SIR SYED COLLEGE



ARIMBAM PO, THALIPARAMBA- KANNUR https://sirsyedcollege.ac.in/ https://sirsvedcollege.ac.in/igac/naac

1.1 Curricular Planning and Implementation

Bridge Courses

BRIDGE COURSE (2023-2026 Batch) SYLLABUS

OBJECTIVES OF THE COURSE

a. To foster students an interest in communication as well as writing skills.

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- b. To give a foundation course in Botany to strengthen the basic and fundamental knowledge of Botany.
- c. To familiarize the students with laboratory manuals and practices so as to ensure the safe exploration of laboratory chemicals and equipments.

Sl. No.	Modules	Objectives	Hours		
1.	Module 1	Vocabulary	3 hrs		
2.	Module 2	Introduction to Botany	2 hrs		
3.	Module 3	Practical Botany	3 hrs		
4.	Module 4	Carrier Orientation	2 hrs		

Module 1 (3 hrs)

Word Building, Kinds of Sentences, Parts of Speech, Sentence Pattern, Tenses, Active and Passive Voice, Reported Speech, Degrees of Comparison, Question Tag.

Module 2 (2 hrs)

Major Botanists- with special reference to India and Kerala, Major Botanical Institutes in India, Branches of Botany, Scope and Significance of Botany.

Module 3 (3 hrs)

Introduction to Laboratory practices, Parts and uses of microscope, Sectioning and staining techniques, Biosafety protocols.

Module 4 (2 hrs)

Major higher education centers in India- UGC-CSIR institutes, Universities, Boards, etc. Carrier opportunities-R & D centers, Education Institutions, Private agencies.



Department of PG Studies and Research in Botany Sir Syed College, Taliparamba, Karimbam PO Kannur, Kerala – 670 142.

BRIDGE COURSE (2022-2025Batch) SYLLABUS

OBJECTIVES OF THE COURSE

- a. To familiarize the students with laboratory manuals and practices so as to ensure the safe exploration of laboratory chemicals and equipments.
- b. To give a foundation course in Botany to strengthen the basic and fundamental knowledge of Botany.
- c. To foster students an interest in communication as well as writing skills..

SI. No.	Modules	Objectives	Hours
1.	Module 1	Carrier Orientation	2 hrs
2.	Module 2	Vocabulary	3 hrs
3.	Module 3	Introduction to Botany	3 hrs
4.	Module 4	Practical Botany	3hrs

Module 1 (2hrs)

Major higher education centers in India- UGC-CSIR institutes, Universities, Boards, etc.

Carrier opportunities-R & D centers, Education Institutions, Private agencies

Module 2 (3 hrs)

Word Building, Kinds of Sentences, Parts of Speech, Sentence Pattern, Tenses, Active and Passive Voice, Reported Speech, Degrees of Comparison, Question Tag.

Module 3 (3 hrs)

Major Botanists- with special reference to India and Kerala, Major Botanical Institutes in India, Branches of Botany, Scope and Significance of Botany.

Module4 (3hrs)

Introduction to Laboratory practices, Parts and uses of microscope, Sectioning and staining techniques, Biosafety protocols.

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Department of PG Studies and Research in Botany Sir Syed College, Taliparamba, Karimbam PO Kannur, Kerala – 670 142.

BRIDGE COURSE (2019-2022 Batch) SYLLABUS

OBJECTIVES OF THE COURSE

- a. To familiarize the students with laboratory manuals and practices so as to ensure the safe exploration of laboratory chemicals and equipments.
- b. To give a foundation course in Botany to strengthen the basic and fundamental knowledge of Botany.
- c. To foster students an interest in communication as well as writing skills..

Sl. No.	Modules	Objectives	Hours	
1. Module		Carrier Orientation	2 hrs	
2.	Module 2	Vocabulary	3 hrs	
3.	Module 3	Introduction to Botany	3 hrs	
4.	Module 4	Practical Botany	3hrs	

Module 1 (2hrs)

Major higher education centers in India- UGC-CSIR institutes, Universities, Boards, etc.

Carrier opportunities-R & D centers, Education Institutions, Private agencies

Module 2 (3 hrs)

Word Building, Kinds of Sentences, Parts of Speech, Sentence Pattern, Tenses, Active and Passive Voice, Reported Speech, Degrees of Comparison, Question Tag.

Module 3 (3 hrs)

Major Botanists- with special reference to India and Kerala, Major Botanical Institutes in India, Branches of Botany, Scope and Significance of Botany.

Module4 (3hrs)

Introduction to Laboratory practices, Parts and uses of microscope, Sectioning and staining techniques, Biosafety protocols.

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Department of PG Studies and Research in Botany
Sir Syed College, Taliparamba, Karimbam PO
Kannur, Kerala – 670 142.

BRIDGE COURSE (2018-2021 Batch) SYLLABUS

OBJECTIVES OF THE COURSE

- a. To foster students an interest in communication as well as writing skills.
- b. To give a foundation course in Botany to strengthen the basic and fundamental knowledge of Botany.
- c. To familiarize the students with laboratory manuals and practices so as to ensure the safe exploration of laboratory chemicals and equipments.

Sl. No.	Modules	Objectives	Hours
1.	Module 1	Vocabulary	3 hrs
2.	Module 2	Introduction to Botany	2 hrs
3.	Module 3	Practical Botany	3 hrs
4.	Module 4	Carrier Orientation	2 hrs

Module 1

(3 hrs)

Word Building, Kinds of Sentences, Parts of Speech, Sentence Pattern, Tenses, Active and Passive Voice, Reported Speech, Degrees of Comparison, Question Tag.

Module 2

(2 hrs)

Major Botanists- with special reference to India and Kerala, Major Botanical Institutes in India, Branches of Botany, Scope and Significance of Botany.

Module 3

(3 hrs)

Introduction to Laboratory practices, Parts and uses of microscope, Sectioning and staining techniques, Biosafety protocols.

Module 4

(2 hrs)

Major higher education centers in India- UGC-CSIR institutes, Universities, Boards, etc. Carrier opportunities-R & D centers, Education Institutions, Private agencies.

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October 10 to 30

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TEFARIMENT / CLUB In association with PTA, Sir Syed College



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Description

BRIDGE COURSE IN MATHEMATICS FOR FIRST SEMESTER GRADUATE STUDENTS

A bridge course for newly admitted undergraduate students of Mathematics, Statistics, Physics Chemistry and Economics before the commencement of the first semester classes.

- The main objective of the course is to bridge the gap between subjects studied at school 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.
- Accordingly, the Bridge Course has been prepared with the dual objective of reviewing the studies done by the students in the previous academic year and helping them to learn the curriculum of the present class in this academic year.
- During the first week after the commencement of the classes, the bridge course curriculum can be delivered to the students.
- ❖ A post bridge course test is conducted after the completion of bridge course syllabus to assess the ability of students. Mathematics is a necessary subject to study Chemistry, Economics, Mathematics, Physics and Statistics. A thorough Mathematical background is needed to better understand the various topics in concerned subjects. There is a gap of knowledge in Mathematics to the students due to various reasons including the online classes during Pandemic era, the reducing of Plus one and Plus Two syllabus to certain focus areas, the poor performance of students in Mathematics from lower classes, Phobia of students towards mathematics, etc. To bridge this gap and to strengthen the fundamentals of the students, a module on Mathematics is incorporated as a bridge course. It would enable the students to grasp the concepts of mathematics quickly and efficiently.

Aim of the Bridge course in Mathematics

- > To make "learning of Mathematics as a pleasant experience".
- > To Bridge the school education and graduate education.
- > To enhance the performance of students in Mathematics
- \succ To reduce the hurdles of students in acquiring knowledge in pure & applied science

The programme started on 10-10-2022 and ends on 29-10-2022. The five full day classes were conducted for three batches BSc. Mathematics & BSc. Statistics, BSc. Chemistry & BSc.

BRIDGE COURSE IN MATHEMATICS FOR

BSc. MATHEMATICS

BSc. STATISTICS

BSc. PHYSICS

BSc. CHEMISTRY

&

BA. ECONOMICS

Prepared by:

- 1. Sirajudheen M P, Head of the Department of Mathematics
- 2. Mansoor N K, Head of the Department of Statistics
- 3. Muneer C.P, Assistant Professor, Department of Physics

SIR SYED COLLEGE

TALIPARAMBA KANNUR KERALA -670142

BRIDGE COURSE IN MATHEMATICS FOR FIRST SEMESTER GRADUATE STUDENTS

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- A post bridge course test is conducted after the completion of bridge course syllabus to assess the ability of students.

Mathematics is a necessary subject to study Chemistry, Economics, Mathematics, Physics and Statistics. A thorough Mathematical background is needed to the better understanding of the various topics in concerned subjects. There is a gap of knowledge in Mathematics to the students due to various reasons including the online classes during Pandemic era, the reducing of Plus one and Plus Two syllabus to certain focus areas, the poor performance of students in Mathematics from lower classes, Phobia of students towards mathematics, etc. To bridge this gap and to strengthen the fundamentals of the students, a module on Mathematics is incorporated as bridge course. It would enable the students to grasp the concepts of mathematics quickly and efficiently.

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➤ To make "learning of Mathematics as a pleasant experience".

- > To Bridge the school education and graduate education.
- ➤ To enhance the performance of students in Mathematics
- > To reduce the hurdles of students in acquiring knowledge in pure & applied science

Total number of hours to be handled: 30

BRIDGE COURSE IN MATHEMATICS FOR B.Sc. MATHEMATICS & B.Sc.

STATISTICS

Module 1

Set Theory, Relations and Functions

- 1. Set Theory
 - 1.1 Definition and Representation
 - 1.2 Types of Sets
 - 1.3 Operation on Sets
- 2. Relations
 - 2.1 Definition
 - 2.2 Types of Relations
 - 2.3 Partial order and Equivalence Relations
- 3. Functions
 - 3.1 Definition and classification
 - 3.2 Types of functions
 - 3.2.1 Algebraic and Transcendental functions
 - 3.2.2 Trigonometric, Logarithmic and Polynomial functions
 - 3.3 Composition and Inverse of functions

Module 2

Number System

- 2.1 Types of Numbers
- 2.2 Open and closed Interval
- 2.3 Neighbourhood of a point
- 2.4 Limit point of a Set

Module 3

Differential

- 3.1 Function
- 3.2 Limit and Continuity
- 3.3 Differentiability
- 3.4 Derivatives of a function
- 3.5 Differentiation rules
- 3.6 Derivatives of trigonometric function.
- 3.7 Chain rule Techniques of differentiation
- 3.8 Total and partial derivatives.

Module 4

Integral Calculus

- 4.1 Applications of integration
- 4.2 Definite and indefinite integrals
- 4.3 Proper and improper integrals
- 4.4 Techniques of integration.
- 4.5 Integration by substitution
- 4.6 Integration by parts

Module 5 Matrices and Determinants

- 5.1 Types of Matrices
- 5.2 Operations on Matrices
- 5.3 Determinants and Cofactors
- 5.4 Inverse of a Square Matrix
- 5.5 Rank of Matrix
- 5.6 Elementary row / column operations
- 5.7 System of Linear Equations

Module-6 Complex Numbers

- 6.1 Definition of complex numbers
- 6.2 Concepts of modulus / absolute value and Arguments
- 6.3 Disks and Neighbourhoods
- 6.4 Complex Function
- 6.5 Real and Imaginary Parts of a Complex Function

Module 7

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Analytical geometry and Vector Algebra

- 7.1 Polar Equation of Conics
- 7.2 Relating Polar and Cartesian coordinates
- 7.3 Conic Section in Polar Coordinates
- 7.4 Directional Derivative
- 7.5 Properties of Directional Derivative
- 7.6 Gradient and directional derivative for function of three variables

- 7.7 Gradient, Divergence and Curl
- 7.8 Properties of gradient
- 7.9 Geometrical meaning of the Gradient
- 7.10 Geometrical meaning of the Gradient

Module 8

Trigonometric Functions

- 8.1Angles
- 8.2 Measurements
- 8.3 Degrees
- 8.4 Radians
- 8.5 Quadrants
- 8.6 Trigonometric ratios
- 8.7 Ratios of particular angles.

Module 7

Differential Equations

7.1 ODE

7.2 PDE

BRIDGE COURSE IN MATHEMATICS FOR B.Sc. CHEMISTRY & B.Sc. PHYSCS

Module 1

Set Theory, Relations and Functions

- 1. Set Theory
 - 1.1 Definition and Representation
 - 1.2 Types of Sets
 - 1.3 Operation on Sets
- 2. Relations
 - 2.1 Definition
 - 2.2 Types of Relations
 - 2.3 Partial order and Equivalence Relations
- 3. Functions
 - 3.1 Definition and classification
 - 3.2 Types of functions
 - 3.3 Composition and Inverse of functions

Module 2

Differential and Integral Calculus

- 2.1 Intervals
- 2.2 Open Interval
- 2.3 Neighbourhood of a point
- 2.4 Function
- 2.5 Limit point of a Set
- 2.6 Limits
- 2.7 Limit of a function
- 2.8 Continuity
- 2.9 Differentiability
- 2.10 Derivatives of a function
- 2.11 Differentiation rules
- 2.12 Derivatives of trigonometric function.
- 2.13 Chain rule Techniques of differentiation
- 2.14 Total and partial derivatives.

Integral Calculus

- 2.15Applications of integration
- 2.16 Definite and indefinite integrals
- 2.17 Proper and improper integrals
- 2.18Techniques of integration.
- 2.19 Integration by substitution

2.20 Integration by parts

Module 3 Matrices and Determinants

- 3.1 Types of Matrices
- 3.2 Operations on Matrices
- 3.3 Determinants and Cofactors
- 3.4 Inverse of a Square Matrix
- 3.5 Rank of Matrix
- 3.6 Elementary row / column operations
- 3.7 System of Linear Equations

Module-4 Complex Numbers

- 4.1 Definition of complex numbers
- 4.2 Concepts of modulus / absolute value
- 4.3 Disks and Neighbourhoods
- 4.4 Complex Function
- 4.5 Real and Imaginary Parts of a Complex Function

Module 5

Analytical geometry and Vector Algebra

- 5.1 Polar Equation of Conics
- 5.2 Relating Polar and Cartesian coordinates
- 5.3 Conic Section in Polar Coordinates
- 5.4 Directional Derivative
- 5.5 Properties of Directional Derivative
- 5.6 Gradient and directional derivative for function of three variables
- 5.7 Gradient, Divergence and Curl
- 5.8 Properties of gradient
- 5.9 Geometrical meaning of the Gradient
- 5.10 Geometrical meaning of the Gradient

Module 6

Trigonometric Functions

- 6.1Angles
- 6.2 Measurements
- 6.3 Degrees
- 6.4 Radians
- 6.5 Quadrants
- 6.6 Trigonometric ratios
- 6.7 Ratios of particular angles.

Module 7

Differential Equations

7.1 ODE

7.2 PDE

BRIDGE COURSE IN MATHEMATICS AND STATISTICS FOR

BA, ECONOMICS

Objective:

The main objective of this course is to bridge the 2 years gap between school and first year undergraduate syllabus of BA. Economics, so that they can be comfortable when they start the subject in first year degree of Economics. Meanwhile they can be able to appear for competitive exams.

Courses Outcome:

After successful completion of the course, the learner shall be confident & enhanced with quantitative aptitude (numerical ability), catering to the needs of candidates who intend to appear for all the competitive or entrance examinations to get admissions to different professional courses. Students are trained with different data analysis techniques.

Module 1

Basic Mathematics

- 1.1 Sequence of mathematical operations BODMAS
- 1.2 Basic Operations on fractions
- 1.3 Solving simultaneous Linear equations
- 1.4 Graph- Basic Graph plotting, Linear equation
- 1.5 Some standard functions and identities
- 1.6 Basic concepts of permutation and combination
- 1.7 Introduction of Derivatives
- 1.8 Simple and compound interest
- 1.9 Basics of Co-ordinate Geometry- Lines
- 1.10 Introduction to matrices and their basic operations
- 1.11 Algebra of indices (Exponents)
- 1.12 Ratio and proportion, Percentage, Profit & Loss, Logarithms

Module 2:

Basic Statistical concepts

- 2.1 Introduction to Statistics (Collection, Classification, Tabulation of Data)
- 2.2 Presenting data in Graphical format (graph, diagrams, pie charts)
- 2.3 Basic concept of probability.

Module 3

Differential and Integral Calculus

- 3.1 Intervals
- 3.2 Open Interval
- 3.3 Neighbourhood of a point
- 3.4 Function
- 3.5 Limit point of a Set
- 3.6 Limits
- 3.7 Limit of a function
- 3.8 Continuity
- 3.9 Differentiability
- 3.10 Derivatives of a function
- 3.11 Differentiation rules
- 3.12 Derivatives of trigonometric function.
- 3.13 Chain rule Techniques of differentiation
- 3.14 Total and partial derivatives.



SIR SYED COLLEGE TALIPARAMBA

Affiliated to Kannur University | Re-accredited by NAAC With A Grade

OFFERS

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BRIDGE COURSE FOR BUILDING THE
INTERPEST IN MATHEMATICAL METHODS
OVER UNDERGRADUATE STUDENES IN
SCIENCE AND ECONIMICS.

Exclusively for freshers in B. Sc. Programes (Mathematics, Statistics, Physics and Chemistry) and BA Economics.



10/10/2022 - 31/10/2022

Patron
Dr. Ismail Olayikkara
Principal, Sir Syed College, Taliparamba

Convener
Dr. Haris P



SIR SYED COLLEGE TALIPARAMBA Affiliated to Kannur University | Re-accredited by NAAC With A Grade

VITE'22

BRIDGE COURSE FOR BUILDING THE INTEREST IN MATHEMATICAL METHODS OVER UNDERGRADUATE STUDENTS IN SCIENCE AND

ECONIMICS.

Exclusively for freshers in B. Sc. Programes (Mathematics, Statistics, Physics and Chemistry) and BA Economics.

10/10/2022 - 31/10/2022

Dr. Ismail Olayikkara Patron

Convener Dr. Haris P

(Bridge Course) Physics Signature Name 28/10/2022 20/10/22 30/10/22 A. Glopika Gropinath 2. Abhirami KS 3, Adheena k P RAFA MARIYAM-AN Rasha Fellin-k 6 Mariya Husna Augali koishua k Abbinay (PC Ambili-T Shamila Fashana K Vyshnav.k Brick RA. B. Brian Tom Joseph Pajath P 12. (13 Muhamed Shahir AKLIF. Mohd. Farger. VP Abdullah. P 16. Vybhar. KC Abhinav T Rana Abdul Kader shahda.mv

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BSC Physics.



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Fathima Rana 15)

MARIYA HUSNA. 16 Sajwa Shirin (A)

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10/11/23 12/11/23 Anjale distale August

Suns

INDEFINITE INTEGRALS

IMPORTANT POINTS

$$frac{d}{dx}[F(x)] = f(x)$$
Then,
$$\int f(x)dx = F(x) + c$$

$$\int x^n dx = \frac{x^{n+1}}{n+1} + c$$

$$\int \frac{1}{x} dx = \log x + c$$

$$\int c^x dx = c^x + c$$

$$\int a^x dx = \frac{a^x}{\log a} + c$$

$$\int \log a \log a$$

$$\int \cos x dx = \sin x + c$$

1

1

$$\int \sin x dx = -\cos x + c$$

$$\int \sec^2 x dx = \tan x + c$$

$$\int \cos e c^2 x dx = -\cot x + c$$

$$\int \sec x \tan x dx = \sec x + c$$

$$\int \cos e c x \cot x dx = -\cos e c x + c$$

$$\int \frac{1}{\sqrt{1-x^2}} \, dx = \sin^{-1} x + c \ or \ -\cos^{-1} x + c$$

$$\int \frac{1}{1+x^2} \, dx = \tan^{-1} x + c \ or \ -\cot^{-1} x + c$$

$$\int \frac{1}{x\sqrt{x^2 - 1}} \, dx = \sec^{-1} x + c! \, or \, - \csc ec^{-1} x + c$$

$$\int \tan x dx = \log \sec x + c$$

$$\int \cot x dx = \log \sin x + c$$

$$\int \sec x dx = \log(\sec x + \tan x) + c$$

$$\int \cos e c x dx = \log \tan \frac{x}{2} + c$$

$$• \int \frac{1}{a \sin x + b \cos x} dx$$

Where,
$$r = \sqrt{a^2 + b^2}$$
 and $\tan \alpha = \frac{b}{a}$

$$\int \frac{1}{x^2 - a^2} \, dx = \frac{1}{2a} \log \left| \frac{x - a}{x + a} \right| + c$$

$$\int \frac{1}{a^2 - x^2} dx = \frac{1}{2a} \log \left| \frac{a + x}{a - x} \right| + c$$

$$\int \frac{1}{\sqrt{x^2 + a^2}} \, dx = \log \left| x + \sqrt{x^2 + a^2} \right| + c$$

$$\int \frac{1}{\sqrt{x^2 - a^2}} \, dx = \log \left| x + \sqrt{x^2 - a^2} \right| + c$$

$$\int \frac{1}{\sqrt{a^2 - x^2}} dx = \sin^{-1} \frac{x}{a} + c$$

$$\int \sqrt{x^2 + a^2} \, dx = \frac{x}{2} \sqrt{x^2 + a^2} + \frac{a^2}{2} \log \left| x + \sqrt{x^2 + a^2} \right| + c$$

$$\int_{1} \sqrt{x^{2} - a^{2}} \, dx = \frac{x}{2} \sqrt{x^{2} - a^{2}} - \frac{a^{2}}{2} \log \left| x + \sqrt{x^{2} - a^{2}} \right| + c$$

$$\int \sqrt{a^2 - x^2} \, dx = \frac{x}{2} \sqrt{a^2 - x^2} + \frac{a^2}{2} \sin^{-1} \frac{x}{a} + c$$

$$\Leftrightarrow \left[e^{x} \left[f(x) + f'(x) \right] dx = e^{x} f(x) + c \right]$$

$$1. \int \frac{\sin^3 x + \cos^3 x}{\sin^2 x \cos^2 x} dx =$$

(a)
$$\sec x + \cot x + c$$
 (b) $\sec x - \csc x + c$

(c)
$$-\sec x - \csc x + c$$
 (d) None

$$2. \int \frac{1-\cos 2x}{1+\cos 2x} dx =$$

(a)
$$tan x + x + c$$

(b)
$$\tan x - x + c$$

(c)
$$\sec^2 x + c$$

3.
$$\int \frac{1-x^4}{1-x} dx =$$

(a)
$$x + \frac{x^2}{2} + \frac{x^3}{2} + \frac{x^4}{4} + c$$

(a)
$$x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4} + c$$
 (b) $x - \frac{x^2}{2} + \frac{x^3}{3} - \frac{x^4}{4} + c$

$$(c) - \frac{1}{4}(1-x)^4 + c$$

$$4. \quad \int \frac{dx}{1+\sin x} =$$

(a)
$$\tan x - \sec x + c$$

(b)
$$\tan x + \sec x + c$$

(c)
$$\tan \frac{x}{2} + c$$

$$5. \quad \int \left(\sin\frac{x}{2} + \cos\frac{x}{2}\right)^2 dx =$$

$$\int \left(\sin\frac{\pi}{2} + \cos\frac{\pi}{2}\right) dx =$$

(b)
$$x - \cos x + c$$

(c)
$$-x + \cos x + c$$

$$6. \quad \int \left(x - \frac{1}{x}\right)^2 dx =$$

(a)
$$\frac{1}{3} \left(x - \frac{1}{x} \right)^3 + c$$

(b)
$$\frac{x^3}{3} - 2x - \frac{1}{x} + c$$

(c)
$$\frac{x^3}{3} + 2x + \frac{1}{x} + c$$

$$7. \quad \int \frac{1}{x \log x} dx =$$

(a)
$$\log x$$

(b)
$$\log \log x$$

(c)
$$\log \log \log x$$

$$8. \int \frac{\sqrt{x^2} + \sqrt[4]{x} + \sqrt[4]{x}}{\sqrt{x}} dx =$$

(a)
$$\frac{6}{7}x^{7/6} + \frac{4}{3}x^{3/4} + \frac{6}{5}x^{5/6} + c$$

(b)
$$-\frac{6}{5}x^{5/6} + \frac{4}{3}x^{3/4} - \frac{6}{5}x^{7/6} + c$$

(c)
$$\frac{6}{5}x^{1/6} + \frac{4}{5}x^{3/4} - \frac{6}{5}x^{5/6} + c$$

9.
$$\int \frac{e^{\sin(\log x)}\cos(\log x)}{x}dx =$$



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(a)
$$\frac{e^{\sin(\log x)}}{x} + c$$

(b) $e^{\cos(\log x)} + c$

(c)
$$e^{\sin(\log x)} + c$$

(d) None

$$10. \int \frac{\sin \sqrt{x}}{\sqrt{x}} dx =$$

(a)
$$\cos \sqrt{x} + c$$

(b)
$$-2\cos\sqrt{x}+c$$

(c)
$$2\cos\sqrt{x} + c$$

(d) $2\sin\sqrt{x} + c$

11.
$$\int e^{e^{x^{2}}} e^{e^{x}} e^{x} dx =$$

(a)
$$\frac{1}{2}e^{e^{\epsilon}}$$
 (b) $\left(e^{e^{\epsilon}}\right)^2$ (c) $e^{e^{\epsilon}}$ (d) $\frac{1}{2}e^{e^{\epsilon^*}}$

12.
$$\int \frac{2e^x}{e^{2x} + 1} dx =$$

(a) $\log(e^x + e^{-x}) + c$

(b)
$$2 \tan^{-1} e^x + c$$

(c) $\log(1+e^{2x})+c$

(d)
$$\tan^{-1}(2e^x + 1) + c$$

$$13. \int \frac{\sqrt{\tan x}}{2\sin x \cos x} dx =$$

(a)
$$\sqrt{\tan x}$$
 (b) $2\sqrt{\tan x}$ (c) $\frac{1}{2}\sqrt{\tan x}$ (d) $\frac{1}{2}\tan x$

14.
$$\frac{dI}{dy} = 3^{\cos y} \cdot \sin y$$
, then I is equals to

(a)
$$3^{\cos y} + c$$

(b)
$$-\frac{3^{\cos y}}{\log 3} + c$$

(c)
$$\sin y + c$$

(d) None

15.
$$\int x^2 e^{x^3} \cos(e^{x^3}) dx =$$

(a)
$$\sin(e^{x^3}) + c$$

(b)
$$3\sin(e^{x^3})+c$$

(c)
$$\frac{1}{3}\sin(e^{x^2})+c$$

(d)
$$e^x \sin(e^{x^2}) + c$$

16.
$$\int \frac{(1+\log x)^2}{x} dx =$$

(a)
$$1 + \log x$$

(b)
$$3(1 + \log x)^3$$

(c)
$$\frac{1}{3}(1 + \log x)^3$$

(d) None

17.
$$\int \sec^m x \tan x dx =$$

(a)
$$\frac{1}{m} \sec^m x + c$$

(b)
$$-\frac{1}{m} \sec^m x + c$$

(c)
$$\sec^m x + c$$

(d) None

18. $\int \sec^3 x dx =$

(a)
$$\frac{1}{2} \tan x \sec x + c$$

(b)
$$\frac{1}{2}\log|\sec x + \tan x| + c$$

(c)
$$\frac{1}{2} \sec x \tan x + \frac{1}{2} \log |\sec x + \tan x| + c$$
 (d) None

$$19. \int \frac{\log(x^2)}{x} dx =$$

$$(a) (\log x)^2 + c$$

(b)
$$\frac{(\log x)^2}{2} + c$$

(c)
$$\log(x^2) + c$$

(d) None

20.
$$\int \frac{2x+3}{x^2+2x+2} dx =$$

(a)
$$tan^{-1}(x+2)+c$$

(a)
$$\tan^{-1}(x+2)+c$$

(b) $\tan^{-1}(x+1)-\log|x^2+2x+2|+c$

(c)
$$\log |x^2 + 2x + 2| + x + c$$

(d)
$$\tan^{-1}(x+1) + \log|x^2 + 2x + 2| + c$$

21.
$$\int \sqrt{\frac{\cos x - \cos^3 x}{1 - \cos^3 x}} dx =$$

(a)
$$-\frac{2}{3}\sin^{-1}(\cos^{3/2}x) + c$$
 (b) $\frac{2}{3}\cos^{-1}(\cos^{3/2}x) + c$

(c)
$$-\frac{3}{2}\sin^{-1}(\cos^{3/2}x)+c$$
 (d) $\frac{3}{2}\cos^{-1}(\cos^{3/2}x)+c$

22.
$$\int \frac{x}{(a^2 - x^2)^{3/2}} dx =$$

(a)
$$\frac{x}{\sqrt{a^2 - x^2}} + c$$

(b)
$$\frac{-1}{\sqrt{a^2-x^2}} + c$$

(c)
$$\frac{1}{\sqrt{a^2-x^2}}+c$$

(d) None

$$23. \int e^{\sqrt{x}} dx =$$

(a)
$$2e^{\sqrt{x}}(\sqrt{x}+1)+c$$

(b)
$$2e^{\sqrt{x}}(\sqrt{x}-1)+c$$

(c)
$$e^{\sqrt{x}}(\sqrt{x}-1)+c$$

(d)None

24.
$$\int [\sin(\log x) + \cos(\log x)] dx =$$

(a)
$$x \sin(\log x) + c$$

(b)
$$\sin(\log x) + \cos(\log x) + c$$

(c)
$$x\cos(\log x) + c$$

(d) None

$$25. \int \frac{dx}{\sqrt{(x-1)(4-x)}} =$$

(a)
$$\sin^{-1} \frac{2x-5}{3} + c$$

(b)
$$\sin^{-1} \frac{x-1}{3} + c$$

(c)
$$\sin^{-1} \frac{4-x}{3} + c$$

(d) None

$$26. \int e^x (\log \sin x + \cot x) dx =$$

(a)
$$e' \cot x + c$$

(b) $e' \log \sin x + c$

(c)
$$e' \tan x + c$$

(d) None

$$27. \int \frac{\sin 2x}{1+\sin^2 x} dx =$$

$$\int_{1+\sin^{2}x}^{1+\sin^{2}x}$$
 (a) $\tan^{-1}(\sin x) + c$

(b)
$$tan^{-1}(cos x) + c$$

(c)
$$\log(1 + \sin^2 x) + c$$

(c)
$$\log(1+\sin^2 x)+c$$
 (d) $\log(\sin^2 x+x)+c$

28. A primitive of
$$|x|$$
, when $x < 0$ is

(a)
$$\frac{1}{2}x^2 + c$$
 (b) $-\frac{1}{2}x^2 + c$ (c) $x + c$ (d) $-x + c$

29.
$$\int \frac{1}{\sqrt{2ax-x^2}} =$$

$$(a) \sin^{-1} \left(\frac{x-a}{a} \right)$$

(a)
$$\sin^{-1}\left(\frac{x-a}{a}\right)$$
 (b) $\tan^{-1}\left(\frac{x-a}{a}\right)$

(c)
$$\cos^{-1}\left(\frac{x-a}{a}\right)$$

(c)
$$\cos^{-1}\left(\frac{x-a}{a}\right)$$
 (d) $\frac{1}{a}\tan^{-1}\left(\frac{x-a}{a}\right)$

30.
$$\int \frac{a^{\sqrt{x}}}{\sqrt{x}} dx =$$

(a)
$$2a^{\sqrt{x}}\log_e a$$

(b)
$$2a^{\sqrt{x}}\log_a e$$

(c)
$$2a^{\sqrt{x}}\log_{10}a$$

(d)
$$2a^{\sqrt{x}}\log_a 10$$

31. The primitive of
$$\frac{1}{1+e^x}$$
 is

(a)
$$\log(1+e^{x})+c$$

(b)
$$-\log(1+e^{-t})+c$$

(c)
$$\log(1 - e^{-x}) + c$$

(d)
$$-\log(1-e^{-x})+c$$

32.
$$\int x \log x dx =$$

(a)
$$\frac{x^2}{2} \log x + \frac{x}{4} \log x - \frac{x^2}{4} + c$$

(b)
$$\frac{x^2}{2} \log x - \frac{x}{4} \log x - \frac{x^2}{4} + c$$

(c)
$$\frac{x^2}{2} \log x - \frac{x}{4} \log x + \frac{x^2}{4} + c$$

(d)
$$\frac{x^2}{2} \log x - \frac{x^2}{4} + c$$

33.
$$\int a^{3x+3} dx$$
, $(a \neq -1)$ is equal to

$$(a) \frac{a^{3x+3}}{3\log a} + c$$

(b)
$$\frac{a^{3x+3}}{3x+4} + c$$

(c)
$$\frac{a^{3x+3}}{\log a} + c$$

(c)
$$\frac{a^{3x+3}}{\log a} + c$$
 (d) $\frac{a^{3x+3}}{3(x+1)} + c$

34.
$$\int e^x \sin x dx =$$

(a)
$$e^x (\sin x - \cos x) + c$$
 (b) $e^x (\sin x + \cos x) + c$

(c)
$$\frac{1}{2}e^{x}(\sin x - \cos x) + c$$
 (d) $\frac{1}{2}e^{x}(\sin x + \cos x) + c$

35.
$$\int \frac{1}{3-2x-x^2} dx =$$

(a)
$$\frac{1}{4} \log \left(\frac{3+x}{1-x} \right) + c$$

(b)
$$\frac{1}{3} \log \left(\frac{3+x}{1-x} \right) + c$$

(c)
$$\frac{1}{2} \log \left(\frac{3+x}{1-x} \right) + c$$
 (d) $\log \left(\frac{1-x}{3+x} \right) + c$

(d)
$$\log \left(\frac{1-x}{3+x} \right) + c$$

36.
$$\int e^{x} (1 - \cot x + \cot^{2} x) dx =$$
(a)
$$e^{x} \cot x + c$$

(b)
$$-e^x \cot x + c$$

(c)
$$e^x \cos e c x + c$$

(d)
$$-e^x \cos ecx + c$$

37.
$$\int (x-1)e^{-x}dx =$$

(a)
$$xe^{-x} + c$$

(b)
$$-xe^{-x} + c$$

(c)
$$xe^x + c$$

(d)
$$-xe^x + c$$

$$38. \int \frac{\sin^6 x}{\cos^8 x} dx =$$

(a)
$$\tan^7 x + c$$

(b)
$$\frac{\tan^2 x}{7} + c$$

(c)
$$\frac{\tan 7x}{7} + c$$

(d)
$$\sec^7 x + c$$

39.
$$\int \tan x \tan 2x \tan 3x dx =$$

(a)
$$\frac{1}{2} \log |\sec 3x| - \frac{1}{2} \log |\sec 2x| + \log |\sec x| + c$$

(b)
$$\frac{1}{2} \log|\sec 3x| - \frac{1}{2} \log|\sec 2x| - \log|\sec x| + c$$

(c)
$$\frac{1}{3} \log |\sec 3x| + \frac{1}{2} \log |\sec 2x| + \log |\sec x| + c$$

40.
$$\left(\left(e^{a \log x} + e^{x \log a} \right) dx = \right)$$

(a)
$$\frac{x^{n+1}}{n+1} + c$$

(b)
$$x^{a+1} + a^{x} + a^{x}$$

(c)
$$\frac{x^{n-1}}{a-1} + \frac{\log a}{a} + c$$

(c)
$$\frac{x^{a-1}}{a-1} + \frac{\log a}{a} + c$$
 (d) $\frac{x^{a+1}}{a+1} + \frac{a^s}{\log a} + c$

HINTS

1. (b)
$$\int (\sec x \tan x + \cos e c x \cot x) dx$$

2. (b)
$$\int \frac{2\sin^2 x}{2\cos^2 x} dx = \int (\sec^2 x - 1) dx$$

3. (a)
$$\int \frac{(1-x)(1+x+x^2+x^3)}{1-x} dx$$

4. (a)
$$\int \frac{1 - \sin x}{1 - \sin^2 x} dx = \int \frac{1 - \sin x}{\cos^2 x} dx$$

= $\int (\sec^2 x - \sec x \tan x) dx$

5. (b)
$$\int (1 + 2\sin(x/2)\cos(x/2))dx = \int (1 + \sin x)dx$$

6. (b)
$$\int \left(x^2 + \frac{1}{x^2} - 2\right) dx$$

7. (b)
$$\int \frac{1}{x \log x} dx = \int \frac{(1/x)}{\log x} dx$$

8. (a)
$$\int \frac{x^{2/3} + x^{1/4} + x^{1/3}}{x^{1/2}} dx$$
$$= \int \left(x^{1/6} + x^{-1/4} + x^{-1/6}\right) dx$$

9. (c) Put
$$\sin \log x = t \Rightarrow \frac{\cos \log x}{x} = dt$$
 and proceed. OR differentiate back from options

10. (b) Put
$$\sqrt{x} = t \Rightarrow \frac{1}{2\sqrt{x}} dx = dt$$
. So $I = \int \sin t \cdot 2 \cdot dt$

11. (c) Put
$$e^{e^t} = I \stackrel{!}{\Rightarrow} e^{e^t} e^x dx = dt$$

$$I = \int e^t dt = e^t + c$$

12. (b) Put
$$e^x = t \Rightarrow I = \int \frac{2dt}{1+t^2} dt = 2 \tan^{-1} t + c$$

13. (a) $I = \frac{1}{2} \int \frac{\sqrt{\tan x}}{\tan x} \sec^2 x dx = \int \frac{\sec^2 x}{2\sqrt{\tan x}} dx$

$$=\sqrt{\tan x}+c$$

14. (b)
$$I = 3^{\cos y} \sin y dy$$
.

Put
$$\cos y = t \Rightarrow -\sin y dy = dt$$

$$I = -\int 3' dt = -\frac{3'}{\log 3} + c$$

15. (c) Put
$$e^{x^3} = t \Rightarrow e^{x^3} . 3x^2 . dx = dt$$

 $I = \frac{1}{3} \int \cos t dt = \frac{1}{3} \sin t + c$

16. (c)
$$\frac{d}{dx}[1 + \log x] = \frac{1}{x}$$

17. (a)
$$\int \sec^{m-1} x \cdot \sec x \tan x dx$$

Put
$$\sec x = t \Rightarrow \sec x \tan x dx = dt$$

$$I = \int t^{m-1} dt = \frac{t^m}{t} + c$$

18. (c)
$$\int \sec^2 x . \sec x dx = \int \sqrt{1 + \tan^2 x} \sec^2 x dx$$

Put $\tan x = t \Rightarrow \sec^2 x dx = dt$
 $I = \sqrt{1 + t^2} dt = \frac{t\sqrt{1 + t^2}}{2} + \frac{1}{2} \log |t + \sqrt{1 + t^2}| + c$

19. (a)
$$\int \frac{2\log x}{x} dx$$

20. (d)
$$I = \int \frac{2x+2}{x^2+2x+2} dx + \int \frac{1}{(x+1)^2+1} dx$$

= $\log |x^2+2x+2| + \tan^{-1}(x+1) + c$

21. (a)
$$I = \frac{\sqrt{\cos x \sin x}}{\sqrt{1 - (\cos^{3/2} x)^2}} dx$$

Put $\cos^{3/2} x = t \Rightarrow \frac{3}{2} \sqrt{\cos x} (-\sin x) dx = dt$
 $I = -\frac{2}{3} \int \frac{1}{\sqrt{1 - t^2}} dt = -\frac{2}{3} \sin^{-1} t + c$

22. (c) Put
$$x^2 = t \Rightarrow 2xdx = dt$$

$$I = \frac{1}{2} \int \frac{1}{(a^2 - t)^{3/2}} dt = \frac{1}{2} \cdot \frac{(a^2 - t)^{-1/2} \cdot (-1)}{-(1/2)}$$

23. (b) Put
$$\sqrt{x} = t \Rightarrow dx = 2tdt$$

 $I = 2 \int e^t t dt = 2e^t (t-1) + c^{-1}$

24. (a) Put
$$\log x = t \Rightarrow \frac{1}{x} dx = dt \Rightarrow dx = e^t dt$$

$$I = \int (\sin t + \cos t)e^t dt = e^t \sin t + c$$

$$= e^{\log x} \sin \log x + c = x \sin \log x + c$$

25. (a)
$$\int \frac{dx}{\sqrt{5x - 4 - x^2}} = \int \frac{dx}{\sqrt{\left(\frac{3}{2}\right)^2 - \left(x - \frac{5}{2}\right)^2}}$$
$$= \sin^{-1} \frac{x - (5/2)}{(3/2)} + c = \sin^{-1} \frac{2x - 5}{3} + c$$

26. (b) Since
$$\frac{d}{dx}(\log \sin x) = \cot x$$

$$27. \quad \text{(c)} \ \frac{d}{dx} \left(1 + \sin^2 x \right) = \sin 2x$$

28. (b)
$$|x| = -x$$
 when $x < 0$, Sp primitive
= $\int |x| dx = \int -x dx = -\frac{x^2}{2} + c$

29. (a)
$$\int \frac{1}{\sqrt{a^2 - (x - a)^2}} dx = \sin^{-1} \left(\frac{x - a}{a} \right) + c$$

30. (b) Put
$$\sqrt{x} = t \Rightarrow \frac{dx}{2\sqrt{x}} = dt$$

$$I = 2 \int a' dt = \frac{2a'}{\log_{x} a} = 2a^{\sqrt{x}} \log_{x} e$$
31. (b) $\int \left(\frac{1+e'}{1+e'} - \frac{e'}{1+e'}\right) dx = x - \log\left(1+e'\right) + c$

$$= \log_{x} c' - \log_{x} \left(1+e'\right) + c = \log\left(\frac{e'}{1+e'}\right) + c$$

$$= \log\left(\frac{1}{1+e''}\right) + c = -\log_{x} \left(1+e''\right) + c$$

32. (d)
$$\int x \log x dx = \log x \cdot \frac{x^2}{2} - \int \frac{1}{x} \cdot \frac{x^2}{2} dx + c$$

$$\frac{x^2 \log x}{2} - \frac{x^2}{4} + c$$

33. (a)
34. (c)
$$\int e^{ax} \sin hx dx = \frac{e^{ax}}{a^2 + b^2} [a \sin hx - b \cos hx] + c$$

$$\int e^{ax} \cos hx dx = \frac{e^{ax}}{a^2 + b^2} [a \cos hx + b \sin hx] + c$$

35. (a)
$$\int \frac{1}{4 - (x+1)^2} dx = \frac{1}{2 \cdot 2} \log \left(\frac{2 + x + 1}{2 - (x+1)} \right) + c$$

36. (b)
$$\int e^{x} (-\cot x + 1 + \cot^{2} x) dx$$

= $\int e^{x} (-\cot x + \cos cc^{2} x) dx = -e^{x} \cot x + c$

37. (b)
$$(x-1)\frac{e^{-x}}{-1} - \int \frac{e^{-x}}{-1} dx + c$$

= $-xe^{-x} + e^{-x} - e^{-x} + c = -xe^{-x} + c$

38. (b)
$$\int \tan^6 x \sec^2 x dx = \frac{\tan^7 x}{7} + c$$

39. (b)
$$\tan 3x = \frac{\tan x + \tan 2x}{1 - \tan x \tan 2x}$$

$$\tan 3x - \tan x \tan 2x \tan 3x = \tan x + \tan 2x$$

$$\Rightarrow \tan x \tan 2x \tan 3x = \tan 3x - \tan x - \tan 2x$$
Now integrate

Now integrate
$$40.(d) \int \left(e^{\log x^a} + e^{\log a^a}\right) dx = \int \left(x^a + a^x\right) dx$$

$$= \frac{x^{a+1}}{a+1} + \frac{a^x}{\log a} + c$$

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BRIDGE COURSE IN CHEMISTRY FOR BSc CHEMISTRY

SIR SYED COLLEGE
DEPARTMENT OF CHEMISTRY
2022-2025 BATCH

Coordinator SHAHABANU.P HoD Dr.BIJU.A.R

SYLLABUS

CHEMISTRY BRIDGE COURSE

SIR SYED COLLEGE

DEPARTMENT OF CHEMISTRY

The syllabus is prepared based on an interdisciplinary approach and aim to provide the students a deep understanding of the basic concepts of chemical sciences by acquiring the knowledge of terms, facts, concepts, processes, techniques and principles of the subject

CONTACT HOURS-30

UNIT 1

STRUCTURE OF ATOM

5 hours

Discovery of Sub-atomic Particles ,Atomic Models ,Developments Leading to the Bohr's Model of Atom,Bohr's Model for Hydrogen Atom,Quantum Mechanical Model of the Atom

UNIT 2

CHEMICAL BONDING

5 hours

Ionic or Electrovalent Bond, The Valence Shell Electron Pair Repulsion (VSEPR) Theory, Valence Bond Theory, Hybridisation, Molecular Orbital Theory, Bonding in Some Homonuclear Diatomic Molecules, Hydrogen Bonding

UNIT 3

CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES

5 hours

Genesis of Periodic Classification, Modern Periodic Law and the Present Form of the Periodic Table, Nomenclature of Elements with Atomic Numbers > 100, Electronic Configurations and Types of Elements, s, p, d, f Blocks, Periodic Trends in Properties of Elements

UNIT 4

Hydrogen, s-Block and p-Block Elements

5 hours

Dihydrogen- Preparation, Properties, Water, Heavy water, Hydrogen peroxide, Dihydrogen as fuel,
Alkali & Alkaline Earth Matals-General Characteristics
Group 13 elements, Important Trends and Anomalous Properties of Boron,
Group 14 elements, Important Trends and Anomalous Properties of Carbon.

UNIT 5

SOME

BASIC

CONCPETS

OF

CHEMISTRY

5hours

Terms used in evaluation of analytical data – significant figures – Rounding of the numerical expression – Errors – Ways to reduce systematic errors Precision and accuracy. Titrimetric analysis – Fundamental concepts – mole, molarity, normality, molality, ppm, and ppb, mole fraction–

UNIT 6

ORGANIC CHEMISTRY-SOME BASIC PRINCIPLES AND TECHNIQUES

5 hours

General Introduction, Nomenclature of Organic Compounds, Isomerism, Fundamental concepts in Organic Reaction Mechanism. Introduction to Halo alkanes, Alcohols Phenols, Ethers, Aldehydes, Ketones, Carboxylic acid, Amines

DESCRIPTION ABOUT BRIDGE COURSE

BRIDGE COURSE IN CHEMISTRY FOR FIRST YEAR GRADUATE STUDENTS:

A bridge course in chemistry typically serves as a preparatory or remedial program that helps students transition from one level of education to another, or to fill gaps in their knowledge and skills. These courses offer several benefits:

Smooth Transition: Bridge courses help students transition from one educational level to another, such as from high school to college or from undergraduate to graduate studies. They can help bridge the gap between the prerequisite knowledge and skills required for success at the next level.

- ❖ The main objective of the course is to bridge the gap between subjects studied at school 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.
- Accordingly, the Bridge Course has been prepared with the dual objective of reviewing the studies done by the students in the previous academic year and helping them to learn the curriculum of the present class in this academic year.
- During the first week after the commencement of the classes, the bridge course curriculum can be delivered to the students.

Aim of the Bridge course in Chemistry

- ➤ To make "learning of Mathematics as a pleasant experience".
- ➤ To enhance the performance of students

SIR SYED COLLEGE DEPARTMENT OF CHEMISTRY BRIDGE COURSE ATTENDANCE 2022-2025 BATCH

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SIR SYED COLLEGE

DEPARTMENT OF CHEMISTRY

BRIDGE COURSE JANUARY 2022

TIME:2Hr

MARKS:20

3X1=3 MARKS

SECTION A

(Answer all the questions)

 Bohr's orbits are called stationary states because.... 2. The orbitals having same energy are called _____ orbitals. 3. The shape of covalent molecule CIF₃ is _____ 2X4=8 MARKS SECTION B

(Answer all the questions)

- 4. What is the difference between bonding molecular orbital and antibonding molecular orbital?
- 5. Give the biological importance of Na and K
- 6. Why does boron trifluoride behave as a Lewis acid?
- 7. Calculate the molarity of a solution of ethanol in water in which the mole fraction of ethanol is 0.040.

SECTION C

3X3=9 MARKS

(Answer all the questions)

- 8. i) Draw the structure of propanone. Write the hybridisation of each carbon in propanone. ii) Arrange the following carbocations in the increasing order of their stability. Justify. CH₃+, CH₃CH₂+, (CH₃)₂CH+
- 9. What is the basic difference in approach between Mendeleev's Periodic Law and the Modern Periodic Law?
- 10. What is heavy water? Mention one use of heavy water. Explain why hydrogen peroxide is not stored in glass vessels.

Thamanna Grafoon 235 pends This Bohn's orbits are called stationary states because the energies of the orbits in which the electrons conevolve area fix, surgener totas the same cismod The orbitals having same energy are called degealors itis coted remains isstidio enitario borno influences remains electrons deflices T shaped. actions a leasts accept Bonding molecular orbitals have lower energy as compared to the parent atomic orbitals. Antibonding molecular orbital possess higher energy comparativy xegger and deateriuro The spatial configuration of the BMO's represents

the molecular geometry or shape. The spatial configuration of ABMO doesn't represent molecular Red Esters geometry. 5) Biological importances of Nai valor work The sodium in the body is used to regulate and blood pressure and blood volume sodium is also required by body in order for your muscles and nerves to function properly. a located winter is succeed a Calcium: Calcium is one of the most important minerals for the human body. It helps form

and maintainson healthy teat teeth and bone. 235 6) setts san form only three covalent bonds. The means that there are only six electrons and boron and its octet remains incomplete whe spone atom of boron combines with three flow atoms, its octet remains incomplete. Hence boron trifluoride remains electron deficient act as a lewis acid, Bonding melecular orbitals have lower energy as 18) Heavy water is a compound that is made up of oxygen and deuterium, a heavier isotope of hydrogen which is denoted by H or D'. Heary water is also called deuterium onide and is configuration of ABMO doesn't represent denoted by 20. geomothy. wses: · Heavy water is used for the preparation of The sedium in the body is used to regulate deuterium

used as traced to study the mechanism of respiration and photosynthesis.

· Heavy water is used as a moderator in inuclear

Calciums is one of the most important

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Hydrogen peroxide is a highly reactive chemical - It is highly unstable and slowly decomp oses when kept in presence of light . Duk to this Hoo kept in ambered coloured bottles. Mendaeleev's periodic law states that physical (9) and chemical properties of elements are periodie function of their atomic weights. Modern periodic law states that the physical and chemical properties of elements are periodick function of their atomic number Mendaleer's periodic table contains significantly less elements than modern periodic table. Mendaleev's table didn't cetegorize the elements as metals, metalloids and non metals. Mendaleev arranged elements ascendinly according to atomic masses while Mosely arranged them ascendingly according to atomic number.

Detailed Syllabus (Theory and Practical) with references and model question paper

Name of Bridge Course-: Introduction to Forestry

Duration of the	Course Code	Hours per week	Credit and	Exam Hours
course			Modules	
30 hours		3	III	1

Module I: Forests

(10 Hrs)

Forests - definitions and role. Benefit - direct and indirect. History of Forestry Forestry - definitions, divisions and interrelationships. Classification of forests. Basic concepts on Forest types of India. Important acts and policies related to Indian forests

Module II: Biomes of the World

(10 Hrs)

Introductions to world forests - Geographical distribution of forests and their classification. Factors influencing global forest distribution - productivity potential and increment of world forests. Forest resources and forestry practices in different eco-regions of the world. General problems of forest development and economy

Module III: Forest and current affairs

(10 Hrs)

Global warming and climate change- GHG emissions- forestry options for mitigation and Adaptation - carbon sequestration/carbon conservation/carbon substitution- AR-CDM projects. Recent trends in forestry development in the world. National and international organizations in forestry. Important events/dates related to forests and environment-themes and philosophy.

References

Beazley, M. (1981). The International Book of Forest. Mitchell Beazly Publishers, London.

Grebner, D.L., Bettinger, P and Siry, J.P. (2012). Introduction to Forestry and NaturalResources. Academic Press. 508p (Google eBook).

Khanna, L.S. (1989). Principles and Practice of Silviculture. Khanna Bandhu, New Delhi, 473p.

Mather, A.S. (1990). Global forest resources. Belhaven, London.

Persson, R. (1992). World forest resources. Periodical experts, New Delhi.

Westoby, J. (1991). Introduction to World Forestry. Wiley, 240p.