

ST. COLUMBA'S SCHOOL
CONTINUOUS LEARNING PLAN
CLASS XI 2026-2027

ENGLISH

<p><u>GENERAL LEARNING COMPETENCIES</u></p> <p><u>The students will be able to:</u></p> <ol style="list-style-type: none"> 1. Acquire a reasonable degree of language proficiency in English language 2. Appreciate the various genres of texts presented in the syllabus 3. Hone language abilities for effective reading, writing, listening and speaking skills 4. Promote advanced language skills with an aim to develop the skills of reasoning, drawing inferences, etc. through meaningful activities. 5. Develop ability and acquire knowledge required in order to engage in independent reflection and enquiry.

Question Paper Design

Section	Competencies	Total Marks
Reading Skills	Conceptual understanding, decoding, analyzing, inferring, interpreting, appreciating, literary, conventions and vocabulary, summarizing and using appropriate format/s.	26
Grammar and Creative Writing Skills	Conceptual Understanding, application of rules, analysis, reasoning, appropriate style and tone, using appropriate format and fluency, inference, evaluation and creativity.	23
Literature Text Book and Supplementary Reading Text	Recalling, reasoning, appreciating literary convention, influence, analysis, creativity with fluency, critical thinking.	31
	TOTAL	80
Internal Assessment	Assessment of Listening and Speaking Skills <ul style="list-style-type: none"> ● Listening ● Speaking ● Project Work + Viva 	20
	GRAND TOTAL	100

April

<p>The Portrait of a Lady (Hornbill)</p> <ul style="list-style-type: none"> - Select and extract relevant information, using reading skills of skimming and scanning - Summarize the story 'The Portrait of a Lady' and understand the use of past perfect tense.(Understand) - Recall the important points of the story through short answer type questions and long answer type questions. (Remember) - Write a short description of an elderly person with whom you have been intimately connected with. (Create) 	<p>A Photograph (Hornbill)</p> <ul style="list-style-type: none"> - to paraphrase the poem 'A Photograph' by Shirley Toulson (Remember) -to understand child psychology. (Understand) - to identify the figure of speech used in the poem (Remember) - to justify the title of the poem (Evaluate) - to analyse the important phrases in the poem (Analyse) - to appreciate the theme and the style of writing of the poet. 	<p>We're Not Afraid to Die... if We Can All Be Together (Hornbill)</p> <ul style="list-style-type: none"> - Summarize the story (Understand) - Recall the important points of the story through short answer questions and long answer type questions (Remember) - Learn the different parts of the ship mentioned in the story. (Remember) Write the character sketch of the narrator (Create) - Justify the title by writing a short note on it. (Evaluate) 	
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<ul style="list-style-type: none"> - Justify the title by writing a short note on it. (Evaluate) - Inculcate the important practice of being calm in adverse situations (Apply) - Infer the meaning of metaphorical statements in the chapter (Analyze) <p>SDG3: Good health and well being</p>	<p>SDG 3: Good health and well being</p>	<ul style="list-style-type: none"> - Practice: being calm in adverse situations (Apply) <p>(SDG 9: Industry, Innovation and infrastructure)</p>	
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MAY

<p>Speech (Writing)</p> <ul style="list-style-type: none"> - develop the language of propaganda and persuasion, use persuasive language in defending one's opinion - identify points for the introduction, 	<p>The Summer of the Beautiful White Horse (Snapshots)</p> <ul style="list-style-type: none"> - Summarize the story (Understand) - Write the character sketch of Uncle Khosrove and Mourad (Create) 	<p>Debate (Writing)</p> <ul style="list-style-type: none"> - understand the language of propaganda and persuasion - present persuasive arguments to defend one's opinion 	
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<p>body and conclusion</p> <p>- choose words and phrases to make the content effective</p> <p>SDG 3: Good Health and Well-being</p> <p>SDG 4: Quality Education</p> <p>SDG 5: Gender Equality</p>	<p>- Infer the meaning of some important statements in the story by writing a short note on them. (Analyze)</p> <p>-learn new phrases and punch lines.</p> <p>- Debate: Did the boys return the horse because they were conscience-stricken or because they were afraid? (Evaluate)</p> <p>SDG 11: Sustainable cities and communities.</p> <p>SDG 8: Decent work in economic growth</p> <p>SDG 1: No Poverty</p>	<p>- identify points for the introduction, body and conclusion</p> <p>- choose words and phrases to make the content effective</p> <p>SDG 10: Reduced Inequality</p> <p>SDG 11: Responsible Consumption and Production</p> <p>SDG 13: Climate Action</p> <p>SDG 16: Peace and Justice Strong Institutions</p>	
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JULY

<p>The Address (Snapshots)</p> <p>- Recall from their history lessons the atrocities faced by millions of Jewish people during the</p>	<p>Classified Ads - (Writing)</p> <p>- Comprehend the purpose of drafting ads.</p> <p>apply the correct format in the ad</p>	<p>Discovering Tut : The Saga Continues (Hornbill)</p> <p>- Identify the mysteries and theories regarding the life and death</p>	
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<p>Holocaust (IInd World War)</p> <ul style="list-style-type: none"> - Recognise the recurring autobiographical elements of author's life in the story - Compare and contrast the pre-war and post-war life of the narrator - Deconstruct the character of Mrs Dorling and people like her who make us question the goodness of human beings. - Empathise with people who have witnessed war and the trauma of war. -Develop comprehension skills, analytical skills, language skills and thinking skills. 	<ul style="list-style-type: none"> - Recognise the kind of ads that appear for various products and services - Arrange and present relevant information based on inputs provided for the ad. - Compose ads with relevant content on a variety of topic <p>(SDG 3: Good health and well-being) out</p>	<p>of King Tut. (remember)</p> <ul style="list-style-type: none"> - Compare the various processes of investigation undertaken by Carter and Zahi Hawass. (understand) - Analyze the significance of the Pharaoh's curse (evaluate) - Enumerate the difficulties that arose at the time of investigation (remember) - Assess how the lifestyle, beliefs and religious background of Egypt vary from modern times. (create) <p>(SDG 9: Industry, Innovation and infrastructure)</p>	
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(SDG 16: Peace justice and strong institution)			
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AUGUST			
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Note Making (Writing)	Laburnum Top (Hornbill)	Poster (Writing)	Mother's Day (Snapshots)
<ul style="list-style-type: none"> - Select and extract relevant information, using reading skills of skimming and scanning - Summarize information from a variety of passages - Reconstruct relevant information and arrange them coherently. - Supply suitable title and make use of abbreviations - Learn the correct and effective use of indentation <p>SDG 4: Quality Education</p>	<ul style="list-style-type: none"> - Learn about the poet and his contributions to the literary world -list examples of onomatopoeia, simile, metaphor - Paraphrase the poem describe the symbiotic relationships in nature <p>(SDG 15: Life on Land)</p>	<ul style="list-style-type: none"> - Comprehend the purpose of designing posters. -Apply the correct format in the poster recognise the kind of posters that appear for general events. - Create visual inputs to enhance the aesthetic appeal of the poster. - Arrange and present relevant information based on inputs provided for the poster. - Compose posters with relevant content 	<ul style="list-style-type: none"> - Identify the elements of style such as humour and irony in the play - Explore and evaluate features of characters - Mrs. Pearson and Mrs. Fitzgerald - Explain why Mrs. Pearson could never stand up to her family. - Discuss the effectiveness of the methods used by Mrs. Fitzgerald. - Role play the characters with proper delivery of dialogues

		<p>on a variety of topics</p> <p>SDG3: Good health and well being</p> <p>SDG 8: Decent Work and Economic Growth</p>	<p>- Enumerate the oral and visual elements of drama.</p> <p>SDG 5: Gender Equality</p> <p>SDG 3: Good health and well being</p> <p>SDG 10: Reduce inequalities.</p>
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SEPTEMBER

<p>REVISION</p> <p>Students will be able to :</p> <ul style="list-style-type: none"> -Consolidate knowledge of literature and language -Recall facts, analyse text structure and refine sentence construction -Foster confidence, deepen understanding and improve overall performance -Enhance critical reading and improve writing skills 	<p>The Tale of Melon City (Snapshots)</p> <ul style="list-style-type: none"> - Read with proper voice intonation and pauses. - Comprehend the poem. - Identify the figures of speech and the rhyming scheme - Enhance their vocabulary - Appreciate the theme and the 		
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<p>-Refine linguistic ability</p>	<p>writing style of the poet</p> <ul style="list-style-type: none"> - Develop the skill to express and write effectively - Understand the attitude of the common people in choosing their rulers although the kind of the ruler they have directly affects the quality of their lives - Understand that law is not only blind it can also spell disaster if it is thoughtlessly implemented. <p>SDG 8: Decent Work and Economic Growth</p>		
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OCTOBER

<p>Classified Ads - (Writing)</p> <ul style="list-style-type: none"> - Comprehend the purpose of drafting ads. 	<p>Birth (Snapshots)</p> <ul style="list-style-type: none"> - Recall the significance of the birth of their baby for the Morgans 	<p>Silk Road (Hornbill)</p> <ul style="list-style-type: none"> - Trace the author's journey from Ravu to Mt. Kailash. 	<p>Father to Son</p> <ul style="list-style-type: none"> - Cultivate interest and appreciate poetry
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<p>- Apply the correct format in the ad</p> <p>recognise the kind of ads that appear for various products and services</p> <p>- Arrange and present relevant information based on inputs provided for the ad.</p> <p>- Compose ads with relevant content on a variety of topic</p> <p>(SDG 3: Good health and well-being)</p>	<p>- Discuss the conflict in Andrew’s mind regarding his relationship with Christine.</p> <p>- Explain the unusual procedure followed by Andrew to resuscitate the baby</p> <p>- Justify the title of the story</p> <p>- Relate the experiences narrated in the story to personal experiences or extrapolate it to experiences outside the textbook.</p> <p>SDG 3: Good health and well being</p> <p>SDG 17: Partnership for the goal</p> <p>SDG 9: Industry innovation and infrastructure</p>	<p>- Explain the significance of <i>kora</i>.</p> <p>- Describe the varied topographic sights he sees on the way.</p> <p>-Illustrate the expertise demonstrated by Tsetan with relevant examples.</p> <p>- Infer why the author was not impressed to witness the beauty of Lake Mansarovar</p> <p>- Recognize the health difficulties faced by the author and effectiveness of the remedy</p> <p>- Discuss why the author considered Norbu to be an ideal companion.</p>	<p>- Read with proper stress and intonation</p> <p>- Become adept at identifying poetic forms, figures of speech and rhyme scheme</p> <p>- Paraphrase the poem to convey meaning effectively.</p> <p>-develop thought and critical analysis on the basis of the text</p> <p>- Feel the pain of chasm (gap) experienced between two generations (thinking)</p> <p>- Understand the consequences of lack of communication and cold indifference</p>
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		SDG 15: Life on land SDG 13: Climate action	with each other in a family SDG 17: Partnerships to achieve the Goal
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NOVEMBER

<p>Voice of the Rain (Hornbill)</p> <ul style="list-style-type: none"> - Grasp the theme and meaning of the poem interpret the title of the poem - Explain the cyclic nature of rain - Read the poem aloud with proper stress and intonation. -Discuss the theme, poetic devices and the structure of the poem. SDG 6: Clean water and sanitation 	<p>Childhood (Hornbill)</p> <ul style="list-style-type: none"> - Identify the traits of childhood mentioned in the poem - Infer the qualities that indicate the loss of childhood - Comprehend the difference between what is said and what is implied - Explain the use of the poetic devices in the poem SDG3: Good health and well being 	<p>The Adventure (Hornbill)</p> <ul style="list-style-type: none"> - Know the relation between science and history - Appreciate science fiction genre know about the life and contributions of eminent scientist, Prof. Jayant Naralika - Identify the principles of physics and the application explained in the text - Explore the possibility of 	
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<p>SDG 15: Life on land</p> <p>SDG 13: Climate action</p>		<p>alternate universes.</p> <p>- Apply scientific knowledge in real life</p> <p>- Enhance scientific knowledge and its reference to history</p> <p>- Develop innovative approach and research skills</p> <p>SDG 9: Industry, Innovation and Infrastructure</p>	
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DECEMBER

<p>Grammar (Clauses)</p> <p>- Identify phrases, independent clauses, and dependent clauses.</p> <p>- Identify and correct sentence errors,</p>			
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<ul style="list-style-type: none"> - Understand sentence structure. - Practice identifying phrases and clauses. - Identify and correct fragments, comma splices, and fused sentences. 			
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JANUARY

<p>Project Presentation in class</p> <p>(Speaking and Project assessment)</p>			
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FEBRUARY

<p>Revision</p> <p>Students will be able to :</p> <p>Consolidate knowledge of literature and language. Recall facts, analyse text structure and refine sentence construction. Foster confidence, deepen understanding and improve overall performance. Enhance critical reading and improve writing skills. Refine linguistic ability.</p>

Kindly Note:

- THE SYLLABUS IS SUBJECT TO CHANGE ACCORDING TO THE INSTRUCTIONS THAT COME LATER DURING THE ACADEMIC SESSION FROM THE CBSE.
- ANY LESSON THAT IS NOT COMPLETED WITHIN THE STIPULATED TIME WILL BE CARRIED FORWARD TO THE NEXT WEEK/MONTH.

ASSESSMENT PLANNER

<p><u>Periodic Test - 1</u></p> <p>40 Marks</p>	<p style="text-align: center;">SYLLABUS</p> <p>Comprehension Passage</p> <p>Grammar</p> <p>Debate writing</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td data-bbox="448 528 908 907" style="width: 50%; vertical-align: top;"> <p><u>HORNBILL</u></p> <ol style="list-style-type: none"> 1. The Portrait of a Lady (Prose) 2. A Photograph (Poem) </td> <td data-bbox="908 528 1423 907" style="width: 50%; vertical-align: top;"> <p><u>SNAPSHOTS</u></p> <ol style="list-style-type: none"> 1. The Summer of the Beautiful White Horse (Prose) 2. The Address (Prose) </td> </tr> </table>	<p><u>HORNBILL</u></p> <ol style="list-style-type: none"> 1. The Portrait of a Lady (Prose) 2. A Photograph (Poem) 	<p><u>SNAPSHOTS</u></p> <ol style="list-style-type: none"> 1. The Summer of the Beautiful White Horse (Prose) 2. The Address (Prose)
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<p><u>Half Yearly Exam</u></p> <p>Theory/Practical</p> <p>80/20</p>	<p style="text-align: center;">SYLLABUS</p> <p>2 Comprehension passages, Note-making, Integrated Grammar, Writing Skills - Poster, Classified Ads (Lost & Found, Missing Person, Sale & Purchase) Speech writing, Debate writing.</p> <p>Literature</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td data-bbox="448 1290 908 1980" style="width: 50%; vertical-align: top;"> <p><u>Hornbill</u></p> <ol style="list-style-type: none"> 1. The Portrait of a Lady (Prose) 2. A Photograph (Poem) 3. We're Not Afraid to Die..if We Can Be Together (Prose) 4. Discovering Tut: The Saga Continues (Prose) 5. The Laburnum Top (Poem) </td> <td data-bbox="908 1290 1423 1980" style="width: 50%; vertical-align: top;"> <p><u>Snapshots</u></p> <ol style="list-style-type: none"> 1. The Summer of the Beautiful White Horse (Prose) 2. The Address (Prose) 3. Mother's Day (Play) </td> </tr> </table> <p>Practical = Listening Assessment (10) + Speaking Assessment (10)</p>	<p><u>Hornbill</u></p> <ol style="list-style-type: none"> 1. The Portrait of a Lady (Prose) 2. A Photograph (Poem) 3. We're Not Afraid to Die..if We Can Be Together (Prose) 4. Discovering Tut: The Saga Continues (Prose) 5. The Laburnum Top (Poem) 	<p><u>Snapshots</u></p> <ol style="list-style-type: none"> 1. The Summer of the Beautiful White Horse (Prose) 2. The Address (Prose) 3. Mother's Day (Play)
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<p><u>Periodic Test - 2</u></p> <p>40 Marks</p>	<p style="text-align: center;">SYLLABUS</p> <p>Comprehension, Classified Ads (Situation Vacant/ wanted/Property, To-let, Accommodation wanted, PG), Speech writing, Grammar</p> <p><u>Literature</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <p><u>Hornbill</u></p> <p>1. Tale of Melon City (Poem)</p> <p>2. Father to Son (Poem)</p> </td> <td style="width: 50%; padding: 5px;"> <p><u>Snapshots</u></p> <p>1. Silk Road (Prose)</p> <p>2. Birth (Prose)</p> </td> </tr> </table>	<p><u>Hornbill</u></p> <p>1. Tale of Melon City (Poem)</p> <p>2. Father to Son (Poem)</p>	<p><u>Snapshots</u></p> <p>1. Silk Road (Prose)</p> <p>2. Birth (Prose)</p>
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<p>Annual Exam</p> <p>Theory / Practical</p> <p>80/20</p>	<p style="text-align: center;">SYLLABUS</p> <p>2 Comprehension passages, Note making, Integrated Grammar, Writing Skills - Poster, Classified Ads, Speech writing, Debate writing</p> <p style="text-align: center;">LITERATURE</p> <p>Snapshots & Hornbill - All Prose and Poems prescribed in CBSE curriculum 2026-27</p> <p>Prescribed Books</p> <p>1. Hornbill: English Reader published by National Council of Education Research and Training, New Delhi</p> <ul style="list-style-type: none"> ● The Portrait of a Lady (Prose) ● A Photograph (Poem) ● “We’re Not Afraid to Die... if We Can Be Together ● Discovering Tut: The Saga Continues ● The Laburnum Top (Poem) ● The Voice of the Rain (Poem) ● Childhood (Poem) ● The Adventure ● Silk Road (Prose) ● Father to Son 		

2. Snapshots: Supplementary Reader published by National Council of Education Research and Training, New Delhi

- The Summer of the Beautiful White Horse (Prose)
- The Address (Prose)
- Mother's Day (Play)
- Birth (Prose)
- The Tale of Melon City

Practical = Project and Viva (5+5 = 10) + Listening Skills Assessment (10)

MATHEMATICS

<p style="text-align: center;"><u>APRIL</u></p> <ul style="list-style-type: none">• COMPLEX NUMBERS & QUADRATIC EQUATIONS• TRIGONOMETRIC FUNCTIONS	<p style="text-align: center;"><u>MAY</u></p> <ul style="list-style-type: none">• TRIGONOMETRIC FUNCTIONS (CONTINUED)• LINEAR INEQUALITIES• 3D GEOMETRY
<p style="text-align: center;"><u>JULY</u></p> <ul style="list-style-type: none">• STRAIGHT LINES• PERMUTATION AND COMBINATIONS	<p style="text-align: center;"><u>AUGUST</u></p> <ul style="list-style-type: none">• PERMUTATION AND COMBINATIONS (CONTD.)• BINOMIAL THEOREM• SETS
<p style="text-align: center;"><u>SEPTEMBER</u></p> <ul style="list-style-type: none">• RELATIONS & FUNCTIONS• PROBABILITY	<p style="text-align: center;"><u>OCTOBER</u></p> <ul style="list-style-type: none">• PROBABILITY (CONTD.)• CONIC SECTIONS
<p style="text-align: center;"><u>NOVEMBER</u></p> <ul style="list-style-type: none">• CONIC SECTIONS (CONTD.)• STATISTICS	<p style="text-align: center;"><u>DECEMBER</u></p> <ul style="list-style-type: none">• SEQUENCES & SERIES
<p style="text-align: center;"><u>JANUARY</u></p> <ul style="list-style-type: none">• LIMITS & DERIVATIVES	<p style="text-align: center;"><u>FEBRUARY</u></p> <ul style="list-style-type: none">• LOGARITHMS

ASSESSMENT PLANNER

<p><u>Periodic Test - 1</u></p> <p>40 Marks</p>	<p style="text-align: center;"><u>SYLLABUS</u></p> <ul style="list-style-type: none">• TRIGONOMETRIC FUNCTIONS• COMPLEX NUMBERS & QUADRATIC EQUATIONS• LINEAR INEQUALITIES• 3D GEOMETRY
<p><u>Periodic Test – 2</u></p> <p>40 Marks</p>	<p style="text-align: center;"><u>SYLLABUS</u></p> <ul style="list-style-type: none">• SETS• RELATIONS & FUNCTIONS• PROBABILITY• CONIC SECTIONS
<p><u>Half Yearly Exam</u> Theory / Practical 80/20</p> <p>Total-100 Marks</p>	<p style="text-align: center;"><u>SYLLABUS</u></p> <ul style="list-style-type: none">• TRIGONOMETRIC FUNCTIONS• COMPLEX NUMBERS & QUADRATIC EQUATIONS• LINEAR INEQUALITIES• STRAIGHT LINES• 3-D GEOMETRY• PERMUTATIONS & COMBINATIONS• BINOMIAL THEOREM
<p><u>Annual Exam</u> Theory / Practical 80/20</p> <p>Total-100 Marks</p>	<p style="text-align: center;"><u>SYLLABUS</u></p> <ul style="list-style-type: none">• TERM 1 SYLLABUS• PA2 SYLLABUS AND• STATISTICS• SEQUENCE & SERIES• LIMITS & DERIVATIVES• LOGARITHMS

LEARNING OUTCOMES

CH- 1 SETS

The students will be able to:

- i. Describe sets, subsets, types of sets, power set.
- ii. Compute union, intersection, complement and difference of sets.
- iii. Illustrate the concepts using Venn diagrams.
- iv. Solve related word problems.

CH- 2 RELATIONS & FUNCTIONS

The students will be able to:

- i. Compute Cartesian product of sets.
- ii. Illustrate relations using arrow diagram.
- iii. Differentiate between relations and functions.
- iv. Express a relation/ function in the set- builder and roster form.
- v. Discuss the different types of functions.
- vi. Identify the domain and range of various functions, apply the concepts to solve related problems.
- vii. Draw the graph of the different types of functions.

CH- 3 TRIGONOMETRIC FUNCTIONS

The students will be able to:

- i. Distinguish between degree and radian measure.
- ii. Classify the results into various identities, recall them and apply them in related problems.
- iii. Compute the trigonometric functions of multiple angles and half angles.
- iv. Draw the graphs of all the trigonometric functions.
- v. Identify the domain and range of all the trigonometric functions.

CH- 4 COMPLEX NUMBERS & QUADRATIC EQUATIONS

The students will be able to:

- i. Recognise a new set of numbers, ie, Complex numbers and be able to perform algebraic operations on them.
- ii. Compute the powers of i .
- iii. Calculate the conjugate, modulus and the multiplicative inverse of a complex number.
- iv. Plot the complex numbers in the Argand plane.
- v. Apply the concepts to solve related problems.

CH- 5 LINEAR INEQUALITIES

The students will be able to:

- i. Recognize the role of Linear inequalities in our day to day life.
- ii. Solve and illustrate the linear inequations in one variable using a number line.
- iii. Identify the different types of linear inequalities.

- iv. Solve simultaneous linear inequalities in one variable and represent their solution on a number line.
- v. Apply the concepts to solve word problems.

CH-6 PERMUTATIONS & COMBINATIONS

The students will be able to:

- i. Use the factorial notation.
- ii. Explain and analyse the concepts of Permutations & combinations, demonstrate it in solving the problems.
- iii. Explain the theorems and standard results on Permutations & combinations.
- iv. Differentiate between the concepts of Permutation & combination, identify and apply the same suitably in solving word problems.

CH- 7 BINOMIAL THEOREM

The students will be able to:

- i. Write the binomial expansion for the given problem.
- ii. Identify the number of terms and compute related problems.

CH- 8 SEQUENCES & SERIES

The students will be able to:

- i. Recall the concept of AP, apply it to compute nth term, arithmetic mean and sum of 'n' terms.
- ii. Describe a GP, compute nth term, geometric mean and sum of 'n' terms.
- iii. Identify an infinite GP and calculate its sum.
- iv. Compute AM and GM and derive the relation between them.

CH- 9 STRAIGHT LINES

The students will be able to:

- i. Associate the inclination of a line to the concept of slope.
- ii. Compute the angle between two lines.
- iii. Classify lines as parallel or perpendicular using the concept of slope.
- iv. Discuss and identify the various forms of equations of a line.
- v. Explain the General equation of a line.
- vi. Convert one form of equation of a line to another.
- vii. Calculate the distance of a point from a line and also between parallel lines.
- viii. Solve related problems.

CH- 10 CONIC SECTIONS

The students will be able to:

- i. Visualise circle, ellipse, parabola, hyperbola as sections generated by a cone.
- ii. Describe the equations and various terms associated with these conic sections and solve related problems.
- iii. Apply the concepts to solve different word problems.

CH- 11 3-D GEOMETRY

The students will be able to:

- i. Visualise and express a given point or a geometric figure in 3-D.
- ii. Identify the octant to which a given point belongs.
- iii. Write the equation of the three axes and the three planes, identify the coordinates of a point lying on them.
- iv. Extrapolate the results from 2-D to 3-D to find the distance between two points.
- v. Apply the concepts to solve related problems.

CH- 12 LIMITS & DERIVATIVES

The students will be able to:

- i. Explain the concept of limits in solving various kinds of problems.
- ii. Perform algebra of limits in the problems.
- iii. Compute the LHL and RHL of a function
- iv. Compute limits of different types of functions.
- v. Define derivatives, illustrate the geometrical interpretation of derivatives.
- vi. Compute the derivative of different kinds of functions using the first principle and also by using formulae.
- vii. Perform algebra of derivatives in the problems.
- viii. Apply chain rule to compute the derivatives of composite functions.
- ix. Calculate the limits of logarithmic and exponential functions using the standard results.

CH- 13 STATISTICS

The students will be able to:

- i. Compute mean, standard deviation and variance of grouped and ungrouped data.
- ii. Apply the concepts to solve related problems.

CH- 14 PROBABILITY

The students will be able to:

- i. Describe random experiment, sample space, events and its types.
- ii. Perform algebra of events.
- iii. Identify mutually exclusive events and exhaustive events.
- iv. Calculate probability of different events, apply the Addition theorem of probability.
- v. Solve related word problems.

CH- LOGARITHMS

The students will be able to:

- i. Define Logarithms as the inverse of the exponential function.
- ii. Enlist and apply the laws of Logarithms to solve related problems.

ACCOUNTANCY

Overall Learning Outcomes

- Students will be able to relate and demonstrate good comprehension of concepts in areas of the student's interest or professional field.
- Students will demonstrate the ability to apply basic conceptual rules of accountancy, including the nature and the interpretation.
- Students will be able to identify the account, evaluate its nature, and know its placement as Debit or Credit.
- Students will demonstrate the ability to evaluate, integrate, and apply appropriate learning from various topics to create comprehensive analysis, segment wise reporting and interpretation with suitable propositions.

APRIL

TOPICS WITH LEARNING OUTCOMES

Introduction to accounting: The student will be able to:

Define Explain and List the meaning process advantages limitations of accounting.

Basic accounting terms: The student shall be able to :

Express the meaning of the accounting terms with examples and clarity.

Theory Base of accounting: The student will be able to:

Call out the nature meaning features necessity of the accounting principles, accounting concepts and assumptions and is able to Define each of them with example and clarity.

Bases of accounting: The student would be able to :

Distinguish between the accrual basis and cash basis of accounting through illustrations and various basis of differences.

Rules of Debit and Credit: The student would be able to:

Memorize the meaning of an account,

meaning of debit and credit,
rules of debit and credit, and
significance of debit and credit balance in accounts

Origin of transactions source documents of accountancy: The student would be able to:

- Know the names,
. uses of source documents and
. Identify their Proforma and its utility in accounting

Books of original entry journal: This would enable the students to:

- . Apply the meaning of journal and journalizing,
- . Tell the advantages and limitations,
- . Learn and practice the steps in journalizing,
- . Understand the simple and compound journal entries,
Discount and rebate,
Difference between trade discount,
Rebate and
Cash discount,
Opening entry.

MAY

TOPICS WITH LEARNING OUTCOMES

Accounting Equation: This chapter would enable the student to:

- . Assess the meaning of an accounting equation,
- . Derive the effect of transactions on accounting equation,
- . Process of preparing accounting equation,
- . Relate the rules for accounting equations,
- . Conclude the effect of adjustment transactions on accounting equation

JULY

TOPICS WITH LEARNING OUTCOMES

Journals: The study of this chapter would enable the student to:

Ledgers, Trial balance: This chapter would enable the student to:

- . Relate the meaning, features and utilities of ledger,
- . Draw the format of ledger account,

- . Grasp the mechanics of posting, balancing of ledger accounts,
- . Distinguish between journal and ledger and
- . Drafting the trial balance.

Cash Book: The students will be able to:

- . Formulate the meaning of subsidiary books of accounting,
- . Classify the subsidiary books,
- . Learn the advantages, meaning and features of cash book,
- . Structure the kinds of types of cash book,
simple cash book,
cash book with 2 columns,
- . Balancing and posting of cash book.

AUGUST

TOPICS WITH LEARNING OUTCOMES

Subsidiary Books: This chapter would enable the students to :

Create the subdivision of journal,
purchase book,
sales book,
purchase return book,
sales return book,
journal proper,

- . Apply the mechanics of posting of subsidiary books or special journals.

Rectification of Errors: The students would be able to :

- . Produce the classification of errors:

errors of omission,
errors of commission,
errors of principle and
compensating errors.

- . Reconstruct the Errors affecting the trial balance or one-sided errors,
errors not affecting the trial balance or two sided errors,
- . locating errors or detection of errors,
- . rectification of errors: before preparation of the trial balance,
after preparation of the trial balance but
before preparation of the final accounts,
Draw the suspense account.

SEPTEMBER

TOPICS WITH LEARNING OUTCOMES

Bank Reconciliation Statement: This chapter would enable the students to:

- . Reveal the meaning of bank reconciliation statement,
- . Tell the need and importance of bank reconciliation statement,
- . Know the reasons of difference between balances as per cash book and pass book,
- . Apply methods of preparing bank reconciliation statement,
- . Presentation of bank reconciliation statement.

OCTOBER

TOPICS WITH LEARNING OUTCOMES

NOVEMBER

TOPICS WITH LEARNING OUTCOMES

Depreciation & Provision for Depreciation: This chapter would enable the student to :

- . Learn the meaning of depreciation, depreciation and amortization and depletion,
- . Identify the causes or reasons of depreciation,
- . Apply accounting concept of depreciation and depreciation accounting,
- . Infer the objectives or need for providing depreciation,
- . Sketch the factors or basis of providing depreciation,
- . Examine the methods of recording depreciation,
- . Distinguish between depreciation account and provision for depreciation account,
- . Complete the methods of depreciation,
- . Compute the preparation of asset disposal account,
- . Distinguish between straight line method and written down value method.

DECEMBER

TOPICS WITH LEARNING OUTCOMES

Financial Statements without adjustments: This chapter would enable the student to :

- . Outline the meaning of financial statements, objectives or needs or importance of financial statements,

- . Name the users of financial statements,
- . Associate classification of capital and revenue items,
- . Practice the preparation of trading account, profit and loss account and balance sheet,
- . Organize grouping and marshalling (arrangement) of Assets and liabilities,
- . Represent classification of Assets and liabilities, methods of presentation of financial statements.

JANUARY

TOPICS WITH LEARNING OUTCOMES

Financial Statements with Adjustments: This chapter will enable the students to :

- . Restate the need for adjustments in the final accounts,
- . Apply the adjustments in preparation of financial statements with respect to: inventory, prepaid, outstanding expenses accrued and unearned income, depreciation, bad debts, provision for doubtful debts, provision for discount on debtors, managers Commission, interest on capital, goods distributed as samples, abnormal or accidental losses, goods taken by proprietor for personal use.

Provisions & Reserves: This chapter would enable the student to:

- . Interpret the meaning and importance of provisions,
- . Discuss the concept of provisions, objectives of provisions,
- . Estimate the meaning importance and types of reserves, revenue reserve, Capital Reserve,
- . Distinguish between revenue reserve and Capital Reserve, general reserve and specific reserve, secret reserve, difference between reserve and provision

FEBRUARY

TOPICS WITH LEARNING OUTCOMES

Revision: All topics with comprehensive problems and overall view of the concepts and principles of the subject.

Subject to Book Remaining in Markets (2025)

ASSESSMENT PLANNER

<p>Periodic Test - 1</p> <p>40 Marks</p>	<p>SYLLABUS</p> <p>Introduction to accounting</p> <p>Basic accounting terms</p> <p>Theory Base of accounting</p> <p>Bases of accounting</p> <p>Accounting Procedures</p> <p>Origin of transactions source documents of accountancy</p> <p>Books of original entry journal</p>
<p>Half Yealy Exam</p> <p>Theory / Practical</p> <p>80/20</p> <p>Theory</p> <p>80 Marks</p>	<p style="text-align: right;">SYLLABUS</p> <p>Introduction to accounting</p> <p>Basic accounting terms</p> <p>Theory Base of accounting</p> <p>Bases of accounting</p> <p>Accounting Equation</p> <p>Accounting Procedures</p> <p>Origin of transactions source documents of accountancy</p> <p>Books of original entry journal</p> <p>Cash book</p> <p>Ledger</p> <p>Trial balance</p> <p>Subsidiary Books</p> <p>Rectification of Errors</p>
<p>Periodic Test - 2</p> <p>40 Marks</p>	<p>SYLLABUS</p> <p>Rectification of Errors</p> <p>Bank Reconciliation Statement</p> <p>Depreciation</p>
<p>Annual Exam</p> <p>Theory / Practical</p> <p>80/20</p> <p>Theory</p> <p>80 Marks</p>	<p>SYLLABUS</p> <p>Introduction to accounting</p> <p>Basic accounting terms</p> <p>Theory Base of accounting</p> <p>Bases of accounting</p> <p>Accounting Equation</p> <p>Accounting Procedures</p> <p>Origin of transactions source documents of accountancy</p> <p>Books of original entry journal</p> <p>Cash book</p> <p>Ledger</p> <p>Trial balance</p> <p>Subsidiary Books</p>

	<p>Rectification of Errors Bank Reconciliation Statement Depreciation, Provision for Depreciation Financial Statements without adjustments Financial Statements with Adjustments</p>
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ENTREPRENEURSHIP

LEARNING OUTCOMES

- ACQUIRING ENTREPRENEURIAL SPIRIT AND RESOURCEFULNESS
- FAMILIARIZATION WITH VARIOUS USES OF HUMAN RESOURCE FOR EARNING DIGNIFIED MEANS OF LIVING
- UNDERSTANDING THE CONCEPT AND PROCESS OF ENTREPRENEURSHIP - ITS CONTRIBUTION IN AND ROLE IN THE GROWTH AND DEVELOPMENT OF INDIVIDUAL AND THE NATION
- ACQUIRING ENTREPRENEURIAL QUALITY, COMPETENCY AND MOTIVATION
- LEARNING THE PROCESS AND SKILLS OF CREATION AND MANAGEMENT OF ENTREPRENEURIAL VENTURE

APRIL

UNIT -1

ENTREPRENEURSHIP - WHAT, WHY AND HOW

- CONCEPT , FUNCTION, NEED AND IMPORTANCE
- WHY ENTREPRENEURSHIP FOR YOU
- MYTHS ABOUT ENTREPRENEURSHIP
- PROS AND CONS OF ENTREPRENEURSHIP
- PROCESS OF ENTREPRENEURSHIP
- START UP AND ITS STAGES
- ENTREPRENEURSHIP- THE INDIAN SCENARIO
- PROJECT WORK – INTERVIEW OF ROLE MODEL

MAY

UNIT – 2

AN ENTREPRENEUR

- WHY BE AN ENTREPRENEUR
- COMPETENCIES AND CHARACTERISTICS: ETHICAL ENTREPRENEURSHIP
- ENTREPRENEURIAL VALUES, ATTITUDES AND MOTIVATION
- MINDSET OF AN EMPLOYEE AND AN ENTREPRENEUR DIFFERENCE
- INTRAPRENEUR: IMPORTANCE IN ANY ORGANISATION

JULY

UNIT- 3

ENTREPRENEURSHIP JOURNEY

- GENERATION OF IDEAS.

AUGUST

UNIT – 4

ENTREPRENEURSHIP AS INNOVATION AND PROBLEM SOLVING

<ul style="list-style-type: none"> • BUSINESS IDEAS VS. BUSINESS OPPORTUNITIES • OPPORTUNITY ASSESSMENT – FACTORS, MICRO AND MACRO MARKET ENVIRONMENT • FEASIBILITY STUDY • BUSINESS PLAN PREPARATION • EXECUTION OF BUSINESS PLAN • ROLE OF NETWORKING IN ENTREPRENEURSHIP • PROJECT WORK – LEARN TO EARN 	<ul style="list-style-type: none"> • ENTREPRENEURS - AS PROBLEM SOLVERS. • INNOVATIONS AND ENTREPRENEURIAL VENTURES –● GLOBAL AND INDIAN • ROLE OF TECHNOLOGY – E-COMMERCE AND SOCIAL MEDIA • SOCIAL ENTREPRENEURSHIP AS PROBLEM • SOLVING-CONCEPT AND IMPORTANCE
<p style="text-align: center;"><u>SEPTEMBER</u></p> <p style="text-align: center;"><u>UNIT – 5</u> <u>CONCEPT OF MARKET</u></p> <ul style="list-style-type: none"> • UNDERSTANDING THE CONCEPT OF MARKET AND ITS EVOLUTION OVER TIME • UNDERSTANDING THE MEANING AND CONCEPT OF E-BUSINESS AND E-COMMERCE • ANALYZE THE MARKET ENVIRONMENT AT MICRO AND MACRO LEVEL. 	<p style="text-align: center;"><u>OCTOBER</u></p> <ul style="list-style-type: none"> • EXPLAIN THE TECHNIQUES OF MARKET RESEARCH AND INSTRUMENTS USED IN THE SAME • UNDERSTAND THE ELEMENTS OF TRADE AND COMMERCE. • EXPLAIN THE CONCEPT OF MARKETING MIX AND THE FOUR P'S OF MARKETING • UNDERSTAND THE CONCEPT, ROLE AND IMPORTANCE OF PRICE <p style="text-align: center;"><u>UNIT – 6</u> <u>BUSINESS ARITHMETIC</u></p> <ul style="list-style-type: none"> • UNIT OF SALE, UNIT PRICE AND UNIT COST - FOR SINGLE PRODUCT OR SERVICE • TYPES OF COSTS - START UP, VARIABLE AND FIXED •
<p style="text-align: center;"><u>NOVEMBER</u></p> <ul style="list-style-type: none"> • BREAK EVEN ANALYSIS - FOR SINGLE PRODUCT OR SERVICE 	<p style="text-align: center;"><u>DECEMBER</u></p> <ul style="list-style-type: none"> • SELECTION AND UTILIZATION OF HUMAN RESOURCES AND PROFESSIONALS LIKE ACCOUNTANTS, LAWYERS,

<p style="text-align: center;"><u>UNIT – 7</u> <u>RESOURCE MOBILIZATION</u></p> <ul style="list-style-type: none"> TYPES OF RESOURCES - HUMAN, CAPITAL AND ENTREPRENEURIAL TOOLS AND RESOURCES 	<p>AUDITORS, BOARD MEMBERS, ETC.</p> <ul style="list-style-type: none"> PROJECT WORK – VISIT AND REPORT (DIC)
<p style="text-align: center;"><u>JANUARY</u></p> <ul style="list-style-type: none"> VIVA VOICE AND PROJECT SUBMISSION ON VISIT TO AND INDUSTRY 	<p style="text-align: center;"><u>FEBRUARY</u></p> <ul style="list-style-type: none"> REVISION

ASSESSMENT PLANNER

<p>Periodic Test - 1</p> <p style="text-align: center;">40 Marks</p>	<p style="text-align: center;">SYLLABUS</p> <ul style="list-style-type: none"> UNIT -1 ENTREPRENEURSHIP - WHAT, WHY AND HOW UNIT – 2 AN ENTREPRENEUR
<p>Periodic Test - 2</p> <p style="text-align: center;">40 Marks</p>	<p style="text-align: center;">SYLLABUS</p> <ul style="list-style-type: none"> UNIT – 4 ENTREPRENEURSHIP AS INNOVATION AND PROBLEM SOLVING UNIT – 6 BUSINESS ARITHMETIC
<p>Half Yealy Exam</p> <p style="text-align: center;">Theory / Prac 70/30 Theory 100 Marks</p>	<p style="text-align: center;">SYLLABUS</p> <ul style="list-style-type: none"> UNIT -1 ENTREPRENEURSHIP - WHAT, WHY AND HOW UNIT – 2 AN ENTREPRENEUR UNIT- 3 ENTREPRENEURSHIP JOURNEY
<p>Annual Exam</p> <p style="text-align: center;">Theory / Prac 70/30 80/20 60/40</p> <p style="text-align: center;">Theory 100 Marks</p>	<p style="text-align: center;">SYLLABUS</p> <ul style="list-style-type: none"> UNIT -1 ENTREPRENEURSHIP - WHAT, WHY AND HOW UNIT – 2 AN ENTREPRENEUR UNIT- 3 ENTREPRENEURSHIP JOURNEY UNIT – 4 ENTREPRENEURSHIP AS INNOVATION AND PROBLEM SOLVING UNIT – 5 UNDERSTANDING THE MARKET UNIT – 6 BUSINESS ARITHMETIC UNIT – 7 RESOURCE MOBILIZATION

ECONOMICS

(Introductory Microeconomics and Statistics for Economics)

The prescribed CBSE syllabus aims to help students to

1. understand basic economic concepts
2. develop economic reasoning which can be applied in day-to-day life
3. acquire analytical skills to observe and understand economic realities
4. equip students with basic tools of Statistics to understand and analyse economic situations
5. develop problem solving ability
6. expose students to various schools of thought on how economic agents behave in an economy
7. develop an understanding that there can be more than one view on any economic issue and to argue logically with reasoning
8. integrate life skills and values in context of Economics
9. acquaint students with the relationship and interdependence of Economics with other subjects
10. assess and critique the functioning of an economy and the impact of various laws and policies.

THE SUSTAINABLE DEVELOPMENT GOALS:

- 1) End poverty in all its forms everywhere
- 2) End hunger, achieve food security and improved nutrition, and promote sustainable agriculture
- 3) Ensure healthy lives and promote wellbeing for all at all ages
- 4) Ensure inclusive & equitable quality education and promote lifelong learning opportunities for all
- 5) Achieve gender equality and empower all women and girls
- 6) Ensure availability and sustainable management of water and sanitation for all
- 7) Ensure access to affordable, reliable, sustainable and modern energy for all
- 8) Promote sustained, inclusive and sustainable economic growth & full and productive employment

- 9) Build resilient infrastructure, promote inclusive and sustainable, and foster innovation
- 10) Reduce inequality within and among countries
- 11) Make cities and human settlements inclusive, safe, resilient and sustainable
- 12) Ensure sustainable consumption and production patterns
- 13) Take urgent action to combat climate change and its impacts
- 14) Conserve & sustainably use the oceans, seas & marine resources for sustainable development
- 15) Protect, restore and promote sustainable use of terrestrial ecosystems & sustainably manage forests
- 16) Promote peaceful and inclusive societies & provide access to justice for all
- 17) Strengthen means of implementation & to revitalize global partnership for sustainable development

April

✓ DEFINITION OF STATISTICS

Learning Objectives:

On completion of the topic, the students will be able to

- Define the meaning of Statistics
- Contrast the concept of statistics in the Singular and Plural sense

✓ IMPORTANCE AND LIMITATIONS OF STATISTICS

Learning Objectives:

Completion of the unit will enable students to

- Enumerate and discuss the scope and functions of Statistics
- Appreciate the importance of statistics in Economics

✓ ORGANIZATION OF NUMERICAL DATA

Learning Objectives:

On completion of the topic, the students will be able to

- Describe the meaning of variables
- Identify and illustrate various types of frequency distributions and series
- Convert one series into another using appropriate formulae

✓ ARITHMETIC MEAN

Learning Objectives:

Completion of the unit will enable students to

- Comprehend the concept of averages
- solve problems using various methods and formulae
- provide interpretation for the results derived

✓ CENTRAL PROBLEMS AND PPC (SDG 11, 12, 16)

Learning Objectives:

On completion of the topic, students will be able to

- Comprehend the distinction between microeconomics and macroeconomics
- Differentiate between positive and normative economics
- Describe an economy
- Outline the central problems of each economy
- List and describe the central problems of an economy: what, how and for whom to produce.
- Illustrate the concept of opportunity cost
- Demonstrate its relevance in economic theory
- Comprehend the production possibilities of an economy using the PPC
- Describe changes in the PPC and its shape
- Evaluate the concept of MRT

May

✓ MEDIAN

Learning Objectives:

At the end of the topic, the students will be able to

- appreciate the concept of partition values
- solve problems using different formulae according to the statistical series
- interpret the results derived

✓ DEMAND AND ITS COMPONENTS & ELASTICITY OF DEMAND

Learning Objectives:

At the end of the unit, students will be able to

- define Demand
- differentiate between individual demand and market demand
- list and interpret the determinants of demand
- write and describe the demand schedule
- draw the demand curve
- comprehend the slope of the demand curve
- draw out the differences between movement and shifts in the demand curve

✓ DISCUSSION ON PROJECT WORK

July

✓ SUPPLY AND ITS PRICE ELASTICITY (SDG 9, 12)

Learning Objectives:

On completion of the topic, the students will be able to

- define Supply
- differentiate between supply and market supply
- enumerate the determinants of supply
- write and describe the supply schedule
- draw the supply curve

- comprehend the slope of the supply curve
- recall and compare movement along and shifts in the supply curve
- comprehend price elasticity of supply
- list the factors affecting price elasticity of supply
- measure the price elasticity of supply using percentage-change method

✓ MODE

Learning Objectives:

On completion of the topic, the students will be able to

- Appreciate the concept of positional averages
- solve problems using various alternative formulae

provide interpretation for the results derived

✓ CONSUMER'S EQUILIBRIUM (UTILITY ANALYSIS) (SDG 3, 12)

Learning Objectives:

On completion of the topic, the students will be able to

- Define consumer's equilibrium
Explain the meaning of utility, marginal utility
- Describe and appreciate the relevance of the law of diminishing marginal utility
- State the conditions of consumer's equilibrium using marginal utility analysis.

August

✓ CONSUMER'S EQUILIBRIUM (UTILITY ANALYSIS) Con't

✓ CONSUMER'S EQUILIBRIUM (IC ANALYSIS)

Learning Objectives:

At the end of the unit, students will be able to

- Explain the Indifference curve analysis of consumer's equilibrium
- Discuss the consumer's budget (budget set and budget line)
- Identify the preferences of the consumer (indifference curve, indifference map)
- State the conditions of consumer's equilibrium
- Show equilibrium using figures

✓ DIAGRAMMATIC PRESENTATION OF DATA (TABLES, BAR AND PIE DIAGRAMS)

Learning Objectives:

On completing the unit, the students will be able to

- Comprehend Tabular Presentation of data
- Learn Diagrammatic Presentation of Data: Geometric forms (bar diagrams and pie diagrams)
- Draw diagrams and comprehend their suitability

✓ SUBMISSION OF ECO PROJECT

Learning Objectives:

On completion of the project, the students will be able to

- acquire knowledge and facts about their chosen topic
- Use appropriate presentation techniques to showcase their study
- analyse, evaluate and examine the material and break information into parts by identifying motives or causes
- Draw inferences and find evidence to support generalizations
- Present and defend opinions by making judgments about information, validity of ideas, etc
- Compile information together to propose alternative solutions.

September

✓ PRIMARY AND SECONDARY DATA

Learning Objectives:

At the end of the topic, the students will be able to

- Distinguish between multiple sources of data – primary and secondary
- Evaluate the relevance of each kind of data in various circumstances.
- List the sources of secondary data

TERM 1 EXAM

October

✓ CENSUS AND SAMPLING METHODS

Learning Objectives:

Completion of the unit will enable the students to

- Describe the concept of Sampling
- List the methods and their relevance
- Identify which method would be most suitable in different situations
- Comprehend the purpose and importance of Census of India and National Sample Survey Organisation.

✓ MARKET EQUILIBRIUM UNDER PERFECT COMPETITION (SDG 3, 10, 12)

Learning Objectives:

Completion of the unit will enable the students to

- describe Perfect competition
- list its features
- comprehend the determination of market equilibrium
- understand and show the effects of shifts in demand and supply
- explain simple applications of Demand and Supply: Price ceiling, price floor.
- relate the concept to real world situations

✓ GRAPHICAL PRESENTATION OF DATA (HISTOGRAMS, POLYGONS, OGIVES)

Learning Objectives:

Completion of the unit will enable the students to

- Draw and present data in the form of graphs (histograms and Ogives)
- Interpret the meaning and relevance of each kind of presentation

November

✓ PRODUCTION FUNCTION (SDG 9, 12)

Learning Objectives:

On completion of the chapter, the students will be able to

- explain the meaning of Production Function
- differentiate between Short-Run and Long-Run Total Product, Average Product and Marginal Product
- comprehend the Returns to a Factor
- state the three phases in the law
- draw figure and describe the phases
- relate the concept to real world situations

✓ CORRELATION

Learning Objectives:

On completion of the topic, the students will be able to

- comprehend the meaning and properties of Correlation
- solve problems using various alternative formulae
- interpret the results derived
- apply the concept to Microeconomic theory.

December

✓ COST (SDG 12)

Learning Objectives:

Completion of the unit will enable the students to

- define cost: Short run costs
- compare total cost, total fixed cost, total variable cost
- differentiate between Average cost, Average fixed cost, Average variable cost and Marginal cost
- describe the meaning of each curve and their relationships with each other
- draw the cost curves showing their relationship
- attempt and solve numerical problems

✓ REVENUE (SDG 7, 9, 12)

Learning Objectives:

On completion of the topic, the students will be able to

- define TR, AR, MR

- differentiate between total, average and marginal revenue
- state the meaning of each curve and relate one to the other
- draw the revenue curves showing their relationship

solve numerical problems based on the relationship between

- ✓ PRODUCER'S EQUILIBRIUM (SDG 12)

Learning Objectives:

Completion of the unit will enable the students to

- derive the equilibrium point for the producer
- identify the break-even point
- present the producer's equilibrium diagrammatically
- relate the concept to real world situations

PROJECT REVIEWS

January

- ✓ PRODUCER'S EQUILIBRIUM Con't
- ✓ INDEX NUMBERS

Learning Objectives:

On completion of the unit, the students will be able to

- define and compare types of Index numbers
- identify the meaning and relevance of wholesale price index, consumer price index
- appreciate the uses of index numbers
- apply the various methods of creating index numbers to solve problems

February

PROJECT VIVA

REVISION

ASSESSMENT PLANNER

<p style="text-align: center;">Periodic Assessment 1</p> <p style="text-align: center;">40 Marks</p>	<p style="text-align: center;">SYLLABUS</p> <p><u>Microeconomics:</u></p> <ol style="list-style-type: none"> 1. Central Problems and PPC 2. Theory of demand <p><u>Statistics:</u></p> <ol style="list-style-type: none"> 1. Definition of Statistics 2. Importance and limitations of statistics 3. Arithmetic Mean 4. Median
<p style="text-align: center;">Periodic Assessment 2</p> <p style="text-align: center;">40 Marks</p>	<p style="text-align: center;">SYLLABUS</p> <p><u>Microeconomics:</u></p> <ol style="list-style-type: none"> 1. Market Equilibrium under Perfect Competition 2. Production Function <p><u>Statistics:</u></p> <ol style="list-style-type: none"> 1. Census Sampling 2. Correlation 3. Graphical Presentation of data (Histograms, Polygons, Ogives)
<p style="text-align: center;">Half Yearly Exam</p> <p style="text-align: center;">Theory / Practical 80/20</p>	<p style="text-align: center;">SYLLABUS</p> <p><u>Microeconomics:</u></p> <ol style="list-style-type: none"> 1. Central Problems and PPC 2. Demand and its price elasticity 3. Supply and its price elasticity 4. Consumer's equilibrium (Utility analysis) (SDG 3, 12) 5. Consumer's equilibrium (IC analysis) (SDG 3, 12) <p><u>Statistics:</u></p> <ol style="list-style-type: none"> 1. Definition of Statistics 2. Importance and limitations of statistics 3. Primary and secondary data 4. Arithmetic Mean 5. Median 6. Mode 7. Diagrammatic presentation of data (Tables, Bar and Pie diagrams)

Annual Exam Theory / Practical 80/20	SYLLABUS Theory Exam: Full Syllabus Practical: Project File
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BUSINESS STUDIES

SDG s objectives

- 1) End poverty in all its forms everywhere
- 2) End hunger, achieve food security and improved nutrition, and promote sustainable agriculture
- 3) Ensure healthy lives and promote wellbeing for all at all ages
- 4) Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- 5) Achieve gender equality and empower all women and girls
- 6) Ensure availability and sustainable management of water and sanitation for all
- 7) Ensure access to affordable, reliable, sustainable and modern energy for all
- 8) Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all
- 9) Build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation
- 10) Reduce inequality within and among countries
- 11) Make cities and human settlements inclusive, safe, resilient and sustainable
- 12) Ensure sustainable consumption and production patterns
- 13) Take urgent action to combat climate change and its impacts
- 14) Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- 15) Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation, and halt biodiversity loss
- 16) Promote peaceful and inclusive societies, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- 17) Strengthen the means of implementation and revitalise the global partnership for sustainable development

MONTH WISE DISTRIBUTION OF SYLLABUS WITH THEIR LEARNING OUTCOMES:

<u>APRIL-MAY</u>	<u>Chapter-1 and 2 LEARNING OUTCOMES</u>
<p><u>Chapter-1: Evolution and Fundamentals of Business (SDG-9)</u></p> <ul style="list-style-type: none"> ● History of Trade and Commerce ● Business- meaning and characteristics ● Business, Profession and Employment ● Objectives of Business ● Industry and Commerce 	<ul style="list-style-type: none"> ● State the meaning of business and identify the features of business. ● Explain the types of business activities. ● Discuss the concept of business risk and its features.

<ul style="list-style-type: none"> • Auxiliaries to trade • Business Risk-Concept <p><u>Chapter-2: Forms of Business Organisations (SDG- 8 and 9)</u></p> <ul style="list-style-type: none"> • Sole Proprietorship- Concept, merits and limitations. • Partnership- Concept, types, merits and limitations, registration, types of partners. • Joint Hindu Family Business-Concept <p>PA 1 EXAM</p>	<ul style="list-style-type: none"> • List the different forms of business organisations and understand their meaning. • Identify and explain the concept, merits and limitations of sole proprietorship. • Identify and explain the concept, merits and limitations of a Partnership Firm. • Name the types of partnership and discuss the types of partners. • State the need for registration of a partnership firm.
<p style="text-align: center;"><u>JULY</u></p> <p><u>Chapter-2: Forms of Business Organisations(SDG- 8 and 9)</u></p> <ul style="list-style-type: none"> • Cooperative Societies- Concept, merits and limitations • Company- Concept, merits and limitations, types of company. • Formation of company- stages, important documents to be used in formation of a company. • Choice of form of business organisation. <p><u>Chapter-3 : Public, Private and MNC'S(SDG- 8 and 10)</u></p> <ul style="list-style-type: none"> • Public sector and private sector enterprises- concept • Forms of public sector enterprises- Departmental Undertaking, Stautory Corporation and Government Company. • MNC'S- Feature, Joint Venture ,PPP-concept. 	<p><u>LEARNING OUTCOMES</u></p> <p><u>Chapter-2</u></p> <ul style="list-style-type: none"> • Identify and explain the concept, merits and limitations of cooperative societies. • Categorize the types of cooperative societies and explain the types of companies. • Distinguish between a private and public company. • Compare the stages in the formation of a company. • Name important documents used in formation of a company. • Recall the factors that influence the choice of a suitable form of business organisation. <p><u>Chapter-3</u></p> <ul style="list-style-type: none"> • Discuss Public sector and private sector enterprises.

	<ul style="list-style-type: none"> • Identify and explain the features, merits and limitations of different forms of public sector enterprises. • Summarize multinational companies, Joint Venture and PPP by giving their meaning and features.
<p style="text-align: center;"><u>AUGUST</u></p> <p><u>Chapter-4: Business Services (SDG- 11)</u></p> <ul style="list-style-type: none"> • Business services- meaning and types • Banking- Types of bank accounts, Banking services, e-banking, types of digital payments. • Insurance- Principles, Types. • Postal Services – financial and mail facilities. <p><u>Chapter-5 : Emerging modes of Business(SDG-8)</u></p> <ul style="list-style-type: none"> • E-business : concept, scope and benefits. 	<p><u>LEARNING OUTCOMES</u></p> <p><u>Chapter-4</u></p> <ul style="list-style-type: none"> • Classify the types of business services. • Discuss the meaning and types of banking. • List the types of bank accounts. • Recall the different services provided by banks. • Recall the concept of insurance. • Identify the principles of insurance. • Discuss the meaning of different types of insurance. • Express the utility of different types of telecom services <p><u>Chapter-5</u></p> <ul style="list-style-type: none"> • Give the meaning of e-business and discuss its scope. • List the benefits of e-business. <p>Distinguish between e-business and traditional business.</p>

<p style="text-align: center;"><u>SEPTEMBER</u></p> <p><u>Chapter- 6: Social Responsibility of Business and Business Ethics(SDG- 6 and 7)</u></p> <ul style="list-style-type: none"> • Concept of social responsibility • Case of social responsibility • Responsibility towards different sectors of society. • Role of business in environment protection. • Business Ethics- Concept and Elements <p>HALF YEARLY EXAM</p>	<p style="text-align: center;"><u>LEARNING OUTCOMES</u></p> <p><u>Chapter-6</u></p> <ul style="list-style-type: none"> • State the concept of social responsibility. • Examine the case for social responsibility. • Identify the social responsibility towards different interest groups. • Justify the role of business in environment protection. • Describe the elements of business ethics.
<p style="text-align: center;"><u>OCTOBER</u></p> <p><u>Chapter-7: Sources of Business Finance (SDG-10)</u></p> <ul style="list-style-type: none"> • Concept of business finance • Owner’s funds- equity shares, preference shares, retained earnings • Borrowed funds- debentures and bonds, loan from financial institution and commercial banks, public deposits, trade credit and ICD. 	<p style="text-align: center;"><u>LEARNING OUTCOMES</u></p> <p><u>Chapter-7</u></p> <ul style="list-style-type: none"> • State the meaning, nature and importance of business finance. • Classify the various sources of funds into owner’s funds. • Discuss the concept of debentures, loans from financial institutions and banks, trade credit and ICD. • Distinguish between owner’s funds and borrowed funds.
<p style="text-align: center;"><u>NOVEMBER</u></p> <p><u>Chapter-8: Small Business and Enterprises (SDG-8)</u></p> <ul style="list-style-type: none"> • Entrepreneurship Development- concept, characteristics and need. • Process of entrepreneurship development- Start up India Scheme, ways to fund start-up. • IPR’s and Entrepreneurship • Role of small business in India • Government schemes and agencies for SSI’s. <p>PA 2 EXAM</p>	<p style="text-align: center;"><u>LEARNING OUTCOMES</u></p> <p><u>Chapter-8:</u></p> <ul style="list-style-type: none"> • Define the concept of Entrepreneurship Development and IPR’s. • State the meaning of small business. • Discuss the role of small business in India. • Categorize the various schemes of government and agencies for development of SSI’s- NSIC and DIC.

<p style="text-align: center;"><u>DECEMBER- JANUARY</u></p> <p><u>Chapter-9: Internal Trade (SDG-8)</u></p> <ul style="list-style-type: none"> • Internal Trade- meaning and types • Services rendered by wholesaler and retailer. • Types of retail trade- Itinerant and fixed shop retailers. • Large scale retailers- Departmental stores, chain stores. • GST- Concept and features. <p><u>Chapter-10: International Trade (SDG-8)</u></p> <ul style="list-style-type: none"> • International trade- concept and benefits. • Export trade- meaning and procedure. • Import trade- meaning and procedure. • Documents involved in international trade. • WTO- meaning and objectives. 	<p style="text-align: center;"><u>LEARNING OUTCOMES</u></p> <p><u>Chapter-9</u></p> <ul style="list-style-type: none"> • State the meaning and types of internal trade. • Classify the services of wholesalers and retailers. • Explain the different types of retail trade. • List the distinctive features of departmental stores, chain stores and mail order business. • Discuss the concept of GST. <p><u>Chapter-10</u></p> <ul style="list-style-type: none"> • State the meaning of international trade. • Describe the scope of international trade to the nation and business firms. • Define the meaning of export and import trade and state the objectives of export and import trade. • Explain the important steps involved in export and import trade. • Examine the various documents used in international trade. • State the meaning of WTO and discuss its objectives in promoting international trade.
<p style="text-align: center;"><u>FEBRUARY</u></p> <ul style="list-style-type: none"> • Revision of all chapters through various assignments. 	<p style="text-align: center;"><u>LEARNING OUTCOMES</u></p> <ul style="list-style-type: none"> • Recapitulate various concepts and topics in different chapters through Case Studies and application based questions.

ASSESSMENT PLANNER

<u>Periodic Test - 1</u> 40 Marks	<u>SYLLABUS</u> Chapter-1: Evolution and Fundamentals of Business Chapter-2: Forms of Business Organisation (Sole proprietorship, Joint Hindu Family Business and Partnership)
<u>Half Yearly Exam</u> Theory / Prac 80/20	<u>SYLLABUS</u> Chapter-1: Evolution and Fundamentals of Business Chapter-2: Forms of Business Organisation Chapter-3: Private, Public and Global Enterprises Chapter-4: Business Services Chapter-5: Emerging modes of Business Chapter-6: Social Responsibility
<u>Periodic Test-2</u> 40 Marks	<u>SYLLABUS</u> Chapter-7 : Sources of finance Chapter-8 : Small Business
<u>Final Examination</u>	<u>SYLLABUS</u> FULL SYLLABUS FROM CHAPTER-1 TO 10.

PHYSICS (THEORY)

MONTH	CHAPTER	LEARNING OUTCOMES
April & May	<p>Motion in a straight line</p> <p>Topics covered:</p> <p>Frame of reference, Motion in a straight line, Elementary concepts of differentiation and integration for describing motion, uniform and non- uniform motion, and instantaneous velocity, uniformly accelerated motion, velocity - time and position-time graphs. Relations for uniformly accelerated motion (graphical treatment).</p> <p>Units and measurements</p> <p>Topics covered:</p> <p>Need for measurement, Units of measurements, System of units, fundamental and derived units, SI units, significant figures, Dimensions of physical quantities, Dimensional analysis and its applications.</p>	<p>The student will be able to differentiate between certain physical quantities- such as distance and displacement, Speed and velocity, Rectilinear and curvilinear motions, Average, relative and instantaneous velocity and speed.</p> <p>The student will be able to Derive formulae and equations- kinematic equations for uniformly accelerated motion.</p> <p>The student will be able to analyze and interpret data, graphs and figures and draw conclusions- different types of rectilinear motion, uniform and uniformly accelerated motion (v-t & x-t graphs) and will be able to explain the concept of change in velocity due to acceleration.</p> <p>The student Applies concept of vectors and motion in a plane in daily life with reasoning while decision making and solving problems- ex:in which direction to hold the umbrella if rain is falling vertically and wind is blowing in a certain direction.</p> <p>The student uses the International system of units, symbols, nomenclature of physical quantities and applies them formulations of dimensions, conversions of units.</p> <p>Common SI units, Prefixes and symbols for multiples and submultiples; Important constants, Conversion factors, Mathematical formulae, SI derived units with special names, dimensional formulae of physical quantities. Guidelines For using symbols for SI unit Newton, Pascal, Joule, Watt, Hertz, Kelvin</p>

		<p>The Student can explain processes, phenomena and laws with the understanding of the relationship between nature and matterhorn scientific basis.</p> <p>The student understands the need for accuracy, precision, errors and uncertainties in measurement.</p> <p>The student can derive formulae and equation - dimensional formulae and dimensional equation.</p> <p>The student can understand the significance and importance of dimensional analysis of any physical quantity.</p>
May & July	<p>Motion in a plane</p> <p>Topics covered:</p> <p>Scalar and vector quantities; position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors, Unit vector; resolution of a vector in a plane, rectangular components, Scalar and Vector product of vectors. Motion in a plane, cases of uniform velocity and uniform acceleration, projectile motion, uniform circular motion.</p>	<p>The student will be able to understand the concept of addition, subtraction, multiplication of vectors and will be able to apply it to solve problems.</p> <p>The student will be able to derive formulae and equations of the path of a projectile, equation of motion of an object in a plane with constant acceleration, centripetal acceleration.</p> <p>The student will be able to analyze and interpret data, graphs and figures and draw conclusions of motion in a plane.</p>

<p>July & August</p>	<p>Laws of motion</p> <p>Topics covered:</p> <p>Intuitive concept of force, Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. Law of conservation of linear momentum and its applications.</p> <p>Equilibrium of concurrent forces, Static and kinetic friction, laws of friction, rolling friction, lubrication. Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a banked road).</p>	<p>The student recognizes the concepts of physics related to various natural phenomena- Force, Momentum.</p> <p>The student can explain processes, phenomena and laws with the understanding of the relationship between nature and matter on a scientific basis- unification of forces, various laws such as laws of motion, friction, lubrication, conservation of linear momentum. Why does a cricketer draw in his hands during a catch?</p> <p>The student exhibits creativity and out -of-the-box thinking in solving challenging physical problems- ex. Minimum speed required by a motorcyclist at the uppermost position to perform a vertical loop in a death well in a circus.</p> <p>The student applies concepts of physics in daily life with reasoning while decision making and solving problems- Max. possible speed of a car on a banked road.</p>
<p>August</p>	<p>Work, Power and Energy</p> <p>Topics covered:</p> <p>Work done by a constant force and a variable force; kinetic energy, work energy theorem, power. Notion of potential energy, potential energy of a spring, conservative forces: non- conservative forces, motion in a vertical circle; elastic and inelastic collisions in one</p>	<p>The student recognizes the concepts of work done by a force, positive, negative and zero work done, conservative and nonconservative forces, mechanical energy, different forms of energy and its conservation and mechanical power.</p> <p>The student derives the formulae and proof of work done by a variable force, work - energy theorem, Potential energy stored in a spring, elastic collision in one dimension.</p> <p>The student applies the concept taught to solve the numerical problems associated with natural phenomena and daily life.</p>

September	<p>and two dimensions.</p> <p>Gravitation:</p> <p>Topics covered:</p> <p>Kepler's laws of planetary motion, universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Gravitational potential energy and gravitational potential, escape velocity, orbital velocity of a satellite.</p>	<p>The student will be able to understand the concept of gravitational force between the two bodies and its conservative nature, variation of acceleration due to gravity with height and depth, gravitational potential, potential energy, escape velocity, Kepler's laws of planetary motion, artificial satellites-its types and uses.</p> <p>The student derives the formulae and proof of acceleration due to gravity with height and depth, gravitational potential and potential energy, escape velocity, quantities associated with motion of satellites.</p> <p>The student applies the concepts taught in solving numerical problems.</p> <p>The student does research and thinks critically on the application of artificial satellites in our daily life and in communication.</p>
October & November	<p>Systems of particles and rotational motion</p> <p>Topics covered:</p> <p>Center of mass of a two-particle system, momentum conservation and Center of mass motion. Center of mass of a rigid body; center of mass of a uniform rod. Moment of a force,</p>	<p>The student will be able to understand the concept of center of mass, torque, angular momentum, moment of inertia.</p> <p>The student will be able to derive the formulae and equations of center of mass of a two particle system, equations of uniformly accelerated rotational motion, relation between torque and moment of inertia, angular momentum and moment of inertia, law of conservation of angular momentum, acceleration of a body rolling</p>

	<p>torque, angular momentum, law of conservation of angular momentum and its applications. Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions. Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation).</p> <p>Properties of solids:</p> <p>Topics covered:</p> <p>Elasticity, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear modulus of rigidity (qualitative idea only), Poisson's ratio; elastic energy.</p>	<p>down an inclined plane.</p> <p>The student will be able to apply the concepts taught in solving the real life problems in the form of numerical examples.</p> <p>The student will be able to understand the concept of elasticity, stress , strain and their types, Hooke's law, modulus of elasticity.</p> <p>The student will be able to apply the concepts of stress, strain and elastic modulus for solving numericals and problems related to construction of different structures etc.</p>
<p>DECEMBER</p>	<p>Properties of liquids</p> <p>Topics covered:</p> <p>Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes), effect of gravity on fluid pressure. Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity, Bernoulli's</p>	<p>The student will be able to understand the practicality of fluid dynamics in real life (Pascal's law, Bernoulli's theorem, Magnus effect).</p> <p>The student will be able to understand the concept of surface tension, surface energy, excess pressure, viscosity and will be able to apply these concepts to solve practical problems in the form of numericals.</p>

	<p>theorem and its simple applications. Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension ideas to drops, bubbles and capillary rise.</p> <p>Thermal properties of matter</p> <p>Topics covered:</p> <p>Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gasses, anomalous expansion of water; specific heat capacity; C_p, C_v - calorimetry; change of state - latent heat capacity. Heat transfer- conduction, convection and radiation, thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law .</p>	<p>The student will be able to understand the concept of thermal expansion of solids- linear, surface and volume expansion, specific and latent heat, principle of calorimetry, different methods of transfer of heat- conduction , convection and radiation. Thermal conductivity.</p> <p>The students will be able to derive the formula for the relations between the coefficients of thermal expansions, thermal conductivity, Newton's law of cooling.</p> <p>The students will be able to apply the concepts of thermal conductivity, specific heat, latent heat , principle of calorimetry, thermal expansion to solve various numerical problems associated with daily life.</p>
<p>JANUARY</p>	<p>Oscillations and waves</p> <p>Topics covered:</p> <p>Periodic motion - time period, frequency, displacement as a function of time, periodic functions and their application. Simple harmonic motion (S.H.M) and its equations of</p>	<p>The student will be able to understand the difference between periodic , oscillatory, harmonic motion and simple harmonic motion, forced vibration and resonance.</p> <p>The student will be able to derive equations of displacement, velocity, acceleration, kinetic and potential energy associated with simple harmonic motion, equations for time period of simple pendulum and vibrating spring.</p>

	<p>motion; phase; oscillations of a loaded spring- restoring force and force constant; energy in S.H.M. Kinetic and potential energies; simple pendulum derivation of expression for its time period.</p> <p>Wave motion: Transverse and longitudinal waves, speed of traveling wave, displacement relation for a progressive wave, principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats.</p> <p>Kinetic theory of gasses</p> <p>Topics covered:</p> <p>Equation of state of a perfect gas, work done in compressing a gas. Kinetic theory of gasses - assumptions, concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of freedom; law of equi-partition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path, Avogadro's number.</p>	<p>The student will be able to apply the concepts taught in solving the numerical problems.</p> <p>The student will be able to understand the basic concept of generation of waves along with its classification, mathematical analysis of waves along with its basic parameters (amplitude, frequency, time period, phase), Reflection and superposition of waves- formation of stationary waves and beats, stationary longitudinal and transverse waves generated in organ pipes and string respectively.</p> <p>The student will be able to understand the concept of pressure due to an ideal gas using assumptions of kinetic theory, kinetic interpretation of temperature, gas laws from kinetic theory, degrees of freedom and law of equipartition of energy.</p> <p>The student will be able to derive the expression pressure due to an ideal gas, kinetic energy per molecule.</p>
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FEBRUARY	<p>Heat and thermodynamics</p> <p>Topics covered:</p> <p>Thermal equilibrium and definition of temperature zeroth law of thermodynamics, heat, work and internal energy. First law of thermodynamics, Second law of thermodynamics: gaseous state of matter, change of condition of gaseous state - isothermal, adiabatic, reversible, irreversible, and cyclic processes.</p>	<p>The student will be able to understand the zeroth, first and second law of thermodynamics, isothermal and adiabatic processes, principle of refrigerator and heat engine.</p> <p>The student will be able to derive the relation between the two specific heats of an ideal gas, working formula of carnot engine and will be able to apply the concepts and formulae to solve numerical problems.</p>
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SUBJECT - PHYSICS (PRACTICAL)

April & May	<p style="text-align: center;">Experiments</p> <ol style="list-style-type: none"> 1. To measure diameter of a small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/calorimeter using Vernier Calipers and hence find its volume. 2. To measure diameter of a given wire and thickness of a given sheet using screw gauge 3. To find the weight of a given body using parallelogram law of vectors 	<p style="text-align: center;">Activities</p> <ol style="list-style-type: none"> 1. To make a paper scale of given least count, e.g.0.2cm, 0.5 cm. 2. To measure the force of limiting friction for rolling of a roller on a horizontal plane. 3. To study the variation in range of a projectile with angle of projection.
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ASSESSMENT PLANNER

<p>Periodic test -1 40 marks</p>	<p style="text-align: center;">Syllabus</p> <p>Motion in a straight line, Unit, measurement & dimensions Motion in a plane</p>
<p>Periodic test-2 40 marks</p>	<p>Rotational motion & properties of solids</p>
<p>Half yearly Exam Theory- 70 marks Practical-30 marks</p>	<p>Units, Measurement and dimensions Motion in a straight line Motion in a plane Laws of motion Work, power & energy Gravitation 4 practical experiments, 3 activities</p>
<p>Annual examination Theory- 70 marks Practical-30 marks</p>	<p>Units, Measurement and dimensions Motion in a straight line Motion in a plane Laws of motion Work, Power and energy Gravitation System of particles and rotational motion Properties of solids Properties of liquids Thermal properties of matter Heat and thermodynamics Kinetic theory of gasses Oscillation and waves 8 practical experiments , 6 activities</p>

BIOLOGY

APRIL

CHAPTER 8: Cell – The unit of life

As digital cytopathology continues to evolve, students equipped with knowledge in this field will have a competitive edge in the growing healthcare and biotech industries.

CHAPTER 10: Cell cycle and cell division

The study of the cell cycle is crucial to understand the health, well-being, and biology of all organisms. It plays a fundamental role in growth and development, impacts human aging and cancer, and has significant implications for disease treatment and tissue repair through stem cell therapies.

MAY

CHAPTER 9: Biomolecules

Biochemistry is vital for understanding disease processes at the molecular level, leading to the development of new diagnostic tools and targeted therapies. Understanding the biochemical basis of food quality and nutrition can create a better scope in food production industries.

CHAPTER 1: The living world

Prepare students for a variety of careers in the biological sciences, including research, healthcare, and biotechnology.

CHAPTER 2: Biological Classification

Utilizing advanced technologies like genomics and artificial intelligence to better understand evolutionary relationships between organisms, enabling faster species identification, and providing readily accessible online databases for global taxonomic information sharing, potentially through a "cybertaxonomy" system.

JULY

CHAPTER 3: Plant kingdom

Plant Systematics, focuses on the classification and evolutionary relationships of plants, often requiring a strong foundation in plant morphology, anatomy, genetics, and molecular biology. Some botanical gardens and research institutes may also offer research opportunities in plant taxonomy.

CHAPTER 4: Animal kingdom

A vision of the future of taxonomy that involves online publication and description of new species is Cybertaxonomy. The governance and practices around these databases are becoming more complex. Modern approaches in systematics can be used to improve conservation strategies.

CHAPTER 5: Morphology of flowering plants

Learn to analyze how plant morphology changes in response to altered temperature, precipitation, and CO₂ levels to identify traits that contribute to resilience and develop climate-resilient crop varieties.

Utilizing genetic tools to identify genes controlling morphological development, enabling targeted manipulation of plant architecture for improved yield and resource use efficiency.

AUGUST

CHAPTER 6: Anatomy of flowering plants

A degree in plant anatomy can lead to a variety of careers in research, agriculture, environmental management, and more.

- Plant biologist/Horticulturist
- Phytochemist
- Plant pathologist
- Environmental scientist

CHAPTER 11: Photosynthesis in higher plants

Understanding the physiology behind the process to promote sustainability for food production.

SEPTEMBER

CHAPTER 12: Respiration in plants

Using nanomaterials to create more sustainable and environmentally friendly agricultural practices as well as hybrid varieties

CHAPTER 13: Plant growth and development

Use their understanding of plant growth and development to explain agricultural practices like vegetative propagation, plant tissue culture, and crop improvement.

OCTOBER

CHAPTER 13: Plant growth and development (Contd..)

Use their understanding of plant growth and development to explain agricultural practices like vegetative propagation, plant tissue culture, and crop improvement.

CHAPTER 7: Structural organization in animals - Frog

Understanding how the structure of a particular tissue or organ is directly related to its specific function in the body.

CHAPTER 14: Breathing and exchange of gases

Be able to analyze graphs and diagrams illustrating respiratory processes and solve problems related to gaseous exchange.

NOVEMBER

CHAPTER 15: Body fluids and circulation

Apply the understanding of body fluids and circulation to explain the transport of nutrients, gases, hormones, and waste products throughout the body.

CHAPTER 16: Excretory products and their elimination

Careers in animal physiology include wildlife biologist, zoologist, veterinary technician, veterinarian, and research scientist.

CHAPTER 17: Locomotion and movement

Understand and evaluate experimental data related to joint mechanics and muscle contraction.

DECEMBER

CHAPTER 18: Neural control and coordination

Relate the concepts of neural control and coordination to everyday activities like movement, response to stimuli, and their symptoms.

JANUARY

CHAPTER 19: Chemical coordination and integration

Understanding the role of hormonal action to pursue career related to medicine, physiology, and research on hormonal imbalances and their treatments.

FEBRUARY

REVISION

ASSESSMENT PLANNER

PA 1

PA 1 SYLLABUS (40 marks)

Class tests (10 marks)

Total = 50 marks

1. Cell: The unit of life
2. Cell cycle and cell division

TERM 1 (HALF-YEARLY)

PA 1 SYLLABUS + Extra chapters (70 marks)

Practical syllabus (30 marks)

Total = 100 marks

1. Cell – The unit of life
2. Cell cycle and cell division
3. Biomolecules
4. The living world
5. Biological Classification
6. Plant kingdom
7. Animal kingdom
8. Morphology of flowering plants
9. Anatomy of flowering plants

PA 2

PA 2 SYLLABUS (40 marks)

Class tests (10 marks)

Total = 50 marks

1. Photosynthesis in higher plants
2. Respiration in plants

TERM 2 (FINALS)

FULL SYLLABUS (ALL 19 CHAPTERS) (70 marks)

PRACTICAL EXAM (30 marks)

TOTAL = 100 marks

IF THE SYLLABUS MAY BE RE-CONSIDERED BY THE CBSE, THEN THE NEW DELETED PORTIONS WILL BE INTIMATED AS THE CIRCULARS NOTIFIED TO THE SCHOOL.

PSYCHOLOGY (037)

General Learning Outcomes

- Psychology as a discipline specializes in the study of experiences, behaviors, and mental processes of human beings.
- The students will be able to understand the basic ideas, principles, and methods in Psychology.
- The students will be able to describe the role of socio-cultural factors responsible for human behavior
- The students will be able to be more sensitive, perceptive, and socially aware while analyzing the human behavior in their daily life experiences.

MONTH	TOPIC	SUB TOPICS	LEARNING OUTCOMES
April	Unit-1 : What is Psychology	1. Psychology as a Discipline – Natural/social Science 2. Evolution of Psychology 3. Development of Psychology in India 4. Branches of Psychology 5. Psychology and Other Disciplines 6. Psychologists at Work	The students will be able to – 1. understand Psychology as a scientific discipline. 2. The students will be able to state the growth of the discipline in India and the world. 3. The students will be able to know the different fields of psychology, its relationship with other disciplines, and professions. 4. The students will be able to apply the knowledge of psychology in daily life.

<p>May</p>	<p>Unit -2: Methods of Enquiry in Psychology</p>	<p>1.Goals of Psychological Enquiry</p> <p>2. Nature of Psychological Data</p> <p>3. Some Important Methods in Psychology-</p> <ul style="list-style-type: none"> · Observational Method · Experimental Method · Correlational Research · Survey Research · Psychological Testing · Case Study <p>4. Analysis of Data</p> <ul style="list-style-type: none"> · Quantitative Method · Qualitative Method 	<p>1. The students will be able to explain the goals and nature of psychological enquiry.</p> <p>2. The students will be able to classify different types of data used by psychologists.</p> <p>3. The students will be able to describe observation method of enquiry.</p> <p>4. The students will be able to describe other important methods of psychological enquiry.</p> <p>5. The students will be able to illustrate methods of analyzing data.</p> <p>6. The students will be able to explain about the limitations of psychological enquiry and Ethical guidelines.</p>
<p>July -</p>	<p>Practical File Work</p>	<p>5 Limitations of Psychological Enquiry</p> <p>6. Ethical Issues</p>	

	<p>Unit -3: Human Development</p> <p>Project work Practical Work Experiment -1</p>	<p>1.Introduction to Experimental Psychology And Project work.</p> <p>1)Introduction 2. Meaning of Development - A Life-Span Perspective on Development. 3.Factors Influencing Development 4. Context of Development 5. Overview of Developmental Stages - · Prenatal Stage · Infancy · Childhood · Challenges of Adolescence · Adulthood and Old Age. Experiment on Verbal Learning Ability.</p>	<p>1.The students will be able to describe the meaning and process of development. 2. The students will be able to explain the influence of heredity, environment and context on human development. 3.The students will be able to explain various stages of development and describe the major characteristics of infancy, childhood, adolescence, adulthood and old age. The students are conducting the experiment on their fellow students, learn to analyse the results and report writing.</p>
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August -	Unit- 4: Sensory, Attentional, and Perceptual Processes	1)Introduction 2. Nature and varieties of Stimulus 3. Sense Modalities 4. Attentional Processes · Selective Attention · Sustained Attention 5. Perceptual Processes · Processing Approaches in Perception. 6)Principles of Perceptual Organization 7) Perception of Space, Depth and Distance · Monocular Cues and Binocular Cues 8)Perceptual Constancies 9) Illusions	1. The students will be able to describe the nature of sensory processes. 2. The students will be able to explain the processes and types of attention. 3. The students will be able to analyse the problems of form and space perception. 4. The students will be able to reflect on sensory, attentional and perceptual processes in everyday life.
September		Mid Term Examination	
October -	Unit –5: LEARNING-	1. Introduction 2. Nature of Learning	1) The students will be able to describe the nature of learning.

		<p>3. Paradigms of Learning</p> <p>4. Classical Conditioning</p> <ul style="list-style-type: none"> · Determinants of Classical Conditioning <p>5. Operant/Instrumental Conditioning</p> <ul style="list-style-type: none"> · Determinants of Operant Conditioning <p>6. Key Learning Processes</p> <p>7. Observational Learning</p> <p>8. Cognitive Learning</p> <p>9. Verbal Learning</p> <p>10. Skill Learning</p> <p>11. Factors Facilitating Learning</p> <p>12. Learning Disabilities</p> <p>13. Applications of Learning Principles.</p>	<p>2) The students will be able to explain different types of learning and the procedures used in different types of learning.</p> <p>3) The students will be able to explain the determinants of learning.</p> <p>4) The students will be able to apply the various learning principles in daily life.</p> <p>5) The students will be able to understand the symptoms of Learning Disabilities.</p>
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November -	<p>Chapter- 6: Human Memory</p> <p>Practical Work Experiment -2</p>	<ol style="list-style-type: none"> 1. Introduction 2. Nature of Memory 3. Information Processing Approach : The Stage Model 4. Memory Systems : Sensory, Short-term and Long term Memories 5. Levels of Processing 6. Types of Long-term Memory <ul style="list-style-type: none"> · Declarative and Procedural; Episodic and Semantic 7. Knowledge Representation and Organisation in Memory 8. Memory as a Constructive Process 9. Nature and Causes of Forgetting 10. Enhancing Memory <ul style="list-style-type: none"> · Mnemonics using Images and Organisation 	<ol style="list-style-type: none"> 1. The students will be able to understand the nature of memory. 2. The students will be able to differentiate between different types of memory. 3. The students will be able to explain the nature and causes of forgetting. 4. The students will be able to describe various strategies for improving memory. <p>The students are conducting the experiment on their fellow students, learn to analyse the results and report writing.</p>
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December -	Chapter – 7: Thinking	<p>Experiment on measuring the memory span of a person.</p> <ol style="list-style-type: none"> 1. Introduction 2. Nature of Thinking 3. The Processes of Thinking 4. Problem Solving 5. Reasoning 6. Decision-making 7. Nature and Process of Creative Thinking <ul style="list-style-type: none"> · Nature of Creative Thinking · Process of Creative Thinking 8. Developing Creative Thinking <ul style="list-style-type: none"> · Barriers to Creative Thinking · Strategies for Creative Thinking 9. Thought and Language 10. Development of Language and Language Use. 	<ol style="list-style-type: none"> 1. The students will be able to describe the nature of thinking and reasoning, 2. The students will be able to explain various cognitive processes involved in problem solving and decision-making. 3. The students will be able to state the nature and process of creative thinking and learn ways of enhancing it 4. The students will be able to illustrate the relationship between language and thought 5. The students will be able to describe the process of language development and apply its use in dealing problems related to that.
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January-	Chapter – 8: Motivation and Emotion	1. Introduction 2. Nature of Motivation 3. Types of Motives · Biological Motives · Psychosocial Motives 4. Maslow’s Hierarchy of Needs 5. Nature of Emotions 6.Expression of Emotions · Culture and Emotional Expression · Culture and Emotional Labelling 10.Managing Negative Emotions 11.Enhancing Positive Emotions	1. The students will be able to describe the nature of emotional expression. 2. The students will be able to understand the relationship between culture and emotion, and 3. The students will be able to know how to manage your own emotions. 4. The students will be able to illustrate different types of motives 5. The students will be able to state Maslow’s Hierarchy of needs and how it apply in a person’s life .
February-	Revision and	Annual Exams	

ASSESSMENT PLANNER

Periodic Test – 1 40 Marks	SYLLABUS Unit 1 : What is Psychology Unit -2 :Methods of Enquiry in Psychology
Periodic Test - 2 40 Marks	SYLLABUS Unit-5: Learning UNIT-6 : Human Memory
Mid Term Exam (September) Theory / Practical 70/30	SYLLABUS UNIT 1 : What is Psychology UNIT -2 :Methods of Enquiry in Psychology UNIT -3 : Human Development UNIT -4 : Sensory, Attentional, and Perceptual Processes
Annual Exam (February) Theory / Practical 70/30	SYLLABUS UNIT 1 : What is Psychology UNIT -2 :Methods of Enquiry in Psychology UNIT -3 : Human Development UNIT -4 : Sensory, Attentional, and Perceptual Processes UNIT 5 : Learning UNIT-6 : Human Memory UNIT -7 : Thinking UNIT -8 : Motivation and Emotion

POLITICAL SCIENCE

APRIL

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
CONSTITUTION RIGHTS	<ul style="list-style-type: none"> • The student will be familiarized with the constitution and why it is required. • They will understand the key factors that led to the framing of the Indian Constitution. • They will learn about Fundamental Rights and Directive Principles • Get knowledge about some rights enshrined in the Indian Constitution. 	<p>At the completion of these topics the student should be able to:</p> <ul style="list-style-type: none"> • State and deduce the factors that lead to the importance of the constitution. • Develop the ability to use and analyze socio-economic and political factors to understand the classification of Rights in Part III and Part IV. • Classify the Rights enshrined in the Constitution. • Explain major events that led to conflict between the judiciary and the legislature after independence.

MAY

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
FUNDAMENTAL RIGHTS CONTD. CONSTITUTION AS A LIVING DOCUMENT PHILOSOPHY OF THE CONSTITUTION	<ul style="list-style-type: none"> • The student will discuss the major constitutional cases. • Familiarize the learner with the different rights in greater detail. • Analyze reasons why constitutions need to be amended. • Understand the process of amendment. 	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Identify the different categories of rights enshrined in the Constitution. • Highlight the constitutional cases that are a milestone. • Build arguments to prove why our Constitution is a living document. • Compare the provisions contained in Part III and Part IV and state their significance.

JULY

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES

ELECTION AND REPRESENTATION LEGISLATURE	<ul style="list-style-type: none"> • The student will be familiarized with the different modes of elections in the world. • Discuss the merits and demerits of the methods studied. • They will analyze the reason why India opted for the simple majority system and the malpractices prevalent in the electoral system in India. • They will learn about the composition of the legislature and the role it plays. 	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Analyze the significance of elections and the impact of the pattern of elections prevalent in the country. • Examine the viability of different methods. • Identify electoral malpractices prevalent in India and suggest remedies. • Analyze the composition and functions of the legislature in India.
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AUGUST

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
EXECUTIVE JUDICIARY	<ul style="list-style-type: none"> • The student will be familiarized with the composition and functions of the executive and judiciary in India. • Learn about judicial activism. • Discuss the need for an independent judiciary and study the role it has played in strengthening democracy. 	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Distinguish between a parliamentary and presidential executive and a single integrated judiciary and dual system of courts. • Trace the reasons why the prime minister is more powerful than the President in India. • Analyze the factors that can enable the President to exercise powers at his own discretion. • Comprehend the reason why the judiciary has contributed in enabling the Constitution to evolve.

SEPTEMBER

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
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<p>FEDERALISM LOCAL GOVERNMENTS</p>	<ul style="list-style-type: none"> • The student will be able to trace the application of vertical power sharing in India. • They will learn why our federation is a holding together one. • Explore the role played by local self-governing institutions in India. 	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Discover the features of a holding together federation as applied to India. • Distinguish between cooperative and competitive federalism. • Appreciate the participation of a wide variety of people in the democratic process at the local level. • Analyze the different reasons that weaken our local governments despite the 73rd and 74th Amendment Acts. • Develop their capacity to link political processes and policies with contemporary realities. • Encourage the students to understand and analyze the challenges of contemporary India.
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OCTOBER

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
<p>POLITICAL THEORY FREEDOM</p>	<ul style="list-style-type: none"> • The student will explore the meaning of political theory and why they must study it. • Discuss the types of liberty. • Learn about the different ideas that have shaped liberty. 	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Analyze the importance of studying political theory. • Evaluate the impact of ideas that have shaped the concept of liberty and its application to our lives today. • Explore how developments shape ideas and transform them.

NOVEMBER

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
<p>EQUALITY JUSTICE</p>	<ul style="list-style-type: none"> • The student will be familiarized with the ideas of equality and justice. • Understand the different dimensions of equality and justice. • Learn about how to promote equality and justice. 	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Define equality and justice. • Analyze the impact of these ideas on our lives. • Evaluate the manner in which our Constitution has guaranteed them to people.

DECEMBER

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
RIGHTS CITIZENSHIP	<ul style="list-style-type: none"> • The students will learn about rights and how every claim made by them cannot be a right. • They will comprehend the importance of full and equal membership of the state in the light of contemporary events and developments. 	<p>At the completion of the syllabus, the student should be able to:</p> <ul style="list-style-type: none"> • Understand and analyze why claims cannot be rights. • Form individual opinions on citizenship and the need for global citizenship. • Compare developments in different situations and appreciate the value of citizenship. • Encourage students to understand and analyze the challenges for contemporary India and their role in nation-building by fulfilling their duties.

JANUARY

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
NATIONALISM SECULARISM	<ul style="list-style-type: none"> • The student will be familiarized with the ideas of nationalism and secularism. • They will become aware of the challenge of reconciling pluralism with multiculturalism. • They will define secularism and highlight the salient features of secularism in India and the West. • Show the challenges faced by a society inhabited by people who follow diverse religions. • Show how notions like modernization need to be critically assessed. 	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Identify factors that give rise to a nation. • Explore strategies to integrate diverse peoples together. • Analyze the differences between the western perspective of secularism and the Indian one. • Summarize the limitations of secularism in India.

FEBRUARY

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
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REVISION	FINAL TERM EXAMINATION	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Understand, analyze and identify the key features, historical processes, and working of the Indian Constitution in real life. • Understand ideas gained from political theory, develop the skill for logical reasoning, and • Engage meaningfully in the political process.
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ASSESSMENT PLANNER

<p>PERIODIC TEST - 1</p> <p>40 MARKS</p>	<p style="text-align: center;"><u>SYLLABUS</u></p> <p>PART A: INDIAN CONSTITUTION AT WORK</p> <ol style="list-style-type: none"> 1. CONSTITUTION 2. RIGHTS IN THE INDIAN CONSTITUTION
<p>PERIODIC TEST - 2</p> <p>40 MARKS</p>	<p style="text-align: center;"><u>SYLLABUS</u></p> <ol style="list-style-type: none"> 1. POLITICAL THEORY: AN INTRODUCTION 2. LOCAL GOVERNMENTS 3. FEDERALISM
<p>HALF YEARLY EXAM</p> <p>THEORY / PRAC 80/20 OR THEORY 100 MARKS</p>	<p style="text-align: center;"><u>SYLLABUS</u></p> <p>PART A: INDIAN CONSTITUTION AT WORK</p> <ol style="list-style-type: none"> 1. CONSTITUTION 2. RIGHTS IN THE INDIAN CONSTITUTION 3. ELECTION AND REPRESENTATION 4. LEGISLATURE 5. EXECUTIVE 6. JUDICIARY
<p>ANNUAL EXAM</p> <p>THEORY / PRAC 80/20 OR THEORY 100 MARKS</p>	<p style="text-align: center;"><u>SYLLABUS</u></p> <ol style="list-style-type: none"> 1. PART A: INDIAN CONSTITUTION AT WORK 2. PART B: POLITICAL THEORY

HISTORY

APRIL		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
WRITING AND CITY LIFE	<p>The student will</p> <ul style="list-style-type: none"> • be familiarized with the nature of early urban centers. • discuss whether writing is significant as an indicator of civilization. 	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Compare and analyze the transformation from Neolithic to Bronze Age Civilization to understand the myriad spheres of human development. • Elucidate the interwoven social and cultural aspects of civilization to understand the connection between city life and culture of contemporary civilizations. • Analyze the outcomes of a sustained tradition of writing.
MAY		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
AN EMPIRE ACROSS THREE CONTINENTS	<p>The student will</p> <ul style="list-style-type: none"> • be familiarized with the history of a major world empire. • Discuss whether slavery was a significant element in the economy. • discuss whether writing is significant as an indicator of civilization. 	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Explain and relate the dynamics of the Roman Empire to understand their polity, economy, society, and culture. • Analyze the implications of the contacts of the Romans with the subcontinent Empires. • Analyze the outcomes of a sustained tradition of writing.

JULY		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
AN EMPIRE ACROSS CONTINENTS – LATE ANTIQUITY HISTORIANS' VIEWS ON THE INSTITUTION OF SLAVERY	<p>The student will</p> <ul style="list-style-type: none"> • be familiarized with the cultural transformation that took place in Rome in its final centuries. 	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Analyze the implications of the Romans' contacts with the subcontinent Empires. • Examine the domains of cultural transformation in this period.
AUGUST		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
NOMADIC EMPIRES	<p>The student will</p> <ul style="list-style-type: none"> • be familiarized with the varieties of nomadic society and their institutions. • Discuss whether state formation is possible in nomadic societies. • discuss whether state formation is possible in nomadic societies. • Discuss whether state formation is possible in nomadic societies. 	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Identify the living patterns of nomadic pastoralist society. • Trace the rise and growth of Genghis Khan to understand him as an oceanic ruler. • Analyze socio-political and economic changes during the period of descendants of Genghis Khan. • Distinguish between the Mongolian people's perspective and the world's opinion of Genghis Khan.
SEPTEMBER		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
THE THREE ORDERS	<p>The student will</p> <ul style="list-style-type: none"> • become familiar with the nature of the economy and society of the period and the changes within them. • Show how the debate on the decline of feudalism helps in understanding processes of transition. 	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Explain the myriad aspects of feudalism with special reference to the first, second, third and fourth order of society. • Relate between ancient slavery and serfdom. • Assess the 14th century crisis and rise of nation states.

OCTOBER		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
CHANGING CULTURAL TRADITIONS	<p>The student will</p> <ul style="list-style-type: none"> • explore the intellectual trends in the period. • Familiarize themselves with the paintings and buildings of the period. • Introduce the debate around the idea of Renaissance. 	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Analyze the causes, events, and effects of Renaissance, Reformation, Scientific Revolution and Age of Exploration. • Relate the different facets of Italian cities to understand characteristics Renaissance, Humanism and Realism. • Compare and contrast the condition of women in the Renaissance period. • Recognize major influences on the architectural, artistic, and literary developments to understand the facades of Renaissance. • Critically analysis of the Roman Catholic Church by Martin Luther and Erasmus and their impact on later reforms. • Evaluate response to the Protestant Reformation in the forms of the Counter and Catholic Reformation.
NOVEMBER		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
DISPLACING INDIGENOUS PEOPLE	<p>The student will be familiarized with the processes of displacements that accompanied the development of America and Australia that will sensitize them.</p> <p>Understand the implications of such processes for the displaced populations.</p>	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> • Recount some aspects of the history of the native people of America to understand their condition. • To analyze the realms of settlement of Europeans in Australia.

DECEMBER		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
DISPLACING INDIGENOUS PEOPLE HISTORIANS VIEWPOINT ON THE IMPACT OF EUROPEAN SETTLEMENT ON INDIGENOUS POPULATION	The student will be familiarized with the viewpoint given by historians on the impact of European settlement on indigenous population.	At the completion of this chapter the student should be able to: <ul style="list-style-type: none"> • Compare and contrast the lives and roles of indigenous people in these continents. • Form individual opinions on this issue with the help of perspectives provided by historians.
JANUARY		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
PATHS TO MODERNIZATION	The student will <ul style="list-style-type: none"> • be familiarized with the idea that transformation in the modern world takes many different forms. • Show how notions like modernization need to be critically assessed. 	At the completion of this chapter the student should be able to: <ul style="list-style-type: none"> • Deduce the histories of China and Japan from the phase of imperialism to modernization. • Explore the Japanese political, cultural and economic system prior to and after the Meiji Restoration. • Analyze the domains of Japanese nationalism prior and after the Second World War. • Summarize the nationalist upsurge in China from Dr. Sun Yet Sen to Mao Zedong to understand the era of communism.
FEBRUARY		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
PATHS TO MODERNIZATION CONTD.	The student will <ul style="list-style-type: none"> • be familiarized with the paths of modernization adopted by Deng Xio Ping and Zhou en Lai 	At the completion of this chapter the student should be able to: <ul style="list-style-type: none"> • Compare and distinguish between policies followed by Mao Zedong and Deng Xio Ping. • Analyze the Chinese path to modernization under Deng

		Xio Ping and Zhou en Lai to understand the transformation between rigid communism to liberal socialism.
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ASSESSMENT PLANNER

PERIODIC TEST - 1 40 MARKS	<u>SYLLABUS</u> WRITING AND CITY LIFE
PERIODIC TEST - 2 40 MARKS	<u>SYLLABUS</u> THE THREE ORDERS CHANGING CULTURAL TRADITIONS
HALF YEARLY EXAM THEORY / PRAC 80/20 OR THEORY 100 MARKS	<u>SYLLABUS</u> 1. WRITING AND CITY LIFE 2. AN EMPIRE ACROSS THREE CONTINENTS 3. NOMADIC EMPIRES
ANNUAL EXAM THEORY / PRAC 80/20 OR THEORY 100 MARKS	<u>SYLLABUS</u> 1. WRITING AND CITY LIFE 2. AN EMPIRE ACROSS THREE CONTINENTS 3. NOMADIC EMPIRES 4. THE THREE ORDERS 5. CHANGING CULTURAL TRADITIONS 6. DISPLACING INDIGENOUS PEOPLES 7. PATHS TO MODERNIZATION

COMPUTER SCIENCE

THE SUSTAINABLE DEVELOPMENT GOALS:

- 1) End poverty in all its forms everywhere
- 2) End hunger, achieve food security and improved nutrition, and promote sustainable agriculture
- 3) Ensure healthy lives and promote wellbeing for all at all ages
- 4) Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- 5) Achieve gender equality and empower all women and girls
- 6) Ensure availability and sustainable management of water and sanitation for all
- 7) Ensure access to affordable, reliable, sustainable and modern energy for all
- 8) Promote sustained, inclusive and sustainable economic growth, full and productive employment & decent work for all
- 9) Build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation
- 10) Reduce inequality within and among countries
- 11) Make cities and human settlements inclusive, safe, resilient and sustainable
- 12) Ensure sustainable consumption and production patterns
- 13) Take urgent action to combat climate change and its impacts
- 14) Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- 15) Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation, and halt biodiversity loss
- 16) Promote peaceful and inclusive societies, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- 17) Strengthen the means of implementation and revitalise the global partnership for sustainable development

Learning outcomes of class XI for the subject Computer Science for class XI

OVREALL EARNING OUTCOMES –

1. Develop basic computational thinking.
2. Explain and use data types.
3. Appreciate the notion of algorithm.
4. Explain cyber ethics, cyber safety and cybercrime.
5. Understand the value of technology in societies along with consideration of gender and disability issues.

April

After the classes conducted during April, students will be able to

Chapter : Python Fundamentals

- a. Understand the need of a programming language.
- b. Understand basic structure to write a simple program.
- c. Able to accept values of following types:
 - a. Int
 - b. String
 - c. Float
- d. Categorization of operators in following categories
 - a. Relational
 - b. Logical
 - c. Mathematical
 - d. Augmented
- e. Implement Print statement to print outputs.
- f. Differentiate between sep and end arguments of print statement.

Chapter : Conditional and Iterable Statements

- a. Define and understand the need of selection statement
- b. Code a condition using following combination of
 - i. if else
 - ii. if elif
 - iii. if if
 - iv. if elif if
- c. Understand the working of immutable datatypes
- d. Implement usage of is,in, not in and range() in code

May

After the classes conducted during May, students will be able to

Chapter : Conditional and Iterable Statements Continued

- a. To understand the need of iterations statements.
- b. Label the parts of following loops:
 - i. For

- ii. While
- c. Implement simple programs to calculate factorial, even odd number sum and multiples of a number.
- d. Convert a simple for loop into while loop.

July

After the classes conducted during July students will be able to

Chapter :Loops(nested)and String manipulations

- a. Implementation of nested loops for patterns and series.
- b. Predict output of the complicated programs involving two to three loops.
- c. Understand the concept on indexing a string value
- d. Differentiate between 0 to n-1 and -1 ,-2
- e. Extract the values of string using slicing method.
- f. Apply following inbuilt functions:
len(), capitalize(), title(), upper(), lower(), count(), find(), index(), isalnum(), islower(), isupper(), isspace(), isalpha(), isdigit(), split(), partition(), strip(), lstrip(),rstrip(), replace(),partition()

August

After the classes conducted during August, students will be able to

Chapter : Lists

- a. Need to create list in python
- b. Differentiate between mutable and immutable
- c. Different types of list usages and syntaxes
 - i. Empty
 - ii. Mixed
 - iii. Numeric
 - iv. String
- d. Code to implement following operations in lists
 - i. Slicing
 - ii. Adding
 - iii. Removing
 - iv. Modifying
- e. Implement following method len(), list(), append(), extend(), insert(), count(), index(), remove(), pop(), del,reverse(), sort(), min(), max(), sum()
- f. Code to pack and unpack lists.
- g. Concept of True , Shallow and deep copy of nested lists.

September

Chapter : Tuples

- a. Need to create tuples in python
- b. Differentiate between lists and tuples

Revision for Mid term Exam will be carried out after finishing the above mentioned topics.

October

After the classes conducted during October, students will be able to

- a. Implement following functions/methods – len(), tuple(), count(), index(), sorted(), min(), max(), sum()
- b. Use the concept of slicing for tuple
- c. Implement programs which are combination lists and tuples.

November

After the classes conducted during November, students will be able to

Chapter : Number System

- a. Distinction between the following number systems
 - i. Decimal
 - ii. Octal
 - iii. Binary
 - iv. Hexadecimal
- b. Identification of the validity of number based on number system.
- c. Conversion of Decimal to
 - i. Octal
 - ii. Binary
 - iii. Hexadecimal
- d. Conversion of Hexadecimal to
 - i. Binary
 - ii. Decimal
- e. Conversion of Octal to
 - i. Binary
 - ii. Decimal
- f. Conversion of Binary to
 - i. Octal
 - ii. Decimal
 - iii. Hexadecimal

December

After the classes conducted during December, students will be able to

Chapter : Dictionary

- a. Understand the need of dictionary.
- b. Differentiate between key and value part of dictionary.
- c. Separate the key and value part of dictionary.
- d. Implement the following operations on a dictionary
 - a. Create a dictionary dynamically
 - b. Modify the key part

- c. Modify the value part
- d. Print values of dictionary

January

After the classes conducted during January, students will be able to

Chapter : Dictionary continued

- a. Implement methods functions/methods – len(), dict(), keys(), values(), items(), get(), update(), del(), del, clear(), fromkeys(), copy(), pop(), popitem(), setdefault(), max(), min(), count(), sorted() copy()
- b. Combine the dictionary involving list, tuples and string values

Chapter : Boolean Algebra

- a. Identify and draw AND,OR,NOT ,NAND & NOR gates
- b. Understand a Boolean expression and verify using truth table.
- c. State and verify laws of Boolean Algebra .
- d. Draw a logic gate of a Boolean expression.

February

After the classes conducted during February, students will be able to

Chapter : Modules

- a. Random module: random(),randint(),randrange(),uniform(),choice()
- b. Math module: pow(),sqrt(),floor(),ceil()
- c. Statistics module :mean() ,median(),mode()

Please Note: the rest of the February students will be revising all the topics using application based questions . Learning Outcome will be to familiarize with each part of question paper.

ASSESSMENT PLANNER

Periodic Test - 1 40 Marks	SYLLABUS 1.Python Fundamentals 2.Conditional/Selection Statements 3. Iteration statements (Single loop)
Half yearly 70/30	SYLLABUS 1.Python Fundamentals 2.Conditional Statements 3.Iteration statements 4.String Manipulations

	<ul style="list-style-type: none"> 5. List manipulations 6. Tuple manipulations
<p>PA2</p> <p>40 marks</p>	<p style="text-align: right;">SYLLABUS</p> <ul style="list-style-type: none"> 1. List Manipulations 2. Tuples Manipulations 3. Number System
<p>Annual Exam</p> <p>Theory / Prac 70/30</p>	<p style="text-align: right;">SYLLABUS</p> <ul style="list-style-type: none"> 1. Introduction to Python 2. Conditional statements 3. Iteration statements 4. String Manipulations 5. Lists 6. Tuples 7. Boolean Algebra 8. Number System 9. Dictionaries

INFORMATICS PRACTICES (065)

GENERAL LEARNING OUTCOMES

- Identify the components of Computer System.
- Create Python programs using different data types, lists and dictionaries. Data analysis and scientific computing with Python
- Explain database concepts and Relational Database Management Systems.
- Retrieve and manipulate data in RDBMS using Structured Query Language
- Identify the Emerging trends in the fields of Information Technology.

THE SUSTAINABLE DEVELOPMENT GOALS

- ✓ SDG 9: Build resilient infrastructure, promote sustainable and inclusive industrialization, and foster innovation
- ✓ SDG 10: Reduce inequality
- ✓ SDG 11: Make cities inclusive, safe, resilient and sustainable
- ✓ SDG 12: Sustainable consumption and production patterns
- ✓ SDG 13: Urgent action to combat climate change and its impacts
- ✓ SDG 14: Conserve and sustainably use oceans, seas and marine resources
- ✓ SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and biodiversity loss
- ✓ SDG 16: Peace, justice and strong institutions
- ✓ SDG 17: Strengthen the means of implementation and global partnerships for development

APRIL

UNIT 1 - INTRODUCTION TO COMPUTER SYSTEM

LEARNING OUTCOMES

- Understand and appreciate fundamentals of Computer and its characteristics
- Understand the components of computer
- Understand Operating System
- Understand the importance of Utilities

APRIL - MAY

UNIT 4 - EMERGING TRENDS

LEARNING OUTCOMES

- Identify the Emerging trends in the fields of Information Technology.
- Artificial Intelligence (AI)

- Big Data
- Internet of Things (IoT) / Web of Things (WoT)
- Cloud Computing
- Grid Computing
- Blockchains

JULY - AUGUST

UNIT 2: INTRODUCTION TO PYTHON

LEARNING OUTCOMES

- General concept to create Python programs using different data types, lists and dictionaries.
- Python Keywords & Data Handling
- Programs for Input and Output data
- Purpose and Difference between Conditional and Iteration / Looping statements.

SEPTEMBER

UNIT 3: DATABASE CONCEPTS AND THE STRUCTURED QUERY LANGUAGE

LEARNING OUTCOMES

- Understand database concepts and Relational Database Management Systems.
- Advantages of using Structured Query Language

OCTOBER – NOVEMBER

UNIT 3: DATABASE CONCEPTS AND THE STRUCTURED QUERY LANGUAGE

LEARNING OUTCOMES

- Retrieve and manipulate data in RDBMS using Structure Query Language
- Data Definition: CREATE TABLE
- Data Manipulation: INSERT
- Retrieve and manipulate data in RDBMS using Structured Query Language
- Data Query: SELECT, FROM, WHERE.

DECEMBER – JANUARY

UNIT 2: INTRODUCTION TO PYTHON – LIST

LEARNING OUTCOMES

- Introduction to List
- Concept of using the List Operations and Traversing a List
- How use List Methods and Built-in Functions And Manipulation

JANUARY - FEBRUARY

UNIT 2: INTRODUCTION TO PYTHON – DICTIONARIES

LEARNING OUTCOMES

- Introduction to Dictionaries
- Concept of Traversing a Dictionary
- Concept of using Dictionary Methods and Built-in Functions and Manipulating Dictionaries

ASSESSMENT PLANNER

Periodic Test PA- 1 40 Marks	SYLLABUS UNIT 1 - INTRODUCTION TO COMPUTER SYSTEM UNIT 4 - EMERGING TRENDS
Periodic Test PA - 2 40 Marks	SYLLABUS UNIT 3: DATABASE CONCEPTS AND THE STRUCTURED QUERY LANGUAGE
Mid Term Exam Theory / Prac 70/30	SYLLABUS UNIT 1 - INTRODUCTION TO COMPUTER SYSTEM UNIT 4 - EMERGING TRENDS UNIT 2: INTRODUCTION TO PYTHON ✓ GETTING STARTED WITH PYTHON ✓ PYTHON FUNDAMENTALS ✓ DATA HANDLING ✓ PROGRAMS FOR INPUT AND OUTPUT DATA ✓ PURPOSE AND DIFFERENCE BETWEEN CONDITIONAL AND ITERATION / LOOPING STATEMENTS. PRACTICALS ✓ PYTHON
Annual Exam Theory / Prac 70/30	SYLLABUS FULL SYLLABUS PRACTICALS ✓ PYTHON ✓ MYSQL ✓ PROJECT IN PYTHON

PHYSICAL EDUCATION (048)

THE SUSTAINABLE DEVELOPMENT GOALS

- SDG 4. Quality Education
- SDG 5. Gender Equality
- SDG 8. Decent Work and Economic Growth
- SDG 10. Reduced Inequalities
- SDG 11. Sustainable Cities and Communities
- SDG 12. Responsible Consumption and Production
- SDG 13. Climate Action
- SDG 16. Peace, Justice, and Strong Institutions
- SDG 17. Partnership for the Goals

(THROUGHOUT THE YEAR WITH PRACTICALS DURING PT PERIODS)

APRIL

UNIT 1: CHANGING TRENDS AND CAREERS IN PHYSICAL EDUCATION

LEARNING OUTCOMES

- Describe the concept of planning in sports.
- Recognize the concept of Physical Education.
- Identify the aims and objectives of Physical Education.
- Explore different career options in the field of Physical Education.
- Classify various sports competitions at National and International level.
- Understand the Khelo India Programme.

MAY

UNIT 2: OLYMPIC VALUE EDUCATION

LEARNING OUTCOMES

- Differentiate between Modern and Ancient Olympic Games, Paralympics and Special Olympic games.
- Identify the Olympic Symbols and Ideals.
- Incorporate values of Olympism in their life.
- Describe the role, responsibilities and functioning of IOC and IOA.

JULY

UNIT 3: YOGA

LEARNING OUTCOMES

- Recognize the concept of yoga and aware with the importance of it.
- Identify the elements of yoga.
- Identify the asanas, pranayamas, meditation and yogic kriyas.
- Classify various yogic activities for enhancement of concentration.
- Know about relaxation techniques for improving concentration.

UNIT 4: PHYSICAL EDUCATION AND SPORTS FOR CHILDREN WITH SPECIAL NEEDS

LEARNING OUTCOMES

- Identify the factors that affect access to physical activity for CWSN.
- Recognize the need of Physical Education and sports for CWSN.
- Outline and describe the aim and objectives of Adapted Physical Education.
- Distinguish the role of Paralympics, Special Olympics and Deaflympics.
- Describe concept of inclusion, need of inclusion and its implementation.
- Explain strategies for increasing access and participation in sports.
- Identify different professionals, their role and services for CWSN.

AUGUST

UNIT 5: PHYSICAL FITNESS, HEALTH AND WELLNESS

LEARNING OUTCOMES

- Describe concept of a healthy life style.
- Explain wellness and its importance and define the components of wellness.
- Classify physical fitness and recognize its importance in life.
- Distinguish between skill-related and health-related components of physical fitness.

SEPTEMBER

UNIT 6: TEST, MEASUREMENT AND EVALUATION

LEARNING OUTCOMES

- Define the terms test, measurement, and evaluation.
- Differentiate norm- and criterion-referenced standards.
- Differentiate formative and summative evaluation.
- Discuss the importance of measurement and evaluation processes.

- Understand BMI: a popular clinical standard and its computation.
- Differentiate between Endomorphy, Mesomorphy & Ectomorphy.
- Describe the procedure of measurement of health-related fitness.

OCTOBER

UNIT 7: FUNDAMENTALS OF ANATOMY, PHYSIOLOGY IN SPORTS

LEARNING OUTCOMES

- Identify the importance of anatomy, physiology and kinesiology.
- Recognize the main functions of the skeleton.
- Understand the functions of bones and identify various types of joints.
- Figure out the properties and functions of muscles and understand how they work.
- Understand the anatomy of the respiratory system and describe its working.
- Identify and analyze the layout and functions of circulatory system.
- Articulate and demonstrate the concept and application of equilibrium and centre of gravity in sports.

NOVEMBER

UNIT 8: FUNDAMENTALS OF KINESIOLOGY AND BIOMECHANICS IN SPORTS

LEARNING OUTCOMES

- Definition and Importance of Kinesiology and Biomechanics in sports
- Principles of Biomechanics
- Types of Body Movements - Flexion, Extension, Abduction, Adduction, Rotation, Circumduction, Supination & Pronation
- Axis and Planes – Concept and its application in body movements

DECEMBER

UNIT 9: PSYCHOLOGY AND SPORTS

LEARNING OUTCOMES

- Identify the role of Psychology in Physical Education and sports.
- Correlate the psychological concepts with the sports and athlete specific situations.
- Differentiate characteristics of growth and development at different stages.
- Determine the issues related to adolescent behaviour.
- Recognize different management strategies for adolescent related issues.

JANUARY

UNIT 10: TRAINING AND DOPING IN SPORTS

LEARNING OUTCOMES

- Identify the need of training in sports.
- Recount principles of sports training.
- Explain the significance of warming up and cooling down.
- Differentiate between skill, technique and style.
- Identify doping and types of doping.
- Recognize side effects of prohibited substances.
- Recognize the effect of alcohol abuse and substance on sports performance.

ASSESSMENT PLANNER

PA-1 (40 marks)	UNIT 1: CHANGING TRENDS AND CAREERS IN PHYSICAL EDUCATION UNIT 2: OLYMPIC VALUE EDUCATION
TERM-1 (Theory and Practical) (70/30)=100	UNIT 1: CHANGING TRENDS AND CAREERS IN PHYSICAL EDUCATION UNIT 2: OLYMPISM UNIT 3: YOGA UNIT 4: PHYSICAL EDUCATION AND SPORTS FOR CHILDREN WITH SPECIAL NEEDS UNIT 5: PHYSICAL FITNESS, HEALTH AND WELLNESS
PA-2 (40 marks)	UNIT 6: TEST, MEASUREMENT AND EVALUATION UNIT 7: FUNDAMENTALS OF ANATOMY, PHYSIOLOGY IN SPORTS
TERM-2 FINALS (Theory and Practical) (70/30)=100	FULL SYLLABUS

CBSE Physical Education Class XI Text Book

https://cbseacademic.nic.in//web_material/Manuals/PhysicalEducation112022.pdf

CHEMISTRY

LEARNING OUTCOMES :

Students will be able to

- Identify basic concepts, terms and important events in development of organometallic chemistry.
- Understand fundamentals of reaction mechanisms.
- Predict structure, properties and reactivities of elements.
- Identify and solve chemical problems and explore new methods.
- Recognize the importance of inorganic molecules in supporting organic biological systems.

OBJECTIVES OF THE SUSTAINABLE DEVELOPMENT GOALS (SDGS)

- 1) End poverty in all its forms everywhere.
- 2) End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.
- 3) Ensure healthy lives and promote wellbeing for all at all ages.
- 4) Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
- 5) Achieve gender equality and empower all women and girls.
- 6) Ensure availability and sustainable management of water and sanitation for all.
- 7) Ensure access to affordable, reliable, sustainable and modern energy for all.
- 8) Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all.
- 9) Build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation.
- 10) Reduce inequality within and among countries.

11) Make cities and human settlements inclusive, safe, resilient and sustainable.

12) Ensure sustainable consumption and production patterns.

13) Take urgent action to combat climate change and its impacts.

14) Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

15) Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation, and halt biodiversity loss.

16) Promote peaceful and inclusive societies, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

17) Strengthen the means of implementation and revitalize the global partnership for sustainable development.

MONTH	UNIT	LEARNING OUTCOMES : students will be able to	SDG
APRIL	SOME BASIC CONCEPTS OF CHEMISTRY	<ul style="list-style-type: none">● Compare the characteristics of three states of matter.● Classify different substances into elements, compounds and mixtures.● State various laws of chemical combination.● Describe the terms – mole and molar mass.● Calculate the mass percent of the component elements constituting a compound.● Determine empirical formula and molecular formula for a compound from the given experimental data.	SDG 13, 14 & 15.

	IUPAC NOMENCLATURE OF ORGANIC COMPOUNDS.	<ul style="list-style-type: none"> ● Perform the stoichiometric Calculations. ● Name the compounds according to the IUPAC system of nomenclature and also derive their structures from the given names. 	SDG-4
MAY	STRUCTURE OF ATOM	<ul style="list-style-type: none"> ● Describe Thomson, Rutherford and Bohr atomic models ● Tell the important features of the quantum mechanical model of atoms. ● Explain the nature of electromagnetic radiation and Planck's quantum theory. ● Explain the photoelectric effect and describe features of atomic spectra. ● State the de Broglie relation and Heisenberg uncertainty principle. 	SDG 4

JULY	STRUCTURE OF ATOM(CONT.)	<ul style="list-style-type: none"> ● Define an atomic orbital in terms of quantum numbers. ● Apply Aufbau principle, Pauli exclusion principle and Hund's rule of maximum multiplicity. ● Write the electronic configurations of atoms. 	SDG 4
	CLASSIFICATION OF ELEMENTS.	<ul style="list-style-type: none"> ● Express the Periodic Law. ● Associate the significance of atomic number and electronic configuration as the basis for periodic classification. ● Name the elements with $Z > 100$ according to IUPAC nomenclature. ● Classify elements into s, p, d, f blocks and learn their main characteristics. ● Recognise the periodic trends in physical and chemical properties of elements. ● Compare the reactivity of elements and correlate it with their occurrence in nature. ● Formulate the relationship between ionization enthalpy and metallic character. ● Use scientific vocabulary 	SDG-6,10 & 12

		<p>appropriately to communicate ideas related to certain important properties of atoms e.g., atomic/ionic radii, ionization enthalpy, electron gain enthalpy, electronegativity, valence of elements.</p>	
AUGUST	CHEMICAL BONDING AND MOLECULAR STRUCTURE.	<ul style="list-style-type: none"> ● Express KÖssel-Lewis approach to chemical bonding. ● Draw Lewis structures of simple molecules. ● Explain the formation of different types of bonds. ● Predict the geometry of simple molecules. ● Explain the valence bond approach for the formation of covalent bonds. ● Predict the directional properties of covalent bonds. ● Compare the different types of hybridisation involving s, p and d orbitals and draw shapes of simple covalent molecules. ● Sketch the molecular orbital Diagram of homonuclear diatomic molecules. 	SDG- 6 ; 10 &12.

		<ul style="list-style-type: none"> ● Apply the concept of hydrogen bond. 	
SEPTEMBER	THERMODYNAMICS (TILL FIRST LAW)	<ul style="list-style-type: none"> ● Explain the terms : system and surroundings. ● Discriminate between close, open and isolated systems. ● Explain internal energy, work and heat. ● State first law of thermodynamics and express it mathematically. ● Calculate energy changes as work and heat contributions in chemical systems; 	SDG-9 & 16.

OCTOBER	THERMODYNAMICS CONTD.	<ul style="list-style-type: none"> ● Explain state functions: U, H. ● Correlate ΔU and ΔH; measure experimentally ΔU and ΔH. ● Define standard states for ΔH. ● Calculate enthalpy changes for various types of reactions. ● State and apply Hess's law of constant heat summation. ● Differentiate between extensive and intensive properties. ● Define spontaneous and nonspontaneous processes. ● Explain entropy as a thermodynamic state function and apply it for spontaneity ● Explain Gibbs energy change (ΔG) and establish a relationship between ΔG and spontaneity, ΔG and equilibrium constant. 	SDG-9 & 16.
	REDOX	<ul style="list-style-type: none"> ● Identify redox reactions as a class of reactions in which oxidation and reduction reactions occur simultaneously. ● Define the terms oxidation, reduction, oxidant (oxidising agent) and reductant (reducing agent). ● Explain mechanism of 	

		<p>redox reactions by electron transfer process.</p> <ul style="list-style-type: none"> ● Use the concept of oxidation number to identify oxidant and reductant in a reaction. ● Classify redox reaction into combination (synthesis), decomposition, displacement and disproportionation reactions. ● Suggest a comparative order among various reductants and oxidants. ● Balance the redox reactions. ● Learn electrode processes. 	SDG-13
NOVEMBER	EQUILIBRIUM	<ul style="list-style-type: none"> ● Identify the dynamic nature of equilibrium involved in physical and 	SDG 3,14&15

		<p>chemical processes.</p> <ul style="list-style-type: none">● State the law of equilibrium.● Explain characteristics of equilibria involved in physical and chemical processes.● Write expressions for equilibrium constants.● Establish a relationship between K_p and K_c.● Explain various factors that affect the equilibrium state of a reaction.● Classify substances as acids or bases according to Arrhenius, Bronsted-Lowry and Lewis concepts.● Classify acids and bases as weak or strong in terms of their ionization constants.● Explain the dependence of degree of ionization on concentration of the electrolyte and that of the common ion.● Describe pH scale for representing hydrogen ion concentration.● Explain ionisation of water and its dual role as acid and base.● Describe ionic product (K_w) and pK_w for water.● Judge use of buffer solutions.● Calculate solubility product constant.	.
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<p>DECEMBER</p>	<p>ORGANIC CHEMISTRY (SOME BASIC PRINCIPLES AND TECHNIQUES)</p>	<ul style="list-style-type: none"> ● Understand reasons for tetravalence of carbon and shapes of organic molecules. ● Write structures of organic molecules in various ways; ● Classify the organic compounds. ● Name the compounds according to IUPAC system of nomenclature and also derive their structures from the given names. ● Understand the concept of organic reaction mechanism. ● Explain the influence of electronic displacements on structure and reactivity of organic compounds. ● Recognise the types of organic reactions. ● Write the different isomers of a given organic compound. 	<p>SDG 3,9, 12 &16.</p>
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JANUARY	HYDROCARBONS	<ul style="list-style-type: none"> ● Name hydrocarbons according to IUPAC system of Nomenclature. ● Recognise and write structures of isomers of alkanes, alkenes, alkynes & aromatic hydrocarbons. ● Learn about various methods of preparation of hydrocarbons. ● Distinguish between alkanes, alkenes, alkynes and aromatic hydrocarbons on the basis of physical and chemical properties. ● Draw and differentiate between various conformations of ethane. ● Predict the formation of the addition products of unsymmetrical alkenes and alkynes on the basis of electronic mechanisms. ● Comprehend the structure of benzene, explain aromaticity and understand mechanism of electrophilic substitution reactions of benzene. ● Predict the directive influence of substituents in monosubstituted benzene ring. 	SDG- 3,9,12 & 16
FEBRUARY	REVISION		

ASSESSMENT PLANNER

<p>Periodical Assessment 1</p> <p>40 MARKS</p>	<p>SYLLABUS</p> <p>Some Basic Concepts of Chemistry + Identification Of Functional Groups.</p>
<p>Periodical Assessment 2</p> <p>40 MARKS</p>	<p>SYLLABUS</p> <p>Redox + Thermodynamics</p>
<p>Half Yearly Exam</p> <p>Theory / Practical</p> <p>70/30</p>	<p>SYLLABUS</p> <p>Some Basic Concepts of Chemistry + Atomic Structure + Classification of Elements and Periodicity in properties + Chemical Bonding + IUPAC Nomenclature of Organic Compounds .</p> <p>Practical Syllabus:</p> <p>Neutralization Titration and Anion Analysis</p>
<p>Annual Exam</p> <p>Theory / Practical</p> <p>70/30</p>	<p>SYLLABUS</p> <p>Some Basic Concepts of Chemistry + Atomic Structure + Classification of Elements and Periodicity in properties + Chemical Bonding and Molecular Structures + Thermodynamics + Redox Reactions + Equilibrium + organic chemistry + Hydrocarbons.</p> <p>Practical Syllabus:</p> <p>Neutralization Titration and Salt Analysis</p>

Information Technology (802)

LEARNING OUTCOMES

UNIT 1- COMPUTER ORGANIZATION

APRIL

- ✓ Understand and appreciate the fundamentals of a computer and its characteristics.
- ✓ Identify and understand the various components of a computer and the Block Diagram of a Computer.
- ✓ Understand Processes of task execution and the steps of process execution.
- ✓ Understand the function of various components of a computer and CPU.
- ✓ Appreciate the function and use of I/O devices.
- ✓ Learn about various storage devices used in a computer and the various memory units of storage.
- ✓ Introduction to Operating System and its need.
- ✓ Learn about the functions of an operating system.
- ✓ Appreciate the types of operating system and the difference between various operating systems.
- ✓ Troubleshooting in computer system.
- ✓ Understand the importance of Utilities

UNIT 2- NETWORKING AND INTERNET

MAY

- ✓ Understand Computer Networking.
- ✓ Appreciate the need and benefits of networking.
- ✓ Learn about components of a network: sender, receive, message, channel.
- ✓ Introduction to Transmission Medium (wired and wireless).
- ✓ Learn about the Telephone Network standard technology used in each generation.
- ✓ Understand and appreciate Networking Devices (RJ45 connector, Modem, Repeater, Hub, Switch, Bridge, Gateway, Routers).
- ✓ Explore Network Topology (Bus, Star, Ring, Tree, Mesh).
- ✓ Explore different types of Networks (LAN, MAN, WAN, PAN, VAN)
- ✓ To understand Internet and its terminology.
- ✓ Introduction and use of Internet.
- ✓ Introduction to Digital Literacy.
- ✓ Explore Network Terminology (Channels, Bandwidth (HERTZ, KHZ), ISP).
- ✓ Explore Data Transfer Rate (bps, Kbps, KBps, Mbps, MBPS, Gbps, GBPS)
- ✓ Explore different Protocols (TCP/IP, FTP, HTTP, SMTP, POP3, PPP, UDP).
- ✓ Understand cybercrime and the need of Cyber Security.
- ✓ Introduction to Network safety concerns: (Digital Footprints, Threats, Virus, Worm, Trojan Horse, Spam, Malware, DoS Attacks, Eavesdropping, Adware, Spyware, Snooping).

- ✓ Explore Networking Security Measures(Antivirus, Firewall, Login ids and Password).
- ✓ Understand various Cyber Crimes(Phishing, Pharming, Spoofing, Cyber Bullying, Hacking, Cracking, Identity Theft, Cyber Stalking, Cyber Trolling).
- ✓ Discuss Cyber Safety(Netiquettes, The IT Act and Cyber Laws).

UNIT 3- OFFICE AUTOMATION TOOLS

JULY AND AUGUST

- ✓ Know the office automation concepts
- ✓ Define how to utilize today's office tools in office automation environment
- ✓ Understand the process flow of the office automation process
- ✓ Apply software application to the office work. Basic functionalities of:-
 - Word processing tools:
 - Introduction to Word Processing and Working with Word processing applications like OpenOffice Writer.
 - Exploring the OpenOffice Writer window components like work area, ruler, tab etc.
 - Understanding various tabs like File, Edit, Insert, View and their submenu options to format a document.
 - Learn to create tables.
 - Electronic Spreadsheets:
 - Appreciate the need and use of spreadsheets.
 - Learn to install an open source spreadsheet software like Calc.
 - Learn components of the Spreadsheet window.
 - Appreciate different formatting features available in spreadsheets.
 - Learn to work, save and close spreadsheets.
 - Work with data, move data, use edit menu, use AutoFill, formatting data, alignment, changing cell color, gridlines and borders, flow of text, merging, splitting text, wrap text, shrink to fit, Numeric data formatting, Find and Replace Data, Sort and filter data, delete data and formatting, delete cells, insert and delete rows and columns.
 - Work with formula and functions, various type of operators, predefined functions(sum(), sqrt(), product(), power(), log(), round(), abs(), average() etc.
 - Understand addressing / referencing: absolute, relative, mixed.
 - Create charts and graphs, setting legend, grids in charts, resizing and moving charts, modifying and deleting charts.
 - Create / record a macro, run/use macros.
 - Print spreadsheets.
 - Powerpoint presentation
 - Introduction to presentation software.
 - Overview of OpenOffice - Impress.

- Study of various tabs of Impress.
- Understand various views of presentation, animations, transitions, header, footer etc.

UNIT 4 – RDBMS

AUGUST AND SEPTEMBER

- ✓ Appreciate the concept of Database Management System
- ✓ Explore Database and its purpose.
- ✓ Understand Relational Database Model Terminology (Relation, Tuple, Attribute, Cardinality) Keys (Primary, Candidate, Alternate, Foreign).
- ✓ Introduction to MYSQL.
- ✓ Classification of MYSQL commands (DDL, DML).
- ✓ Explore different Data Types in MYSQL (char, varchar, decimal, int, date, time).
- ✓ Start working in MYSQL - Create database, Create table, View structure of a table, Add constraints in a table, Modify structure of a table, Show all tables created in a database, Delete structure of a table.
- ✓ Perform operations on a table - Add rows to a table, Viewing content of a table, Display selected data depending on specific conditions, Display data in an ordered manner, Modify the data stored in a table, Delete the contents of a table.
- ✓ Retrieve data using queries.

UNIT 5- FUNDAMENTALS OF JAVA PROGRAMMING

OCTOBER AND NOVEMBER

- ✓ Develop programming skills in Java(Netbeans)
- ✓ Explore the Components of the Netbeans IDE.
- ✓ Understand and change Properties and methods of Components like jButton, jLabel, jTextField, jTextArea, jRadioButton, jCheckBox, jPasswordField, jListbox, jComboBox.
- ✓ Introduction to Object Oriented Programming .
- ✓ Understand various data types (primitive) and the purpose of each data type.
- ✓ Understand the need and usage of variables.
- ✓ Explore various operators (assignment, arithmetic, relational, logical, bitwise).
- ✓ Understand how to attach a code with components like jButton, jLabel, jTextField and create a simple application on JFrame.
- ✓ Investigate and understand the use of various components like jTextArea, jRadioButton, jCheckBox, jPasswordField, jListbox, jComboBox, JTable, JOptionPane, JPanel.
- ✓ Understand when to use selection statements (if, if else and switch case).
- ✓ Introduction to Loops.

EMPLOYABILITY SKILLS

DECEMBER

- ✓ Communication Skills - III
 - Demonstrate knowledge of various methods of communication

- Provide descriptive and specific feedback
- Apply measures to overcome barriers in communication
- Apply principles of communication
- Demonstrate basic writing skills
- ✓ Self-management Skills - III
 - Apply stress management techniques
 - Demonstrate the ability to work independently
- ✓ Information and Communication Technology Skills - III
 - Distinguish between different operating systems
 - Apply basic skills for care and maintenance of computer
- ✓ Entrepreneurial Skills - III
 - List the characteristics of successful entrepreneur
- ✓ Green Skills - III
 - Demonstrate the knowledge of importance, problems and solutions related to sustainable development

	<u>APRIL</u> Understanding of Hardware. Basics of Operating System. Introduction to Networks and the Internet. Network Types and Topologies Network Device
<u>MAY</u> Network Safety concerns. Network Security tools and services. Cyber Security. REVISION	<u>JUNE</u>
<u>JULY</u> Safe practices on Social networking Basic functionalities of Spreadsheet.	<u>AUGUST</u> Basic functionalities of Word processing. Basic functionalities of Presentation Software. Understand basics of databases and SQL to handle a Relational DBMS Simple Queries of MySql for processing data.
<u>SEPTEMBER</u> <u>REVISION</u>	<u>OCTOBER</u> Develop programming skills in Java (Netbeans) Data handling Swing Controls Control Structures Project in Java(NetBeans)

<u>NOVEMBER</u> Develop programming skills in Java (Netbeans) REVISION	<u>DECEMBER</u> Employability Skills - III Communication Skills - III Self-management Skills - III
<u>JANUARY</u> Information and Communication Technology Skills - III Entrepreneurial Skills - III Green Skills - III	<u>FEBRUARY</u> REVISION

ASSESSMENT PLANNER

Periodic Test - 1 40 Marks	SYLLABUS Understanding of Hardware. Basics of Operating System. Introduction to Networks and the Internet. Network Types and topologies
Periodic Test - 2 40 Marks	SYLLABUS Office Automation Tools MySql
Half Yealy Exam Theory / Prac 60/40	SYLLABUS THEORY Network Devices Network Safety concerns. Network Security tools and services. Cyber Security. Safe practices on Social networking. Spreadsheets. PRACTICALS Spreadsheets
Annual Exam Theory / Prac 60/40	SYLLABUS COMPLETE SYLLABUS (Including First Term) PRACTICALS MySql Netbeans Project in Netbeans

WEB APPLICATIONS 2 (CODE – 803)

LEARNING OUTCOMES

UNIT-1: BASICS OF NETWORKING

APRIL AND MAY

Students will be able to :

- Understand the concept of Networking and Data Communication.
- Get familiar with data communication terminology.
- Know about various Network Devices and types of Networks.
- Get familiar with Peer-to-Peer and Client-Server Web Architecture.
- Be aware of Network Threats and the Security Measures to be taken.

UNIT-2: WEBSITE DEVELOPMENT USING HTML AND CSS

MAY AND JULY

Students will be able to :

- Understand basic concepts of website.
- Differentiate between static and dynamic websites.
- Know about creating a webpage using the tags in HTML.
- Understand the usage of Images, Lists and Tables.
- Know how to embed audio and video files in a web page.
- Get familiar with CSS and the three ways to implement it.
- Understand the CSS Box Model using Div.
- Be able to use CSS in a webpage.

UNIT-4: JAVASCRIPT PART 1

AUGUST , SEPTEMBER AND OCTOBER

Students will be able to :

- Introduction to JavaScript.
- Analyze limitations of static websites.
- Understand dynamic websites and their need.
- Understand Basics of JavaScript.
- Appreciate advantages and features of JavaScript.
- Introduction to the <script> tag and Develop interactive web pages using JavaScript.
- Explain the advantages of using Javascript.
- Understand and demonstrate the different ways to write Javascript.
- Understand JavaScript Syntax and Rules.
- Explore Common Errors.
- Use Internal and External Java Script.
- Explore Primitive Data Types and Non-Primitive Data Types.

- Define variables and Literals. Understand the need for variables.
- Understand Variable naming conventions.
- Perform Input and Output using Java script.
- Differentiate between different types of Operators.
- Design and code scripts using Operators.
- Work with in-built Java Script functions (parseInt(), parseFloat(), valueOf(), isNaN())
- Design and Code scripts using popup boxes (alert / confirm / prompt).
- Recognize the importance of decision constructs or selection statements.
- Define and design code using different types of selection statements (if-else / switch-case).
- Recognize the importance of iterations / loops.
- Define and design code using different types of loop statements (while / do-while / for).

UNIT-3: MULTIMEDIA DESIGN- GIMP

NOVEMBER TO JANUARY

Students will be able to :

- Understand Multimedia.
- Understand how to install GIMP.
- Appreciate interface of GIMP.
- Start working in GIMP - GIMP Docks, GIMP Window Modes, How to create a file in GIMP, How to open an image in GIMP, How to save a file in GIMP.
- Explore the GIMP Toolbox - Selection Tools, Text Tool, Color Picker Tool, Zoom Tool, Color Tool.
- Explore Filters in GIMP - use various filters on image files and display the edited image.
- Practice working with Layers in GIMP - Creating a new layer, Renaming a layer, Duplicating a layer, Merging layers, Layer Masking.

	<u>APRIL</u> UNIT-1: BASICS OF NETWORKING
<u>MAY</u> UNIT-2: WEBSITE DEVELOPMENT USING HTML AND CSS	<u>JUNE</u>
<u>JULY</u> UNIT-2: WEBSITE DEVELOPMENT USING HTML AND CSS	<u>AUGUST</u> UNIT-4: JAVASCRIPT PART 1
<u>SEPTEMBER</u> UNIT-4: JAVASCRIPT PART 1	<u>OCTOBER</u> UNIT-4: JAVASCRIPT PART 1

<u>NOVEMBER</u> UNIT-3: MULTIMEDIA DESIGN- GIMP	<u>DECEMBER</u> UNIT-3: MULTIMEDIA DESIGN- GIMP
<u>JANUARY</u> UNIT-3: MULTIMEDIA DESIGN- GIMP	<u>FEBRUARY</u> Revision

ASSESSMENT PLANNER

Periodic Test - 1 40 Marks	SYLLABUS UNIT-1: BASICS OF NETWORKING
Periodic Test - 2 40 Marks	SYLLABUS UNIT-2: WEBSITE DEVELOPMENT USING HTML AND CSS UNIT-4: INTRODUCTION TO DYNAMIC WEBSITES USING JAVASCRIPT.
Half Yealy Exam Theory / Prac 60/40	SYLLABUS THEORY UNIT-1: BASICS OF NETWORKING UNIT-2: WEBSITE DEVELOPMENT USING HTML AND CSS PRACTICALS UNIT-2: WEBSITE DEVELOPMENT USING HTML AND CSS
Annual Exam Theory / Prac 60/40	SYLLABUS COMPLETE SYLLABUS (Including First Term) PRACTICALS UNIT-2: WEBSITE DEVELOPMENT USING HTML AND CSS UNIT-3: MULTIMEDIA DESIGN- GIMP UNIT-4: INTRODUCTION TO DYNAMIC WEBSITES USING JAVASCRIPT. Project in HTML, CSS AND JAVASCRIPT