies all known elementary particles.

## standing wave

## state of matter

## statics

The branch of mechanics concerned with the analysis of loads (force and torque, or "moment") on physical systems in static equilibrium, that is, in a state where the relative positions of subsystems do not vary over time, or where components and structures are at a constant velocity.

## statistical mechanics

## stiffness

The rigidity of an object, i.e. the extent to which it resists deformation in response to an applied force.

## strain

The transformation of a body from a reference configuration to a current configuration. A configuration is a set containing the positions of all particles of the body.

## strain hardening

## strength of materials

## stress

1. An applied force or system of forces that tends to strain or deform a physical body.
2. A measure of the internal forces acting within a deformable body.
3. A quantitative measure of the average force per unit area of a surface within a body on which internal forces act.

## stress-strain curve

string duality
string theory
structural load

## subatomic particle

Any particle that is smaller than an atom.

## sublimation

The physical process by which matter is transformed directly from the solid phase to the gas phase without passing through an intermediate liquid phase. Sublimation is an endothermic phase transition that occurs at temperatures and pressures below a substance's triple point in its phase diagram.

## superconductivity

## superconductor

A phenomenon of exactly zero electrical resistance and expulsion of magnetic fields occurring in certain materials when cooled below a characteristic critical temperature.

## superhard material

superposition principle

## T

## temperature

A physical property of matter that quantitatively expresses the common notions of hot and cold.

## tensile modulus

## tensile strength

## tesla (T)

## test particle

## theoretical physics

A branch of physics that employs mathematical models and abstractions of physical objects and systems in order to rationalize, explain, and predict natural phenomena, as opposed to experimental physics, which relies on data generated by experimental observations.

## theory of everything (ToE)

## theory of relativity

## thermal conduction

## thermal equilibrium

A state in which there is no net flow of thermal energy between two physical systems when the systems are connected by a path permeable to heat. A system may also be said to be in thermal equilibrium with itself if the temperature within the system is spatially and temporally uniform. Systems in thermodynamic equilibrium are always in thermal equilibrium, but the converse is not always true.

## thermal radiation

## thermionic emission

## thermodynamic equilibrium

thermodynamic free energy

## thermodynamics

## thermometer

An instrument used to measure temperature.

## third law of thermodynamics

threshold frequency

## torque

The tendency of a force to rotate an object about an axis, fulcrum, or pivot. Just as a force is a push or a pull, a torque can be thought of as a twist to an object.

## total internal reflection

## toughness

The ability of a material to absorb energy and plastically deform without fracturing. Material toughness is defined as the amount of energy per unit volume that a material can absorb before rupturing. It is also defined as the resistance to fracture of a material when stressed.

## trajectory

The path that a moving object follows through space as a function of time.

## transducer

## transmission medium

## transverse wave

## trigonometry

A branch of mathematics that studies triangles and the relationships between their sides and the angles between these sides.

## trimean

## triple point

The temperature and pressure at which the three phases (gas, liquid, and solid) of a given substance coexist in thermodynamic equilibrium.

## truncated mean

## U

## Unbalanced forces

When there is unbalanced force(s); and as such, the object changes its state of motion. The object is not at equilibrium and subsequently accelerates.

## uncertainty principle

Any of a variety of mathematical inequalities asserting a fundamental limit to the precision with which certain pairs of physical properties of a particle, such as position $x$ and momentum $p$, cannot be known simultaneously.

## unified atomic mass unit

One dalton: one-twelfth the mass of an isolated neutral atom of the isotope ${ }_{6}^{12} \mathrm{C}$ in its ground state.

## uniform motion

## uniform circular motion

## unit vector

utility frequency
The frequency of the oscillations of alternating current (AC) in an electric power grid transmitted from a power plant to the end-user.

## V

## vacuum

An area of space which contains no matter.

## valence electron

An electron that is associated with an atom and can participate in the formation of a chemical bond.

## valence shell

The outermost electron shell of an atom.

## valley of stability

## Van de Graaff generator

variable capacitor
variable resistor
vector
Any quantity that has both magnitude and direction.

## vector space

A mathematical structure formed by a collection of elements called vectors, which may be added together and multiplied ("scaled") by numbers called scalars.

## velocity ( $v$ )

A vector quantity defined as the rate of change of the position of an object with respect to a given frame of reference. Velocity specifies both an object's speed and direction of motion (e.g. 60 kilometres per hour to the north).
virtual image
virtual particle
viscoelasticity
viscosity
visible light
A form of electromagnetic radiation generally defined as the range of wavelengths visible to the average human eye.

## volt (V)

The $\underline{\text { SI }}$ derived unit for electric potential, electric potential difference, and electromotive force, defined as the difference in electric potential between two points of a conducting wire when an electric current of one ampere dissipates one watt of power between those two points.

## Volta potential

voltage
voltmeter
An instrument used for measuring the difference in electric potential between two points in an electric circuit. Analog voltmeters move a pointer across a scale in proportion to the voltage of the circuit.

## volt per metre

volume
W

## W and $Z$ bosons

## watt (W)

A derived unit of power in the International System of Units (SI) defined as one joule per second. The watt measures the rate of energy conversion or transfer.

## wave

A disturbance or oscillation that travels through spacetime accompanied by a transfer of energy.

## wave equation

wave function
wave function collapse
wave-particle duality

## wavelength

A measure of the distance traversed by a single spatial period of a sinusoidal wave, i.e. the distance over which the wave's shape repeats.

## weak interaction

One of the four fundamental forces of nature, along with the strong nuclear force, electromagnetism, and gravitation. It is responsible for the radioactive decay of subatomic
particles and initiates the process known as hydrogen fusion in stars.

## weber (Wb)

wedge
A triangular round tool in the form of a compound and portable inclined plane; one of six classical simple machines.

## weight

## wheel and axle

A wheel attached to an axle in such a way that the two parts rotate together and transfer forces between them; one of six classical simple machines.

## white body

A hypothetical idealized physical body that reflects all incident electromagnetic radiation completely and uniformly in all directions; the opposite of a black body.

## wind

The flow of gases on a large scale.

## work

## work function

## X

## X-ray

A high-energy photon (between 100 eV and 100 keV ) with a wavelength shorter than that of ultraviolet radiation and longer than that of gamma radiation.

## Y

## Young's modulus

A measure of the stiffness of a solid material which defines the relationship between mechanical stress and strain.

Z

## Zeeman effect

The effect of splitting a spectral line into several components in the presence of a static magnetic field by the lifting of degeneracy in electronic states.

## INDEX

## 1. Details of the Students

2. Syllabus
3. Pre Bridge course Test
4. Pre Bridge course Test Analysis
5. Day wise Schedule
6. Post Bridge course Test
7. Post Bridge course Test Analysis

## Syllabus

Organic Chemistry
> Fundamental particles of an atom
$>$ Bohr's atomic theory
$>$ Quantum Numbers
$>$ Basic rules for electronic Configuration
$>$ Atomic number-Electronic configuration of Elements
$>$ Valency of carbon
Types of hybridization in carbon compounds
$>$ Pi bond formation - bond polarisation
$>$ Inductive effect
$>$ Mesomeric effect
$>$ Hyper conjugation effect
$>$ lectronic configuration of Elements
Sigma and Pi bond formation
$>$ Valency bond theory
$>$ Hybridisation of orbitals with examples
Physical Chemistry
$>$ Definition of Lattice point, Space lattice, Unit Cell
$>$ Braggs's Law
$>$ Defects in Crystals
$>$ Joule Thomson effect
> Liquid Crystals
Nernst Distribution Law
$>$ Common Ion Effect
$>$ Solubility Product
> Colligative properties
Inorganic Chemistry
$>$ Periodic Table
Diborane Structure
$>$ Oxidation states
> Magnetic Properties
> Lanthanide Contraction

| Date | Name of the Topic <br> Covered | Name of the <br> Lecturer | Dr.K.Jhansi Lakshmi <br> Bohr's Model, Quantum <br> Numbers,Electronic <br> Configuration |
| :---: | :--- | :--- | :--- |
| 01.10 .2022 | Valency of Carbon, <br> Hybridization, Bond <br> Polarization | Dr.K.Jhansi Lakshmi <br> Inductive Effect, Mesomeric <br> Effect, Hyper conjugation | Dr.K.Jhansi Lakshmi <br> VB Theory, Hybridisation of <br> Orbitals with examples. |
| 03.11 .2022 |  |  |  |

## Students Details

| SI.No | Name of the Student | Group |
| :---: | :---: | :---: |
| 1 | V.Vijaya Lakshmi | MPC |
| 2 | K.Veera Veni | MPC |
| 3 | Ch.Madhuri | MPC |
| 4 | A.Lakshmi | CBMB |
| 5 | P.Bhavani | CBMB |
| 6 | J.Suji | CBZ |
| 7 | R.R.Venkatalakshmi | CBZ |
| 8 | K.Sharmila Ganga | CBZ |
| 9 | S.Meghana Sriveni | CBZ |
| 10 | D.Ganga Bhavani | MPC |
| 11 | K.Bhavani | MPC |
| 12 | S.Sammakka | MPC |
| 13 | T.Anantha | MPC |
| 14 | K.Anusha | CBHT |
| 15 | R.D.Kumari | CZAqT |
| 16 | K.Bala Rajini | CZAqT |
| 17 | V.Muneeswari | CZAqT |
| 18 | V.Sudha Rani | CZAqT |
| 19 | Ch.Anitha | CZAqT |
| 20 | M.Rani | CBMB |
| 21 | P.Kusuma | CBMB |


| 22 | P.Susma | CBMB |
| :---: | :---: | :---: |
| 23 | B.P.Pushpa | CBMB |
| 24 | R.Madhu | CBMB |
| 25 | I.Srilakshmi | CBHT |
| 26 | S.Raja Kumari | CBHT |
| 27 | K.Sai Kumari | MPC |
| 28 | A.D.Mahalakshmi | MPC |
| 29 | M.Satya Spandana | MPC |
| 30 | B.Lovatalli | MPC |
| 31 | R.Sunitha | MPC |
| 32 | P.Krishna Veni | CBMB |
| 33 | K.Veera Veni | CBHT |
| 34 | B.Durga Bhavani | CBZ |
| 35 | A.Akhila | CBZ |
| 36 | K.Saranya | CBHT |
| 37 | T.Asha Jyothi | CBHT |
| 38 | S.Prema Vani | CBHT |
| 39 | G.Akshaya | CBHT |
| 40 | P.Durga Bhavani | CBZ |

# ASDGOVERNMENT DFGREF COLIECEFOR WOMEN(A). KAKINADA 

DEPARTMENT OF CHEMISTRY
BRIDGE COURSE QUESTIONNAIRE
2022-2023

1. Whe introduced the eiectron?
A) J. Thompson
B) Rutherford
C) Chadwick
D) Newton
A) Principal quantum number
B) Angular Quantum Number
C) Magnetic Quantum Number
D) None of these
2. Electronic configuration of inert gas is
A) $1 S^{2} 2 S^{2}$
B) $1 S^{1} 2 S^{2} 2 P^{1}$
C) $1 S^{2} 2 S^{2} 2 \mathrm{P}^{\mathrm{s}}$
D) $1 \mathrm{~S} \cdot 2 \mathrm{~S} \cdot 2 \mathrm{P}$
3. Which group is known as Alkali metal family ?
A) VII A
B) 1 A
C) 11 A
D) VIIIA
4. What is the valency of carbon atom ?
A) 2
B) 3
C) 4
None of these
5. Highest electronegative element
A) Cs
B) F
C) Cl
D) Br
6. what is the Hybridastion in H 2 O molecule?
A) SP3
B) SP
C) SP
D) SP3d
7. Which among the Following is a non metal
A) Potassium
B) Chlorine
C) Silicone
D) Sodium
8. The Maximum number of electrons in a sub shell is given by
A) $21+1$
B) $2(2 \mid+1)$
C) $3 n+1$
D) $2 n^{2}$
9. Which of the following is not a Crystalline solid ?
A) Kcl
B) Cscl
C) Glass
D) Rhombic Sulphur
10. Which substance will conduct the current in the solid state ?
A) Diomond
B) Graphite
C) lodine
D) Sodium
11. Which Defect causes in the density of the crystal ?Which
A) Frenkel
B) Schotty
C) F centre
D) Interstial
12. Which of the following has no units ?
A)Morality
B)Normality
C)molality
D) Mole Fraction
13. Which of the following is a colligative property
A) Boiling Point
B)Osmotic Pressure
C)Vapour pressure
D)Freezing Point
14. Lanthanoids and Actinoids together belong to
A)S - Block
B) P - Block
C)D-Block
D) F - Block
15. Electronic Configuration of Chromium.
A) $\left(A r^{18}\right) 3 d^{5} 4 s^{1}$
B) $\left(\mathrm{Ar}^{18}\right) 3 \mathrm{~d}^{4} 4 \mathrm{~s}^{2}$
C) $\left(\mathrm{Ar}^{18}\right) 3 \mathrm{~d}^{9} 4 \mathrm{~s}^{2}$
D) $\left(\mathrm{Ar}^{18}\right) 3 \mathrm{~d}^{10} 4 \mathrm{~s}^{2}$
16. Hybridisation of Carbon in Acetylene
A) $\mathrm{SP}^{3}$
B) $\mathrm{SP}^{2}$
C) SP
D) $\mathrm{SP}^{3} \mathrm{~d}$
17. Oxidation state of Manganese in $\mathrm{KMnO}_{4}$
A) +2
B) +7
C) +6
D) 0
18. Bond length of Carbon - Carbon double bond.
A) $1.54 \mathrm{~A}^{\circ}$
B) $1.34 \mathrm{~A}^{\circ}$
C) $1.30 \mathrm{~A}^{\circ}$
D) $1.20 \mathrm{~A}^{\circ}$
19. Which one is not a inert gas.
A) He
B) Pt
C) Ar
D) Kr

KEY

| 1.A | $4 . B$ | $7 . \mathrm{A}$ | $10 . \mathrm{C}$ | $13 . \mathrm{D}$ | $16 . \mathrm{A}$ | $19 . \mathrm{B}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 2.B | 5.C | 8.B | 11.D | $14 . \mathrm{B}$ | $17 . \mathrm{C}$ | $20 . \mathrm{B}$ |
| 3.C | $6 . \mathrm{B}$ | $9 . \mathrm{B}$ | $12 . \mathrm{B}$ | $15 . \mathrm{D}$ | $18 . \mathrm{B}$ |  |

Pre and Post Bridge Course Test Marks

| S.No | Name of the Student | $\begin{aligned} & \text { Pre Bridge } \\ & \text { Course Test } \end{aligned}$ | Post Bridge Course Test |
| :---: | :---: | :---: | :---: |
| 1 | V.Vijaya Lakshmi | 15 | 16 |
| 2 | K.Veera Veni | 15 | 18 |
| 3 | Ch.Madhuri | 13 | 17 |
| 4 | A.Lakshmi | 13 | 15 |
| 5 | P.Bhavani | 14 | $17$ |
| 6 | J.Suji | 13 | 18 |
| 7 | R.R.Venkatalakshmi |  |  |
|  |  | +13 | 19 |
| 8 | K.Sharmila Ganga | 13 | 20 |
| 9 | S.Meghana Sriveni | 14 |  |
| 10 | D.Ganga Bhavani |  |  |
| 11 |  | 15 | 16 |
|  | K.Bhavani | 10 | 16 |
| 12 | S.Sammakka |  |  |
| 13 | T.Anantha | 11 | 17 |
| 14 | K.Anusha | 10 | 17 |
| 15 | R.D.Kumari | 15 | 18 |
| 16 | K.Bala Rajini | - 11 | 19 |
|  |  | 10 | 20 |
| 17 | V.Muneeswari | - |  |
| 18 | V.Sudha Rani | 13 | 19 |
|  |  | 11 | 20 |
| 19 | Ch.Anitha | 10 | 16 |
| 20 | M.Rani |  |  |
| 21 | P. Kusuma | 15 | 18 |
|  | P.Kusuma | 15 | 17 |


| 22 | P.Susma | 11 | 16 |
| :---: | :--- | :---: | :---: |
| 23 | B.P.Pushpa | 10 | 18 |
| 24 | R.Madhu | 9 | 17 |
| 25 | I.Srilakshmi | 14 | 17 |
| 26 | S.Raja Kumari | 8 | 18 |
| 27 | K.Sai Kumari | 10 | 16 |
| 28 | A.D.Mahalakshmi | 11 | 17 |
| 29 | M.Satya Spandana | 15 | 18 |
| 30 | B.Lovatalli | 14 | 20 |
| 31 | R.Sunitha | 13 | 19 |
| 32 | P.Krishna Veni | 12 | 19 |
| 33 | K.Veera Veni | 10 | 20 |
| 34 | B.Durga Bhavani | 11 | 17 |
| 35 | A.Akhila | 09 | 16 |
| 36 | K.Saranya | 08 | 18 |
| 37 | T.Asha Jyothi | 07 | 18 |
| 38 | S.Prema Vani | 06 | 18 |
| 39 | G.Akshaya | 10 | 18 |
| 40 | P.Durga Bhavani | 10 | 18 |

$\operatorname{Vin}=A$

## A.S.D GOVT.DEGREE COLLEGE FOR WOMEN (A) Jagannaickpur, Kakinada

## DEPARTMENT OF COMPUTER SCIENCE Activity Register 2022-2023

| Date | 31-10-2022 to 10-11-2022 |
| :---: | :---: |
| Conducted through (DRC/JKC/ELF/NCC/NSS/Department etc., | Department of Computer Science |
| Nature of Activity (seminar/workshop/exten Lecture etc) | BRIDGE COURSE I B.Sc (M.P.Cs) |
| Title of the Activity | Fundamentals Of Computers |
| Name of the Department/ Committee | Department of Computer Science |
| Details of Resourc persons ( Name, Designation etc.,) | N.Naga Subrahmanyeswari M.Tech. <br> Lecturer in Computer Science K.Surya Lakshmi M.Sc(IT) Guest Lecturer in Computer Science |
| No. of students participated | 30 |
| Brief Report on the activity | To get the students acquainted with the Computer fundamentals and programming skills to enhance their caliber in Programming |
| Name of the Lecturers who planned \& conducted the activity | N.Naga Subrahmanyeswari M.Tech. <br> Lecturer in Computer Science <br> K.Surya Lakshmi M.Sc(IT) <br> Guest Lecturer in Computer Science |
| Signature of the Department <br> In-charge/ Convener of the Committee | N.N.S. Eswout to/14/22 |
| Signature of the Principal | V. Amanto pilincipad |
| Remarks | A.S.D.GOVT.DEGREE COLLEGF IW: autonamous rakinada |

# A.S.D GOVT.DEGREE COLLEGE FOR WOMEN (A) <br> <br> DEPARTMENT OF COMPUTER SCIENCE 

 <br> <br> DEPARTMENT OF COMPUTER SCIENCE}

## BRIDGE COURSE <br> on <br> "Fundamentals of Computers"

The Department of Computer Science conducted Bridge course for I B.Sc (M.P.Cs) and I B.Com(CA) students who did not have knowledge about Fundamentals of computers and Programming. Wih this 8-Day course students get acquainted with the basic fundamentals of computers where in the total introduction of the syllabus is covered and there by the student can rise up to a level to apprehend the subject.

## OBJECTIVIES:

- To introduce the fundamentals of computing devices and reinforce computer vocabulary particularly with respect to personal use of computer hardware and software, the Internet, networking and mobile computing.
- To understand basics of computer and working with operating system.
- To acquire basic skills needed to operate a computer.
- To apply computing in problem solving.


## A.S.D.GOVERNMENT DEGREE COLLEGE FOR WOMEN (A), KAKINADA

## DEPARTMENT OF COMPUTER SCIENCE

BRIDGE COURSE 2022-2023
Fundamentals of Computers

| S.NO | DATE | SYLLABUS |
| :---: | :---: | :---: |
| 01 | 31/10/2022 | * Introduction to Computers |
| 02 | 1/11/2022 | * Computer Fundamentals |
| 03 | 2/11/2022 | * Computer Components |
| 04 | 3/11/2022 | * Working of Computer |
| 05 | 4/11/2022 | * Hardware |
| 06 | 5/11/2022 | * Software |
| 07 | 6/11/2022 | * Classification of Computers |
| 08 | 7/11/2022 | * Generation of Computers |
| 09 | 8/11/2022 | * Computer Viruses |
| 10 | 09/11/2022 | * Operating Systems |

Signature of the Lecturers

1. NN.S.Espaii

## A.S.D.GOVERNMENT DEGREE COLLEGE FOR WOMEN (A), KAKINADA



## BRIDGE COURSE TIME TABLE

I B.Sc(M.P.Cs) \& I B.Com(CA)
2022-2023

| DAY | TIMINGS |
| :---: | :---: |
| 31/10/2022 | 10.00A.M to 11.00A.M |
| 1/11/2022 | 10.00 A.M to $11.00 \mathrm{~A} . \mathrm{M}$ |
| 2/11/2022 | 10.00 A.M to 11.00A.M |
| 3/11/2022 | $10.00 \mathrm{~A} . \mathrm{M}$ to $11.00 \mathrm{~A} . \mathrm{M}$ |
| 4/11/2022 | 10.00A.M to 11.00A.M |
| 5/11/2022 | 10.00A.M to $11.00 \mathrm{~A} . \mathrm{M}$ |
| 6/11/2022 | $10.00 \mathrm{~A} . \mathrm{M}$ to $11.00 \mathrm{~A} . \mathrm{M}$ |
| 7/11/2022 | 10.00A.M to 11.00A.M |
| 8/11/2022 | 10.00A.M to 11.00A.M |
| 9/11/2022 | 10.00A.M to 11.00A.M |

Signature of the Lecturers

1. N.N.S Eswori

## A.S.D.GOVT.DEGREE COLLEGE FOR WOMEN(A), KAKINADA DEPARTMENTS OF COMPUTER SCIENCE <br> BRIDGE COURSE <br> Fundamentals of Computers

| S.NO. | NAME OF THE STUDENT | CLASS | SIGNATURE |
| :---: | :---: | :---: | :---: |
| 1. | B.Sri Ramya Priya | I B.Sc(M.P.Cs) | R. Ori Ranyer priya |
| 2. | B. Bhavya Vijaya | $1 \mathrm{~B} . \mathrm{Sc}(\mathrm{M} . \mathrm{P} . \mathrm{Cs})$ | $B$. Bhavua vijo |
| 3. | S.Gnga Mahalakshmi | I B.Sc(M.P.Cs) | S. Goung mahalakstui, |
| 4. | Ch.Devi | I B.Sc(M.P.Cs) | ch. Devi |
| 5. | A.Durga Devi | 1B.Sc(M.P.Cs) | A. Durga Devi |
| 6. | M.Satya Asha Deepthi | 18.Sc(M.P.Cs) | M. Satala Asha Deeptio |
| 7. | P. Anusha | IB.Sc(M.P.Cs) | p. Anusha |
| 8. | S. Nagambika | I B.Sc(M.P.Cs) | S. Nagambika |
| 9. | V. Maheswari | IB.Sc(M.P.Cs) | U. Mnheswari |
| 10. | A. Siri Chandana | 1 B.Sc(M.P.Cs) | A. S. Chandana. |
| 11. | B. Gayatri Devi | IB.Sc(M.P.Cs) | B. Gayathi Deni |
| 12. | B. Lalitha | IB.Sc(M.P.Cs) | B. Lalitha |
| 13. | Ch.Pushpa Bhavani | I B.Sc(M.P.Cs) | ch. Pushparshavani |
| 14. | Ch. Baby Sireesha | 1 B.Sc(M.P.Cs) | Ch. Babt siveesh |
| 15. | Ch. Bhuvaneswari | $1 \mathrm{~B} . \mathrm{Sc}(\mathrm{M} . \mathrm{P} . \mathrm{Cs})$ | Ch. Bhuramerwari |
| 16. | D. Divya Sri | $1 \mathrm{~B} . \mathrm{Sc}$ (M.P.Cs) | D. Divga sri |
| 17. | D. Sai Veni | $1 \mathrm{~B} . \mathrm{Sc}(\mathrm{M} . \mathrm{P} . \mathrm{Cs})$ | D. Divya $\mathrm{sr}_{\text {ri }}$ |
| 18. | G. Vijaya Lakshmi | I B.Sc(M.P.Cs) | D. S.veni |
| 19. | K. Sri Lakshmi | $1 \mathrm{~B} . \mathrm{Sc}(\mathrm{M} . \mathrm{P} . \mathrm{Cs})$ | K. S. Lakshmis |
| 20. | L. Naga Lakshmi | I B.Sc(M.P.Cs) | L. Naga lak shmi |
| 21. | M. Ramya | I B.Sc(M.P.Cs) | M Pamea |
| 22. | M. Veera Veni | I B.Sc(M.P.Cs) | M. veera veni |
| 23. | P.B.V.Ganga Sindhu | I B.Sc(M.P.Cs) | P.B.V. Songa sina |


| S.NO. | NAME OF THE STUDENT | Class | SIGNATURE |
| :---: | :---: | :---: | :---: |
| 24. | P. Durge Bhavan! | I B.Sc(M.P.Cs) | d. Dungra |
| 25. | Y.Teja sri Sal Pavani | 1 B.Sc(M.P.Cs) | Teja |
| 26. | V. Sangeetha | $1 \mathrm{~B} . \mathrm{Sc}(\mathrm{M} . \mathrm{P} . \mathrm{Cs})$ | V. Sangeethe |
| 28 | S. Chandini | I B.Sc(M.P.Cs) | $S$ chandini |
| 28. | J. Thanu Sri | I B.Sc(M.P.Cs) | J. Thanes Sri |
|  | D. Veeraveni | I B.Sc(M.P.Cs) | D. Vearaven |
| 3. | P. Maha Lakshmi | I B.Sc(M.P.Cs) | P. Mahal akr his |

## A.S.D GOVT.DEGREE COLLEGE FOR WOMEN (A)

## DEPARTMENT OF COMPUTER SCIENCE ATTENDANCE for BRIDGE COURSE

| $\begin{gathered} \text { S.N } \\ 0 \end{gathered}$ | Name of the Student | 31/10/22 | 1/11/22 | 2/11/22 | 3/11/22 | 4/11/22 | 3/11/22 | 6/11/22 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | B.Sri Ramya Priya | $P$ | $p$ | $p$ | $P$ | $P$ | $p$ | $p$ |
| 2. | B. Bhavya Vijaya | $p$ | $P$ | 9 | $P$ | $P$ | $P$ | A |
| 3. | S.Gnga Mahalakshmi | A | $P$ | $P$ | $P$ | $P$ | $p$ | $P$ |
| 5 | Ch.Devi | $p$ | $A$ | $p$ | $P$ | $P$ | $P$ | $P$ |
| 5. | A.Durga Devi | P | $P$ | A | $P$ | $P$ | $P$ | A |
| 6. | M.Satya Asha Deepthi | P | P | $\frac{1}{p}$ |  |  |  | A |
| 7. | P. Anusha | P |  |  |  |  |  |  |
| 8. |  | $P$ | P | A | P | P | P | $P$ |
| 9. | S.Nagambika | $P$ | $P$ | $P$ | $P$ | $P$ | 1 | $P$ |
| 10. | V. Maheswari | $A$ | $p$ | $p$ | $P$ | $P$ | $p$ | P |
| 11. | A. Siri Chandana | $p$ | A | $P$ | $P$ | $P$ | $p$ | $\rho$ |
| 12 | B. Gayatri Devi | A | A | $p$ | $P$ | $P$ | $P$ | P |
| 12. | B. Lalitha | $p$ | $P$ | $P$ | A | $P$ | $P$ | $P$ |
| 13. | Ch.Pushpa Bhavani | $p$ | $P$ | $P$ | $P$ | A | $p$ | $p$ |
| 14. | Ch. Baby Sireesha | $p$ | P | $P$ | P | $P$ | A | $P$ |
| 15. | Ch. Bhuvaneswari | $A$ | A | $P$ | $P$ | , |  |  |
| 16. | D.Divya Sri | $P$ | $p$ |  | P |  |  |  |
| 17. | D. Sai Veni |  |  |  | P |  |  | A |
| 18. | G. Vijaya Lakshmi | 0 | P | P |  |  | $P$ | $A$ |
| 19. | K. Sri Lakshmi | $P$ | A | $P$ |  | P | $p$ | $P$ |
| 20. | L. Naga Lakshmi | $P$ |  |  |  |  |  |  |
| 21. |  | $p$ |  |  |  |  | $P$ | $P$ |
| 22. | M. Ramya |  |  |  | $P$ | $P$ | $P$ | $P$ |
| 23. | M. Veera Veni | ? | A | $P$ | $P$ | $p$ | $P$ | $p$ |
| 23. | P.B.V.Ganga Sindhu | $f$ | $p$ | $P$ | A | $P$ | $P$ | P |
| 24. | P. Durga Bhavani | .$P$ | $p$ | $p$ | $p$ | A | $P$ | $P$ |
| 25. | Y.Teja sri Sai Pavani | P | $P$ | $P$ | $P$ | $p$ | $P$ | $A$ |
| 27. | V. Sangeetha S. Chandini | $P$ | $P$ | $P$ | $p$ | $P$ | $p$ | $P$ |
|  | S. Chandini | A | $P$ | $P$ | P | $P$ | $P$ | 7 |


| S.N <br> O | Name of the <br> Student | $31 / 10 / 22$ | $1 / 11 / 22$ | $2 / 11 / 22$ | $3 / 11 / 22$ | $4 / 11 / 22$ | $5 / 11 / 22$ | $6 / 11 / 22$ |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 28. | J. Thanu Sri | $P$ | $P$ | $P$ | $P$ | $P$ | $A$ | $P$ |
| 29. | D. Veeraveni | $P$ | $P$ | $P$ | $A$ | $P$ | $P$ | $P$ |
| 30. | P. Maha Lakshmi | $P$ | $P$ | $P$ | $P$ | $A$ | $P$ | $P$ |

N.N.S. Eswaii

# A.S.D GOVT.DEGREE COLLEGE FOR WOMEN (A) DEPARTMENT OF COMPUTER SCIENCE 



| S.NO | Name of the Student | 7/11/22 | $8 / 11 / 22$ | $9 / 11 / 22$ | $10 / 11 / 22$ |
| :---: | :--- | :---: | :---: | :---: | :---: |
| 28. | J. Thanu Sri | $P$ | $P$ | $P$ | $P$ |
| 29. | D. Veeravenl | $P$ | $A$ | $P$ | $P$ |
| 30. | $P$. Maha Lakshmi | $P$ | $A$ | $P$ | $P$ |

N.N.S. Eswani

COURSE MATERIAL

## INTRODUCTION TO COMPUTERS

## Definition of a Computer:

A computer is an electronic device that manipulates information, or data. It has the ability to store, retrieve, and process data. You may already know that you can use a computer to type documents, send email, play games, and browse the Web. You can also use it to edit or create spreadsheets, presentations, and even videos. The basic parts of a desktop computer are the computer case, monitor, keyboard, mouse, and power cord. Each part plays an important role whenever we use a computer.

## Hardware

Hardware refers to the physical elements of a computer. This is also sometime called the machinery or the equipment of the computer. Examples of hardware in a computer are the keyboard, the monitor, the mouse and the central processing unit. However, most of a computer's hardware cannot be seen; in other words, it is not an external element of the computer, but rather an internal one, surrounded by the computer's casing (tower). A computer's hardware is comprised of many different parts, but perhaps the most important of these is the motherboard. The motherboard is made up of even more parts that power and control the computer.
Software:
Software, commonly known as programs or apps, consists of all the instructions that tell the hardware how to perform a task. These instructions come from a software developer in the form that will be accepted by the platform (operating system + CPU) that they are based on. For example, a program that is designed for the Windows operating system will only work for that specific operating system. Compatibility of software will vary as the design of the software and the operating system differ. Software that is designed for Windows XP may experience a compatibility issue when running under Windows 2000 or NT.

## Computer case



The computer case is the metal and plastic box that contains the main components of the computer, including the motherboard, central processing unit (CPU), and power supply. The front of the case usually has an On/Off button and one or more optical drives. Computer cases come in different shapes and sizes. A desktop case lies flat on a desk, and the monitor usually sits on top of it A tower case is tall and sits next to the monitor or on the floor. All-inone computers come with the internal components built into the monitor, which eliminates the need for a separate case.

## Monitor

The monitor works with a video card, located inside the computer case, to display images and text on the screen. Most monitors have control buttons that allow you to change your monitor's display settings, and some monitors also have built-in speakers.

Newer monitors usually have LCD (liquid crystal display) or LED (light-emitting diode) displays. These can be made very thin, and they are often called flat-panel displays. Older monitors use CRT (cathode ray tube) displays. CRT monitors are much larger and heavier, and they take up more desk space.
A.S.D.GOVT. DEGREE COLLEGE FOR WOMEN (A) (Re-Aecredited with 'B' Grade by NAAC) (Affiliated to Adikavi Nannaya University) Jagannaickpur, Kakinada.

## DEPARTMENT OF COMPUTER SCIENCE



## 2022-2023

## A.S.D GOVT.DEGREE COLLEGE FOR WOMEN (A) Jagannaickpur, Kakinada

## DEPARTMENT OF COMPUTER SCIENCE Activity Register 2022-2023

| Date | 31-10-2022 to 10-11-2022 |
| :---: | :---: |
| Conducted through <br> (DRC/JKC/ELF/NCC/NSS/Department etc.,) | Department of Computer Science |
| Nature of Activity (seminar/workshop/exten Lecture etc) | BRIDGE COURSE I B.Com(CA) |
| Title of the Activity | Fundamentals Of Computers |
| Name of the Department/ Committee | Department of Computer Science |
| Details of Resourc persons <br> (Name, Designation ctc.,) | G.Satya Suneetha M.Tech.,(Ph.D). Lecturer in Computer Applications |
| No. of students participated | 20 |
| Brief Report on the activity | To get the students acquainted with the Computer fundamentals and programming skills to enhance their caliber in Programming |
| Name of the Lecturers who planned \& conducted the activity | G.Satya Suneetha M.Tech.,(Ph.D). Lecturer in Computer Applications |
| Signature of the Department <br> In-charge/ Convener of the Committee | Suneutha lo 1 "1/23 |
| Signature of the Principal | V. Avanta labl |
| Remarks | PRINCTPAL <br> W.S.D.GOVT.DEGRE COIIFGT iW, AUTONOMOUS KAKINADA |

# A.S.D GOVT.DEGREE COLLEGE FOR WOMEN (A) DEPARTMENT OF COMPUTER SCIENCE 

BRIDGE COURSE<br>on<br>"Fundamentals of Computers"

The Department of Computer Science conducted Bridge course for I B.Sc (M.P.Cs) and I B.Com(CA) students who did not have knowledge about Fundamentals of computers and Programming. Wih this 8-Day course students get acquainted with the basic fundamentals of computers where in the total introduction of the syllabus is covered and there by the student can rise up to a level to apprehend the subject.

## OBJECTIVIES:

- To introduce the fundamentals of computing devices and reinforce computer vocabulary particularly with respect to personal use of computer hardware and software, the Internet, networking and mobile computing.
- To understand basics of computer and working with operating system.
- To acquire basic skills needed to operate a computer.
- To apply computing in problem solving.


## A.S.D.GOVT.DEGREE COLLEGE FOR WOMEN(A), KAKINADA DEPARTMENTS OF COMPUTER SCIENCE BRIDGE COURSE <br> Fundamentals of Computers

| S.NO. | NAME OF THE STUDENT | Class | SIGNATURE |
| :---: | :---: | :---: | :---: |
| S.No. | NAME OF THE STUDENT | class | signature |
| 1. | M.Charishma | I B. $\operatorname{Com}(\mathrm{C} . \mathrm{A}$. | M. Charishura |
| 2. | N.Asma | I B.Com(C.A.) | N.Asma |
| 3. | P. Kalyani | I B.Com(C.A.) | P. Kalyani |
| 4. | R.Venkata Mounika | I B.Com(C.A.) | R vonketa th |
| 5. | R.Vimala | I B.Com(C.A.) |  |
| 6. | M. Kalyani | I B.Com(C.A.) |  |
| 7. | M.Nireesha | 1 B.Com(C.A.) | . Kalyan |
| 8. | A.Hemalatha |  |  |
| 9. |  | I B.Com(C.A.) | A. Hemalatha |
|  | B. Lakshmi Prasanna | IB. $\operatorname{Com}(\mathrm{C} . \mathrm{A}$. | B. La kshmiprasanna |
| 10. | Ch. Satyaveni | I B.Com(C.A.) | ch. Satyave |
| 11. | D.Naga Mani | I B.Com(C.A.) | D. Nagumani. |
| 12. | G. Kanaka Maha Lakshmi | I B.Com(C.A.) | GKM latern |
| 13. | G.Navya Mamatha | I B.Com(C.A.) | G.N. Mamatha |
| 14. | G. Chinnari | I B.Com(C.A.) | G. Chinnari |
| 15. | G. Gowri | I B.Com(C.A.) | GiGowr |
| 16. | K.Swathi | I B. $\operatorname{Com}(\mathrm{C} . \mathrm{A}$. | CoSuathi |
| 17. | L. Ramya | I B.Com(C.A.) | C. Ramya |
| 18. | M. Bhargavi | I B.Com(C.A.) | M. Bhargani |
| 19. | V.Sailu | I B.Com(C.A.) | V.Sailu |
| 20. | V.Indira | I B.Com(C.A.) | V. Indira. |

## A.S.D.GOVERNMENT DEGREE COLLEGE FOR WOMEN (A), KAKINADA <br> DEPARTMENT OF COMPUTER SCIENCE

BRIDGE COURSE 2022-2023
Fundamentals of Computer

| S.NO | DATE | SYLLABUS |
| :---: | :---: | :---: |
| 01 | 31/10/2022 | * Introduction to Computers |
| 02 | 1/11/2022 | * Computer Fundamentals |
| 03 | 2/11/2022 | * Computer Components |
| 04 | 3/11/2022 | * Working of Computer |
| 05 | 4/11/2022 | * Hardware |
| 06 | 5/11/2022 | * Software |
| 07 | 6/11/2022 | * Classification of Computers |
| 08 | 7/11/2022 | * Generation of Computers |
| 09 | 8/11/2022 | * Computer Viruses |
| 10 | 09/11/2022 | * Operating Systems |

Signature of the Lecturers

$$
\text { Sunnecha } 10 \mid \times 1 / 23
$$

A.S.D.GOVERNMENT DEGREE COLLEGE FOR WOMEN (A), KAKINADA


BRIDGE COURSE TIME TABLE
I B.Sc(M.P.Cs) \& I B.Com(CA)
2022-2023

| DAY | TIMINGS |
| :---: | :---: |
| 31/10/2022 | 10.00A.M to $11.00 \mathrm{~A} . \mathrm{M}$ |
| 1/11/2022 | 10.00A.M to 11.00 A.M |
| 2/11/2022 | 10.00A.M to 11.00A.M |
| 3/11/2022 | $10.00 \mathrm{~A} . \mathrm{M}$ to $11.00 \mathrm{~A} . \mathrm{M}$ |
| 4/11/2022 | 10.00 A.M to 11.00 A.M |
| 5/11/2022 | 10.00A.M to 11.00A.M |
| 6/11/2022 | 10.00 A.M to 11.00 A.M |
| 7/11/2022 | $10.00 \mathrm{~A} . \mathrm{M}$ to $11.00 \mathrm{~A} . \mathrm{M}$ |
| 8/11/2022 | $10.00 \mathrm{~A} . \mathrm{M}$ to $11.00 \mathrm{~A} . \mathrm{M}$ |
| 9/11/2022 | $10.00 \mathrm{~A} . \mathrm{M}$ to $11.00 \mathrm{~A} . \mathrm{M}$ |

Signature of the Lecturers

## A.S.D GOVT.DEGREE COLLEGE FOR WOMEN (A)

## DEPARTMENT OF COMPUTER SCIENCE <br> ATTENDANCE for BRIDGE COURSE

| S.N | $\begin{aligned} & \text { Name of the } \\ & \text { Student } \end{aligned}$ | 31/10/22 | 1/11/22 | 2/1/22 | 3/1/22 | 4/11/22 | 5/1/22 | 6/11/22 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | M. Charishma | P | $P$ | P | P | P | P | A |
| $\frac{2}{3 .}$ | N.Asma | P | P | P | $P$ | P | A | $p$ |
| 4. | P. Kalyani | $P$ | A | $P$ | $P$ | P | $P$ | P |
| 4. | R.Venkata Mounika | P | P | A | $P$ | $P$ | P | $p$ |
| ${ }^{5} 6$. | R.Vimala | P | P | P | A | $P$ | $P$ | P |
| 6. | M.Kalyani | $P$ | P | P | $P$ | A | $P$ | $P$ |
| ${ }_{8} 8$. | M.Nireesha | $P$ | $P$ | $P$ | P | P | A | $P$ |
| ${ }_{8}^{8 .}$ | A.Hemalatha | P | P | P | $p$ | $P$ | $P$ | A |
| ${ }^{9}$ | B. Lakshmi Prasanna | A | P | P | $p$ | $P$ | P | P |
| ${ }^{11}$. | Ch. Satyaveni | A | $P$ | P | $P$ | P | $P$ | P |
| ${ }^{11} 12$. | D. Naga Mani | $p$ | A | P | P | $P$ | P | P |
| 12. | $\begin{aligned} & \text { G. Kanaka Maha } \\ & \text { Lakshmi } \end{aligned}$ | $p$ | $P$ | A | $P$ | P | $p$ | P |
| 13. | G.Navya Mamatha | $p$ | $P$ | $P$ | A | P | P | P |
| 14. | G. Chinnari | P | $P$ | P | $P$ | $P$ | P | $p$ |
| 15. | G. Gowri | P | $P$ | A | $P$ | $p$ | P | P |
| ${ }^{16 .}$ | K.Swathi | $A$ | $P$ | P | P | P | $P$ | $P$ |
| 17. | L. Ramya | P | A | $p$ | P | P | $P$ | $P$ |
| 18. | M. Bhargavi | $P$ | P | A | $P$ | P | $P$ | $P$ |
| 19. | v.Sailu | $P$ | P | $P$ | $A$ | $p$ | $P$ | $P$ |
| 20. | V.Indira | $P$ | P | P | $p$ | A | P | $P$ |

## A.S.D GOVT.DEGREE COLLEGE FOR WOMEN (A) DEPARTMENT OF COMPUTER SCIENCE

ATTENDANCE for BRIDGE COURSE

| S.No. | Name of the Student | 7/11/22 | 8/11/22 | 9/11/22 | 10/11/22 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | M.Charishma | $P$ | P | $P$ | $P$ |
| 2. | N.Asma | $p$ | $P$ | $A$ | P |
| 3. | P. Kalyani | $p$ |  | A | $P$ |
| 4. | R.Venkata Mounika |  |  |  |  |
| 5. | R.Venkata Mounika | $P$ | $P$ | $\rho$ | A |
| 5. | R.Vimala | A | $p$ | $p$ | $p$ |
| 6. | M,Kalyani | P | $p$ | $P$ | $p$ |
| 7. | M. Nireesha | $P$ | A | $P$ | P |
| 8. | A.Hemalatha | A | $P$ | $P$ | $P$ |
| 9. | B. Lakshmi Prasanna | $p$ | $P$ | A | $P$ |
| 10. | Ch. Satyaveni | $P$ | $P$ | $P$ | A |
| 11. | D. Naga Mani | P | $P$ | $P$ | A |
| 12. | G. Kanaka Maha Lakshmi | A | $P$ | P | $P$ |
| 13. | G.Navya Mamatha | $P$ | A | $P$ | $P$ |
| 14. | G. Chinnari | $P$ | $p$ | A | $P$ |
| 15. | G. Gowri | P | $p$ | $P$ | $P$ |
| 16. | K.Swathi | $p$ | $P$ | $P$ | $P$ |
| 17. | L. Ramya | $P$ | A | P | $P$ |
| 18. | M. Bhargavi | $p$ | P | $P$ | $A$ |
| 19. | V.Sailu | $P$ | $P$ | $P$ | $P$ |
| 20. | V.Indira | $p$ | A | $p$ | $P$ |

## COURSE MATERIAL

## INTRODUCTION TO COMPUTERS

## Definition of a Computer:

to store, retrievo, and pronic device that manipulates information, or data. It has the ability documents, send email, play data. You may already know that you can use a computer to type create spreadsheets, presentations, games, and browse the Web. You can also use it to edit or the computer case, monitor, keybond even videos. The basie parts of a desktop computer are role whenever we use a computer.

## Hardware

Hardware refers to the physical elements of a computer. This is also sometime called the keyboard, the monitor, the me of the computer. Examples of hardware in a computer are the hardware cannot be seen; in ouse and the central processing unit. However, most of a computer's an internal one, surrounded by ther words, it is not an external element of the computer, but rather of many different parts, but the computer's casing (tower). A computer's hardware is comprised motherboard is made up of even perhaps the most important of these is the motherboard. The Software:

Software, commonly known as programs or apps, consists of all the instructions that tell the hardware how to perform a task. These instructions come from a software developer in the form example, a program the platform (operating system + CPU) that they are based on. For specific operating system. Compned for the Windows operating system will only work for that operating system differ. Software that is of software will vary as the design of the software and the issue when running under Winare that is designed for Windows XP may experience a compatibility

## Computer case

The computer case is the metal and plastic box that contains the main components of the computer, including the motherboard, central processing unit (CPU), and power supply. The front of the case usually has an On/Off button and one or more optical drives. Computer cases come in different shapes and sizes. A desktop case lies flat on a desk, and the monitor usually sits on top of it. A tower case is tall and sits next to the monitor or on the floor. All-inone computers come with the internal components built into the monitor, which eliminates the need for a separate case.

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# A.S.D. GOVT. DEGREE COLLEGE FOR WOMEN(A), 

KAKINADA - 533002. EASTGODAVARI, ANDHRA PRADESH

## DEPARTMENT OF BOTANY $\&$ HORTICULTURE



## BRIDGE COURSE

2022-2023

## DEPARTMENT OF BOTANY \& HORTICULTURE

## Activity Register

_Bridge Course for 10 days (23/10/22 $102 / 11 / 22$ )

| Title of the Activity | Bridge Course on Origin of Life, Viruses \& Bacteria |
| :---: | :---: |
| Date | $23 / 10122$ to $2 / 11 / 22$ |
| Conducted by | Department of Botany \& Horticulture |
| Nature of Activity | Department Organised Bridge course on Origin of Life, Viruses \& Bacteria to the newly joined students |
| Number of Students Participated | 76 |
| Brief Report on the Activity | Faculty of the Department organised Bridge Course on Origin of Life , Viruses \& Bacteria to the newly joined students |
| Name of the Lecturer who planned and conducted the Activity | 1. H. Scilatara |
| Signature of the Dept. Incharge / Convenor of the Committee | Bnuwy |
| Signature of the Principal | vint 1 - princtipal |
| Remarks | A.S.D.OUV AUTONOVOUS KAKimiad |

## A.S.D. GOVT. DEGREE COLLEGE FORWOMEN

## DEPARTMENT OF BOTANY \& HORTICULTURE

Bridge Course on Origin of Life, Viruses \& Bacteria
The Department of Botany \& Horticulture conducted Bridge course for IB.Sc.(C.B.Z ,C.B.MB\& C.B.Ht.) student who did not have knowledge about fundamentals of Botany with this 10 days course students get awquainted with the basic fundamentals of Botany where in the the total introduction of the syllabus is covered and there by the student can rise up to a level to apprehend the subject

## OBJECTIVIES:

- To create Awareness on all cryptogams
- To enchance the Knowledge of Diversity in all cryptogams
- To create awareness on economic importance of Algae , Fungi, Bryophyta, Pteridophyta
- To study about structure and diseases and control methods of Plant diseases caused by viruses, Bacteria.
- To create awareness on classification on flowering plants

76 students were benefitted from this course. This course was intended to bridge the gap between the knowledge they gained in their Intermediate and the knowledgerequired tobegin their UG studies. A pre-bridge course test was cunducted before the commencement of course to test the knowledge levels of studentsand a post bridge course test was conducted after the completion of the course to assess the achievement of course objectives
K.N.V.S.N.Eswari- HoD of Botany ,Dr.M.Sulakshana- Lecturer in botany, N.Pushpa- Guest faculty in botany have conducted this course.

| S.No. | Name of the student | 2) |  |  | $2{ }^{10}$ | $\imath^{1}$ | 28 | 29 | $3)^{10}$ | - | $2 \chi^{* 3}$ | Signature of the student |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | PITUANI SUPRAJA <br> SHANMUKHA <br> SRIVALL.I | $\times$ | $x$ | $\times$ | $\times$ | $\checkmark$ | $\times$ | $\times$ | a | $\times$ | $\times$ | 'P.senivathi |
| 2. | $\begin{aligned} & \text { KowLURI } \\ & \text { NACGALAXMI } \end{aligned}$ | $\wedge$ | $\times$ | $\times$ | $\times$ | $\kappa$ | $x$ | a | $\times$ | $x$ | N | K. Nogalakaxmi |
| 3. | NEMMADI YAMUNA | $\times$ | $x$ | $x$ | K | $x$ | $x$ | X | $\times$ | $x$ | $\chi$ | K.Naqalax |
| 4 | MERIGI SATYAVENI | $\times$ | $\times$ | $x$ | $\kappa$ | $x$ | $\alpha$ | $x$ | $x$ | $x$ | $x$ | N. Yamuna |
| 5 | MATTA ChaNDRIKA | $x$ | $\times$ | $x$ | $\wedge$ | $x$ | $\times$ | $x$ | $x$ | $\times$ | $\checkmark$ | M Qaltaven |
| 6 | POLIREDDY | $x$ | $x$ | $\times$ | $\times$ | $\times$ | $x$ | $x$ | $\chi$ | $x$ | $x$ | M.Chandrilca |
| 7 | MORTHA MOUNIKA | $\times$ | $\pm$ | $\star$ | $\star$ | * | $\times$ | $x$ | $\times$ | $\mathcal{R}$ | a | P. Karya see |
| 8 | $\begin{aligned} & \text { CHOLLA } \\ & \text { BHOOMIK } \\ & \hline \end{aligned}$ | $x$ | $\times$ | $\times$ | $x$ | $x$ | $\times$ | $\times$ | $x$ | $x$ | $\times$ | CH. BHoomika. |
| 9 | $\begin{aligned} & \text { Karri Sharmila } \\ & \text { GANGA } \\ & \hline \end{aligned}$ | a | $*$ | $\chi$ | $x$ | $x$ | $x$ | $\chi$ | x | $x$ | $x$ |  |
| 10 | CHINTALA SRI LARSHMI DURGA DIVYA | $x$ | < | $x$ | $\times$ | $\chi$ | a | $x$ | $a$ | $x$ | $x$ | k. Divy |
| 11 | $\begin{aligned} & \text { PALNATI RAIYA } \\ & \text { LAKSHM! } \\ & \hline \end{aligned}$ | $x$ | $\times$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $X$ | P.1 kthni |
| 12 | $\begin{aligned} & \text { PANTHADIDUROA } \\ & \text { BHAVANI } \end{aligned}$ | $\times$ | $x$ | $x$ | $x$ | $x$ | $x$ | X | $x$ | $\times$ | $\times$ | 3 Ofitha. |
| 13 | SIVAKOTIANTHA | $\times$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $\times$ | $\times$ | $x$ | S. Arrither |
| 14 | RAVVA PAVANI | $a$ | $x$ | $x$ | $\times$ | $\dot{\text { a }}$ | $x$ | X | $x$ | $x$ | $\wedge$ | R. Pavari |
| 15. | $\begin{aligned} & \text { ADABALAOANGA } \\ & \text { BHAVANI } \\ & \hline \end{aligned}$ | $x$ | $x$ | $x$ | $x$ | X | $x$ | X | $x$ | $x$ | $\times$ | , Palan |
| 16 | varasala mant | * | $x$ | $x$ | $x$ | $x^{\prime}$ | $x$ | a | $x$ | $\times$ | $x$ | $V$ |
| 17 | $\begin{aligned} & \text { YALLA SRISAI } \\ & \text { DURGA } \end{aligned}$ | $x$ | $x$ | $\times$ | $x$ | $X$ | $x$ | $x$ | $\wedge$ | $x$ | $\lambda$ |  |
| 18 | KANCHEM SWETHA | $\times$ | ${ }^{\prime}$ | $x$ | $x$ | $\times$ | $x$ | $x$ | * | $x$ | $\times$ | k. swetha. |
| 19 | mandidivya | * | 4 | $x$, | $\times$ | $a$ | $x$ | $x$ | * | $x$ | $\times$ |  |
| 20 | BADDIDIRGA aHAVANI | $\times$ | $\times$ | $x$ | $x$ | $\times$ | $x$ | $x$ | $\star$ | $x$ | $x$ |  |
| 21 | AMURTHI AKHILA | $a$ | $\times$ | $x$ | $\wedge$ | $x$ | $\times$ | $\times$ | $*$ | $x$ | $\times$ |  |
| 22 | PESANGI GAYATRI | $a$ | $\times$ | $x$ | $x$ | $x$ | $x$ | $x$ | x | $x$ | $\times$ | D. G |
| 23 | $\begin{aligned} & \text { PEMMADI LEELA } \\ & \text { SADGURU } \\ & \hline \end{aligned}$ | $\times$ | $\times$ | $\chi$ | $\times$ | $x$ | $x$ | $x$ | $\lambda$ | $x$ | $\times$ | karvi kaveri |
| 24. | Karri kaveri | $x$ | $\times$ | $x$ | $\gamma$ | $x$ | a | $x$ | $\triangle$ | $x$ | $\kappa$ | 1c.kaveri |
| 25. | DONDAPATI NAMITHA | $\cdots$ | $\times$ | $x$ | $x$ | $\times$ | $x$ | $x$ | $\times$ | $\times$ | $\times$ | D. Namith |
| 26. | NEMMADI RNESWAR! | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $\times$ | $x$ | $\wedge$ | $x$ |  |
| 27. | DURVA HINDU | $\times$ | $\times$ | $x$ | $\times$ | $x$ | $x$ | $\times$ | $x$ | $\times$ | $\times$ |  |
| 28. | KINJAM BHANL SRUTHI | 7 | $\cdots$ | $x$ | $x$ | $x$ | $x$ | $\times$ | $x$ | $x$ | $x$ | k. Gauthi |
| 29. | IANIPALLIS SUII | $\times$ | $\times$ | $x$ | $\times$ | $x$ | $\times$ | K | $*$ | $\times$ | , |  |


| 30. | vararaunal | $\times$ | $x$ | $\times$ | $x$ | $x$ | $x$ | $\star$ | $x$ | $x$ |  | V.(Raíni |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 31. | $\begin{aligned} & \text { HILING } \\ & \text { NOOKARATNAM } \\ & \hline \end{aligned}$ | $\star$ | $x$ | $x$ | x | a | $x$ | $\star$ | x | $x$ | $x$ |  |
| 32 | handi trisha | $\wedge$ | $x$ | $\times$ | $x$ | $x$ | $x$ | $\times$ | $\times$ | $x$ | $\times$ |  |
| 33 | $\begin{aligned} & \text { MIPAMM SRAVANT } \\ & \text { SANDHA } \end{aligned}$ | $x$ | $x$ | $x$ | $x$ | $\times$ | $x$ | $\times$ | $a$ | $x$ | $\times$ | B. Tr |
| 34 | PandRum KRISHNAVENI | $x$ | $x$ | $\times$ | $x$ | $x$ | $x$ | $x$ | a | $\times$ | 0 | D. Knishareui |
| 35 | padala roia | $\times$ | $\times$ | $x$ | $x$ | $x$ | $x$ | $\times$ | $x$ | $x$ | $x$ | P |
| 36 | KOPPLSETHI DURGABHAVANI | $x$ | $\times$ | a | $x$ | $\times$ | $x$ | $\times$ | a | $\times$ | $x$ |  |
| 37 | $\begin{aligned} & \text { PATLAKAYALA } \\ & \text { LEHYASSI } \end{aligned}$ | $\times$ | $\times$ | $\times$ | $x$ | x | $\times$ | $\times$ | $x$ | $x$ | x |  |
| 39 | SATYAMSETTI MEGHANA SRI VEA | $x$ | a | $y$ | x | X | $x$ | $x$ | $x$ | $x$ | $\times$ |  |
| 40 | $\begin{aligned} & \text { BANDIDEVI } \\ & \text { SAllala } \\ & \hline \end{aligned}$ | $x$ | $x$ | $x$ | $x$ | > | $\times$ | $x$ | $x$ | $\times$ | $\times$ | B. |
| 41 | $\begin{aligned} & \text { GUNADA } \\ & \text { GRATYPLLI } \\ & \text { PRASHA } \end{aligned}$ | $\times$ | $\times$ | $x$ | $x$ | $x$ | a | 7 | $x$ | $x$ | $a$ | G. pratyund |
| 42 | $\begin{aligned} & \text { PENUBMLIU } \\ & \text { ANUSHA } \end{aligned}$ | $\times$ | $x$ | $x$ | $x$ | 入 | $x$ | $\cdots$ | $\checkmark$ | $x$ | $x$ | $P$ Anvisa. |
| 43 | TONTONI KEERTHIKA | $x$ | $x$ | $x$ | $\times$ | $\star$ | $x$ | $x$ | 0 | $x$ | $x$ | T.keerthan |
| 44 | $\begin{aligned} & \text { PLNYAMANTHULA } \\ & \text { DIVYADURGA SRI } \\ & \hline \end{aligned}$ | $x$ | + | $x$ | $x$ | $k$ | $\times$ | $\lambda$ | $x$ | $x$ | $x$ | P. Dirya |
| 45 | CHETLA JAYASRI | $x$ | $x$ | $\times$ | $x$ | $\times$ | $a$ | $x$ | $x$ | $\times$ | $a$ | Ch. Jaya |
| 46 | KUTISRAVANTHI | $x$ | $a$ | a | $x$ | $\times$ | $x$ | $x$ | X | a | $\times$ |  |
| 47 | JFTT KEERTHI MAHA LAKSHMI | $x$ | $x$ | $x$ | $x$ | $x$ | $\chi$, | $x$ | $x$ | $\wedge$ | $x$ |  |
| 48 | $\begin{aligned} & \text { YELETIIEEVANA } \\ & \text { SANOHYA } \end{aligned}$ | $x$ | $x$ | $x$ | $\times$ | $x$ | $x$ | $x$ | $x$ | $k$ |  |  |
| 49 | $\begin{aligned} & \begin{array}{l} \text { REPMUMAMA } \\ \text { VENATAMA } \\ \text { LEKSAMA } \end{array} \end{aligned}$ | $x$ | $x$ | $x$ | $x$ | $*$ | $x$ | $x$ | X | $\times$ | a |  |
| 50 | $\begin{aligned} & \text { DEVADULA } \\ & \text { LAKSHMM } \\ & \text { PRASANNA } \\ & \hline \end{aligned}$ | $x$ | $x$ | $\times$ | $a$ | $\times$ | $x$ | $x$ | $x$ | $x$ | $x$ | Pre |
| 51 | ARADADI Lakshmi | $x$ | $x$ | $\cdots$ | $x$ | a | $x$ | $x$ | $x$ | a | $x$ | A.C |
| 52 | CHANDADIRUDRA MAHALAKSOMMI | $x$ | $\times$ | $x$ | $x$ | $\times$ | $x$ | $\times$ | $x$ | $x$ | $\times$ |  |
| 3 | BORAGA PARMALA PUSHPA | $x$ | $\times$ | $x$ | $\times$ | $\times$ | $x$ | 4 | x | $x$ | X | $B \text { PuS }$ |
| 14 | JONNADM HFMA! ATHA | $x$ | $\times$ | $x$ | $x$ | $x$ | a | $x$ | X | X | a |  |
| 15 | mallada rani | $x$ | $\times$ | $x$ | $x$ | $\times$ | $x$ | $x$ | $\times$ | $\times$ | $\chi$ | YM. Ran9 |
| 16 | Pabsinem Kusuma | $x$ | $x$ | $\times$ | a | $x$ | $x$ | $x$ | $X$ | $\wedge$ | $\cdots$ |  |
| 7 | PabBineDI susilma | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | $y$ | $\times$ | a | $x$ |  |
| 18 | PAKKUKTIII GANGA BHAVANI | $x$ | $x$ | 0 | $x$ | $x$ | $x$ | $x$ | $x$ | $\times$ | $X$ |  |
| 9 | PIILImLavasi | $x$ | $x$ | $x$ | $x$ | $\cdots$ | $x$ | $\lambda$ | $x$ | $x$ | $x$ |  |
| 0 |  | $x$ | $x$ | $x$ | $x$ | $\times$ | $a$ | $x$ | $\times$ | $\times$ |  | P. Kr |
| 1 | RASIFALIL MADIM | $x$ | $x$ | $x$ | $x$ | $x$ | $y$ | $x$ | $\times$ | $x$ | $\times$ | R.M |
| 12 | SURCMAITIOI <br> ssumpitisa | $\cdots$ | $x$ | $x$ | $X$ | $y$ | $x$ | $x$ | $X$ | $x$ | $\times$ | R |
| 13 | $\begin{array}{\|l} \hline \text { VEDURIVAKA } \\ \text { DURGA IHAVANI } \\ \hline \end{array}$ | $y$ | $\times$ | $x$ | $\alpha$ | $y^{4}$ | $x$ | $\times$ | $x$ | $x$ | X | S.sripujitha |
| $\frac{4}{5}$ | tatimanga | $\times$ | $x$ | $x$ | $x$ | $x$ | $x$ | $\pi$ | $x$ | $x$ | $\times$ |  |
| 5 | Karhi veira vini | $\pm$ | $>$ | $\times$ | $\times$ | A | $x$ | $\times$ | K | $\times$ | $x$ | k. veraleni |


| 65 | Vaddi Syamala | $x$ | $x$ | $\times$ | $\star$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 67 | $\begin{aligned} & \text { GUMMADM } \\ & \text { AKSHAYA } \end{aligned}$ | $x$ | $\propto$ | $x$ | $\times$ | $x$ | $\times$ | $\times$ | $x$ | K | $x$ |  |
| 68 | karam saranya | $x$ | $x$ | $x$ | X | $x$ | X | $x$ | $\times$ | $a$ | $x$ |  |
| 69 | $\begin{aligned} & \text { TATAPUDI RSHA } \\ & \text { MOHII } \end{aligned}$ | $x$ | $x$ | $x$ | $\chi$ | $x$ | $x$ | $x$ | a | $\chi$ | $x$ |  |
| 70 | INDUGUPALLI SRI LAKSHMI | $x$ | $\times$ | $\times$ | $x^{*}$ | $x$ | $a$ | x | - | $x$ | x | 1 |
| 71 | $\begin{aligned} & \text { UFPULURI BHAGYA } \\ & \text { LASKHMI } \end{aligned}$ | $x$ | $\times$ | $\times$ | $a$ | $x$ | $\times$ | $\times$ | $x$ | $x$ | a | 1 |
| 72 | SOYAM RAAA KLMAR1 | $x$ | $\times$ | $\times$ | - | $x$ | $x$ | $x$ | $x$ | a | $x$ |  |
| 73 | Kamana plirnima VEERAMANI | $a$ | $x$ | $x$ | $\times$ | $x$ | $x$ | $x$ | $x$ | $x$ | $x$ | K. Vegan |
| 74 | katta anusha | $x$ | $\chi$ | $\times$ | a | $x$ | $\times$ | $\times$ | $x$ | $x$ | $\times$ | j. Arusiha |
| 75 | Yalla SRISRI 15WARYAMBICA | $\times$ | $x$ | $x$ | $x$ | $\times$ | $\times$ | $\times$ | a | $x$ | $\times$ | V. Ambica |
| 76 | $\begin{aligned} & \text { EEKA } \\ & \text { CHANDRAKALA } \end{aligned}$ | $\times$ | $x$ | $x$ | $x$ | $x$ | $\gamma$ | $x$ | X | $\times$ | $\times$ | E.chandrakiala |



## A.S.D. GOVT. DEGREE COLLEGE FOR WOMEN (A)

## DEPARTMENT OF BOTANY \& HORTICULTURE

Bridge course from $23|10| 22$ 10- $2 / 11 / 22$

| Sl.no. | Date | syllabus |
| :--- | :--- | :--- |
| 1 | $23-10-22$ | Origin of life |
| 2 | $24-10-22$ | Discovery of Micro organisms |
| 3 | $25-10-22$ | Shape and symmetry of viruses |
| 4 | $26-10-22$ | T.M.V |
| 5 | $27-10-22$ | Plants diseases caused by Viruses |
| 6 | $28-10-22$ | Transmission of plant Viruses and their control |
| 7 | $30-10-22$ | Significance of viruses in Vaccine production, <br> Biopestcides and as cloning vectors |
| 8 | $31-10-22$ | Brief account of Archaebacteria, Actinomycetes, <br> \& Cyanobacteria |
| 9 | $1-11-22$ | Economic importance of Bacteria |
| 10 | $2-11-22$ | Plant diseases caused by Bacteria |
| 11 | $3-11-22$ | Photosynthesis in Higher Plants $\theta$ Exam. |



Signature of the Lecturer

## A.S.D.GOVT. DEGREE COLLEGE FOR WOMEN (A), KAKINADA BRIDGE COURSE 2022-2023

ICB Z

| S.No | Roll No. | Name of the Student | Marks Obtained before Bridge Course | Marks Obtained after Bridge Course |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 22233801 | PITHANI SUPRAJA SHANMUKHA SRIVALLI | 10 | 16 |
| 2 | 22233802 | KOWLURI NAGALAXMI | 11 | 15 |
| 3 | 22233803 | NEMMADI YAMUNA | 12 | 18 |
| 4 | 22233804 | MERIGI SATYAVENI | 13 | 17 |
| 5 | 22233805 | MATTA CHANDRIKA | 9 | 16 |
| 6 | 22233805 | POLIREDDY KAVYA SREE | 10 | 15 |
| 7 | 22233807 | MORTHA MOUNIKA | 12 | 14 |
| 8 | 22233808 | CHOLLA BHOOMIKA | 13 | 18 |
| 9 | 22233809 | KARRI SHARMILA GANGA | 12 | 16 |
| 10 | 22233810 | CHINTALA SRI LAKSHMI DURGA DIVYA | 9 | 16 |
| 11 | 22233811 | PALNATI RAJYA LAKSHMI | 8 | 15 |
| 12 | 22233812 | PANTHADI DURGA BHAVANI | 9 | 15 |
| 13 | 22233813 | SIVAKOTI ANITHA | 10 | 16 |
| 14 | 22233814 | RAVVA PAVANI | 11 | 16 |
| 15 | 22233815 | ADABALA GANGA BHAVANI | 12 | 18 |
| 16 | 22233816 | VARASALA MANI | 10 | 16 |
| 17 | 22233817 | YALLA SRI SAI DURGA | 9 | 16 |
| 18 | 22233818 | KANCHEM SWETHA | 18 | 17 |
| 19 | 22233819 | IMANDI DIVYA | 16 | 18 |
| 20 | 22233820 | BADDI DURGA BHAVANI | 17 | 20 |
| 21 | 22233821 | AMURTHI AKHILA | 15 | 18 |
| 22 | 22233822 | PESANGI GAYATRI | 14 | 17 |
| 23 | 22233823 | PEMMADI LEELA SADGURU | 13 | 19 |
| 24 | 22233824 | KARRIKAVERI | 9 | 15 |
| 25 | 22233825 | DONDAPATI NAMITIAA | 8 | 15 |
| 26 | 22233826 | NEMMADI RAJESWARI | 7 | 15 |
| 27 | 22233827 | DURVA HINDU | 10 | 16 |
| 28 | 22233828 | KUNJAM BHANU SRUTHI | 8 | 17 |
| 29 | 22233829 | JANIPALLI SUSI | 11 | 16 |
| 30 | 22233830 | VARA RAJANI | 13 | 17 |
| 31 | 22233831 | ILILINGI NOOKARATNAM | 11 | 14 |


| 32 | 22233832 | BANDI TRISHA | 10 | 15 |
| :---: | :---: | :--- | :---: | :---: |
| 33 | 22233833 | MUPPAM SRAVANI SANDHYA | 10 | 19 |
| 34 | 22233834 | PANDRUM KRISHNAVENI | 11 | 18 |
| 35 | 22233835 | PADALA ROJA | 11 | 17 |
| 36 | 22233836 | KOPPISETTI DURGABHAVANI | 12 | 17 |
| 37 | 22233837 | PATLAKAYALA LEHYA SRI | 10 | 16 |
| 38 | 22233838 | ANJURI ANNA SOWMYA | 10 | 17 |
| 39 | 22233839 | SATYAMSETTI MEGHANA SRI VENI | 12 | 16 |
| 40 | 22233840 | BANDI DEVI SAILAJA | 11 | 14 |
| 41 | 22233841 | GUNDUPALLI PRATYUSHA | 8 | 15 |
| 42 | 22233842 | PENUBALLIANUSHA | 8 | 18 |
| 43 | 22233843 | TONTONI KEERTHIKA | 9 | 16 |
| 44 | 22233844 | PUNYAMANTHULA DIVYA DURGA SRI | 13 | 15 |
| 45 | 22233845 | CHETLA JAYASRI | 11 | 16 |
| 46 | 22233846 | KUTI SRAVANTHI | 9 | 18 |
| 47 | 22233847 | JETTI KEERTHI MAHA LAKSHMI | 9 | 18 |
| 48 | 22233848 | YELETI JEEVANA SANDHYA | 10 | 16 |
| 49 | 22233849 | REPALLIRAMA VENKATA LAKSHMI | 12 | 17 |
| 50 | 22233850 | DEVADULA LAKSHMI PRASANNA | 11 | 16 |

M. Sulatinane

## A.S.D.GOVT. DEGREE COLLEGE FOR WOMEN (A), KAKINADA BRIDGE COURSE 2022-2023

| S.No | Roll No. | Name of the Student | Marks Obtained before Bridge Copse Course | $\begin{array}{\|c\|c\|} \hline \text { Marks } \\ \text { Obtained } \\ \text { after } \\ \text { Bridge } \\ \text { Counse } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 2234001 | Aradadi Lakshmi | 12 | 18 |
| 2 | 2234002 | Chandadi Rudra Mahalakshmi | 13 | 17 |
| 3 | 2234003 | Boraga Parimala Pushpa | 9 | 16 |
| 4 | 2234004 | Jonnada Hemalatha | 10 | 15 |
| 5 | 2234005 | Mallada Rani | 12 | 14 |
| 6 | 2234006 | Pabbinedi Kusuma | 13 | 18 |
| 7 | 2234007 | Pabbinedi sushma | 12 | 14 |
| 8 | 2234008 | Pakkurthi Ganga Bhavani | 13 | 18 |
| 9 | 2234009 | Pilli Bhavani | 12 | 16 |
| 10 | 2234010 | Pinapothu Krishnaveni | 9 | 16 |
| 11 | 2234011 | Rasipalli Madhu | 10 | 16 |
| 12 | 2234012 | Surampudi Ssripujitha | 11 | 16 |
|  |  | Vedurupaka Durga |  |  |
| 13 | 2234013 | Bhavani | 12 | 18 |



## A.S.D.GOVT. DEGREE COLLEGE FOR WOMEN (A), KAKINADA BRIDGE COURSE 2021-2022

ICB HT

| S.No | Roll No. | Marls B HT <br> Obained <br> beflef <br> Brige <br> Course | Marks <br> Obtained <br> after <br> Bridge <br> Course |  |
| :---: | :---: | :--- | :---: | :---: |
| 1 | 22233901 | Tati Manga | 10 | 16 |
| 2 | 22233902 | Karri Veera Veni | 11 | 15 |
| 3 | 22233903 | Vaddi Syamala | 12 | 18 |
| 4 | 22233904 | Gummadi Akshaya | 13 | 17 |
| 5 | 22233905 | Karam Saranya | 9 | 16 |
| 6 | 22233906 | Tatapudi Asha Jyothi | 10 | 15 |
| 7 | 22233907 | Indugupalli Sri Lakshmi | 12 | 14 |
| 8 | 22233908 | Uppuluri Bhagya Laskshmi | 13 | 18 |
| 9 | 22233910 | Soyam Raja Kumari | 12 | 16 |
| 10 | 22233911 | Kamana Pumima Veeramani | 9 | 16 |
| 11 | 22233912 | Katta Anusha | 8 | 15 |
| 12 | 22233914 | Yalla Sri Sri Iswaryambica | 9 | 15 |
| 13 | 22233915 | Eeka Chandrakala | 10 | 16 |



# A.S.D.GOVT.DEGREE COLLEGE FOR WOMEN(A)KAKINADA DEPARTMENT OF BOTANY \& HORTICULTURE 

## Questionaire - 1

Role of Microbes in Human welfare

## Student:

Class:
Regd No:
1.Vitamin B2 is obtained from:
A)Penicillium
B) Acetobacter
C)Aspergillus
D)Ashbya gessypii
2.Methanogenic bacteria present in
A) Anserobic sludge
B)Rumen (a part of stomach) of cattle
C)Both [a] and [b]
D)None of these
3.Lichen that yields antibiotic is:
A) Ampicillin
B)Oxacillin
C)Both [a] and [b]
D) Tetracycline
4.Acetic acid is produced with the help of:
A) Albugo species
B)Acetobacter species
C)Aspergillus species
D)Lactobacillus species

5 Antibiotics are mostly got from:

[^0]6. Which antiblotic Inhiblits peptide bond formation
A)Streptomycin
B)Tetracycilin
C) Chloramphenicol
D)Neomycin
7. Penicillin inhibits bacterial multiplication because it:
A)checks RNA synthesis.
B)checks DNA synthesis.
C)destroys chromatin formation.
D)inhibits cell wail formation,
8. Pasteurisation is heating at
A) $120^{\circ} \mathrm{Cfor} 60$ minutes
B) $60 \%-63 \circ \mathrm{Cfor} 30$ minutes
C) $70 \circ$ Cfor 60 minutes
D) $80 \circ \mathrm{Cfor} 30$ minutes
9.Which of the following is not an antiblotic
A) Griseofulvin
B) Cephalosporin
C) Citric acid
D)Streptomycin
10. Problotics are
A) Live microbial food supplement.
B) Cancer inducing microbes.
C) New kind of food allergens.
D) Safe antibiotic

KEY: 1. (C) 2. (C) 3. (C) 4. (B) 5. (A) $6 .(\mathrm{C}) 7$ (D) $8 .(\mathrm{C} / 9$. (C) 10 .(A)

## QUESTIONAIRE II

1) Who is popularly called as the "Father of Biology "?
(a) Lamarck
(b) Aristotle
(c) Carolus Linnaeus
(d) Robert May
2) The number of plant species that are known and described range is . Fill in the blanks with the correct option from the following. ( )
(a) 1.4 to 1.5 million
(b) 1.6 to 1.7 million
(c) 1.7 to 1.8 million
(d) 0.5 million
3) What are the twin characteristics of growth?
(a) increase in mass
(b) increase in number
(c) both a and b
(d) none of the above
4) Growth cannot be taken as a defining property or feature of living organisms because
(a) all living organisms do not show growth
(b) non living things grow from inside
(c) non living things also grow
(d) some living organisms do not show the process of reproduction
5) Growth is synonymous with reproduction for which of the following organism (
(a) unicellular algae
(b) amoeba
(c) bacteria
(d) all of the above
6) Which of the following organisms multiply by Spore formation?
(a) fungi
(b) filamentous algae
(c) planaria
(d) all of the above
7) Mark the correct statement from the following
(a) growth in living organisms is from inside
(b) plants grow but only up to a certain age
(c) only living organisms grow
(d) all of the above
8)Growth and reproduction are mutually exclusive eevents in which ofthe following
(a) plants only
(b) animals only
(c) higher animals and plants
(d) lower organisms
8) Reproduction cannot be an all inclusive defining characteristic feature of living organisms because
(a) living organisms do not show growth
(b) many living organisms do not reproduce
(c) non living objects are also capable of reproducing
(d) all living organisms show a small period of reproductive phase in their life
9) Living organisms show
(a) self replication and self regulation
(b) evolution
(c) response to external stimuli
(d) all of the above

KEY: 1.(B) 2.(D) 3.(C) 4.(C) 5.(D) 6.(D) 7.(A) 8.(C) 19.(B) 10. (D)

## A.S.D. GOVT. DEGREE COLLEGE FOR WOMEN

(A), KAKINADA - 533002 L LASIGODAVARI, ANDIRA PRADESH

## DEPARTMENT OF HORTICULTURE



## BRIDGE COURSE

2022-2023

## DEPARTMENT OF BOTANY \& IIORTICULTURE

## Activity Register

Bridge Course from (2022-2023)

| Title of the Activity | Bridge Course on Fundamentals of <br> Horticulture |
| :--- | :--- |
| Date | $23 / 10 / 22-2 / 11 / 22$ |
| Conducted by | Department of Horticulture <br> Department Organised Bridge course <br> on Fundamentals of Horticulture to the <br> newly joined students |
| Nature of Activity | 12 |
| Number of Students Participated | Faculty of the Department organised <br> Bridge Course on Fundamentals of <br> Horticulture to the newly joined students |
| Brief Report on the Activity | M. Scelakelane |
| Name of the Lecturer who planned and <br> conducted the Activity | Nina-b |
| Signature of the Dept. Incharge $/$ <br> Convenor of the Committec | Vignature of the Principal |
| Remarks |  |

## A.S.D. GOVT. DEGREE COLLEGE FORWOMEN

## DEPARTMENT OF BOTANY \& HORTICULTURE

## Bridge Course on Fundamentals of Horticulture

The Department of Botany \& Horticulture conducted Bridge course for 1 year students. Students will get acquainted with the Basic fundamentals of Fundamentals of horticulture where in the introduction of the syllabus will be covered and there by the student can rise up to a level to apprehend the subject

## OBJECTIVIES:

- To create Awareness on Importance of Horticulture
- To enchance the Knowledge of Division of horiculture
- To create awareness on vegetable crop gardens \& nutrition and kitchen garden
- To study about classification of horticultural crops based on soil.
- To create awareness on Gardens in floriculture.

12 students were benefitted from this course. This course was intended to bridge the gap between the knowledge they gained in their Intermediate and the knowledge required to begin their UG studies. A pre-bridge course test was conducted before the commencement of course to test the knowledge levels of students and a post bridge course test was conducted after the completion of the course to assess the achievement of course objectives

Signature of Lecturer) in - Charge
M. Suldekiane

Signature of Lecturers

## A.S.D. GOVT. DEGREE COLLEGE FORWOMEN

DEPARTMENT OF BOTANY \& HORTICULTURE
Bridge course from $23 / 10 / 22$ to $2 / 11 / 22$

| Sl.no. | Date | Syllabus |
| :--- | :--- | :--- |
| 1 | $23 / 10 / 22$ | Vegetable crop garden |
| 2 | $24 / 10 / 22$ | Divisions of horticulture |
| 3 | $25 / 10 / 22$ | Classification of horticultural crops based on <br> soil |
| 4 | $26 / 10 / 22$ | Importance of horticulture |
| 5 | $27 / 10 / 22$ | Nutrition and kitchen garden |
| 6 | $28 / 10 / 22$ | Humus |
| 7 | $30 / 10 / 22$ | Orchard -different systems of planting <br> orchards |
| 8 | $31 / 10 / 22$ | Different types and methods of pruning |
| 9 | $01 / 11 / 22$ | Soil organic matter |
| 10 | $02 / 11 / 22$ | Gardens in floriculture |

M. Scularalane.

Signature of the Lecturer

## A.S.D GOVT DEGREE COLLEGE FOR WOMEN (A), KAKINADA

## Bridge course attendance from 2022-23



## A.S.D GOVERNMENT DEGREE COLLEGE FOR WOMEN (A) KAKINADA <br> Department of Horticulture

Bridge course 2022-23
QUESTIONNAIRE
Max Marks: 60M
1."Fruit of the $21^{1 "}$ century" is called $\qquad$
a) Jamun
b) Ber
c) Aonta
d) Bael
2.Pusa Nanha dwarf variety of papaya is developed through
a) Hybridization
b) Mutation
c) selection
d) Heterosis
3.The fruit of banana is botanically alan
a)Pepo
b) Berry
c)Pome
d)Drupe
4)Pollination in Mango is mainly by . $\qquad$
a) House fly
b) Honey bees
c) Weevil
djWind
5) Which Mango variety is suitable for high density planting
a) Sindhu
b) Amrapalli
c) Mallika
d) Ambika
6) Seedless variety of Mango
a) Mallika
b) Safari
c) Ratna
d) Sindhu
7) which of the following is the edible part of litchi
a)Percarp
b)Kernal
c) Fleshy aril
d) Thalamus
8) Regulation in Mango to some extent can be induced with the application ( ) of $\qquad$
8) Paclobutrazol
b) $A B A$
c) Auxin
d) Thiourea
9) Which papaya species is resistant to distortion ring-spot virus)
a) Carica papaya
b) Carica pentagonia
c) Carica cauliflora
10.Gulabi is important cultivar of $\qquad$
8) strawberry
b) Litchi
c) Pomegranate
d) Grape fruit
11.Which state is known as "Apple Bowl
a). Himachal Pradesh
b) Uttarkhand
c) $\& k$
d) Punjab
12)Apple is divided into how much grades
a) 4
b) 8
c) 6
d) 10
13.Polyembryonic fruit crop is $\qquad$
a) Mango
b) Citrus
c) Jamun
d) All of the above
14.In papaya papain contain $\qquad$ protein
a) $65.2 \%$
b) $82.2 \%$
c) $72.2 \%$ -
d) $55.5 \%$
15.Lock's combo is a physiological disorder of $\qquad$
a)Sapota
b)Aonta
c) Ber
d) none of above
16. Which crop is called micronutrient loving crop
a) Mango
b) Citrus
c) Banana
d)Apple
17. Multistorey
a) Bihar \& Up
b) Karnataka \& Kerala
c)J \& K
d) Punjab \& Gujarat
18. Pink fleshed variety of papaya
a) Sunrise solo
c)Surya
b) Taiwan
d) Coorg Honey Dew
19. Kinne Mandarin is across between kingand
a) Acid lime
c) Sweet line
b)willow Leaf
d) Pummelo
20.Bitter pit in apple is due to the deficiency of
a) Ca
b) Zn
C) Mn
d) $K$

Key: 1.c 2.b 3.b $4 . a$ 5.b.6.d. 7.c. 8.a.9.c. 10.b. 11.a. 12.a. 13.d. 14.c. 15.a. 16.c. 17.b. 18.a 19.b. 20.a

## A.S.D GOVT DEGREE COLLEGE FOR WOMEN (A), KAKINADA BRIDGE COURSE 2022-2023

| 200 | Name of the Student | Marks Obtained before <br> Bridge Course | Marks Obtained after <br> Bridge Course |
| :--- | :--- | :---: | :---: |
| 1 | T.Manga | 8 | 16 |
| 2 | Karri Veeraveni | 10 | 17 |
| 9 | Vaddi Syamala | 12 | 18 |
| 4 | Gummadi Akshaya | 11 | 17 |
| 5 | Karam Saranya | 6 | 16 |
| 6 | Indugupalli Srilakshmi | 7 | 15 |
| 7 | Uppuliuri Bhagya Lakshmi | 14 | 19 |
| 8 | Soyam Rajakumari | 10 | 17 |
| 9 | Kamma Purnima veeramani | 14 | 20 |
| 10 | Katla Anusha | 10 | 16 |
| 11 | Yalla Sri Sai Ishwaryambica | 13 | 18 |
| 12 | Eaka Chandrakala | 11 | 19 |

# ASD GOVT. DEGREE COLLEGE FOR WOMEN (A) (Re- Accredited by NAAC with B Grade) 

Jagannaickpur, Kakinada, East Godavari, AP-533002

## DEPARTMENT OF ZOOLOGY \& AQUACULTURE TECHNOLOGY

ZOOLOGY
Bridge Course
(CBZ \& CZAqT)


## 2022-2023

## Bridge course 2022-2023

The Department of Zoology \& Aquaculture Technology has conducted Bridge Course for Newly joined students of CBZ \& CZAqT in the academic year 2021-2022. The course was conducted from 31/10/2022 to 11/11/2022.

Syllabus covered during the course:

## - Basics in Zoology

- Scope and significance of Zoology
- Branches of Zoology Applied Zoology
- Recent trends in Zoology
- Role of Human beings in protecting environment and biodiversity.

57 students were benefited from this course. This course was intended to bridge the gap between the knowledge they gained in their Intermediate and the knowledge required to begin their UG studies. A pre-bridge course test was conducted before the commencement of course to test the knowledge levels of students and a post- bridge course test was conducted after the completion of the course to assess the achievement of course objectives.

Ms. M.Vasantha Lakshmi- HoD of Zoology, Ms. S.Madhavi- Lecturer in Zoology and Ms. N.Vecra Chant -Guest Faculty in Aquaculture Technology have conducted this course.
mu Juoque
Signature of Lecturerinchaharge
DEPARTMENT OF 2001001
ass. GOVT, COLLEGE FOR WOAE:
KAKINADA-2

Signature of the Lecturers: 1.
 relates to the amimal kimedom, including the identilication. structure emberoheg. ©bolution, ch watication, halbits. and distribution of all amimals, both living and evtinct and how they intenct with their ecosystems. The term is derived
 study". To study the variet! of anmals that exist (or hate caisted), see lis of ammolo to combun hame and /aco of cobsma/s.
Branches of zoology

- Searohest - study of mites and tichs
- Autnomwhelogy - study of arthropods as a whole - Cavimologes - the study of ciustaccims - Wriapobthoge - study of milli- and cemipetes C Arathonhy - study of spiders and related inimals stuch as scoppions. pseudoscorpions, and harsestmen. collectively called arachnids
- I-ntemahion - study of insects
- Loleupterologh - study of beetles
- I epidepterologes - stud of butterflies
- Velitahoge - stady of bees
- Mormeothey - study of ants
- Orthopterologe - study of grasshoppers
- Hernetologr - study of amphibians and reptiles

Batrachology - study of amphibians including frogs and toads. salamanders, newts. and caecilians

- Cheloniologe - study of turtles and tortoises
(n Saumology - study of lizards
- Serpentology - study of snakes
- Ichthrology - study of lish
- Malacologs - study of mollusks
- Conchologes - study of shells
- T © athologe - study of eephalopods
- Manabaing - study of mammals
- Cetology - study of cetaceans
- Primatology - study of primates
- Omitholony - study of birds
- Parantologe - study of parasites, their hosts, and the relationship between them

- Plankology - study of plomktom, various small drifting plants, animals and mictoorgemisms that inhabit bodies of water
- Protoroology - study of protozoan. the "animal-like" (i.e., motile and heterotrophic) protists -
- Nematolones - study of nematodes (roundworms)


## By nature of studies

## Inthromoologe - study of interaction between humans and other animals

## Behasioral ecologe - study of environmental effects on animal behaviors

- Inderrineloy - study of endocrine systems
- I tholoys - study of animal behaviour, usually with a lisets on behaviour under natural conditions, and viewing helavisur as an evolutionarily adaptive trait
- Veurnetholow - study of animal behavior and its underlying mechanistic contral by the nervous system
- Palowoolog! - the branch of Palcontology that studes animal remains
- Cobarclabologes - study of amimal remains in relation to ancient people
- /ageveraplis - Zoogeography is the scientific study of geographical distribution of animal species (both historic and contemporary) in the world
- Zougraph - Zoography is study of animals and their habitats (also known as descriptive zoology)
- Commetry - is a sub-division of coology that deals with measurements (length or size) of animal parts
- /wotome - Human Anatomy is the study of the structure of humans and their various parts whercas Zootomy specilically refers to animal anatomy
- formorphaloge - The morphology of animals
- General trends
- Zoology has become animal biology-that is, the life sciences display a new unity. one that is founded on the common hasis of all life, on the gene pool-species organization of organisms, and on the obligatory interacting of the components of ecosystems. Iiven as regards the specialized Features of animals-involving physiology, development, or behaviour-the current emphasis is on elucidating the broad biological principles that identify animals as one aspect of nature. Zoology has thus given up its cxclusive emphasis on animals-an emphasis maintained from Aristotle's time well into the 19th century-in favour of a broader view of life. The successes in applying physical and chemical ideas and techniques to life processes have not only unified the lite seiences but have also created bridges to other sciences in a way only dimly forseen by carlier workers. The practical and theoretical consequences of this trend have just begun to be realized.
- Methods in zoology
- Because the study of animals may be coneentrated on widely different topies, suctr as ecosystems and theirconstituent populations, organisms. cells, and chemical reactions, specific techniques are needed for each kind of investigation. The emphasis on the molecular basis of genetics development. physiology, behaviour. and scology has placed increasing importance on those techniques involving cells and their many eomponents. Mieroseopy, therefore, is a necessary technique in zoology. as are certain physicochemical methods for isolating and characterizing molecules. Computer technology also has a special role in the analysis of animal life. These newer techniques are used in addition to the many classical ones-measurement and experimentation at the tieste organ, organ system, and organismic levels.
- Microscopy
- In addition to contunuous improvements in the technicues of staming celis. so that their components can be seen clearly, the light used in microscopy can now be manipulated to make visible certain structures in living eells that are otherwise
undetectable. The ability to observe living cells is an advantage of light microseopes oxer electron microscopes; the later require the cells to be in an enviromment that hills them. The particular ahantage of the shedrom mictosogk. however, is its great powers of magnification. Theoretically, it can resolve single atoms: in biology. howerer. magnifieations of lesser magnitude are most weftul in determining the nature of structures ly ing between whole cells and their constituent molecules.
- Separation and purification teehniques
- The characterization of components of cellular systems is mecessary for biochemical studies. The specific molecular composition of eellular organelles. for example, affeets ther shape and density (mass per that volume): as a result, cellular components settle at different rates (and thus ean be separated) when they are spun in a centrituge.
- Other methods of purification rely on other physical properties. Molecules vary in their aftinity for the positive or negative pole of an electrical field. Migration to or away from these poles, therefore, oceurs at difterent rates for diflerent molecules and allows their separation: the process is calledelectophoresis. The separation of molecules by liquid solvents exploits the lact that the molecules differ in their solubility, and hence they migrate to various degrees as a solvent flows past them. This process, known as chromatography because of the colour used to identify the position of the migrating materials, yields samples of extratordinarily high purity.
- Radioactive tracers
- Radioactive compounds are especially useful in biochemical studies involving metabolic pathways of sonthesis and degradation. Radioactive compounds are incorporated into cells in the same way as their nonradioactive counterparts. These compounds provide information on the sites of specific metabolic activities within cells and insights into the fates of these compounds in both organisms and the ecosystem.
- Computers
- Computers process information using their own general language, which is able to complete calculations as complex and diverse as statistical analyses and determinations of enzymatically controlled reaction rates. Computers with access to extensive data files can select information associated with a specific problem and display it to aid the researcher in formulating possible solutions. They help perform routine examinations such as scanning chromosome preparations in order to idehtify abnormalities in number or shape. Test organisms can be electronically monitored with computers, so that adjustments can be made during experiments; this procedure improves the quality of the data and allows experimental situations to be fully exploited. Computer simulation is important in analyzing complex problems; as many as 100 variables, for example, are involved in the management of salmon fisheries. Simulation makes possible the development of models that approach the complexities of conditions in nature, a procedure of great salue in study ins wildlife managenent and related ecological problems.
- Applied zoology
- Animal-related industries produce food (meats and dairy products), hides, furs, wool. organic fertilizers, and miscellaneous chemical byproducts. There has been a dramatic increase in the productivity of animal husbandry since the 1870s. largely as a consequence of selective breeding and improved animal nutrition. The purpose of selective breeding is to develop livestoch whose desirable traits have strong heritable components and can therefore be propagated. Heritable components are distinguished
from envirommental factors by detemining the cocflicien of heritahility, which is delined as the ratio of variance in a genc-controlled character to total vatiance.
 some chemical pesticices make extremely important the development of effective and sate control mechanisms. Animal, Fowl resoutces include conmercial fishing. The development of shellish resurees and fisheries managenemt (e.g. growth of fish in rice paddies in Asia) are importann aspects of this indostry.

Biodiversity or biological diversity is the variety and variahility of life on fath. Biodiversity is a measure of variation at the pencticetremeror
 he age wi the inhit is alom 4.54 hilhon years. The canliest undisputed evidence of life dates at least from 3.7 hillion years ago, daring the t-ourehomen era after a geological crust started to solidify following the earlier molten llatean eon. There are micmbial mat thoilsfound in 3.48 billion-year-old multone discovered in tiestern. Austatat. Other early physical evidence of aboretmic
 in Western (ireentand. More recently. in 2015, "remains of biotic lite" were found in 4.1 billion-year-old rocks in Western Australia. Aceording to one of the researchers. "If life arose relatively quichly on Earth...then it could be common in the univeree.
"Biodiversity" is most commonly used to replace the more clearly-defined and longestablished lerms, pozius diurai and poetios richmose Biologists most often define biodisersity as the "fotality of tene vecte and ecow vem of a region". An advantage of this definition is that it presents a unified view of the traditional types of biological variety previously identified:


- erolongieal diversit (often view ed from the perspective of ecrowatom divervity) ${ }^{10}$
- morphological diversity (which stems from eenetic ditervty and merlecular diversits "),
- lunclimal dice ity (which is a measure of the number of functionally disparate species within a population (e.g. different feeding mechanism. different motility. predator vs prey. etc. $)^{\prime \prime \prime}$ ) This multilevel construct is consistent with Datman and Lovejoy


## Forest biological biodiversity| die!

Forest biological diversity is a broad term that refers to all life forms found within forested areas and the ecological roles they perform. As such. forest biological diversity encompasses not just trees. but the multitude of plants, animals and microorganisms that inhabit forest areas and their associated genetic diversity. Forest biological diversity can be considered at different levels. including ecosystem. landscape. species. population and genetic. Complex interactions can oceur within and between these levels. In biologically diverse forests, this complexity allows organisms to adapt to continually changing em ironmental conditions and to maintain ecosystem functions.

## Biolinguistic diversity

Biolinguistic diversity comprises the expanse of all living thing, on earth, including all humans and the languages that they speak

## Biodiversity Hotspot

Abmatiactaly bolypor is a region with a high level of endernic species that hase experienced great halvtat loss.' The term hotspot was introkltued in 1988 by Nomam Now. ${ }^{2}$ and and most are located in the tompes,

Brazil's Athatic lotest is considered one such lobspen, containing roughly 20.000 plant species, 1.350 vertebrates and millions of insects. about half of which oseur nowhere else. The island of Mablasiscar and lada are also particularly notable Role of an individual in conservation of natural resourees Conservation of energy:

1. Switch ofl light. fan and other appliances when not in tue.
2. Use solar system heater for cooking.
3. Dry the eloth in the sumlight instead of driers.
4. Use always pressure cookers.

## Consersation of water:

1. I/se minimum water for all domestic purposes.
2. Use drip irrization.
3. A rainwater harvesting system should be installed in all the houses.
4. Sewage treatment plants may be installed in all industries and institutions.

## Conservation of soil:

1. Ciron differem typer of planis i.e. tees. herbse and slerubs.
2. In the irrigation process. using a strong flow of water should be avoided.

## Conservation of forest:

I. Use non-timber products.
2. Plant more trees.
3. Minimize the use of paper and fuel.
4. Avoid the construction of dam, road in the forest areas.

## A.S.D GOVT. DEGREE COLLEGE FOR WOMEN (A) Department of Zoology and Aquaculture Technology

## Bridge course questionnaire

1. In Greek "Zoo" means
A) Animal
B) Ant
C) Plant
D) Life
2. Branch of Zoology that deals with classification of animals .
A) Anatomy
B) Taxonomy
C) Morphology
D) Ecology
3. Who is the father of Zoology?
A) Aristotle
B) Goldfuss
C) Haeckel
D) Linnaeus
4. Group of cells performing same function is called
A) Tissue
B) Organ
C) System
D) Metabolism
5. Largest class among Animalia
A) Sarcodina
B) Insecta
C) Gastropod
D) Astroidea
6. Bat is a
A) Bird
B) Mammal
C) Dragon
D) Fox
7. The cell organelle that helps in amoeboid movement
A) Cilia
B) Pseudopodium
C) Flagella
D) Myonemes
8. Primitive life is in the form of
A) Prokaryotes
B) Protobiont
C) Eukaryotes
D) Autotrophic
9. Apiculture is culturing of
A) Fishes
B) Birds
C) Bees
D) Apple
10. Father of Genetics
A) Gregor John Mendel
B) Hugo devries
C) Bateson
D) Morghan
11. The number of Biodiversity hotspots in the world
A) 17
B) 26
C) 36
D) 42
12. The term biodiversity hotspot was introduced by
13. Distribution of tariable number of species on biosphere is ealled
A). Biodiversity B). Ethology (').Gcography
D). Zoogeography
14. Study of Cancer is called as
A). Radiology
B). Carcinology C). Oncology D). Conchology
15. Glohal warming is due to which gas
A). $\mathrm{O}_{2}$
B). $\mathrm{H}_{2} \mathrm{C}$ ) $\mathrm{CO}_{2}$
D) O 3
16. Find the the radio active element among the following
A). Cl 4
B). HI
C). N14
D) O 16
17. Seperation of molecules in an electrical field.
A).Purification
B). Centrifugation C).Electrophoresis
D) Blotting
18. The simple microscope was invited by
A).Robert Brown
B).Robert Hooke
C).Linnaeus
D) Darwin
19. Environmental protection act was enacted in the year
A). 1985
B). 1986
C). 1987
D). 1988

Key: 1).A. 2)B. 3).A. 4).A. 5).B. 6) B. 7).B. 8).B. 9).C. 10).A. 11).C, 12)B, 13).B, 14)A. 15).C. 16)(. (7).A. 18).C. 19).B. 2().B

Bridge course attendance 2022-2023


| Pre and Post Bridge Course Test Marls |  |  |  |
| :---: | :---: | :---: | :---: |
| S.入o | Name of Student | Pre-Ibridge course test marls | Post- Bridge course test marks |
| 1 | 1. Din?a |  |  |
| 2 | M. Satya Veni | 10 | 15 |
| 3 | P.S.S Srivalli | 12 | 16 |
| 4 | Ch. Srilakshmi | 08 | 13 |
| 4 | Darga Disya | 13 | . $16 \rightarrow$ |
| 5 | K. Kaveri | 13 | - 16 |
| 6 | A. Akhila | 06 | 16 |
| ${ }^{6}$ | M.Mounika | 08 | 1.5 |
| 7 |  | 13 | - 16 |
| 8 | P. Lecela sadguru |  | 16 |
| 9 | A.Ganga Bhavani | 09 | 13 |
|  |  | 09 | 16 |
| 10 | M. Chadrika | 12 |  |
| 11 | P.Rajya Lahshmi | -0 |  |
| 12 | Y. Sti Sai Durya | 09 | 12 |
| 12 |  | 08 | 12 |
| 13 | N. Yamuna |  |  |
| 14 | Ch.Bhoomika | 12 | 16 |
|  |  | 11 | 17 |
| 15 | B. Durga Bhavani | A | A |
| 16 | P.Gayathri | A | - A |
| 17 | V. Muneswari | 07 | 16 |
| 18 | K.Bala Ranjani | 13 | 15 |
| 19 | V. Sudha Rani | 05 | $14$ |
| 20 | K.L.akshmi Pallavi | 06 | 14 |
| 21 | P.Hema Latha | 06 | . 14 . |
| 22 | S.Sharon | 09 | 14 |
| 23 | Ch. srivalli | 14 | $.15=$ |
| 24 | P.Bhuneswari | 11 | 16 |
| 25 | Ch. Anitha Raj |  |  |
|  | inv zu nature of thedectu EEPARTMENT e.s. EOVT. COLL KAKIN | 5 |  |

# ASD GOVT. DEGREE COLLEGE FOR WOMEN (A), <br> (Re- Aceredited by NAAC with B Grade) <br> Jagannaickpur, Kakinada, East Godavari, AP - 533002 

DEPARTMENT OF ZOOLOGY \& AQUACCULTURE TECHNOLOGY

## AQUACULTURE TECHNOLOGY

## Bridge Course

(CZAqT)

$\rightarrow$

2022-2023

# ASL GOVT DEGREE COLLEGE FOR WOMEN (A), KAKINADA DEPARTMENT OF ZOOLOGY AND AQUACULTURE TECHNOLOGY Bridge course 2022-2023 

The Department of Zoology \& Aquaculture Technology has conducted Bridge Course for Newly joined students of $C Z \wedge q T$ in the academic year 2022-2023. The course was conducted from 31/10/2022 to 11/11/2022.

Syllabus covered during the course:

- Fisheries and Aquaculture Introduction
- Types of aquaculture
- Benefits of aquaculture
- Importance of Aquaculture

19 students were benefited from this course. This course was intended to bridge the gap between the knowledge they gained in their Intermediate and the knowledge required to begin their UG studies. A pre-bridge course test was conducted before the commencement of course to test the knowledge levels of students and a post- bridge course test was conducted after the completion of the course to assess the achievement of course objectives.

Ms. M. Vasantha Lakshmi- HoD of Zoology, Ms. S.Madhavi- Lecturer in Zoology and Ms. N. Veera Chanti -Guest Faculty in Aquaculture Technology have conducted this course.
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KAKINADA-2

Signature of the Lecturers: 1. N Meres


SignatphiNEIBAL Principal
A.S.D.GOVT.DEGREE COLLEGE

AUTONOMOUS
KAKINADA.

## Fisheries and Aquaculture

About Indian Fisheries India is the third largest fish producing country and the second largest aquaculture fish producer in the world. India contributes about $7 \%$ to the global fish production. The country is also home to more than $10 \%$ of the glohal fish biodiversity and is one of the 17 -mega biodiversity rich countries. Around 14 million people are engaged in fisheries and its allied activities. Andhra Pradesh is the largest fish producer in the country followed by West Bengal and Gujarat. The total fish production during 2017-18 is estimated to be 12.60 million metric tonnes, of which nearly $70 \%$ is from inland seetor and about $50 \%$ of the total production is from culture lisheries. Mere than 50 different types of lish and shellfish products are being exported to 75 countries around the world. Fish and fish products have presently emerged as the largest group in agricultural exports from India, with 13.77 lakh tonnes in terms of quantity and Rs. $45,106.89$ crore in value. This accounts for around $10 \%$ of the total exports and nearly $20 \%$ of the agricultural exports. and contribute to about $0.91 \%$ of the GDP and $5.23 \%$ to the Agricultural GVA of the country.
Fisheries is an economic activity that involves harvesting lish or any aquatic organism from the wild (Capture Fisheries) or raising them in confinement (Culture Fisheries/ Aquaculture). It may be Traditional/ Small Scale Fisheries (SSF) for sustenance, or Large-Scale/ Commercial Tisheries for profit.
Fish (in general) is a cold-blooded aquatic organism that breathes with gills and swims with fins: they are categorized as Finfish and Shellfish.
Finfish are cold-blooded aquatic vertebrates that have gills, fins with rays, and scales covering the body.
Shellfish are cold-blooded aquatic invertebrate that have gills, various types of locomotory organs and a shell/ exoskeleton covering the body. They include crustaceans and molluse. •
Biodiversity: India has a large number of finfish species. As per the database of the National Bureau of Fish Genctic Resources (NBFGR), Lucknow, 2,508 species of native finfish have been recorded, of which 1.518 species are from the marine environment. 113 from brackish waters and 877 are from freshwater habitats. In addition. 291 exotic fish species also occur in India.
Fish Diversity of India* Native Fishes Number of Species Marine Ecosystem 1518 Brackishwater Ecosystem 113 Freshwater Ecosystem 877 Sub-total 2508.Exotic Fishes 291 Total 2799 *Utam K Sarkar, JK Jena, Shri Prakash Singh, AK Singh and SC Rebello (2012). Documenting Coastal Fish Biodiversity of India: Status, Issues and Challenges. Conference Paper, International Day for Biological Diversity, Marine Biodiversity, 22 May 2012. Uttar Pradesh State Biodiversity Board. Lucknow, pp. 22-28:

## Categorization of Fish by their habitat:

- Freshwater Fish: Fish that spend most or all of their life in freshwaters, such as rivers and lakes, having a salinity of less than 0.5 ppt . Around $40 \%$ of all known species of fish are found in freshwater. They may be divided into Coldwater Fish ( $5-20$ oC); examples: Mahseer. Trout, etc., and Warm water Fish ( $25-35$ oC): example: Carps, Catfish, Snakeheads, Feather backs, etc.
- Brackish water Fish: Fish that can tolerate a wide range of salinity ( $0.5-30.0 \mathrm{ppt}$ ) and live in backwaters, estuaries and coastal waters. Example: Mullet, Milkfish, Seabass, Pearlspot, Mudskipper, etc.
- Marine Fish: Fish that spend most or all of their life in seawater, such as Seas and Oceans, having salinity above 30 ppt . There are about 240 species contributing to the marine lisheries. Example: Sardines. Mackerel. Ribbonfish. Anchovies, Grouper, Cobia, Tuna, ete


## Definition of Aquaculture

Aquaculture: The farming of aquatic organisms including fish. molluses, crustaceans and aquatic plants. Farming implies some sort of intervention in the rearing process to enhance production. such as regular stocking. feeding, protection from predators, etc. Farming also implies individual or corporate ownership of the stock being cultivated, the planning.
development and operation of aquaculture systems, sites, facilities and practices, and the production and transport.
For more terms related to aquaculture,

## Types of Aquaculture

There are diflerent types of aquaculture -
I. Depending on Ilydrobiological Features ${ }^{\text {E }}$
II. Depending on the Motive of Farming
III. Depending on Special Operational Techniques
\arious 1 ypes of cutural practices are carried out in each of these divisions. Some hate been discussed here.

## 1. Mariculture

Mariculture is aquateulture, that involves the use of scawater. It can either be done next to an occan. with a sectioned off part of the ocean or in ponds separate from the ocean. but containing seawater all the same. The organisms bred here range from molluses to seafood options like prawn and other shellfish. and even seaweed.
like seaweed are also pout of mariculture. These sea plam and animal species find many uses in manulacturing industres such as in cosmeties and jewelry where collagen from seaweed is used to make facial creams. Pearls are picked from molluses and made into fishion items.

## 2. Fish Farming

Iish larming is the most common lype of aquaculture. It involves the selective breeding of fish. ether in freshmater or scamater, with the purpose of producing a food source for consumption. the tatrme is highly exploited as it allows for the production of a cheap source of protein.
Furthermore. lish farming is easier to do than other kinds of farming as lish are not careintensive, but only requiring food and proper water conditions as well as temperatures. The process is also less land-intensive as the size of ponds required to grow some fish species such as tilapia is much smaller than the spate required to grow the same amount of protein from beef cattle.

## 3. Algaculture

Nesculture is a type of aquaculture imolving the cultivation of algae. Agac are mierobial organisms that share animal and plant characteristics. They are sometimes motile like other microbes, but they also contain chloroplasts that make them green and allow them to photosy nthesiee just like green plants.
However. for economic feasibility they have to be grown and havested in large numbers. Algae are finding many applications in today's markets. Exxon mobile has been making strides in developing them as a new

## 4. Integrated Multi-Trophic Aquaculture(IMTA)

IMTA is an advanced system of aquaculture where different trophic levels are mixed intome system to provide different nutritional needs for each other. Notably, it is an eflicient sysem because it trics 60 emulate the ecole ical system that exists in the nallual habitat.

 practioce ensutes the nutrients are recyeled, meaning the proeess is less wasteful and produces more products.

## 5. Inland Pond Culture

This ustally imothes infand artificial ponds of about 20 acres in si天a and about (6-8fi deep it is common to see deration system: connected to the pond. to introduce air into the ponds. This enhances the supply of oxygen and also reduces ice formation in the winter season.
In China, over $75 \%$ of the farmed treshwater fish are produced in constructed ponds. and nearls all of the harmed ealfish are saised in ponds in the L/S.

## 6. Recirculating Systems

This imsolves a closed set of chambers (units) where fish is hept in one-and water treatrfent hept in anotber. It is highly dependent on the power supply. as water has to be pumped constantly through the fish chambers. As water hows through the treatment chamber. particulate matter is filtered out and air introduced. This closed system controls the salinitytemperature, oxygen and anything that can cause harm to the fish.
It is an em irommentall! friendly sy stem because very little new water is introduced to replace water that evaporated. The residuc from the filters is also disposed of in a responsible mamner.

## 7. Open-net pen and Cage Systems

Operi-net pen and Cage systems are often found offishore and in freshwater lakes. Mesh cages of hetween 6 and 60 cubic feet (pens) are installed in the water with the lish inside it. With a high coneentration of Gish in the pens, waste. chemicals. parasites and discases are often exchanged in the immediate water enviromments.
The fish also attract predatory animals (bipger lish), which are often entangled in the nets. This sysem uses public water: therefors, environmental regulation and some authorization protocols must be respected.

## 8. Flow-through / Raceway

This is a system made of long units stocked with fish. The umits have feeding stations artached to them. Water is diverted from flowing water and fed into the raceway units flowing downstream. Down the end of the unit, waste is collected and disposed of Raceways are common for culturing trout.

## Benefits of Aquaculture

## Economic Bencfits

## 1. Alternative Food Source

fish and other seafood are good suurses of protcin. Thes also have more nutritional value fike die addrtion of natural ofls into the diet, such as omega 3 latty actids. Also, sinte it offers white meat, it is better for the bleod to reduce cholesterol levels as apposed to beet ${ }^{-}$, fed meat.
Fish is abo easier to keep compared to other meat-producing animals as they are able to conven more feed into protein. Therefore, its overall conversion of a pound of food ao a pound of protein makes it cheaper for rear lish as they use the food more efficiently.

## 2. Alternative Fuel Source

Agese are slowly being developed into alternative lied sourees by haning them produce fieds that can replace contemporary the f thek. Algae produce lipids that. if harvested can be burned as an altenative fiel woble whose only by products would he water when burnt.

Sotha breakthough eould cose the dependeney of the world on difled fossil Fucts as well as weftee the price of energy by hating it grown instead of drilling petmetem. Monoter, alyat fast is a steaner and famable soture of energy. which meansit can revolutioniac the energy scoter and ereate a more stable conomy that asoids the boom-bust nature of oil and teplaces it with a more abundian feel source.

## 3. Increase Jobs in the Market

bybathure enereates the mumber of pessible jobs in the market. If provides both new products for a market and eneates job oppottumitics as labor is required to maintain the pook and hamest the organisms grown.
The increase in fobs is mostly realized in third world countries as nymacultmre provides both a food source and an extra source of ineome to supplement those who live in these regions. Aymakutate abo saves lishermen time as they do mot have to spond their day at sea hishing It allows them free time to pursuc other ceonomic activities like engaging in alternative businesses. This hoosts entrepreneaship and provides more hiring possibilities and more jobs.

## 4. Reduce Sea Food Trade Deficit

The seatiod trade in Ameriea is mainly hased on trade from Asia and Europe, with most of it being imported, The resultant batance places a trade delieit on the nation. Aquaculture would provide a means for the reduction of this deficit at a lower opportunity cost as local production would mean that the seafood nould be fresher. It would also be cheaper due to ratuced transport cosis.

## Environmental Benefits

## 1. Creates a Barrier Against Pollution With Molluse and Seaweed

Molluses are filter feeders, while seaweed acts a lot like the grass of the sea. Both these organisms sift the water that flows through them as hrought in hy the current and elean the water. This provides a buffer region that protects the rest of the sea from weth ming fanu the 4- - peeifically from activ ities than disturb the sea bed and raise dust.
Also. the economic benclits of molluses and scaweed can create more pressure from governments to protect their habitats as they serve, economic importance. The financial benefits realized provides an incentive for the gevermment to protect the seas in order to protect seafood revenue.

## 2. Reduces Fishing Pressure on Wild Stock

The practice of aquaculture allows for altemative sourecs of fyod instead of lishing the same species in their $\quad$ Population numbers of some wild stocks of some species are in danger of teing depleted due to worfi-hime and uncontrolled exploitation. The use of
unsustainable fishing methods such as bottom trawlers is also reduced.
Ayuaculure provides an alternative by allowing farmers to breed those same species in captivity and allow the wild populations to revitalize. The incentive of less labor for more gains pushes lishors to comert to lish firmers and make even mone profit than before.
It alow allows the control of the supply of the fish in the market, giving them the ability to


## 3. Low Environmental Impact

Studies conducted by voli. indicate aquaculture poses a low rish to the environment. The impact is mostly local and temporary. In some eases, aquaculture can benefit the
 geality in poods and lothes can implete



 pration this helpsotoreduce diseanes tramber in the waters and we ons.

## 4. Water Usage

 water this reduces the dependeney on other sources of wate supply In addition to this.


## Importance of Aquaculture

## 1. Itealth Benefit

Sll onet the workd, the demand lin seatood has imereses became people hate leanod that
 other major illossses. Nons matood has becone part of reqular diets.

## 2. Sustainable Use of Sea Resources

 spurces and globalization has led to an increase in lishinge Aguaculture is currently estimated to accoum for approsimately 13 pereent ( 10,2 million lonsh of world lish prodection.
bet. this has led listemen to become sellish and overtish the devired on high-denand peccies. Through aquateblture, it provises both an alternatioe and epportunity for wild stochs to replenish over time.

## 3. Conservation of Biodiversity

Aquactultes aloo proted biodivensity by redteing the lishing activities on the wild stock in their By prowiding altematios to lishing. there is a reduced altack on the witd populations of the varfous species it the sea. Revlued action of lishime saves the divervity of the tamethe selos in from extinetion dae to onerfishing.

## 4. Increased Efficiency, More Resources for Less Effort

Fish convert feed into body protein more efliciently-than catle or chichen production. It is much mure eflicient, meaning that the fish companies make more fiskl for less leed.
Such elifiency means that less tiond and energy is used to produce food. meaming that the podection process is cheaper as well. It simes resurees and even allows for more fopd to be produced. leading to secure reseros and less the of the om mome ith.
Aquacthans will add to wild weationd and make it cherper and acecssible to all. especialty in regions where they depend on imported seatood products.

## 5. Reduced Environmental Disturbance

By increasing aquaculture, lish larminy in specifie, there is a reduced need for the fishing of the wild stoch. As an outcome, it puts less stress on the ecosestem and egually reduces human interkenence.
Actions of motorboats and other loman inlluetwes such as the removal of viable breedinge adult fish are all stresses put on the aquatic ecospstems, and their discontinuation alloss the ecosystem to flourish and find their natural balance.

Fieshater aquaculture refers to raising and breeding aquatic amimals (hish. shrimp, crab, shellfish. efe.) and plants for economic purposes by thie use of ponds, reservirs, bahes, rivers. and other inland waterways (including brachish water). which play ay important role in the aфuaculture industry.

## A.S.I) GOVT, DEGREE COLLEGE FOR WOMEN (A)

## Department of Zoology and Aquaculture Technology

## Bridge course questionnaire

1. Study of Fishes is called as
A) Ichthyology
B) Herpetology
C) Zoology
D) Physiology
2. Culturing of Fishes is called as
A) Aquaculture
B) Pisciculture
C) Sericulture
D) Apiculture
3. Culturing of Aquatic organisms?
A) Aquaculture
B) Pisciculture
C) Sericulture
D) Apiculture
4. Shell fish belongs to which phylum
A) Chordata \& Arthropoda
B) Annelida \& Arthropoda
C) Echinodermata \& Mollusca
D) Arthropoda \& Mollusca
5. Blue revolution is increase the production of
A) Milk
B) Fish
C) Eges
D) Aquatic organisms
6. Largest fish
A) Rhinodon
B) Scoliodon
C) Blue Whate
D) Torpedo
7. Based on salinity water bodies are divided into
A) 3 types
B) 2 types
C) 5 types
D) 4 types
8. Fishes are
A) Poikilothermic
B) Homoeothermic
C) Cold blooded
D) $\mathrm{A} \& \mathrm{C}$
9. Heart in fishes
A) Bronchial
B) Venous
C) Two chambered
D) All of the above
10. Respiratory organs in fishes
A) Gills
B) lungs
C) Both
D) None
11. Tish lat is rich in
A) N-3 Fatty Acids
13) Cholesterol C) Saturated fatty acids
D) None
12. Airbladder is present in
A) Cartilaginots lish B). Bony fish
C). Ornamental lish
1). Sliell fish
13. Which of the following is called as derman denticle
A).Placoid scale
13). Cyeloid Scale C). Ganoid scale
D). Ctenoid Scale
14. Distribution of variable number of species on biosphere is called A). Biodiversity B). Ethology (').Geography D). Zoogeography
15. Catla catla is a
A). Surface feeder B). Column feeder C). Bothom feeder D). All the above
16. Which of the following is air breething lish
A). Calla
B). labeo
C). Chama D)'Grass Carp
17. Optimum DO in culture ponds
A).5ppm
B). $8 p p m$
C). 7 ppm
D) 9 ppm
18. Turbidity is meassured by.
A). Salinometer
B). Seechi dise C).potentioneter
D) Lactometer
19. Diseased fish is kent in
A).Aquarium
B).Culture pond C), Quarantine
D) Hatchery
20. Widely cultured prawn at present
A), Macrobrachium B).Paneaus Monodon C). Paneaus Indicus D) ,L. Pancaus • Vannamei

Key: 1),A, 2)(3, 3),A. 4),A, 5), (3, 6) (. 7),A. 8),D, 9),D, (10).A. (1).(. (2)B, 13),A, 14)A.


Bridge course attendance 2022-2023


Pre and Post Bridge Course Test Marks

| S. No | Vame of Student | Pre-Bridge course test marks | Post- Bridge course test marks |
| :---: | :---: | :---: | :---: |
| 1 | Cli. Anitha Raj | 10 | $A b$ |
| 2 | V. Muncewari | Ab. | 14. |
| 3 | K. Bala Ranjani | 10. | 16 |
| 4 | V. Sudha Rani | 05 | - 11 |
| 5 | Ch. Srivalli | 11 | 17 - |
| 6 | P. Bhuvaneswari | 08 | 16 |
| 7 | P. IIema Latha | 12 | $A b$ |
| A | S. Sharon | 13 | . 15 |
| 9 | R. Pramela | $A b$ | $A b$ |
| 10 | Ch. Pushpa | - 10 | 15. |
| 11 | K. Aswini | 11 | 14 |
| 12 | R.Devana Kumari | 11 | 15 |
| 13 | V. Katyayini | 08 | 14 |

mu
Signature of the Lecturee in-charge
aERA ATMONT OF ZOULOE*
*.A. SDVT, GDLLEEE FDS WRNE


# A.S.D.GOVERNMENT DEGREE COLLEGE for Women, (Autonomous), KAKINADA DEPARTMENT OF HISTORY 



# BRIDGE COURSE 2022-2023 

(9/11/2022 to 29/11/2022)

# I.B.A SEMESTER - I 

Y. Sita Maha Lakshmi, Lecturer in Charge, Dept. of History

## A.S.D GOVT. DEGREE COLLEGE for Women, (Autonomous), KAKINADA Activity Register 2022-2023 Department of History

| Date | 9/11/2022 to 29/11/22 (10 days) |
| :---: | :---: |
| Conduct throegh (DRCJKKC/ELFINCONSS: Department etc...) | Department of History |
| Nature of Activity (Seminariworkshop/ Extn. Lecture elc...) | Bridge Course |
| Title of the Activity | Bridge Course |
| Name of the Department' committee | Department of History |
| Details of Resource Persons (Name, Designation etc...) |  |
| No. of students participaied | 32 students of 1 B.A |
| Brief Report on the Activity | Depariment of History conducted a Bridge course for newly Joined in IB.A Degree course in the academic year 2022-23 who came from different groups, studied non - History students in this year. In this Bridge course the Department of History conducted a Test (Previous test) on 05/11/2022 and given a special coaching for the particular students in History. After completed the course the course again a test was conducted on $2 / 12 / 2022$. The Bridge course was given by 10 days more from 9/11/2022 to 29/11/2022. |
| Name of the Lecturer who Planned \& conducted the Activity | Y.Sita Maha Lakshmi, Lecturer in - Charge, Dept. of History \& L.Bhanu Teja, Guest Faculty of History |
| Signature of the Dept. in chargel convener of the committee | GWN |
| Signature of the Principal | $V, ~$ A.S.D-GOVT.DEGREE COLLEGE (W) <br> AUTONOMOUS |
| Remarks | Students get more knowergigharathe importance of the History subject |

A.S.D Gout Degree college fo women
kakinoda [A]
Department of History
Bridge course 2022-23
syllabus

signature of the lecture incharge:signature of the Acadamic co-ordinator $=$ ohM)
A.S.D GOVERNMENT DEGREE COLLEGE (WOMEN), (AUTONOMOUS), KAKINADA

DEPARTMENT OF HISTORY
Bridge Course 2022-23



AS.D. Government Degree College for Women, (Autonomous). Kakinada

## Department of History

## Bridge Course 2022-2023

## B.A I YEAR Sem-1



## Test-I

Max. Marks: 20
Name:Vincela.B
Inter Group HEC

1. In which continent is India located?
a) Europe
b) Asia
c) America
d) Africa
2. The highest peak in Himalayas is?
a) Everest
b) Kanchenjunga
c) Dhavalagiri
d) Nenga Parbet
3. What direction can the Himalayas lead to India?
a) North
b) east
c) west
d) south
4. How many Vedas?
a) six
b) two
c) four
d) five
5. Which of the following rivers flows in North India?
a) Kaveri
b) Krishna
c) Gang
d) Godavari
6. Ramayana and Mahabharata are .....-?
a) Epics
b) Vedas
c) Vedamgas
d) purana
7. What is the official language of India?
a) Sanskrit
b) Hindi
c) Telugu
d) English
8. By what name is India known in Puranas?
a) Jambu dweepam
B) Spatha Samudra
c) India
d) Hindu Desam
9. Narmada and Tapti rivers meet in which sea?
1) Bey of Bengal
b) Arabian sea
c) Indian Ocean
d) Pacific Ocean
10. In which language are the ancient Hindu scriptures?
) Prakrit
b) Hindi
c) Sanskrit
d) Tamil
11. The Author of Artha Sastra was?
(
(C)


a
4.). Gevernment Degree College for Women, (Autonomous), Kakinada

## Bridge Course <br> 2022-2023

B.A I YEAR Sem-I

## Test-II

## Inter Group: $H E R$

 Whal was the original name of Gowthama Buddha?b) Suddhodhana
c) Rahul
d) Siddhu Hershs Charitra was written by-...
b) Hala
c) Bana Bhatta
d) Bala Raju Who was the composer of Allahabad Pillar inscription? Sarrudra Gupta
b) Chandragupta
c) Harshvardhan
d) Harisena The birth place of Gautama Buddha?
a) Lumbini
b) Gaya
c) Saranadh
d) Rajagriha

Allisbad pillar inscription belonged to
Harsha
b) Ashoka
c) Kharavela
d) Samudra Gupta

The $23^{\text {nd }}$ Tirthankara was .....
Passvenatha
b) Vardhamana
c) Asoka
d) Bhadra bahu

The capital of Mauryas was -----
Samath
b) Pataliputra
c) Kalinga
d) Magadha

The Nasik inscription gives the details about $\qquad$
Grptas
b) Mauryas
c) Satavahanas
d) Kushans

Deranampriya was the title of -..
Kanishka
b) Asoka
c) Harsha
d) Pulakesi
Fahien visited India during the reign of
Chanda Gupta-II
b) Asoka
c) Kanishka
d) Harshvardhan


Max. Marks: 20
(a)
(


A.S.D, GOVT. DEGREE COLLEGE FOR WOMEN (A), KAKINADA (NAAC Accredited with B Grade Cycle-3)
(Affiliated to Adikavi Nannayya University)


## DEPARTMENT OF ECONOMICS

Bridge Course<br>2022-2023

## A.S.D GOVT. DEGREE COLLEGE for Women, (Autonomous), KAKINADA Activity Register 2023-2024 Department of Economics

| Date | 9/11/2022 to 26/11/22 (10 days) |
| :---: | :---: |
| Conduct through <br> (DRC/JKC/ELF/NCCNSS/ <br> Department etc. .) | Department of Economics |
| Nature of Activity (Seminar/workshop/ Extn. Lecture etc...) | Bridge Course |
| Title of the Activity | Bridge Course |
| Name of the Department committee | Department of Economics |
| Details of Resource Persons (Name, Designation etc...) |  |
| No. of students participated | 10 students of IB.A |
| Brief Report on the Activity | Department of Economies conducted a Bridge course for newly Joined in I B.A Degree course in the academic year 2022-23 who came from different groups, studied non - Economics students in this year. In this Bridge course the Department of economies conducted a. Test (Previous test) on 05/1 1/2022 and given a special coaching for the particular students in Economics. After completed the course the course again a test was conducted. The Bridge course was given by 10 days more from 9/11/2022 to 26/1 //2022. |
| Name of the Lecturer who Planned \& conducted the Activity | G. Pavani Devi, Lecturer in Economies |
| Signature of the Dept. in charge' comvener of the committee |  |
| Signature of the Principal | A.S.D.GOVT, DEGREE CU...US (W) |
| Remarks |  Science subject |

A.S.D. GOVT. DEGREE COLLEGE FOR WOMEN (A), KAKINADA


## DEPARTMENT OF ECONOMICS

## Bridge Course

2022-2023

Class and Year: I BA (HEP) 2022-2023 Admitted
Dates Conducted: 9/11/2022 to 26/11/2022

| S.No | Name of the student | Group in <br> Intermediate | Signature of the <br> students |
| :---: | :---: | :---: | :---: |
| 1 | K. Ramya | MPC | K Ramya |
| 2 | B.Sailaja | BiPC | B. Sailaja |
| 3 | M.Anusha | BiPC | M. Anvsha |
| 4 | G.Jyothi | 2021 passed <br> out | G. Jyothi |



Department of Economics

Signature of the Principal
A.S.D.GOVT.DEGREE COLLEGE (W) AUTONOMOUS

KAKINADA

## Attendance Sheet

| S. $\mathrm{V}_{0}$ | Name of the student | 80.11-3072 | 3011-2max | 11-11-2002 | 24.11.2082 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | K. Ramya | $P$ | $P$ | A | D | 13-11-2022 | $\frac{18-11-2122}{}$ | 24-12.2022 | 24.11.2002 | 25612004 |
| 2 | B. Sailaja | $p$ | $P$ | $\frac{4}{P}$ | P | P | 8 | P | A | P |
| 3 | M. Anusha | P | A | $p$ | $p$ |  | P | P | P | $p$ |
| 4 | G. Jyothi | $p$ | P | P | $p$ | p | ? | P | P | P |



Lectuses in-chouy
Department of Ecenomics
V.Anant bal.

A 5.0.GOVT.DEGREE COLLEGE (W)
AUTONOMOUS
KAKINADA

## ASD Govt Degree College for Women (A), Kakinada Department of Economics <br> Test for Bridge Course in Economics

Name

$$
\begin{aligned}
& \text { of the student: } \\
& \text { K Rambo - B.A H.E.P }
\end{aligned}
$$

## Maximum Time: $\mathbf{3 0}$ Min <br> Maximum Time: 3010.

1. The term Economics is derived from a

a. Latin word
b. Greek word
c. Russian word
d. Indian word
2. Adam Smith book "An Enquiry into the Nature and Causes of Wealth of Nations" was published in the year
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c. 1776
d. 1930
3. Micro economic approach is
a. Total
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c. Aggregative
d. None of the above

4. The phrase "Ceteris paribus" mean that
a. Other things must be held constant $\quad$ b. The petrol prices must be adjusted for inflation
c. The theory is widely accepted, but cannot be tested $d$. All of the above.
5. Demand curve shows:
a. Inverse relationship between cost of production of a commodity and its quantity demanded
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c. None of the above
6. An algebraic expression of the relationship between price and quantity demanded is known as the
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b. Log function
c. Supply function
d. Demand function
7. Wealth definition to economics is given by
a. Adam Smith
b. Marshall
c. Robinson
d. Samuelson


## 8. Production Possibility Curve is

a. Different combinations of production
b. Different combinations of output that can be produced given current resources and technology
c. Different combinations of Labour and capital to produce various goods
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9. What do you mean by the supply of goods?
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a) 10. Which of the following is the relation that the law of demand defines?
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11. What do you mean by a mixed economy?
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13. Which of the following is/are linked with the financial sector of India and controlled by the Reserve Bank of India (RBI)?
a. Commercial bank
b. Money lenders
c. Stock exchange operations
d. All of the above
14. What is the main economic problem faced by the society?
a. Unemployment
b. Inequality
c. Poverty
d. Scarcity
15. What does the law of demand mean?
a. As the quantity demanded rises, the price rises.
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## ASD Govt Degree College for Women (A), Kakinada Department of Economics <br> Test for Bridge Course in Economics



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M. Anusha BA (H.E.P)

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Department of Economics
Test for Bridge Course in Economics
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# ASD Govt Degree College for Women (A), Kakinada Department of Economics Test for Bridge Course in Economics 

Maximum Time: $\mathbf{3 0}$ Min
Date: 26-11-2022
Name: Ch. Romper B.A. [H.E.P]

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Department of Economics Brief Report of the Bridge Course

Department of Economics conducted a Bridge course for newly joined in I B.A Degree course in the academic year 2022-23 who came from different groups, studied non - Economics students in this year. In this Bridge course the Department of economics conducted a Test (Previous test) on 05/11/2022 and given a special coaching for the particular students in Economics. After completed the course the course again a test was conducted. The Bridge course was given by 10 days more from 9/11/2022 to 26/11/2022

| S.No | Name of the student | Max marks | Before Bridge <br> Course | After the bridge-coumse |
| :---: | :---: | :---: | :---: | :---: |
| 1 | K. Ramya | 15 | 7 | 11 |
| 2 | B.Sailaja | 15 | 9 | 13 |
| 3 | M.Anusha | 15 | 5 | 11 |
| 4 | G.Jyothi | 15 | 5 | 11 |



Lecturer in -charge Dept of Economics.

# A.S.D.GOVERNMENT DEGREE <br> <br> COLLEGE for Women, (Autonomous), <br> <br> COLLEGE for Women, (Autonomous), KAKINADA <br> <br> DEPARTMENT OF POLITICAL <br> <br> DEPARTMENT OF POLITICAL <br> <br> SCIENCE 

 <br> <br> SCIENCE}


## BRIDGE COURSE 2022-2023 <br> (9/11/2022 to 29/11/2022) I.B.A <br> SEMESTER - I

Smt. P.V. Bhuvaneswari Devi
Guest faculty in Political Science

## A.S.D GOVT. DEGREE COLLEGE for Women, (Autonomous), KAKINADA Activity Register 2023-2024 Department of Political Science

| Dalc | 9/11/2022 to 29/11/22 (10 days) |
| :---: | :---: |
| Conduct through <br> (DRC/JKC/ELF/NCC/NSS/ <br> Department etc...) | Department of Political Science |
| Nature of Activity <br> (Seminar/workshop/ Extn. <br> Lecture etc...) | Bridge Course |
| Title of the Activity | Bridge Course |
| Name of the Departunent $/$ committee | Department of Political Science |
| Details of Resource Persons (Name. Designation etc...) | * |
| No. of students participated | 10 students of I B.A |
| Brief Report on the Activity | Department of Political Science conducted a Bridge course for newly Joined in I B. A Degree course in the academic year 2022-23 who came from different groups, studied non - Political Science students in this year. In this Bridge course the Department of Political Science conducted a Test (Previous test) on 05/11/2022 and given a special coaching for the particular students in Political Science. After completed the course the course again a test was conducted on $2 / 12 / 2022$. The Bridge course was given by 10 days more from 9/11/2022 to 29/11/2022. |
| Name of the Lecturer who Planned \& conducted the Activity | Y. Sita Maha Lakshmi, Lecturer in - Charge, Dept. of Political Science \& P.V.Bhuvaneswari Devi, Guest Faculty of Political Science |
| Signature of the Dept. in charge/ convener of the committee | PRINCIPAL |
| Signature of the Principal | V. A O A.S.D.GOVT.DEGREE COIIEN I.... |
| Remarks | Students get more knowledge about the importance of the Political Science subject |

A.S.D. rout. Degree college for women. Kakinada [A].
Department of political science.
Bridge course - 2022-23.
SyLLABUS.
SN DATE
CHAPTER.
1 9lil|22. political science Introduction.
$210 / 11122$ Nature, scope of political science.
3 11) $11 / 22$. Definition of the state.
4 14)1122 Elements of the state.
5 1sli1122 concepts of political science.
6 18/11/22. Law, Liberty, Equality.
$721 / 412 z$ Theories of Rights.
8 2ylit2z meaning, Nature of Rights.
9 26/1122- political Ideologies.
$1029 / 11 / 22$ Liberalism Individualism.
signature of the Lecture in-chorge:- "ch F-
signature of the Acadamis coordinator:

I BAA. HEP.
Department of political science.
Bridge Course Register -2022-23.

A.SD vout Degree college for womon. Kakinada Department of political science. Maddaucstion paper be fore bridge course. Hame :- $M$. Anusha.

1. The father of political science $\qquad$
(a) Hobbes
(b) $\operatorname{mar} x$
(c) Aristotle.
2. The author of "social contract theory" is
(a) plato
(b) Rousseall
(c) Locke.
3. Rights and - are like the two sides of a coin
(a) dulies
(b) naturs
(c) Jobs.
4. "Comnurist manifesto" was written by $\qquad$
(a) Hobbes
(b) marre
(c) Locke.
5. "Back to Nalure" was the slogen given by
(a) Hobbes
(b) Rousseau
c) Locke
6. modorn states are - states
(a) welfare
(b) Religious
(c) secular
7.     - proposed limiter government
(a) Avistotle
(b) Hobbes
(c) Locke.
8. Aythor of book "Liviathan"
(a) Larki
(b) Hobbes
(c) Roussear.
9. Politics is the study of
(a) wealth
(b) Power
(c) Human nature.
10. State is a neceessary evil $\qquad$
(a) Anarchism
(b) Individualism
(c) syndicalierm.
A.S.D. Govt Degree college for when kakinada Department of Political science. model question Paper offer Bridge course.
B. Sailaja.

Answer the following multiple choice questions.

- man is a social animal
(a) $x$
a] plato
b] Aristotle
c] socrates
8 communism was supported by -
(b)
a] Laski
b] Gandhi
c] marx.

3) The author of Grammar of Politics -
$(a)$
a] Aristotle
b] Austin
c] LasKi
4) 

advocated social contract Theory
(b)
a] Locke b] Aristotle c] Gandhi
Q. The auother of pas capital is $\qquad$
a] Lenin b] mas c] kasimarx.
Who said that religion is the opium of the people $(q)$
d] $\operatorname{mar} x$
b] Gandhi
c] Robert owe $n$.
1 politics is the study of -
a] wealth b] power c] Human nature.
An Indicridual is both a sovereis
a] Laski b] Gandhi c] Rousseall.
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A.S.D. GOVERNMENT DEGREE COLLEGE FORWOMEN (ALTONOMOUS)KAKLNADA

## DEPARTMENT OF COMMERCE



## BRIDGE COURSE ON

## FUNDAMENTAL OF ACCOUNTING

 2022-2023
A.S.D. Government Degree College for Women (Autonomous), Kakinada Activity Register 2022-23

| Date | 5-11-2022 $6022-11-2022$ |
| :---: | :---: |
| andacted through HCC/JKC/ELIV/NCC/NSS pp. etc. | Bepurtment of Commerce |
| Iture of Activify tminar/Worknhoj/ tension lecture cte., | Hridge Courne |
| Ie of the Activity | Fhancial Accounting |
| dents participated | IIt.Com Studenta who studled their Intermediate in Non Commercestream |
| ne of the Department maittee | Commerce |
| f Report on the netivity | In the activity bridge courne is conducted for the IB,Com Students who atudied Non-Commerce aubject in their Intermediate Education In this course Basic and fundamentals of Accounting were taught . |
| e of the lecturers who ned \& conducted the ity | R.R.D.Sirisha, P.Rajya lakshmi, Ch.SSV.Prasad. |
| ture of the timent in charge/ ener of the nittee | $R \cdot R \cdot R$ Erijek |
| ture of the Principal |  |

A.S.D.GOVT.DEGREE COLLEGE FOR WOMEN (A), KAKINADA.

DEPARTMENT OF COMMERCE
BRIDGE COURSE FOR I B. COM., STUDENTS
2022-23
FINANCIAL ACCOUNTING -I
ATTENDANCE LIST

# A.S.D.GOVT.DEGREE COLLEGE VOR WOMEM, KAKINADA <br> DEPARTMENT OF COMMERCE BRIDGE COURSE 

The Department of Commerce takes up a Bridge Course for I It:Cson, stodenti whe sot read Commerce as their subject at their intermediate lesel. To grt them anguaistat the subject, a Fifteen-day programme is being held wherein the total introdarties of the bus is covered and thereby the Student can rise up to a level to underatand fler seliject. $r$ the programme, an objective test for 50 marks will be cenducted with a vire to ansent *ability of understanding the subject. Fer those whe secure leas than the minimans IS ks, they will be taken care until they are familiar with the subject.

## JECTIVES:

「'o be able to learn the Commerce terms.
lo be able to get a overall view of the subject.
'o be able to understand the weight age of the subject in competitive ainations.
o be able to learn the systems of govern
A.S.D.GOVT.DEGREE COLLEGE FOR WOMEN (A), KAKINADA. DEPARTMENT OF COMMERCE BRIDGE COURSE FOR I B.COM. STUDENTS 2022-23
FUNDAMENTALS ACCOUNTING
MARKS LIST

| NAME OF THESTUDENT | GROUP | MARKS OBTAINED before bridge COURSE | MARKS OBTAINED AFTER BRIDGE COURSE | Remarks. |
| :---: | :---: | :---: | :---: | :---: |
| D.Tejaswini | E.M | 12 | 17 | Jeord |
| D. Sathya Priya | E.M | 13 | 16 | ford |
| Ch.Lavanya | E.M | 14 | 17 | gend |
| P.V.V.Sivani | E.M | 13 | 18 | gond |
| P.Renuka | E.M | 15 | 18 | good |
| K.Surekha | E.M | 14 | 17 | goond |
| K. Deevena | E.M | 12 | 16 | good |
| L.Sathya Kumari | E.M | 13 | 19 | Fxilear |
| G.Nooka Rathnam | E.M | 10 | 18 | goud |
| S.Sandhya | E.M | 14 | 17 | good |
| B.Sathya Veni | E.M | 13 | 14 | good |
| D.Rekha | E.M | 12 | 13 | good |
| R.Padma | C.A | 15 | 16 | gerod |
| M.Sirisha | C.A | 14 | 17 | gend |
| R.Vimala | C.A | 13 | 17 | grone |
| M.Bhargavi | C.A | 14 | 18 | sand |
| B.Lakshmi Prasanna | C.A | 15 | 18 | goved |
| K.Rajeswari | C.A | 13 | 18 | giond |
| ?.Haripriya | C.A | 15 | 18 | good |

# A.S.D.GOVT.DEGREE COLLEGE FOR WOMEN (A), KAKINADA. <br> DEPARTMENT OF COMMERCE BRIDGE COURSE FOR I B.COM, STUDENTS 

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2022-23
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## FUNDAMENTALS ACCOUNTING

## QUESTION PAPER BEFORE BRIDGE COURSE

HAME OF THE STUDENT: GROUP:
nswer all questions. 20×1-20 marles.
xample of Tangible Assets $\qquad$
xample of Liabilities
on-Cash Expenditure is $\qquad$
ectification of Errors recorded in the book of $\qquad$
xample of Fixed Assets $\qquad$
leaning of Trial Balance is $\qquad$
ull form of B.R.S $\qquad$
scounting Equation is Assets $=$
cample of Intangible Assets
'ull form of GAAP= $\qquad$

Brioge Course on.
MICROBIOLOGY
The following student have attended the bridge class today $\&$ the topic is Introdulion to Microbiology, Scope \& limpatance of Mierobiology.
$V$ Durga bhavani - $V$ Durga bhawani
A. Cami
ch. Rudlera
R. Madhes
S. Poojithg
p. Ganga bhavami - P. Ganga Bhavani
D. (rayener Lec Mivotiology

The following students of I2.8.5. Hiessiondogy have. atcuded the Bridge Course PRE TEST on Basies of Hicraniology.
$\checkmark$ Dinga bhavain
p. Ganga bhowan:
A. larmi
ch Ruchra
p. Bhavan:
R. Madhu
s. poojitha

- V.Darga btavemi
- P. Girgea Btawani
- Alakihni
- ch. Audramaho Otokhnm
- P. Bhavané
- R. Madher
- S. Sri puigither


Histarical events in development of Miorobiology, Abrogensis theory os spontanious. generation theory.
V. Dwga bhavami - V.DWga bhawami
P. Ganga bhavomi - P. Ganga Bhavani
A. larmi

Ch. Rudhra
p. Krishnaveni
D. Bhavami:

- ch. Rudramaholakshimi
R. Madhu
S. poojitha
- p. Krushnaveni
p. Bhavaní
- R.Madhu
- s. Sripujitha

Mirrociopy - Working porinciple, Handling magnufication, applecations.
V. Dusiga bhavami
ch. Ruchro
A. lacmi
R. Madhes
P. Bhaw ani
P. Gang a bhowani
p. koishnaven:

- V. Durga bhavami
- ch tudro mahalakhmi
- Alakishomi
- R. Madhu
- P Bhavarí
- P. Gorga Bhavani
-P. Krishmavent

Mirobiology laboratory Equipments, the working princíple, usses.
V. Desga bhavon.
ch. Redihra
A. Lanmi
P. Bhawani
R. Madhes
S. Poofthe
P. Gangabhavami - P Gance Brovani

- V.Dwge bhavan!
- ch. Rudramahalakshmi
- A. aleshmi
- P. Bhavani
- R.ntadhes
- S. Srippijitia

Qafety measures ior the mieroliology laboratory.

ViDurga bhavani
A. lanmi

Ch. Rudhro
p. kishnavemi
D. Bhawami,
R. Madher
S. poojithg
p. Genga bhewomi

- V.Dugga bhavami
- Alakihmi
- ch. Dudramoho Labihmi
- P.k. veri
- P. Bhavaní
- P Madir
- S. Sri pujitha
- P. Garga Bravani
career epportchnites in microbelology future propects of Murobiology
V. Durga Bhavani
p. Garga Bhavan:
ch. Rualhora
p Krishnaveni
P. Bhavan
R. Madhu
S. pegitha
A. loxmi
- Vinuga Bhavani
- pranga Bhavan:
- ch. Rudramahalakihmi
- P.K.Veri
- Pbhavani
- R. Machur
- Soris puitha
- A. laleshmí

Basic characteristic features :Types of Mivroorganisms
$V$ Dusga bhavami
A laximi
Ch. Rudhra
P. Krishnaveni
P. Bhavomi
R. Madher
S. poojithg

PGanga bhovami

- V.Durga bhavanis
- A.Latikmi
- ch. \$udramahalatithm
- P.k.vent
- P. Bhavani
- R Madher
- S. Srippijhg
- P. Ganga Bhavani
scope and Anplications \& Different Fields. Smportance of Microbiology
V. Durga bhavoní
A. laxmi
ch. ke Puchra
P. Bhavani
S.poojitha
p. Gangabhavan
- v. Dung a bhavami
- A. lakshmi
- ch. kudramaha lakhmi
- P. Bhavani
- R.madher
- S. Sri poinitla
- p.Ganga Bhawan;

Bocteria, fungi, virus perotgon
V. Durga bhavani
A. Larmi

Ch. Rudhrg
1P. Corishnaveni
R.Madhes
S. Sripooitha
P. Ganga bhavani
M. Rani

- v. Dusga bhavani
- A.Lakshmis
- ch Judramaholakhmi
- Pik. veni
- R.madru
- S. Sripuitha
- P. Ganga bhavani
- M Rani

Names of Bacterial Diseases

- Types study Berefly.
V. Dugg a bhavamit
A. Lormil
ch. Rudhro
(7. Krishnaveni
R.Madhes
P. Gange bhavami
s. sripoojitha
M. Rani
- Visga bhewomi
- A. lakchmi
- ch Audramohaloshmi
P.K. veni
- R. Madhu
- p-Ganga Bhavan:
S. Srie pujitha
- M. Rani

Name of Viral Discases
V. Durg a bhavan'!
A. Larmi

Ch Rudhra
O. Krishnaveni
R. Madhu
S.sipoojitha
p. Ganga bhavani
M. Rani

- V.Dosga bhowomi
- A.laksioni
- ch. kudra mahaladechmi
- Krishna Veni
- R Madher
- SSri pujitha
- pGanga Bhavan MRani

Basic laboratory equipments and Safety Precautions to world in Laboratory. Remaining Students BRIDGE COURSE Past Test.

B. Parimila pushoa/|7-11-22| 16 B.P. Pushpa


NAME OF THE LECTURER: M. Suvarchala

DATE: $31-10-22$

HOUR : AH

TIME : $10-11$

TOPIC : Scope of thmesciance and
Relationship with other Subjects.
ABOUT THE TOPIC:
$\Rightarrow$ Home science is a multidisciplinary field that is not only confined to food and. nutrition but also covers topics such as textiles, health, clothing, family relations, child development and Hygiene :-
Home science is important as it equips individuals with essential life skills, promotes health and nutrition, enhances hame -management, fosters personal development, and encourages sustainable. living.

It teaches us to do all the household jobs in a systematic and scientific manner.
For example:- It teaches us not only to cook food, but also teaches how

NAME OF THE LECTURER :DK. Lavanya

$$
\text { DATE: } 1-11-22
$$

HOUR

$$
\text { TIME: } 10-11
$$

TOPIC : Branches of Home Science
ABOUT THE TOPIC
Home science or the study of hame making deals with subjects connected with doily activities of hame maker such as food clothing, shelter, finance, health, childcare, home beautification, community service etc. Religion, culture art and music from its integral parts.
Types:-
Food and nutrition: Good nutrition is important for healthy living.
clothing and Textiles: Knowledge of aesthetic, hyp genic and ecomanic value of clothing is important for Home science students.
Home -management: Management plays an important role for successful tome making Housing : Good howling ensures the heath and security

Health and Hygiene: Health is an important broach. of home science.
child cave and development: Children are the future citizens of the nation
Home nursing and first aid: As health plays on imported vole in life the knowledge of home nursing.
Human relationships: As man is a social animal be con find greatest happiness in society. SIGNATURE OF THE LECTURER:

SIGNATURE OF THE STUDENT:

1. V. yroshria
2. K. Mercy Joy
3. S. Sravani
4. B. Daleshmi Pracaina
5. R. Sheba lathe
6. K. tranga Lakshmi
7. pyamini sushmithe
8. G. Sivoni

NAME OF THE LEOTURER : L.:Malleswar:

DATE : $2-11-2 \%$

HOUR : : 1

TIME: $10-11$

TOPIC: Basins of Textiles and clothing, Extension education.

ABOUT THE TOPIC :

1) Textiles are materials made from fibers and threads, such as fabric, cloth and clothing.
2) Explore animal-based, plant-basedi and Synthetic fibers, and learn about the manufacture of fibers, as well. and uses and examples of Textiles.
3) The textile study course is designed to give a comprehensive over. view of Textile fibres, their production, types, characteristics, spiming into yarns, designing, formation of fabrics of different types through weaving and other methods of fabric construction, care of fabrics Etc.
4) clothing and textile is a soleable subject that offers Students Skills that will help them to be self reliant and self employed on graduation.

SIGNATURE OF THE LECTURER:1, Males -

SIGNATURE OF THE STUDENT:

1. S. Sravani
2. R. Snipe lathe
3.K. Mercy Joy
3. Vofyoghna
4. B. Qaceshmi Poacosanna
5. p. yamini sushmitha
6. K. Tanga Lakshmi
7. G. Sivan

NAME OF THE LECTURER : Dr. G. Anitha

DATE: 3-11-22

HOUR : 1

TIME : $10-11$
TOPIC: Scope and principles of foods and Nutrition and Human Development. ABOUT THE TOPIC :

1) Eat variety of foods to Ensure
2) Adequate intake of nutrients.
3) Eat plenty of fruits and vegetables.
4) Consume whole grains, nuts and healthy facts rich in unsaturated fatty acids.
5) Reduce the intake of Saturated fats
6) Limit Sugar intake
7) cut back e on salt
8) Drink water regularly.
a) Human Apwelopment majors can work in teaching, research, or as community administrators.
9) Human development majors can also pursue careers in counseling psychology, mental teat counseling and social work. G. Ant ha $3 \mid 1122$

SIGNATURE OF THE LECTURER:

SIGNATURE OF THE STUDENT:

1. R. Sheba lathe
2. S. sravani
3. p. yominisushmithe.
4. K. Mercy Joy
5. V. juoshna
6. B. Lakshmi Porasanna
7. G. sivan
8. K. Ganglia Lakshmi

NAME OF THE LECTURER: Dr. K. Lavanya
DATE : $4-11-22$

HOUR :

TIME: 10:11
TOPIC : Scope and principles of
Resources management.
ABOUT THE TOPIC :

1. Resource management is the process of wring
a one's resources in the mort efficient may possible.
2. These resources can include tangible resources Such as goods and equipments. financial resources, and labor resources

Such as employees.
3. The Scope of human resource management includes reveriting, Hiring, trainings and distributing salaries of the employees of
a Company.
4. Resource management principles Customes forms leadership, Engagement of people, process approach. improvement. Evidence based decision making and relationship management.
5. Management Concept is comprehensive. and covers all aspects of business.
6. Human resource management repers to the Sutrategic approach to managing an ognisations wirk force.

SIgNATURE OF THE LECTURER:

SIgNATURE OF THE STUOENT:

1. G. sivani
2. R. Suha latha
3. K. Granga lakehmi
4. B. Carshmiprasanna.
5. K. Mercy Joy
6. S. Sravani

7 i. Jyoshia
spyaminisuhmithe.

NAME OF THE LECTURER: Dr. G. Anitha

DATE: $5-11-22$

HOUR:

TIME: $10-11$
TOPIC: Basic Chemistry of foods
ABOUT THE TOPIC :

1. Food chemistry is the study of the chemical processes and interactions of foods biological and non-bidogical Eemponents.
2. Chemicals in food are largely, themes and frequently beneficial, for eseample. Carbohydrates, protein, fat of fibre are all chemical Components.
3. Food chemistry is one of the fields involved in the multidisciplinary field of food Science.
4. It is the study of food components Such as protains, carbohydrates, fats and water.
5. In addition fred chemistry assesses the reactions these components go through during food processing and preservation. 6. Food is made up of many biological. molecules that provide with energy and include Chemicals, that cue require
to develop and repair ourselves and assist our cells to work is our bodies.

SIGNATURE OF THE IECTURER: $Q$. Anithe 5/yl22

SIGNATURE OF THE STIDENT:

1. P. Yamini sushmitha
2. K. Ganga lotitmi
3. G. Sivani
4. R. Sneha latha
5. S. Shavani

6 K. Mercy Joy
7. B. Sabsoshmi Prasanina
8. V. jyposhena

NAME OF THE LECTURER: L. Mallescoari
DATE : 8-11-28

HOUR : 1

TIME : $10-11$
TOPIC: Infection and Immunity ABOUT THE TOPIC:

Immunity is In biology, immunity is the state of being insusceptible or resistant to a noxious agon or process, especially a pathogen or Infections disease.
2) Immunity may occur naturally or be produced by prior expasurp ar Immunization.

Infection:- Infection occurs when viruses, bacteria? or Other microbes enter your body and begin to multiply. Disease, which typically happens in a small proportion of infected people.
g) Occurs when the cells in your body are damaged as a result of infection, and signs and symptoms of an illness appear.

Infection and immunity is a peer-reviewed medical journal published by the American society for microbiology. it focuses an interactions between bacterial, fungal, or parasitic pathogens and their hosts.

SIGNATURE OF THE LECTURER: L. Mallespan:

SIGNATURE OF THE STUDENT:

1. V. Jyoshuse

2 P. Yamini sushonithe
3 C-sivans'
4 ki tranga lakshmi
5 S.Sravani
6 R. Snehe lathe
7 K. Mercy Joy
8. Bi lalashmi Padsianna
and reproductive system

SIGNATURE OF THE LECTURER: H. Suvarca de

SIGNATURE OF THE STUDENTS:
$t$ B. larchmi Draosama.
2 G-sivans.
3 K. toanga Lokimi
4. P. Yamini sushmithe.
at. 5 R. Snche latha.
6 vofuroshria
7 S. sravani:
al 8 k. Mercy Joy

NAME OF THE LECTURER: Or. G. Anitha
DATE: $\quad 10-11-22$

HOUR: I
TIME: 10-11
"TOPIC: Hormones and its role
in metabolism.
ABOUT THE TOPIC:

1) ultimately, hormones control the function of Entire organs, affecting such diverse processes as growth and development, reproduction, and nutrient metabolisms.
2) Harmones also influence the way the body uses and stores Energy and control the volume of fluid and the levels of salts and sugar (glucose) in the blood.
3) The harmonies test tosteronc and Estro. gen play a leading orle in your metabolism.
4) Insulin plays a critical role in many hormones regulating lipid
meta holism.
5) The Endocrine system involves many iran systems and hormones, many of which are still being investigated and understood.

metabolism.
6) The sndocrine system invalues many sigan systems and hormones, many of which are still being investigated and understand.

SIGNATURE OF THE LECTURER: G. An-tha $1 0 / 4 \longdiv { 2 2 }$

IGNATURE OF THE BTUDENT:
K. Mexcy Ioy
3. Uaceshan Poracanna
S. Sravani
r-sivani
2Vamini sushmittla

- Snehe latha

5. Trauga Lakehmi
: Jyothina
metabolism.
5) The Endocrine system involves many organ systems and hormones, many of which are still being investigated and understand.

SIGNATURE OF THE LECTURER: G. An the 10/4)22

SIGNATURE OF THE STUDENT:

1. K. Mercy Joy

2 Bu lareshent Poracarna
3 S. Sravani
d) G. Sivan

5 p.Vamini sushmitho
6 R. Sue lathe.
7 K. Gang Lakehmi
8 v. Jyostina

NAME OF THELECTURER: M. Suvarachala
DATE: $11-11-22$
HOUR: 1 H
TIE: $10-11$
TOPIC: Entreprenurship and Higher progression in Home Science ABOUT THE TOPIC:

1) Home science is an interdisciplinary field of knowledge with focus on food \& Nutrition, fabric \& Apparent Designing Human derolopomenti, Resource and communication \& extension -
2) High - growth entroproneurship stands for a key ancioecononic phenomenon that spurs aggregate levels of Innovation, competitiveness and economic development
3) Entrepreneurial opportunities: Home science offers excellent prospects for ontreprenurship. Graduates can start their own businesses in various fields such as food and catering Services, interior design consultancy, clothing and fashion design, or even open their own childraxe Centers
4) Entrepreneurship in thane science. Home science is an interdisciplinary field of knowledge with focus on food \& Nutrition, fabric \& Apparel Designining:

## SIGNATURE OF THE LECTURER: H-Suvarchae

SIGNATURE OF THE STUDENT:

1. K. Gang Lakshmi
2. rigyothea
3. G-sivani
4. P. Yamen sushmitta
5. K. Mercy Joy.
6. R. Shilha lathe
7. Be lakshmi Perasanna.
B. S. Sravani
H. Suvarthala

Lecturer in Hun f Science
A.S.D. Govt. DEGREE COLLEGE (W


[^0]:    A) Fungi
    B) Virus

    C Bacteria
    D) Cyanobactería

