

# ST. COLUMBA'S SCHOOL

## CONTINUOUS LEARNING PLAN

### CLASS XI 2023-2024

## ENGLISH

### GENERAL LEARNING COMPETENCIES

#### The students will be able to

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

April			
<b>The Portrait of a Lady (Hornbill)</b> select and extract relevant information, using reading skills of skimming and scanning Summarize the story 'The Portrait of a Lady' in a gap-filling exercise. (Understand) Recall the important points of the story through short answer questions and long answer type questions worksheet. (Remember) Write the character sketch of the grandmother (Create) 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) <b>SDG3: Good health and well being</b>	<b>A Photograph (Hornbill)</b> to paraphrase the poem 'A Photograph' by Shirley Toulson (Remember) 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 (Analyze) <b>SDG 3: Good health and well being</b>	<b>We're Not Afraid to Die... if We Can All Be Together (Hornbill)</b> Summarize the story in a gap-filling exercise. (Understand) Recall the important points of the story through short answer questions and long answer type questions worksheet. (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) Practice: being calm in adverse situations (Apply) <b>(SDG 9: Industry, Innovation and infrastructure)</b>	
MAY			
<b>Speech (Writing)</b>	<b>The Summer of the Beautiful White Horse (Snapshots)</b>	<b>Debate (Writing)</b>	

<p>develop the language of propaganda and persuasion</p> <p>use persuasive language in defending one's opinion</p> <p>identify points for the introduction, body and conclusion</p> <p>choose words and phrases to make the content effective</p> <p><b>SDG 3: Good Health and Well-being</b>  <b>SDG 4: Quality Education</b>  <b>SDG 5: Gender Equality</b></p>	<p>Summarize the story in a gap-filling exercise. (Understand)</p> <p>Recall the important points of the story through a questionnaire (Remember)</p> <p>Write the character sketch of Uncle Khosrove and Mourad (Create)</p> <p>Infer the meaning of some important statements in the story by writing a short note on them. (Analyze)</p> <p>Debate :Did the boys return the horse because they were conscience-stricken or because they were afraid? (Evaluate)</p> <p><b>SDG 11: Sustainable cities and communities.</b>  <b>SDG 8: Decent work in economic growth</b>  <b>SDG 1: No Poverty</b></p>	<p>understand the language of propaganda and persuasion</p> <p>present persuasive arguments to defend one's opinion</p> <p>identify points for the introduction, body and conclusion</p> <p>choose words and phrases to make the content effective</p> <p><b>SDG 10: Reduced Inequality</b>  <b>SDG 11: Responsible Consumption and Production</b>  <b>SDG 13: Climate Action</b>  <b>SDG 16: Peace and Justice Strong Institutions</b></p>	
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## JULY

<p><b>The Address (Snapshots)</b></p> <p>Recall from their history lessons the atrocities faced by millions of Jewish people during the Holocaust (IInd World War)</p> <p>Recognise the recurring autobiographical elements of author's life in the story</p> <p>Compare and contrast the pre-war and post-war life of the narrator</p> <p>Deconstruct the character of Mrs Dorling and people like her who make us question the goodness of human beings.</p> <p>Empathise with people who have witnessed war and the trauma of war.</p>	<p><b>Classified Ads - (Writing)</b></p> <p>comprehend the purpose of drafting ads.</p> <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><b>(SDG 3: Good health and well-being)</b></p>	<p><b>Discovering Tut : The Saga Continues (Hornbill)</b></p> <p>Identify the mysteries and theories regarding the life and death of King Tut. (remember)</p> <p>compare the various processes of investigation undertaken by Carter and Zahi Hawass. (understand)</p> <p>analyze the significance of the Pharaoh's curse (evaluate)</p> <p>enumerate the difficulties that arose at the time of investigation (remember)</p> <p>assess how the lifestyle, beliefs and religious background of Egypt vary from modern times.(create)</p> <p><b>(SDG 9: Industry, Innovation and infrastructure)</b></p>	
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(SDG 16: Peace justice and strong institution)			
AUGUST			
<p><b>Note Making (Writing)</b> 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 <b>SDG 4: Quality Education</b></p>	<p><b>Laburnum Top (Hornbill)</b> 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 <b>(SDG 15: Life on Land)</b></p>	<p><b>Posters (Writing)</b> 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 on a variety of topics <b>SDG3: Good health and well being</b> <b>SDG 8 : Decent Work and Economic Growth</b></p>	<p><b>Mother's Day (Snapshots)</b> 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 enumerate the oral and visual elements of drama. <b>(SDG 5: Gender Equality</b> <b>SDG 3: Good health and well being</b> <b>SDG 10: Reduce inequalities.)</b></p>
SEPTEMBER			
REVISION	<p><b>The tale of a melon city (Snapshots)</b> 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 writing style of the poet 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</p>		

	<p>understand that law is not only blind it can also spell disaster if it is thoughtlessly implemented.</p> <p><b>SDG 8: Decent Work and Economic Growth</b></p>		
<b>OCTOBER</b>			
<p><b>Classified Ads - (Writing)</b> comprehend the purpose of drafting ads. apply the correct format in the ad 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> <p><b>(SDG 3: Good health and well-being)</b></p>	<p><b>Birth (Snapshots)</b> Recall the significance of the birth of their baby for the Morgans Discuss the conflict in Andrew's mind regarding his relationship with Christine. Explain the unusual procedure followed by Andrew to resuscitate the baby Justify the title of the story Relate the experiences narrated in the story to personal experiences or extrapolate it to experiences outside the textbook.</p> <p><b>SDG 3: Good health and well being</b> <b>SDG 17: Partnership for the goal</b> <b>SDG 9: Industry innovation and infrastructure</b></p>	<p><b>Silk Road (Hornbill)</b> Trace the author's journey from Ravu to Mt. Kailash. Explain the significance of <i>kora</i>. Describe the varied topographic sights he sees on the way. Illustrate the expertise demonstrated by Tsetan with relevant examples. Infer why the author was not impressed to witness the beauty of Lake Mansarovar Recognize the health difficulties faced by the author and effectiveness of the remedy Discuss why the author considered Norbu to be an ideal companion.</p> <p><b>SDG 15: Life on land</b> <b>SDG 13: Climate action</b></p>	<p><b>Father to Son</b> cultivate interest and appreciate poetry read with proper stress and intonation Become adept at identifying poetic forms, figures of speech and rhyme scheme Paraphrase the poem to convey meaning effectively. develop thought and critical analysis on the basis of the text feel the pain of chasm( gap) experienced between two generations( thinking) understand the consequences of lack of communication and cold indifference with each other in a family</p> <p><b>SDG 17: Partnerships to achieve the Goal</b></p>
<b>NOVEMBER</b>			
<p><b>Voice of the Rain (Hornbill)</b> 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.</p> <p><b>SDG 6: Clean water and sanitation</b> <b>SDG 15: Life on land</b></p>	<p><b>Childhood (Hornbill)</b> 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</p> <p><b>SDG3: Good health and well being</b></p>	<p><b>The Adventure (Hornbill)</b> know the relation between science and history appreciate science fiction genre know about the life and contributions of eminent scientist, Prof. Jayant Narlikar identify the principles of physics and the application explained in the text Explore the possibility of alternate universes.</p>	

<b>SDG 13: Climate action</b>		apply scientific knowledge in real life enhance scientific knowledge and its reference to history develop innovative approach and research skills <b>SDG 9: Industry, Innovation and Infrastructure</b>	
<b>DECEMBER</b>			
<b>Job Application (Writing)</b> Discuss the significance of drafting a good job application List the essential qualities and pieces of information that are necessary for the job application Frame statements appropriately for a job application Draft the bio-data with information in the correct sequence. Compose job applications for a variety of posts. <b>SDG 17 Partnership for goals</b> <b>SDG 8 Decent work and Economic growth</b>	<b>Letter to the Editor</b> Guide and motivate students to express and write effectively. Develop knowledge and purpose of writing a Letter to the Editor Awareness of the form, content and process of writing Organize ideas on a particular subject Create social awareness.  <b>SDG 11 - Sustainable cities and communities</b> <b>SDG 16 - Peace Justice and Strong institution</b>	<b>Grammar (Clauses)</b> identify phrases, independent clauses, and dependent clauses. identify and correct sentence errors, understand sentence structure. practice identifying phrases and clauses. identify and correct fragments, comma splices, and fused sentences.	
<b>JANUARY</b>			
<b>Project Presentation in class (Speaking and Project assessment)</b>			

### ASSESSMENT PLANNER

- 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.

<b>Periodic Test - 1</b>	<b>SYLLABUS</b>
<b>40 Marks</b>	<b>Syllabus:</b> Portrait of a lady, A photograph, Summer of a beautiful white horse, Speech writing, Unseen Passage and Grammar
<b>Half Yearly Exam</b>	<b>SYLLABUS</b>
<b>Theory / Prac 80/20</b>	<b>Comprehension- 2 passages, Note Making, Integrated Grammar</b>

	<b>Writing Skills</b> - Poster, Classified Ads (Lost & Found, Missing Person, Sale & Purchase) Speech, Debate  <b>Literature</b> <table border="1"> <tr> <td> <b>Hornbill</b>  The Portrait of a Lady  A Photograph (Poem)  We are not afraid to die...  Discovering Tut  The Laburnum Top (Poem) </td><td> <b>Snapshots</b>  The Summer of a beautiful white horse  The Address  Mother's day </td></tr> </table>	<b>Hornbill</b> The Portrait of a Lady A Photograph (Poem) We are not afraid to die... Discovering Tut The Laburnum Top (Poem)	<b>Snapshots</b> The Summer of a beautiful white horse The Address Mother's day
<b>Hornbill</b> The Portrait of a Lady A Photograph (Poem) We are not afraid to die... Discovering Tut The Laburnum Top (Poem)	<b>Snapshots</b> The Summer of a beautiful white horse The Address Mother's day		
<b>Periodic Test - 2</b>  <b>40 Marks</b>	<b>SYLLABUS</b>  Comprehension, Classified Ads (Situation Vacant/ wanted/Property, To-let, Accommodation wanted, PG) ,Debate writing, Grammar <b>Literature</b> <table border="1"> <tr> <td> <b>Hornbill</b>  Tale of Melon City  Father to Son (Poem) </td><td> <b>Snapshots</b>  Silk road  Birth </td></tr> </table>	<b>Hornbill</b> Tale of Melon City Father to Son (Poem)	<b>Snapshots</b> Silk road Birth
<b>Hornbill</b> Tale of Melon City Father to Son (Poem)	<b>Snapshots</b> Silk road Birth		
<b>Annual Exam</b>  <b>Theory / Prac</b> <b>80/20</b>	<b>SYLLABUS</b>  <b>Comprehension- 2 passages, Note Making, Integrated Grammar</b> <b>Writing Skills</b> - Poster, Classified Ads, Speech, Debate  <b>LITERATURE</b> Entire syllabus to be tested		

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## **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**

**Meaning in objectives of 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.**

**Accounting principles: 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.**

**Process and 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.**

**Double entry system: 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**

**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.

## **JULY**

### **TOPICS WITH LEARNING OUTCOMES**

**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.

**Subsidiary Books: This chapter would enable the students to :**

- . Create the subdivision of journal,  
purchase book,  
sales book,

## **AUGUST**

### **TOPICS WITH LEARNING OUTCOMES**

**Subsidiary Books continued:**

- 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,

## **SEPTEMBER**

### **TOPICS WITH LEARNING OUTCOMES**

**Rectification of Errors continued:**

after preparation of the trial balance but  
before preparation of the final accounts,



**Draw the suspense account.**

**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**

**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**

## **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.**

**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.**

## **DECEMBER**

### **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.

## **JANUARY**

### **TOPICS WITH LEARNING OUTCOMES**

Financial Statements with Adjustments continued

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.

## **ASSESSMENT PLANNER**

Periodic Test - 1	<b>SYLLABUS</b>
40 Marks	Meaning in objectives of accounting

<b>15<sup>th</sup> – 20<sup>th</sup> May</b>	Basic accounting terms Accounting principles Process and Bases of accounting Double entry system Origin of transactions source documents of accountancy Books of original entry journal Ledger Trial balance
<b>Half Yealy Exam</b>  <b>Theory / Practical</b>  <b>80/20</b>  <b>Theory</b> <b>80 Marks</b>  <b>11<sup>th</sup> – 22<sup>th</sup> Sept.</b>	<b>SYLLABUS</b> Meaning in objectives of accounting Basic accounting terms Accounting principles Process and Bases of accounting Double entry system Origin of transactions source documents of accountancy Books of original entry journal Cash book Ledger Trial balance Subsidiary Books Rectification of Errors Bank Reconciliation Statement
<b>Periodic Test - 2</b>  <b>40 Marks</b>  <b>20<sup>th</sup> – 28<sup>th</sup> Nov</b>	<b>SYLLABUS</b> Rectification of Errors Accounting Equation Depreciation Financial Statements without adjustments
<b>Annual Exam</b>  <b>Theory / Practical</b>  <b>80/20</b>  <b>Theory</b> <b>80 Marks</b> <b>19<sup>th</sup> Feb – 1<sup>st</sup> Mar</b>	<b>SYLLABUS</b> Meaning in objectives of accounting Basic accounting terms Accounting principles Process and Bases of accounting Double entry system Origin of transactions source documents of accountancy Books of original entry journal Journals Cash book Ledger Trial balance Subsidiary Books Rectification of Errors Bank Reconciliation Statement Accounting Equation Depreciation Provision for Depreciation Financial Statements without adjustments Financial Statements with Adjustments

# **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:**

<b><u>APRIL-MAY</u></b>	<b><u>Chapter-1 and 2 LEARNING OUTCOMES</u></b>
<b><u>Chapter-1: Evolution and Fundamentals of Business (SDG-9)</u></b> <ul style="list-style-type: none"> <li>History of Trade and Commerce</li> <li>Business- meaning and characteristics</li> <li>Business, Profession and Employment</li> <li>Objectives of Business</li> <li>Industry and Commerce</li> <li>Auxiliaries to trade</li> <li>Business Risk-Concept</li> </ul> <b><u>Chapter-2: Forms of Business Organisations( SDG- 8 and 9)</u></b> <ul style="list-style-type: none"> <li>Sole Proprietorship- Concept, merits and limitations.</li> </ul>	<ul style="list-style-type: none"> <li>State the meaning of business and identify the features of business.</li> <li>Explain the types of business activities.</li> <li>Discuss the concept of business risk and its features.</li> <li>List the different forms of business organisations and understand their meaning.</li> <li>Identify and explain the concept, merits and limitations of sole proprietorship.</li> <li>Identify and explain the concept, merits and limitations of a Partnership Firm.</li> </ul>

<ul style="list-style-type: none"> <li>Partnership- Concept, types, merits and limitations, registration, types of partners.</li> <li>Joint Hindu Family Business- Concept</li> </ul> <p>PA 1 EXAM</p>	<ul style="list-style-type: none"> <li>Name the types of partnership and discuss the types of partners.</li> <li>State the need for registration of a partnership firm.</li> </ul>
<p style="text-align: center;"><u>JULY</u></p> <p><b>Chapter-2: Forms of Business Organisations( SDG- 8 and 9)</b></p> <ul style="list-style-type: none"> <li>Cooperative Societies-Concept, merits and limitations.</li> <li>Company- Concept, merits and limitations, types of company.</li> <li>Formation of company- stages, important documents to be used in formation of a company.</li> <li>Choice of form of business organisation.</li> </ul> <p><b>Chapter-3 : Public, Private and MNC'S( SDG- 8 and 10)</b></p> <ul style="list-style-type: none"> <li>Public sector and private sector enterprises-concept</li> <li>Forms of public sector enterprises- Departmental Undertaking, Statutory Corporation and Government Company.</li> <li>MNC'S- Feature, PPP-concept.</li> </ul>	<p><b>LEARNING OUTCOMES</b></p> <p><b>Chapter-2</b></p> <ul style="list-style-type: none"> <li>Identify and explain the concept, merits and limitations of cooperative societies.</li> <li>Categorize the types of cooperative societies and explain the types of companies.</li> <li>Distinguish between a private and public company.</li> <li>Compare the stages in the formation of a company.</li> <li>Name important documents used in formation of a company.</li> <li>Recall the factors that influence the choice of a suitable form of business organisation.</li> </ul> <p><b>Chapter-3</b></p> <ul style="list-style-type: none"> <li>Discuss Public sector and private sector enterprises.</li> <li>Identify and explain the features, merits and limitations of different forms of public sector enterprises.</li> <li>Summarize multinational companies and PPP by giving their meaning and features.</li> </ul>
<p style="text-align: center;"><u>AUGUST</u></p> <p><b>Chapter-4: Business Services (SDG- 11)</b></p> <ul style="list-style-type: none"> <li>Business services- meaning and types</li> <li>Banking- Types of bank accounts, Banking services, e-banking, types of digital payments.</li> <li>Insurance- Principles, Types.</li> <li>Postal Services – financial and mail facilities.</li> </ul> <p><b>Chapter-5 : Emerging modes of Business( SDG-8)</b></p> <ul style="list-style-type: none"> <li>E-business : concept, scope and benefits.</li> </ul>	<p><b>LEARNING OUTCOMES</b></p> <p><b>Chapter-4</b></p> <ul style="list-style-type: none"> <li>Classify the types of business services.</li> <li>Discuss the meaning and types of banking.</li> <li>List the types of bank accounts.</li> <li>Recall the different services provided by banks.</li> <li>Recall the concept of insurance.</li> <li>Identify the principles of insurance.</li> <li>Discuss the meaning of different types of insurance.</li> <li>Express the utility of different types of telecom services</li> </ul> <p><b>Chapter-5</b></p>

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

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

### **ASSESSMENT PLANNER**

<p style="text-align: center;"><b><u>Periodic Test - 1</u></b></p> <p style="text-align: center;">40 Marks FROM 15th MAY TO 20<sup>th</sup> MAY</p>	<p style="text-align: center;"><b><u>SYLLABUS</u></b></p> <p>Chapter-1: Evolution and Fundamentals of Business Chapter-2: Forms of Business Organisation (till Joint Hindu Family Business)</p>
<p style="text-align: center;"><b><u>Half Yearly Exam</u></b></p> <p style="text-align: center;">Theory / Prac 80/20 FROM 11<sup>th</sup> SEPT TO 22<sup>nd</sup> SEPT</p>	<p style="text-align: center;"><b><u>SYLLABUS</u></b></p> <p>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</p>

<b><u>Periodic Test-2</u></b>  <b>40 Marks</b> <b>FROM 20<sup>th</sup> NOV TO</b> <b>28<sup>TH</sup> NOV.</b>	<b><u>SYLLABUS</u></b>  <b>Chapter-6: Social Responsibility of Business</b> <b>Chapter-7 : Sources of finance</b> <b>Chapter-8 : Small Business</b>
<b><u>Final Examination</u></b> <b>From 20<sup>th</sup> FEB TO 1<sup>st</sup></b> <b>MARCH</b>	<b><u>SYLLABUS</u></b>  <b>FULL SYLLABUS FROM CHAPTER-1 TO 10.</b>

# **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 policy measures.

### **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, 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 to revitalize the 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

### **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

## **May**

### **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

### **DEMAND AND ITS COMPONENTS**

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**

#### **DEMAND & PRICE ELASTICITY OF DEMAND Continued(SDG 3, 12)**

Learning Objectives:

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

- comprehend price elasticity of demand
- list and classify the factors affecting price elasticity of demand
- use the formula to measure the price elasticity of demand using percentage method and expenditure method

#### **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

### **August**

#### **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.

#### **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 (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, 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

## PROJECT REVIEWS

### January

#### 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

#### 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

<b>Periodic Assessment 1</b>  <b>40 Marks</b>  <b>15- 20 May</b>	<b>SYLLABUS</b>  <u>Microeconomics:</u> 1. Central Problems and PPC 2. Demand and its components  <u>Statistics:</u> 1. Definition of Statistics 2. Importance and limitations of statistics 3. Arithmetic Mean 4. Median
<b>Periodic Assessment 2</b>  <b>40 Marks</b>  <b>20-28 November</b>	<b>SYLLABUS</b>  <u>Microeconomics:</u> 1. Market Equilibrium under Perfect Competition 2. Production Function  <u>Statistics:</u> 1. Census Sampling 2. Correlation 3. Graphical Presentation of data (Histograms, Polygons, Ogives)

<b>Half Yearly Exam</b>  <b>Theory / Practical</b> <b>80/20</b>  <b>11- 22 September</b>	<b>SYLLABUS</b>  <u>Microeconomics:</u> 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)  <u>Statistics:</u> 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 (Bar and Pie diagrams)
<b>Annual Exam</b>  <b>Theory / Practical</b> <b>80/20</b> <b>20-29 February</b>	<b>SYLLABUS</b>  <b>Theory Exam: Full Syllabus</b> <b>Practical: Project File + Viva based on chosen topic</b>

## **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**

<p style="text-align: center;"><u>APRIL</u></p> <p style="text-align: center;"><u>UNIT -1</u> <u>ENTREPRENEURSHIP - WHAT, WHY AND HOW</u></p> <ul style="list-style-type: none"> <li>• CONCEPT , FUNCTION, NEED AND IMPORTANCE</li> <li>• WHY ENTREPRENEURSHIP FOR YOU</li> <li>• MYTHS ABOUT ENTREPRENEURSHIP</li> <li>• PROS AND CONS OF ENTREPRENEURSHIP</li> <li>• PROCESS OF ENTREPRENEURSHIP</li> <li>• START UP AND ITS STAGES</li> <li>• ENTREPRENEURSHIP- THE INDIAN SCENARIO</li> <li>• PROJECT WORK – INTERVIEW OF ROLE MODEL</li> </ul>	<p style="text-align: center;"><u>MAY</u></p> <p style="text-align: center;"><u>UNIT – 2</u> <u>AN ENTREPRENEUR</u></p> <ul style="list-style-type: none"> <li>• WHY BE AN ENTREPRENEUR</li> <li>• COMPETENCIES AND CHARACTERISTICS: ETHICAL ENTREPRENEURSHIP</li> <li>• ENTREPRENEURIAL VALUES, ATTITUDES AND MOTIVATION</li> <li>• MINDSET OF AN EMPLOYEE AND AN ENTREPRENEUR DIFFERENCE</li> <li>• INTRAPRENEUR: IMPORTANCE IN ANY ORGANISATION</li> </ul>
<p style="text-align: center;"><u>JULY</u></p> <p style="text-align: center;"><u>UNIT- 3</u> <u>ENTREPRENEURSHIP JOURNEY</u></p> <ul style="list-style-type: none"> <li>• GENERATION OF IDEAS.</li> <li>• BUSINESS IDEAS VS. BUSINESS OPPORTUNITIES</li> <li>• OPPORTUNITY ASSESSMENT – FACTORS, MICRO AND MACRO MARKET ENVIRONMENT</li> <li>• FEASIBILITY STUDY</li> <li>• BUSINESS PLAN PREPARATION</li> <li>• EXECUTION OF BUSINESS PLAN</li> <li>• ROLE OF NETWORKING IN ENTREPRENEURSHIP</li> <li>• PROJECT WORK – LEARN TO EARN</li> </ul>	<p style="text-align: center;"><u>AUGUST</u></p> <p style="text-align: center;"><u>UNIT – 4</u> <u>ENTREPRENEURSHIP AS INNOVATION AND PROBLEM SOLVING</u></p> <ul style="list-style-type: none"> <li>• ENTREPRENEURS - AS PROBLEM SOLVERS.</li> <li>• INNOVATIONS AND ENTREPRENEURIAL VENTURES –• GLOBAL AND INDIAN</li> <li>• ROLE OF TECHNOLOGY – E-COMMERCE AND SOCIAL MEDIA</li> <li>• SOCIAL ENTREPRENEURSHIP AS PROBLEM</li> <li>• SOLVING-CONCEPT AND IMPORTANCE</li> </ul>
<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"> <li>• UNDERSTANDING THE CONCEPT OF MARKET AND ITS EVOLUTION OVER TIME</li> <li>• UNDERSTANDING THE MEANING AND CONCEPT OF E-BUSINESS AND E-COMMERCE</li> <li>• ANALYZE THE MARKET ENVIRONMENT AT MICRO AND MACRO LEVEL.</li> </ul>	<p style="text-align: center;"><u>OCTOBER</u></p> <ul style="list-style-type: none"> <li>• EXPLAIN THE TECHNIQUES OF MARKET RESEARCH AND INSTRUMENTS USED IN THE SAME</li> <li>• UNDERSTAND THE ELEMENTS OF TRADE AND COMMERCE.</li> <li>• EXPLAIN THE CONCEPT OF MARKETING MIX AND THE FOUR P’S OF MARKETING</li> <li>• UNDERSTAND THE CONCEPT, ROLE AND IMPORTANCE OF PRICE</li> </ul> <p style="text-align: center;"><u>UNIT – 6</u> <u>BUSINESS ARITHMETIC</u></p>



	<ul style="list-style-type: none"> <li>• UNIT OF SALE, UNIT PRICE AND UNIT COST - FOR SINGLE PRODUCT OR SERVICE</li> <li>• TYPES OF COSTS - START UP, VARIABLE AND FIXED</li> </ul>
<p style="text-align: center;"><u>NOVEMBER</u></p> <ul style="list-style-type: none"> <li>• BREAK EVEN ANALYSIS - FOR SINGLE PRODUCT OR SERVICE</li> </ul> <p style="text-align: center;"><u>UNIT – 7</u> <u>RESOURCE MOBILIZATION</u></p> <ul style="list-style-type: none"> <li>• TYPES OF RESOURCES - HUMAN, CAPITAL AND ENTREPRENEURIAL TOOLS AND RESOURCES</li> <li>• SELECTION AND UTILIZATION OF HUMAN RESOURCES AND PROFESSIONALS LIKE ACCOUNTANTS, LAWYERS, AUDITORS, BOARD MEMBERS, ETC.</li> </ul>	<p style="text-align: center;"><u>DECEMBER</u></p> <ul style="list-style-type: none"> <li>• ESTIMATING CAPITAL REQUIREMENT.</li> <li>• METHODS OF MEETING THE FINANCIAL REQUIREMENTS – DEBT VS. EQUITY</li> <li>• PROJECT WORK – VISIT AND REPORT (DIC)</li> </ul>
<p style="text-align: center;"><u>JANUARY</u></p> <ul style="list-style-type: none"> <li>• METHODS OF COLLECTING DATA</li> <li>• VIVA VOICE AND PROJECT SUBMISSION ON VISIT TO AND INDUSTRY</li> </ul>	<p style="text-align: center;"><u>FEBRUARY</u></p> <ul style="list-style-type: none"> <li>• REVISION</li> </ul>

#### ASSESSMENT PLANNER

<p>Periodic Test - 1</p> <p>40 Marks 15 -20 MAY</p>	<p style="text-align: center;">SYLLABUS</p> <ul style="list-style-type: none"> <li>• UNIT -1 ENTREPRENEURSHIP - WHAT, WHY AND HOW</li> <li>• UNIT – 2 AN ENTREPRENEUR</li> </ul>
<p>Periodic Test - 2</p> <p>40 Marks 20-28 NOVEMBER</p>	<p style="text-align: center;">SYLLABUS</p> <ul style="list-style-type: none"> <li>• UNIT – 4 ENTREPRENEURSHIP AS INNOVATION AND PROBLEM SOLVING</li> <li>• UNIT – 6 BUSINESS ARITHMETIC</li> </ul>

<p><b>Half Yealy Exam</b></p> <p>Theory / Prac 70/30 80/20 60/40</p> <p>Theory 100 Marks 11-22 SEPTEMBER</p>	<p><b>SYLLABUS</b></p> <ul style="list-style-type: none"> <li>• UNIT -1 ENTREPRENEURSHIP - WHAT, WHY AND HOW</li> <li>• UNIT – 2 AN ENTREPRENEUR</li> <li>• UNIT- 3 ENTREPRENEURSHIP JOURNEY</li> </ul>
<p><b>Annual Exam</b></p> <p>Theory / Prac 70/30 80/20 60/40</p> <p>Theory 100 Marks 20-29 FEBRUARY</p>	<p><b>SYLLABUS</b></p> <ul style="list-style-type: none"> <li>• UNIT -1 ENTREPRENEURSHIP - WHAT, WHY AND HOW</li> <li>• UNIT – 2 AN ENTREPRENEUR</li> <li>• UNIT- 3 ENTREPRENEURSHIP JOURNEY</li> <li>• UNIT – 4 ENTREPRENEURSHIP AS INNOVATION AND PROBLEM SOLVING</li> <li>• UNIT – 5 UNDERSTANDING THE MARKET</li> <li>• UNIT – 6 BUSINESS ARITHMETIC</li> <li>• UNIT – 7 RESOURCE MOBILIZATION</li> </ul>

## **MATHEMATICS**

<p style="text-align: center;"><u><b>APRIL</b></u></p> <ul style="list-style-type: none"> <li>• COMPLEX NUMBERS &amp; QUADRATIC EQUATIONS</li> <li>• TRIGONOMETRY</li> </ul>	<p style="text-align: center;"><u><b>MAY</b></u></p> <ul style="list-style-type: none"> <li>• TRIGONOMETRY (CONTD.)</li> <li>• LINEAR INEQUALITIES</li> </ul>
<p style="text-align: center;"><u><b>JULY</b></u></p> <ul style="list-style-type: none"> <li>• STRAIGHT LINES</li> <li>• 3D GEOMETRY</li> </ul>	<p style="text-align: center;"><u><b>AUGUST</b></u></p> <ul style="list-style-type: none"> <li>• 3D GEOMETRY (CONTD.)</li> <li>• PERMUTATION AND COMBINATIONS</li> <li>• BINOMIAL THEOREM</li> </ul>

<p style="text-align: center;"><b><u>SEPTEMBER</u></b></p> <ul style="list-style-type: none"> <li>• BINOMIAL THEOREM(CONTD.)</li> <li>• SETS</li> </ul>	<p style="text-align: center;"><b><u>OCTOBER</u></b></p> <ul style="list-style-type: none"> <li>• RELATIONS &amp; FUNCTIONS</li> <li>• PROBABILITY</li> </ul>
<p style="text-align: center;"><b><u>NOVEMBER</u></b></p> <ul style="list-style-type: none"> <li>• CONIC SECTIONS</li> <li>• SEQUENCE &amp; SERIES</li> </ul>	<p style="text-align: center;"><b><u>DECEMBER</u></b></p> <ul style="list-style-type: none"> <li>• SEQUENCE &amp; SERIES(CONTD.)</li> </ul>
<p style="text-align: center;"><b><u>JANUARY</u></b></p> <ul style="list-style-type: none"> <li>• LIMITS &amp; DERIVATIVES</li> </ul>	<p style="text-align: center;"><b><u>FEBRUARY</u></b></p> <ul style="list-style-type: none"> <li>• STATISTICS</li> </ul>

## **ASSESSMENT PLANNER**

<p><b><u>Periodic Test - 1</u></b></p> <p>40 Marks</p>	<p style="text-align: center;"><b><u>SYLLABUS</u></b></p> <ul style="list-style-type: none"> <li>• TRIGONOMETRY</li> <li>• COMPLEX NUMBERS &amp; QUADRATIC EQUATIONS</li> </ul>
<p><b><u>Periodic Test – 2</u></b></p> <p>40 Marks</p>	<p style="text-align: center;"><b><u>SYLLABUS</u></b></p> <ul style="list-style-type: none"> <li>• SETS</li> <li>• RELATIONS &amp; FUNCTIONS</li> <li>• PROBABILITY</li> <li>• CONIC SECTIONS</li> </ul>

<b><u>Half Yearly Exam</u></b> Theory / Practical 80/20  Total-100 Marks	<p style="text-align: center;"><b><u>SYLLABUS</u></b></p> <ul style="list-style-type: none"> <li>• TRIGONOMETRY</li> <li>• COMPLEX NUMBERS &amp; QUADRATIC EQUATIONS</li> <li>• LINEAR INEQUALITIES</li> <li>• STRAIGHT LINES</li> <li>• 3-D GEOMETRY</li> <li>• PERMUTATIONS &amp; COMBINATIONS</li> <li>• BINOMIAL THEOREM</li> </ul>
<b><u>Annual Exam</u></b> Theory / Practical 80/20  Total-100 Marks	<p style="text-align: center;"><b><u>SYLLABUS</u></b></p> <ul style="list-style-type: none"> <li>• TERM 1 SYLLABUS</li> <li>• PA2 SYLLABUS AND</li> <li>• SEQUENCE &amp; SERIES</li> <li>• LIMIT &amp; DERIVATIVES</li> <li>• STATISTICS</li> </ul>

## **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 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. Discuss the different types of functions
- v. Identify the domain and range of various functions, apply the concepts to solve related problems.

### **CH- 3 TRIGONOMETRIC FUNCTIONS**

The students will be able to:

- i. Distinguish between degree and radian
- ii. Classify the results into various identities, recall them and solve related problems
- iii. Compute the trigonometric functions of multiple angles and half angles.

### **CH- 5 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 square root of a complex number
- iii. Apply the concept of complex numbers to solve quadratic equations.
- iv. Apply the concepts to solve related problems.

### **CH- 6 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 equations using a number line and graph.
- iii. Apply the concepts to solve related problems.

### **CH-7 PERMUTATIONS & COMBINATIONS**

The students will be able to:

- i. Explain and analyse the concepts of Permutations & combinations, demonstrate it in solving the problems.
- ii. Differentiate between the concepts of Permutation & combination, identify and apply the same suitably in solving problems.

### **CH- 8 BINOMIAL THEOREM**

The students will be able to:

- i. Express the given problem using Binomial theorem and compute related problems.

### **CH- 9 SEQUENCES & SERIES**

The students will be able to:

- i. Recall the concept of AP, apply it to compute arithmetic mean, sum of 'n' terms and related problems.
- ii. Describe a GP, infinite GP.
- iii. Classify the given series as AP, GP and solve related problems.

### **CH- 10 STRAIGHT LINES**

The students will be able to:

- i. Associate the inclination of a line to the concept of slope.
- ii. Classify lines as parallel or perpendicular using the concept of slope.
- iii. Discuss and identify the various forms of equations of a line.
- iv. Convert one form of equation to another.
- v. Calculate the distance of a point from a line and also between parallel lines.

### **CH- 11 CONIC SECTIONS**

The students will be able to:

- i. Visualise circle, ellipse, parabola, hyperbola as shapes 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 kinds of practical problems.

### **CH- 12 3-D GEOMETRY**

The students will be able to:

- i. Visualise and express a given point or a geometric figure in 3-D.
- ii. Extrapolate the results from 2-D to 3-D
- iii. Apply the concepts to solve related problems.

### **CH- 13 LIMITS & DERIVATIVES**

The students will be able to:

- i. Understand and express 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.

### **CH- 15 STATISTICS**

The students will be able to:

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

### **CH- 16 PROBABILITY**

The students will be able to:

- i. Describe random experiment, sample space, events and its types.
- ii. Perform algebra of events.
- iii. Calculate probability of different events, apply the Addition theorem of probability.

# **BIOLOGY (044)**

## **APRIL**

### **Unit-III Cell: Structure and Function**

**Chapter-8: Cell-The Unit of Life** life, structure of prokaryotic and eukaryotic cells; Plant cell and animal cell; cell envelope; cell membrane, cell wall; cell organelles - structure and function; endomembrane system, endoplasmic reticulum, golgi bodies, lysosomes, vacuoles, mitochondria, ribosomes

Cell theory and cell as the basic unit of, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles (ultrastructure and function); nucleus

#### **LEARNING OUTCOMES/ COMPETENCIES:**

Students will be able to: -

1. State the postulates of cell theory.
2. Differentiate between PROKARYOTIC & EUKARYOTIC CELL.
3. Draw, understand & explain the composition, function of all the organelle seen in the CELL.
4. Explain the structure of cilia, flagella & centrioles
5. Explain & draw the Ultra Structure & function of Nucleus.

## **MAY**

### **Unit-I Diversity of Living Organisms**

#### **Chapter-1: The Living World**

What is living? Biodiversity; Need for classification; three domains of life; concept of species and taxonomical hierarchy; binomial nomenclature.

#### **LEARNING OUTCOMES/ COMPETENCIES:**

Students will be able to: -

1. Explain the characteristics features of LIVING organism .
2. Interpret why there is the need to Classification system.
3. Elaborate the type of taxonomic hierarchy in which the classification system is written.
4. Explain binomial Nomenclature system for naming an organisms.

#### **Chapter-2: Biological Classification**

Five kingdom classification; Salient features and classification of Monera, Protista and Fungi into major groups; Lichens, Viruses and Viroids.

#### **LEARNING OUTCOMES/ COMPETENCIES:**



**STUDENTS WILL BE ABLE TO:**

1. Explain the 5 kingdom Classification system in detail.
2. Elaborate the various salient features & their Classification observed in major Phylum.

**MAY/ JULY**

### **Chapter-3: Plant Kingdom**

Salient features and classification of plants into major groups - Algae, Bryophyta, Pteridophyte and Gymnospermae. (salient and distinguishing features and a few examples of each category): Angiosperms - classification up to class, characteristic features and examples.

Plant life cycles and alternation of generations

### **LEARNING OUTCOMES/ COMPETENCIES:**

STUDENTS will be able to: -

1. Elaborate on the various salient features involved in the Plant kingdom.
2. Examples for further understanding are used.
3. Differentiate between each plant division by identifying plants specimens given to them.
4. Understand the differences in between Monocots & Dicots in the Angiosperms.

**JULY**

### **Chapter-4: Animal Kingdom**

Salient features and classification of animals, non-chordates up to phyla level and chordates up to class level (salient features and distinguishing features of a few examples of each category). (No live animals or specimen should be displayed.)

### **LEARNING OUTCOMES/ COMPETENCIES:**

STUDENTS will be able to:-

1. Differentiate between, Invertebrates & Vertebrates.
2. Elaborate on the various features & classification of animals.
3. Explain the Classification System for CHORDATA, in details

**AUGUST**

### **Unit-II Structural Organization in Animals and Plants**

### **Chapter-5: Morphology of Flowering Plants**

Morphology and modifications: Morphology of different parts of flowering plants: root, stem, leaf, inflorescence, flower, fruit and seed. Description of families: Fabaceae & Solanaceae (to be dealt along with the relevant experiments of the Practical Syllabus).

### **LEARNING OUTCOMES/ COMPETENCIES:**

**STUDENTS will be able to: -**

1. Define Morphology.
2. Elaborate on the different parts of morphological features of flowering plants.
3. Define Inflorescence.
4. Distinguish between Racemose & Cymose Inflorescence.
5. Explain the process of fruits & seed formation with the help of examples.
6. Elaborate the important terms / definitions used in Flower Description.
7. Interpret the floral description done for family: Solanaceae.

### **Chapter-7: Structural Organization in Animals**

Animal tissues. Morphology, Anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of A FROG (a brief account only).

#### **LEARNING OUTCOMES/ COMPETENCIES:**

**STUDENTS will be able to: -**

1. Differentiate in the various tissues found in the Animals along with their Diagram, structure & composition.
2. Analyze & dissect the thigh muscle of cockroach to understand various muscle systems in living organism.
3. Elaborate the brief account of digestive, circulatory, respiratory, nervous & reproductive system of FROG.

## **SEPTEMBER**

### **Chapter-9: Biomolecules**

Chemical constituents of living cells: biomolecules, structure and function of proteins, carbohydrates, lipids, nucleic acids; Enzymes- types, properties, enzyme action.

#### **LEARNING OUTCOMES/ COMPETENCIES:**

**STUDENTS Will be able to: -**

1. Differentiate between Micro & Macro molecules.
2. Elaborate the structure & function of Protein.
  3. Elaborate the structure & function of Carbohydrates.
  4. elaborate the structure & function of Lipids, Nucleic Acids.
3. Explain the enzyme mechanism, its types & various other enzymatic action.

## SEPTEMBER / OCTOBER

### **Chapter-10: Cell Cycle and Cell Division**

Cell cycle, mitosis, meiosis and their significance

#### **LEARNING OUTCOMES/ COMPETENCIES:**

STUDENTS will be able to: -

1. Explain the Cell cycle & its phases.
2. Draw & explain the various stages involved in MITOSIS.
3. DRAW & explain the various stages involved in Meiosis & write its significance.

## OCTOBER

### **Unit-IV Plant Physiology**

#### **Chapter-15: Plant - Growth and Development**

Seed germination; characteristics, measurements and phases of plant growth, growth rate; conditions for growth; differentiation, dedifferentiation and redifferentiation; sequence of developmental processes in a plant cell; growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA; seed dormancy; vernalization; photoperiodism.

#### **LEARNING OUTCOMES/ COMPETENCIES:**

STUDENT will be able to: -

1. Define growth, development in a definite manner.
2. Analyze the seed germination mechanism, different characteristics involved in development.
3. Explain the functions, deficiency symptoms / diseases seen for Auxin, Gibberellin, Cytokinin, Ethylene, ABA in detailed.
4. Define seed dormancy.
5. Differentiate between vernalization & photoperiodism.

## NOVEMBER

#### **Chapter-13: Photosynthesis in Higher Plants**

Photosynthesis as a means of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis (elementary idea); photochemical and biosynthetic phases of photosynthesis; cyclic and non-cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C<sub>3</sub> and C<sub>4</sub> pathways; factors affecting photosynthesis.

#### **LEARNING OUTCOMES/ COMPETENCIES:**

STUDENTS will be able to:-

1. Understand & explain the mechanism used in by the mesophyll leaf for photosynthesis.
2. Enumerate the light reaction & dark reaction pathways.
3. Differentiate between Cyclic & Non cyclic photophosphorylation.
4. State & explain the Chemiosmotic Hypothesis.
5. State & explain the process of Photo respiration.
6. Differentiate between C<sub>3</sub> & C<sub>4</sub> pathways
7. Explain the factors affecting rate of photosynthesis.

## NOVEMBER / DECEMBER

### **Chapter-14: Respiration in Plants**

Exchange of gases; cellular respiration - glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); energy relations - number of ATP molecules generated; amphibolic pathways; respiratory quotient

#### **LEARNING OUTCOMES/ COMPETENCIES:**

STUDENTS will be able to:-

1. Distinguish between aerobic & Anaerobic respiration.
2. Explain the process of GLYCOLYTIC PATHWAY IN CELLS.
3. Elucidate the TCA Cycle & Electron Transport system in mitochondria.
4. Calculate the number / amount of ATP RELEASED / USED per cycle.
5. Explain the Amphibolic pathways & respiratory quotients.

## DECEMBER

### **Unit-V Human Physiology**

#### **Chapter-17: Breathing and Exchange of Gases**

Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing and its regulation in humans - exchange of gases, transport of gases and regulation of respiration, respiratory volume; disorders related to respiration - asthma, emphysema, occupational respiratory disorders.

#### **LEARNING OUTCOMES/ COMPETENCIES:**

STUDENTS will be able to: -

1. Differentiate between different respiratory organs observed in animals.
2. Explain & enumerate the Human Respiratory System explaining the breathing mechanism.
3. Define respiratory volumes.
4. Discuss & elucidate the various Respiratory disorders observed.

#### **Chapter-18: Body Fluids and Circulation**

Composition of blood, blood groups, coagulation of blood; composition of lymph and its function; human circulatory system - Structure of human heart and blood vessels; cardiac cycle, cardiac

output, ECG; double circulation; regulation of cardiac activity; disorders of circulatory system - hypertension, coronary artery disease, angina pectoris, heart failure.

#### **LEARNING OUTCOMES/ COMPETENCIES:**

STUDENTS will be able to :-

5. Give the composition of the Blood
6. Differentiate between the various blood groups seen .
7. Explain the clotting of blood mechanism in humans .
8. Elaborate & draw the structure of Human Heart .
9. Define cardiac cycle , cardiac output , ECG , Double Circulation & cardiac activity .
10. Elucidate the disorders related to Circulatory system .

### **JANUARY 2024**

#### **Chapter-19: Excretory Products and their Elimination**

Modes of excretion - ammonotelism, ureotelism, uricotelism; human excretory system – structure and function; urine formation, osmoregulation; regulation of kidney function - renin - angiotensin, atrial natriuretic factor, ADH and diabetes insipidus; role of other organs in excretion; disorders - uremia, renal failure, renal calculi, nephritis; dialysis and artificial kidney, kidney transplant.

#### **LEARNING OUTCOMES/ COMPETENCIES:**

STUDENTS will be able to :-

1. Difference between Ureotelic, Uricotelic & ammonotelic organisms.
2. Elaborate the Excretory System of humans.
3. Explain the urine formation mechanism. & also, the Renin-Angiotensin Mechanism in blood.
4. Explain the disorders related to the Excretory systems.

#### **Chapter-20: Locomotion and Movement**

Types of movement – amoeboid, ciliary, flagellar, muscular; types of muscles; skeletal muscle, contractile proteins and muscle contraction; skeletal system and its functions; joints; disorders of muscular and skeletal systems - myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout.

#### **LEARNING OUTCOMES/ COMPETENCIES:**

STUDENTS will be able to: -

1. Explain the various types of movements found in animals (in general)
2. Explain the composition of skeletal, muscles.
3. Give the structure & composition of the contractile proteins.

4. Explain the sliding filament Theory of muscle contraction.
5. Explain the disorders related to the muscular systems.

## **FEBRUARY**

### **Chapter-21: Neural Control and Coordination**

Neuron and nerves; Nervous system in humans - central nervous system; peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse.

#### **LEARNING OUTCOMES/ COMPETENCIES:**

STUDENTS will be able to: -

1. Explain the CNS system better.
2. Differentiate between CNS & PNS system better.
3. Explain the generation of nerve impulse in an Axon.

### **Chapter-22: Chemical Coordination and Integration**

Endocrine glands and hormones; human endocrine system - hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads; mechanism of hormone action (elementary idea); role of hormones as messengers and regulators, hypo - and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goiter, exophthalmic goiter, diabetes, Addison's disease. Note: Diseases related to all the human physiological systems to be taught in brief.

#### **LEARNING OUTCOMES/ COMPETENCIES:**

Students will be able to:

1. Enumerate & list the different endocrine glands found in human body.
2. State the functions, deficiency symptoms & diseases caused in cases of hypo / hyper secretions.
4. Differentiate between various hormonal function & composition of endocrine glands in human body.
5. Explain the role of Hormones as messengers & regulators.
6. Enumerate the various diseases related to Hormonal imbalances in the body will be discussed

# **ASSESSMENT PLANNER 2023-2024**

**PA 1**

**SYLLABUS**

**40 MARKS**

- Cell: the unit of life.
- The living world.
- Biological Classification.

**PA2**

**SYLLABUS.**

**40 MARKS**

- CELL CYCLE & CELL DIVISION.
- PLANT GROWTH & DEVELOPMENT
- PHOTOSYNTHESIS IN HIGHER PLANTS

**SA1/ HALF**

**\* PA 1 SYLLABUS + theory & practical**

**(70/30marks)**

- Animal Kingdom.
- Plant Kingdom.
- morphology of flowering plants
- Structural Organization in Animal
- Biomolecules

**SA2**





**FULL SYLLABUS TO BE STUDIED (ALL 22 CHAPTERS WILL BE TESTED ON)**

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

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# **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
<b>April-2023</b>	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.
<b>May- 2023</b>	Unit -2: Methods of Enquiry in Psychology	1. Goals of Psychological Enquiry 2. Nature of Psychological Data 3. Some Important Methods in Psychology- • Observational Method • Experimental Method • Correlational Research • Survey Research • Psychological Testing • Case Study 4. Analysis of Data • Quantitative Method • Qualitative Method	1 The students will be able to explain the goals and nature of psychological enquiry.  2 The students will be able to classify different types of data used by psychologists.  3. The students will be able to describe observation method of enquiry. 4. The students will be able to describe other important methods of psychological enquiry. 5. The students will be able to illustrate methods of analyzing data.



<p><b>July -2023</b></p>	<p>Practical File Work</p> <p><b>Unit -3: Human Development</b></p> <p>Project work</p>	<p>5 Limitations of Psychological Enquiry 6. Ethical Issues</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 -</p> <ul style="list-style-type: none"> <li>• Prenatal Stage</li> <li>• Infancy</li> <li>• Childhood</li> <li>• Challenges of Adolescence</li> <li>• Adulthood and Old Age.</li> </ul>	<p>6 The students will be able to explain about the limitations of psychological enquiry and Ethical guidelines.</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.</p>
<p><b>August - 2023</b></p>	<p>Unit- 4: Sensory, Attentional, and Perceptual Processes</p>	<p>1)Introduction 2. Nature and varieties of Stimulus 3. Sense Modalities 4) Attentional Processes</p> <ul style="list-style-type: none"> <li>• Selective Attention</li> <li>• Sustained Attention</li> </ul> <p>5. Perceptual Processes</p> <ul style="list-style-type: none"> <li>• Processing Approaches in Perception.</li> </ul> <p>6)Principles of Perceptual Organization 7) Perception of Space, Depth and Distance</p> <ul style="list-style-type: none"> <li>• Monocular Cues and Binocular Cues</li> </ul> <p>8)Perceptual Constancies 9) Illusions</p>	<p>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.</p>

September 2023		Mid Term Examination	
<b>October - 2023</b>	Unit –5: LEARNING-	1. Introduction 2. Nature of Learning 3. Paradigms of Learning 4. Classical Conditioning <ul style="list-style-type: none"> <li>• Determinants of Classical Conditioning</li> </ul> 5. Operant/Instrumental Conditioning <ul style="list-style-type: none"> <li>• Determinants of Operant Conditioning</li> </ul> 6. Key Learning Processes 7. Observational Learning 8. Cognitive Learning 9. Verbal Learning 10. Skill Learning 11. Factors Facilitating Learning 12. Learning Disabilities 13. Applications of Learning Principles.	1) The students will be able to describe the nature of learning. 2) The students will be able to explain different types of learning and the procedures used in different types of learning. 3) The students will be able to explain the determinants of learning.  4) The students will be able to apply the various learning principles in daily life .  5) The students will be able to understand the symptoms of Learning Disabilities.
	Practical Work Experiment -1	Experiment on Verbal Learning Ability.	The students are conducting the experiment on their fellow students, learn to analyse the results and report writing.
November - 2023	Chapter- 6: Human Memory	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"> <li>• Declarative and Procedural; Episodic and Semantic</li> </ul> 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"> <li>• Mnemonics using Images and Organisation</li> </ul>	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.

December - 2023	<p>Practical Work Experiment -2</p> <p>Chapter – 7: Thinking</p>	<p>Experiment on measuring the memory span of a person.</p> <ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Nature of Thinking</li> <li>3. The Processes of Thinking</li> <li>4. Problem Solving</li> <li>5. Reasoning</li> <li>6. Decision-making</li> <li>7. Nature and Process of Creative Thinking               <ul style="list-style-type: none"> <li>• Nature of Creative Thinking</li> <li>• Process of Creative Thinking</li> </ul> </li> <li>8. Developing Creative Thinking               <ul style="list-style-type: none"> <li>• Barriers to Creative Thinking</li> <li>• Strategies for Creative Thinking</li> </ul> </li> <li>9. Thought and Language</li> <li>10. Development of Language and Language Use.</li> </ol>	<p>The students are conducting the experiment on their fellow students, learn to analyse the results and report writing.</p> <ol style="list-style-type: none"> <li>1 The students will be able to describe the nature of thinking and reasoning,</li> <li>2 The students will be able to explain various cognitive processes involved in problem solving and decision-making.</li> <li>3 The students will be able to state the nature and process of creative thinking and learn ways of enhancing it,</li> <li>4 The students will be able to illustrate the relationship between language and thought</li> <li>5. The students will be able to describe the process of language development and apply its use in dealing problems related to that.</li> </ol>
January- 2024	Chapter – 8: Motivation and Emotion	<ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Nature of Motivation</li> <li>3. Types of Motives               <ul style="list-style-type: none"> <li>• Biological Motives</li> <li>• Psychosocial Motives</li> </ul> </li> <li>4. Maslow's Hierarchy of Needs</li> <li>5. Nature of Emotions</li> <li>6. Expression of Emotions               <ul style="list-style-type: none"> <li>• Culture and Emotional Expression</li> <li>• Culture and Emotional Labelling</li> </ul> </li> <li>10. Managing Negative Emotions</li> <li>11. Enhancing Positive Emotions</li> </ol>	<ol style="list-style-type: none"> <li>1 The students will be able to describe the nature of emotional expression.</li> <li>2 The students will be able to understand the relationship between culture and emotion, and</li> <li>3 The students will be able to know how to manage your own emotions.</li> <li>4. The students will be able to illustrate different types of motives</li> <li>5. The students will be able to state Maslow's Hierarchy of needs and how it apply in a person's life .</li> </ol>
February- 2024	Revision and	Annual Exams	

**ASSESSMENT PLANNER**

<b>Periodic Test – 1 (May 2023)</b>  <b>40 Marks</b>	<b>SYLLABUS</b>  <b>Unit 1 : What is Psychology</b>  <b>Unit -2 :Methods of Enquiry in Psychology</b>
<b>Periodic Test - 2 (November-2023)</b>  <b>40 Marks</b>	<b>SYLLABUS</b>  <b>Unit-5: Learning</b> <b>UNIT-6 : Human Memory</b>
<b>Mid Term Exam (September )</b>  <b>Theory / Practical 70/30</b>	<b>SYLLABUS</b>  <b>UNIT 1 : What is Psychology</b>  <b>UNIT -2 :Methods of Enquiry in Psychology</b>  <b>UNIT -3 : Human Development</b>  <b>UNIT -4 : Sensory, Attentional, and Perceptual Processes</b>
<b>Annual Exam (February)</b>  <b>Theory / Practical 70/30</b>	<b>SYLLABUS</b>  <b>UNIT 1 : What is Psychology</b>  <b>UNIT -2 :Methods of Enquiry in Psychology</b>  <b>UNIT -3 : Human Development</b>  <b>UNIT -4 : Sensory, Attentional, and Perceptual Processes</b>  <b>UNIT 5 : Learning</b>  <b>UNIT-6 : Human Memory</b>  <b>UNIT -7 : Thinking</b>  <b>UNIT -8 : Motivation and Emotion</b>

# **POLITICAL SCIENCE**

APRIL		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
CONSTITUTION RIGHTS	<ul style="list-style-type: none"> <li>The student will be familiarized with the constitution and why it is required.</li> <li>They will understand the key factors that led to the framing of the Indian Constitution.</li> <li>They will learn about Fundamental Rights and Directive Principles</li> <li>Get knowledge about some rights enshrined in the Indian Constitution.</li> </ul>	<p>At the completion of these topics the student should be able to:</p> <ul style="list-style-type: none"> <li>State and deduce the factors that lead to the importance of the constitution.</li> <li>Develop the ability to use and analyze socio-economic and political factors to understand the classification of Rights in Part III and Part IV.</li> <li>Classify the Rights enshrined in the Constitution.</li> <li>Explain major events that led to conflict between the judiciary and the legislature after independence.</li> </ul>
MAY		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
FUNDAMENTAL RIGHTS CONTD. CONSTITUTIONAL AMENDMENTS	<ul style="list-style-type: none"> <li>The student will discuss the major constitutional cases.</li> <li>Familiarize the learner with the different rights in greater detail.</li> <li>Analyze reasons why constitutions need to be amended.</li> <li>Understand the process of amendment.</li> </ul>	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> <li>Identify the different categories of rights enshrined in the Constitution.</li> <li>Highlight the constitutional cases that are a milestone.</li> <li>Build arguments to prove why our Constitution is a living document.</li> <li>Compare the provisions contained in Part III and Part IV and state their significance.</li> </ul>
JULY		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
ELECTION AND REPRESENTATION LEGISLATURE	<ul style="list-style-type: none"> <li>The student will be familiarized with the different modes of elections in the world.</li> <li>Discuss the merits and demerits of the methods studied.</li> <li>They will analyze the reason why India opted for the simple majority system and the malpractices prevalent in the electoral system in India.</li> <li>They will learn about the composition of the legislature and the role it plays.</li> </ul>	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> <li>Analyze the significance of elections and the impact of the pattern of elections prevalent in the country.</li> <li>Examine the viability of different methods.</li> <li>Identify electoral malpractices prevalent in India and suggest remedies.</li> <li>Analyze the composition and functions of the legislature in India.</li> </ul>
AUGUST		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES

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

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

OCTOBER

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

NOVEMBER

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
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IEQUALITY JUSTICE	<ul style="list-style-type: none"> <li>The student will be familiarized with the ideas of equality and justice.</li> <li>Understand the different dimensions of equality and justice.</li> <li>Learn about how to promote equality and justice.</li> </ul>	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> <li>Define equality and justice.</li> <li>Analyze the impact of these ideas on our lives.</li> <li>Evaluate the manner in which our Constitution has guaranteed them to people.</li> </ul>
DECEMBER		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
RIGHTS CITIZENSHIP	<ul style="list-style-type: none"> <li>The students will learn about rights and how every claim made by them cannot be a right.</li> <li>They will comprehend the importance of full and equal membership of the state in the light of contemporary events and developments.</li> </ul>	<p>At the completion of the syllabus, the student should be able to:</p> <ul style="list-style-type: none"> <li>Understand and analyze why claims cannot be rights.</li> <li>Form individual opinions on citizenship and the need for global citizenship.</li> <li>Compare developments in different situations and appreciate the value of citizenship.</li> <li>Encourage students to understand and analyze the challenges for contemporary India and their role in nation-building by fulfilling their duties.</li> </ul>
JANUARY		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
NATIONALISM SECULARISM	<ul style="list-style-type: none"> <li>The student will be familiarized with the ideas of nationalism and secularism.</li> <li>They will become aware of the challenge of reconciling pluralism with multiculturalism.</li> <li>They will define secularism and highlight the salient features of secularism in India and the West.</li> <li>Show the challenges faced by a society inhabited by people who follow diverse religions.</li> <li>Show how notions like modernization need to be critically assessed.</li> </ul>	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> <li>Identify factors that give rise to a nation.</li> <li>Explore strategies to integrate diverse peoples together.</li> <li>Analyze the differences between the western perspective of secularism and the Indian one.</li> <li>Summarize the limitations of secularism in India.</li> </ul>
FEBRUARY		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
REVISION	FINAL TERM EXAMINATION	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> <li>Understand , analyze and identify the key features , historical processes, and working of the Indian Constitution in real life.</li> <li>Understand ideas gained from political theory, develop the skill for logical reasoning, and</li> <li>engage meaningfully in the political process.</li> </ul>

# Information Technology (802)

## LEARNING OUTCOMES

### **Unit 1- Computer Organization& OS: User perspective.**

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

### **Unit 2- Networking and Internet.**

- ✓ Understand Computer Networking
- ✓ To understand Internet and its terminology
- ✓ Understand cybercrime and the need of Cyber Security

### **Unit 3- Office automation tools:**

Know the office automation concepts

- ✓ Define how to utilize the 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
  - Electronic Spreadsheets
  - Powerpoint presentation

### **Unit 4 – RDBMS**

- ✓ **Appreciate the concept of Database Management System**
  - Create and edit tables using wizard and SQL commands
  - Perform operations on table
  - Retrieve data using query

### **Unit 5- Fundamentals of Java**

- ✓ Develop programming skills in Java(Netbeans)

### **Employability Skills**

- 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



<b><u>MARCH</u></b>	<b><u>APRIL</u></b> Understanding of Hardware. Basics of Operating System. Introduction to Networks and the Internet. Network Types and Topologies Network Device
<b><u>MAY</u></b> Network Safety concerns. Network Security tools and services. Cyber Security. <b>REVISION</b>	<b><u>JUNE</u></b>
<b><u>JULY</u></b> Safe practices on Social networking Basic functionalities of Spreadsheet.	<b><u>AUGUST</u></b> 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.
<b><u>SEPTEMBER</u></b> <b><u>REVISION</u></b>	<b><u>OCTOBER</u></b> Develop programming skills in Java (Netbeans) Data handling Swing Controls Control Structures Project in Java(NetBeans)
<b><u>NOVEMBER</u></b> Develop programming skills in Java (Netbeans) <b>REVISION</b>	<b><u>DECEMBER</u></b> Employability Skills - III Communication Skills - III Self-management Skills - III
<b><u>JANUARY</u></b> Information and Communication Technology Skills - III Entrepreneurial Skills - III Green Skills - III	<b><u>FEBRUARY</u></b> <b>REVISION</b>

**ASSESSMENT PLANNER**

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

# **WEB APPLICATIONS 2** (CODE – 803)

## **LEARNING OUTCOMES**

### **UNIT-1: BASICS OF NETWORKING AND WEB ARCHITECTURE**

**APRIL AND MAY 2023**

**Students will be able to :**

- Understand Basic network concepts.
- Discuss and understand the working of the Internet.
- Understand and explain the concepts of channel, Bandwidth, Data Transfer Rate.
- Understand and present the concept of Protocols: HTTP, FTP, TCP/IP, VoIP
- Discuss and Describe different Types of network: PAN, LAN, MAN, WAN.
- Understand and describe Web Architecture and the Types of architecture- Client Server Model, Three Tier Model, Service Oriented Architectures.
- Understand and explain Web server and Web Client.
- Discuss and analyse Network threats and Security measures

### **UNIT-2: WEBSITE DEVELOPMENT USING HTML AND CSS**

**JULY AND AUGUST 2023**

**Students will be able to :**

- Understand basic concepts of website.
- Differentiate between static and dynamic websites.
- Analyse static websites.
- Appreciate various tags in HTML.
- Understand and Define HTML.
- Understand and Define the different types of Tags and attributes in HTML.
- Design and Code Web pages using Basic HTML.
- Understand the need for and Define Cascading Style Sheets (CSS).
- Understand and Describe the Advantages of CSS.
- Understand and Define the Syntax of a CSS Rule.
- Understand and Design Web pages using the different style sheet locations (External, Internal, Inline).
- Understand and apply different CSS properties and values.
- Understand requirements for publishing a website.
- Identify different domains and domain name systems.
- Understand the Domain Naming System (DNS).
- Discuss and explain the following: DNS Server, Domain Space Provider, Domain Name registration process and acquiring domain space.
- Understand Website Hosting, Website publishing tools.

### **UNIT-4: INTRODUCTION TO DYNAMIC WEBSITES USING JAVASCRIPT**

**SEPTEMBER AND OCTOBER 2023**

**Students will be able to :**

- Analyze limitations of static websites
- Understand dynamic websites and their need
- Understand Basics of JavaScript
- Appreciate advantages and features of JavaScript
- Develop interactive web pages using JavaScript
- Explain the advantages of using Javascript.
- Understand and demonstrate the different ways to write Javascript.

- Define variables and understand the need for variables.
- Differentiate between different types of Operators.
- Design and code scripts using Operators.
- 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).
- Understand and Describe the DOM (Document Object Model) and the different Objects in the DOM.
- Design and Code scripts using popup boxes (alert / confirm / prompt).

### **UNIT-3: MULTIMEDIA DESIGN- GIMP**

**NOVEMBER 2023 TO JANUARY 2024**

**Students will be able to :**

- Appreciate interface of GIMP
- Understand and use drawing tools, selections
- Appreciate different color modes
- Create and edit images
- Appreciate and use filters and layers
- Develop skill to create and edit an image

<b><u>MARCH</u></b>	<b><u>APRIL</u></b> <b>UNIT-1: BASICS OF NETWORKING AND WEB ARCHITECTURE</b>
<b><u>MAY</u></b> <b>UNIT-1: BASICS OF NETWORKING AND WEB ARCHITECTURE</b>	<b><u>JUNE</u></b>
<b><u>JULY</u></b> <b>UNIT-2: WEBSITE DEVELOPMENT USING HTML AND CSS</b>	<b><u>AUGUST</u></b> <b>UNIT-2: WEBSITE DEVELOPMENT USING HTML AND CSS</b>
<b><u>SEPTEMBER</u></b> <b>UNIT-4: INTRODUCTION TO DYNAMIC WEBSITES USING JAVASCRIPT.</b>	<b><u>OCTOBER</u></b> <b>UNIT-4: INTRODUCTION TO DYNAMIC WEBSITES USING JAVASCRIPT.</b>
<b><u>NOVEMBER</u></b> <b>UNIT-4: INTRODUCTION TO DYNAMIC WEBSITES USING JAVASCRIPT.</b>	<b><u>DECEMBER</u></b> <b>UNIT-3: MULTIMEDIA DESIGN- GIMP</b>
<b><u>JANUARY</u></b> <b>UNIT-3: MULTIMEDIA DESIGN- GIMP</b>	<b><u>FEBRUARY</u></b> <b>UNIT-3: MULTIMEDIA DESIGN- GIMP</b> Revision

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

# HISTORY

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

AUGUST		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
NOMADIC EMPIRES	<p>The student will</p> <ul style="list-style-type: none"> <li>• be familiarized with the varieties of nomadic society and their institutions.</li> <li>• Discuss whether state formation is possible in nomadic societies.</li> <li>• discuss whether state formation is possible in nomadic societies.</li> <li>• Discuss whether state formation is possible in nomadic societies.</li> </ul>	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> <li>• Identify the living patterns of nomadic pastoralist society.</li> <li>• Trace the rise and growth of Genghis Khan to understand him as an oceanic ruler.</li> <li>• Analyze socio-political and economic changes during the period of descendants of Genghis Khan.</li> <li>• Distinguish between the Mongolian people's perspective and the world's opinion of Genghis Khan.</li> </ul>
SEPTEMBER		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
THE THREE ORDERS	<p>The student will</p> <ul style="list-style-type: none"> <li>• become familiar with the nature of the economy and society of the period and the changes within them.</li> <li>• Show how the debate on the decline of feudalism helps in understanding processes of transition.</li> </ul>	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> <li>• Explain the myriad aspects of feudalism with special reference to the first, second, third and fourth order of society.</li> <li>• Relate between ancient slavery and serfdom.</li> <li>• Assess the 14<sup>th</sup> century crisis and rise of nation states.</li> </ul>
OCTOBER		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
CHANGING CULTURAL TRADITIONS	<p>The student will</p> <ul style="list-style-type: none"> <li>• explore the intellectual trends in the period.</li> <li>• Familiarize themselves with the paintings and buildings of the period.</li> <li>• Introduce the debate around the idea of Renaissance.</li> </ul>	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> <li>• Analyze the causes, events, and effects of Renaissance, Reformation, Scientific Revolution and Age of Exploration.</li> <li>• Relate the different facets of Italian cities to understand characteristics Renaissance, Humanism and Realism.</li> <li>• Compare and contrast the condition of women in the Renaissance period.</li> <li>• Recognize major influences on the architectural, artistic, and literary developments to understand the facades of Renaissance.</li> <li>• Critically analysis of the Roman Catholic Church by Martin Luther and Erasmus and their impact on later reforms.</li> <li>• Evaluate response to the Protestant Reformation in the forms of the Counter and Catholic Reformation.</li> </ul>

NOVEMBER		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
DISPLACING INDIGENOUS PEOPLE	The student will be familiarized with the processes of displacements that accompanied the development of America and Australia that will sensitize them. Understand the implications of such processes for the displaced populations.	At the completion of this chapter the student should be able to: <ul style="list-style-type: none"> <li>Recount some aspects of the history of the native people of America to understand their condition.</li> <li>To analyze the realms of settlement of Europeans in Australia.</li> </ul>
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"> <li>Compare and contrast the lives and roles of indigenous people in these continents.</li> <li>Form individual opinions on this issue with the help of perspectives provided by historians.</li> </ul>
JANUARY		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
PATHS TO MODERNIZATION	The student will <ul style="list-style-type: none"> <li>be familiarized with the idea that transformation in the modern world takes many different forms.</li> <li>Show how notions like modernization need to be critically assessed.</li> </ul>	At the completion of this chapter the student should be able to: <ul style="list-style-type: none"> <li>Deduce the histories of China and Japan from the phase of imperialism to modernization.</li> <li>Explore the Japanese political, cultural and economic system prior to and after the Meiji Restoration.</li> <li>Analyze the domains of Japanese nationalism prior and after the Second World War.</li> <li>Summarize the nationalist upsurge in China from Dr. Sun Yet Sen to Mao Zedong to understand the era of communism.</li> </ul>
FEBRUARY		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
PATHS TO MODERNIZATION CONTD.	The student will <ul style="list-style-type: none"> <li>be familiarized with the paths of modernization adopted by Deng Xio Ping and Zhou en Lai</li> </ul>	At the completion of this chapter the student should be able to: <ul style="list-style-type: none"> <li>Compare and distinguish between policies followed by Mao Zedong and Deng Xio Ping.</li> <li>Analyze the Chinese path to modernization under Deng Xio Ping and Zhou en Lai to understand the transformation between rigid communism to liberal socialism.</li> </ul>



# **POLITICAL SCIENCE**

## **BROAD COMPETENCIES AND OUTCOMES**

### **INDIAN CONSTITUTION AT WORK:**

- 1.1. **COMPETENCY:** Understanding, identifying and analyzing the key features, historical processes and working of the Constitution of India.
- 1.2. **OUTCOMES:** The students will:
- 1.3. Understand the historical processes and the circumstances in which the Constitution was made.
- 1.4. Be familiar with the diverse perspectives that guided the makers of the Indian Constitution.
- 1.5. Identify key features of the Constitution and compare these to other constitutions in the world.
- 1.6. Analyze the working of the Constitution in real life.

### **POLITICAL THEORY:**

- 1.1 **COMPETENCY:** Understanding, critically evaluating and applying political theory.
- 1.2 **OUTCOMES:** The students will:
- 1.3 Understand different themes and thinkers associated with real life.
- 1.4 Develop skills for logical reasoning.
- 1.5 Meaningfully participate in the issues and concerns of political life surrounding them.

<u><b>APRIL</b></u>	<u><b>MAY</b></u>
<u><b>PART A: INDIAN CONSTITUTION AT WORK</b></u> <ol style="list-style-type: none"> <li>1. CONSTITUTION</li> <li>2. RIGHTS IN THE INDIAN CONSTITUTION</li> </ol>	<u><b>PART A: INDIAN CONSTITUTION AT WORK</b></u> <ol style="list-style-type: none"> <li>1. RIGHTS IN THE INDIAN CONSTITUTION</li> <li>2. CONSTITUTIONAL AMENDMENTS</li> </ol>
<u><b>JULY</b></u>	<u><b>AUGUST</b></u>
<u><b>PART A: INDIAN CONSTITUTION AT WORK</b></u> <ol style="list-style-type: none"> <li>1. ELECTION AND REPRESENTATION</li> <li>2. THE LEGISLATURE</li> </ol>	<u><b>PART A: INDIAN CONSTITUTION AT WORK</b></u> <ol style="list-style-type: none"> <li>1. THE EXECUTIVE</li> <li>2. JUDICIARY</li> </ol>
<u><b>SEPTEMBER</b></u>	<u><b>OCTOBER</b></u>
<u><b>PART A: INDIAN CONSTITUTION AT WORK</b></u> <ol style="list-style-type: none"> <li>1. FEDERALISM</li> <li>2. LOCAL GOVERNMENTS</li> </ol>	<u><b>PART B: POLITICAL THEORY</b></u> <ol style="list-style-type: none"> <li>1. POLITICAL THEORY</li> <li>2. LIBERTY</li> </ol>
<u><b>NOVEMBER</b></u>	<u><b>DECEMBER</b></u>
<u><b>PART B: POLITICAL THEORY</b></u> <ol style="list-style-type: none"> <li>1. EQUALITY</li> <li>2. JUSTICE</li> </ol>	<u><b>PART B: POLITICAL THEORY</b></u> <ol style="list-style-type: none"> <li>1. RIGHTS</li> <li>2. CITIZENSHIP</li> </ol>

<p style="text-align: center;"><b><u>JANUARY</u></b></p> <p><b><u>PART B: POLITICAL THEORY</u></b></p> <ol style="list-style-type: none"> <li>1. NATIONALISM</li> <li>2. SECULARISM</li> </ol>	<p style="text-align: center;"><b><u>FEBRUARY</u></b></p> <ol style="list-style-type: none"> <li>1. <b><u>REVISION</u></b></li> </ol>
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## **ASSESSMENT PLANNER**

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

# HISTORY

<u>THEMES IN WORLD HISTORY</u>	
<p style="text-align: center;"><u>APRIL</u></p> <p><b><u>SECTION I: EARLY SOCIETIES – WRITING AND CITY LIFE</u></b></p> <ol style="list-style-type: none"> <li>1. IRAQ 3<sup>RD</sup> MILLENNIUM BCE</li> <li>2. GROWTH OF TOWNS</li> <li>3. NATURE OF EARLY URBAN SOCIETIES</li> <li>3. HISTORIANS’ DEBATE ON USES OF HANDWRITING</li> </ol>	<p style="text-align: center;"><u>MAY</u></p> <p><b><u>SECTION 11: EMPIRES – AN EMPIRE ACROSS THREE CONTINENTS</u></b></p> <ol style="list-style-type: none"> <li>1. ROMAN EMPIRE – 27 BCE TO 600 CE</li> <li>2. POLITICAL EVOLUTION</li> <li>3. ECONOMIC EXPANSION</li> <li>4. RELIGION – CULTURE FOUNDATION</li> </ol>
<p style="text-align: center;"><u>JULY</u></p> <p><b><u>SECTION II: EMPIRES – AN EMPIRE ACROSS THREE CONTINENTS</u></b></p> <ol style="list-style-type: none"> <li>1. EMPIRES – LATE ANTIQUITY</li> <li>2. HISTORIANS’ VIEW ON THE INSTITUTION OF SLAVERY</li> </ol>	<p style="text-align: center;"><u>AUGUST</u></p> <p><b><u>SECTION II: - NOMADIC EMPIRES</u></b></p> <ol style="list-style-type: none"> <li>1. THE MONGOL – 13<sup>TH</sup> – 14<sup>TH</sup> CENTURY</li> <li>2. THE NATURE OF NOMADISM</li> <li>3. FORMATION OF EMPIRES</li> <li>4. CONQUESTS AND RELATIONS WITH OTHER STATES.</li> <li>5. HISTORIANS’ VIEWS ON NOMADIC SOCIETIES AND STATE FORMATION</li> </ol>
<p style="text-align: center;"><u>SEPTEMBER</u></p> <p><b><u>SECTION III: THE THREE ORDERS</u></b></p> <ol style="list-style-type: none"> <li>1. THE THREE ORDERS</li> <li>2. WESTERN EUROPE: 13<sup>TH</sup> TO 16<sup>TH</sup> CENTURY</li> <li>3. FEUDAL SOCIETY AND ECONOMY</li> <li>4. FORMATION OF STATE</li> <li>5. CHURCH AND SOCIETY</li> <li>6. HISTORIANS’ VIEW ON THE DECLINE OF FEUDALISM</li> </ol>	<p style="text-align: center;"><u>OCTOBER</u></p> <p><b><u>SECTION III: CHANGING CULTURAL TRADITIONS</u></b></p> <ol style="list-style-type: none"> <li>1. EUROPE 14<sup>TH</sup> TO 17<sup>TH</sup> CENTURY</li> <li>2. NEW IDEAS AND NEW TRENDS IN LITERATURE AND THE ARTS.</li> <li>3. RELATIONSHIP WITH EARLIER IDEAS</li> <li>4. THE CONTRIBUTION OF WEST ASIA</li> <li>5. HISTORIANS’ VIEWPOINT ON THE VALIDITY OF THE NOTION OF EUROPEAN RENAISSANCE</li> </ol>
<p style="text-align: center;"><u>NOVEMBER</u></p> <p><b><u>SECTION IV: DISPLACING INDIGENOUS PEOPLE</u></b></p> <ol style="list-style-type: none"> <li>1. NORTH AMERICA AND AUSTRALIA – 18<sup>TH</sup> TO 20<sup>TH</sup> CENTURY</li> <li>2. EUROPEAN COLONISTS IN NORTH AMERICA AND AUSTRALIA</li> <li>3. FORMATION OF WHITE SETTLER SOCIETIES.</li> </ol>	<p style="text-align: center;"><u>DECEMBER</u></p> <p><b><u>SECTION IV: DISPLACING INDIGENOUS PEOPLE</u></b></p> <ol style="list-style-type: none"> <li>1. DISPLACEMENT AND REPRESSION OF LOCAL PEOPLE</li> <li>2. HISTORIANS’ VIEWPOINT ON THE IMPACT OF EUROPEAN SETTLEMENT ON INDIGENOUS POPULATION</li> </ol>

<u><b>JANUARY</b></u>	<u><b>FEBRUARY</b></u>
<u><b>SECTION IV: PATHS TO MODERNIZATION</b></u>	<u><b>SECTION IV: TOWARDS MODERNIZATION</b></u>
<ol style="list-style-type: none"> <li><b>EAST ASIA, LATE 19<sup>TH</sup> TO 20<sup>TH</sup> CENTURY</b></li> <li><b>MILITARIZATION AND ECONOMIC GROWTH IN JAPAN</b></li> <li><b>CHINA AND THE COMMUNIST ALTERNATIVE</b></li> </ol>	<ol style="list-style-type: none"> <li><b>HISTORIANS' DEBATE ON MODERNIZATION</b></li> <li><b>REVISION</b></li> </ol>

## **ASSESSMENT PLANNER**

<b>PERIODIC TEST - 1</b>  <b>40 MARKS</b>	<u><b>SYLLABUS</b></u> <b>EARLY SOCIETIES, WRITING AND CITY LIFE</b>
<b>PERIODIC TEST - 2</b>  <b>40 MARKS</b>	<u><b>SYLLABUS</b></u> <b>CHANGING TRADITIONS</b>
<b>HALF YEALY EXAM</b>  <b>THEORY / PRAC</b> <b>80/20</b> <b>OR</b> <b>THEORY</b> <b>100 MARKS</b>	<u><b>SYLLABUS</b></u>  <ol style="list-style-type: none"> <li><b>EARLY SOCIETIES</b></li> <li><b>EMPIRES</b></li> </ol>
<b>ANNUAL EXAM</b>  <b>THEORY / PRAC</b> <b>80/20</b> <b>OR</b> <b>THEORY</b> <b>100 MARKS</b>	<u><b>SYLLABUS</b></u>  <ol style="list-style-type: none"> <li><b>EARLY SOCIETIES</b></li> <li><b>EMPIRES</b></li> <li><b>CHANGING TRADITIONS</b></li> <li><b>TOWARDS MODERNIZATION</b></li> </ol>

# Engineering Graphics

## LEARNING OUTCOMES

1. Develop clear visualization and understanding of geometric shapes, forms & proportion of objects.
2. Develop the skill of expressing real life objects in the professional language of engineers.
3. Familiarizing with various drawing instruments including set squares, compass, mini drafter, roller scales etc. and acquire speed and accuracy in their use.
4. Develop a clear understanding of plane and solid Geometry so as to apply the same in relevant practical fields such as technology and industry.

### APRIL

1. Introduction to Engineering Graphics – importance of subject, handling and proper use of instruments,
2. Lettering of drawing sheets
3. Drawing lines and angles

**Learning Outcomes:** Enhancing the power to visualize, feel the shapes of various objects in their consciousness. Get acquainted with the instruments such as set squares, compass, dividers, various types of pencils. Acquire speed and accuracy in use of drawing instruments.

### MAY

1. Drawing other rectilinear 2D figures such as triangles, quadrilaterals, regular polygons such as pentagons and hexagons.
2. Circles
3. Reduced and enlarged figures

**Learning Outcomes:** Enhancing the power to visualize, feel the shapes of various objects in their consciousness. Get acquainted with the instruments such as set squares, compass, dividers, various types of pencils. Acquire speed and accuracy in use of drawing instruments.

### JULY

1. Drawing special curve such as the ellipse.
2. Orthographic projection of a point, line, regular 2D figures like triangle, square, pentagon and hexagon.

**Learning Outcomes:** Enhancing the power to visualize, feel the shapes of various objects in their consciousness. Acquire speed and accuracy in use of drawing instruments.

### AUGUST

1. Orthographic projection of regular solids such as prisms and pyramids.

**Learning Outcomes:** Enhancing the power to visualize, feel the shapes of various objects in their consciousness. Acquire speed and accuracy in use of drawing instruments. Develop the skill of expressing real life objects in the professional language of engineers.

### SEPTEMBER

1. Sectioning of solids, top view, front view and true shape of section of various solids such as cone, prism and pyramid.

### OCTOBER

1. Orthographic projection of simple machine blocks

<p><b>Learning Outcomes:</b> Enhancing the power to visualize, feel the shapes of various objects in their consciousness. Acquire speed and accuracy in use of drawing instruments.</p>	<p><b>Learning Outcomes:</b> Develop a clear understanding of plane and solid Geometry so as to apply the same in relevant practical fields such as technology and industry.</p>
<p style="text-align: center;"><b><u>NOVEMBER</u></b></p> <p>1. Development of surfaces of various solids such as cube, Pentagonal Prism, Triangular Pyramid, Square Pyramid etc.</p> <p><b>Learning Outcomes:</b> Develop a clear understanding of plane and solid Geometry so as to apply the same in relevant practical fields such as technology and industry. Enhancing the power to visualize, feel the shapes of various objects in their consciousness. Acquire speed and accuracy in use of drawing instruments.</p>	<p style="text-align: center;"><b><u>DECEMBER</u></b></p> <p>1. Introduction to Isometric projection. Planar figures, frustums and single objects.</p> <p><b>Learning Outcomes:</b> Develop a clear understanding of plane and solid Geometry so as to apply the same in relevant practical fields such as technology and industry. Enhancing the power to visualize, feel the shapes of various objects in their consciousness. Acquire speed and accuracy in use of drawing instruments.</p>
<p style="text-align: center;"><b><u>JANUARY</u></b></p> <p><b>1. Practical:</b></p> <p>(a) Drawing Top View / Plan of a house or a flat  (b) Constructing Ellipse using concentric circles, intersecting arcs and intersecting lines methods  (c) Construction of an Ellipse using a Trammel</p> <p><b>2. Revision of entire syllabus</b></p> <p><b>Learning Outcomes:</b> Acquire speed and accuracy in use of drawing instruments.</p>	<p style="text-align: center;"><b><u>FEBRUARY</u></b></p> <p style="text-align: center;"><b>Revision</b></p> <p><b>Learning Outcomes:</b> Acquire speed and accuracy in use of drawing instruments.</p>

### ASSESSMENT PLANNER

<p><b>Periodic Test - 1</b></p> <p><b>40 Marks</b></p>	<p style="text-align: center;"><b>SYLLABUS</b></p> <ol style="list-style-type: none"> <li>1. Drawing of lines and angles etc.</li> <li>2. Drawing of rectilinear 2D figures such as triangles, Quadrilaterals, regular polygons such as pentagons and hexagons.</li> <li>3. Circles and tangents</li> <li>4. Reduced and enlarged figures</li> </ol>
<p><b>Periodic Test - 2</b></p> <p><b>40 Marks</b></p>	<p style="text-align: center;"><b>SYLLABUS</b></p> <ol style="list-style-type: none"> <li>1. Special curve such as the Ellipse</li> <li>2. Orthographic projection of a point, line, regular 2D figures like triangle, square, pentagon and hexagon.</li> <li>3. Orthographic projection of regular solids such as prisms and pyramids.</li> <li>4. Sectioning of solids, top view, front view and true shape of section of various solids such as cone, prism and pyramid.</li> <li>5. Orthographic projection of simple machine blocks</li> </ol>
<p><b>Half Yearly Exam</b></p> <p><b>Theory / Practical</b> <b>70/30</b></p>	<p style="text-align: center;"><b>SYLLABUS</b></p> <ol style="list-style-type: none"> <li>1. Drawing lines and angles etc.</li> <li>2. Drawing other rectilinear 2D figures such as triangles, Quadrilaterals, regular polygons such as pentagons and hexagons.</li> <li>3. Circles and tangents</li> <li>4. Reduced and enlarged figures</li> <li>5. Special curves such as Ellipse, Parabola, Involute, cycloid and Helix.</li> <li>6. Orthographic projection of a point, line, regular 2D figures like triangle, square, pentagon and hexagon.</li> <li>7. Orthographic projection of regular solids such as prisms and pyramids.</li> </ol>
<p><b>Annual Exam</b></p> <p><b>Theory / Practical</b> <b>70/30</b></p>	<p style="text-align: center;"><b>SYLLABUS</b></p> <ol style="list-style-type: none"> <li>1. Drawing lines and angles etc.</li> <li>2. Drawing other rectilinear 2D figures such as triangles, Quadrilaterals, regular polygons such as pentagons and hexagons.</li> <li>3. Circles and tangents</li> <li>4. Reduced and enlarged figures</li> <li>5. Special curve such as Ellipse.</li> <li>6. Orthographic projection of a point, line, regular 2D figures like triangle, square, pentagon and hexagon.</li> <li>7. Orthographic projection of regular solids such as prisms and pyramids.</li> <li>8. Sectioning of solids, top view, front view and true shape of section of various solids such as cone, prism and pyramid.</li> <li>9. Orthographic projection of simple machine blocks</li> <li>10. Development of surfaces of various solids such as cube, Pentagonal Prism, Triangular Pyramid, Square Pyramid etc.</li> <li>11. Isometric projection of planar figures, frustums and single solids.</li> <li>12. Practical:             <ol style="list-style-type: none"> <li>(a) Making of Pentagonal Prism using card paper.</li> <li>(b) Drawing Top View / Plan of a house or a flat</li> <li>(c) Constructing Ellipse by concentric circles, intersecting lines and intersecting arcs methods.</li> <li>(d) Construction of an Ellipse using a Trammel</li> </ol> </li> </ol>

# **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

## OVERALL 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.

### **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, sum of series , patterns

- d. Convert a simple for loop into while loop.

### July

**After the classes conducted during July students will be able to**

#### **Chapter : Conditional and Iterable Statements Continued**

- a. Implementation of nested loops.
- b. Predict output of the complicated programs involving two to three loops.

#### **Chapter :String manipulations**

- a. Understand the concept on indexing a string value
- b. Differentiate between 0 to n-1 and -1 ,-2
- c. Extract the values of string using slicing method

### August

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

#### **Chapter :String manipulations Continued**

- a. 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()`

#### **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

## September

**After the classes conducted during September, students will be able to**

- a. Implement following method **len()**, **list()**, **append()**, **extend()**, **insert()**, **count()**, **index()**, **remove()**, **pop()**, **reverse()**, **sort()**, **min()**, **max()**, **sum()**
- b. Code to pack and unpack lists.

**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**

### **Chapter : Tuples**

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

## November

**After the classes conducted during November, 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.

### **Chapter : Modules**

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

## 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 gates
- b. Understand a Boolean expression and verify using truth table.
- c. State and verify D' morgan theorem .
- d. Draw a logic gate of a Boolean expression.

### February

**After the classes conducted during February, 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

## **Chapter : Society laws and ethics**

- a. Technically understand and define
  - i. Cyber Safety (SDG 16)
  - ii. Cyber trolls
  - iii. Cyber bullying
- b. Define the concept of illegal down loads phishing , intellectual property using examples from real world
- c. List the most commonly cyber crimes (SDG 13)
- d. List the steps involved to decompose E-Waste SDG 16)

**Students will be presenting the above-mentioned topics in form of one to one presentation.**

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**

#### **Computer Science-XI**

<b>Periodic Test - 1</b>  <b>40 Marks</b>	<b>SYLLABUS</b> <b>1. Python Fundamentals</b> <b>2. Conditional/Selection Statements</b> <b>3. Iteration statements (Single for and while loop)</b>
<b>Half yearly</b>  <b>70/30</b>	<b>SYLLABUS</b> <b>1. Python Fundamentals</b> <b>2. Conditional Statements</b> <b>3. Iteration statements</b> <b>4. String Manipulations</b> <b>5. List manipulations</b>

<b>PA2</b>  <b>40 marks</b>	<b>SYLLABUS</b> <b>1.Modules</b> <b>2.List Manipulations</b> <b>3. Tuples Manipulations</b>
<b>Annual Exam</b>  <b>Theory / Prac</b> <b>70/30</b>	<b>SYLLABUS</b> <b>1.Introduction to Python</b> <b>2. Conditional statements</b> <b>3. Iteration statements</b> <b>4.String Manipulations</b> <b>5.lists</b> <b>6. Tuples</b> <b>7.Boolean Algebra</b> <b>8. Cyber Safety</b> <b>10.Online access and cyber security</b> <b>11.Data representation</b> <b>12.Dictionaries</b>

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## **INFORMATICS PRACTICES (065)**

**Class XI (2023–24)**

### **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 2023**

**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 2023**

**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 2023**

**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 2023**

**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 2023**

**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 2023 - 2024**

**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 2024**

**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**

<b>Periodic Test PA- 1</b>  <b>40 Marks</b>	<b>SYLLABUS</b> <b>UNIT 1 - INTRODUCTION TO COMPUTER SYSTEM</b> <b>UNIT 4 - EMERGING TRENDS</b>
<b>Periodic Test PA - 2</b>  <b>40 Marks</b>	<b>SYLLABUS</b> <b>UNIT 3: DATABASE CONCEPTS AND THE STRUCTURED QUERY LANGUAGE</b>
<b>Mid Term Exam</b>  <b>Theory / Prac 70/30</b>	<b>SYLLABUS</b> <b>UNIT 1 - INTRODUCTION TO COMPUTER SYSTEM</b> <b>UNIT 4 - EMERGING TRENDS</b> <b>UNIT 2: INTRODUCTION TO PYTHON</b> <ul style="list-style-type: none"> <li>✓ GETTING STARTED WITH PYTHON</li> <li>✓ PYTHON FUNDAMENTALS</li> <li>✓ DATA HANDLING</li> <li>✓ PROGRAMS FOR INPUT AND OUTPUT DATA</li> <li>✓ PURPOSE AND DIFFERENCE BETWEEN CONDITIONAL AND ITERATION / LOOPING STATEMENTS.</li> </ul> <b>PRACTICALS</b> <ul style="list-style-type: none"> <li>✓ PYTHON</li> </ul>
<b>Annual Exam</b>  <b>Theory / Prac 70/30</b>	<b>SYLLABUS</b> <b>FULL SYLLABUS</b>  <b>PRACTICALS</b> <ul style="list-style-type: none"> <li>✓ PYTHON</li> <li>✓ MYSQL</li> <li>✓ PROJECT IN PYTHON</li> </ul>



# **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 2023**

#### **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 2023**

#### **UNIT 2: OLYMPISM**

##### **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 2023**

#### **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.

### **AUGUST 2023**

#### **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.

## **SEPTEMBER 2023**

### **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.

## **OCTOBER 2023**

### **UNIT 6: TEST, MEASUREMENT & 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.

## **NOVEMBER 2023**

### **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.

## **DECEMBER 2023**

### **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

## **JANUARY 2024**

### **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.

## **FEBRUARY 2024**

### **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**

<b>Periodic Test</b> <b>PA- 1</b>  <b>40 Marks</b>	<b>SYLLABUS</b> <b>UNIT 1: CHANGING TRENDS AND CAREERS IN PHYSICAL EDUCATION</b> <b>UNIT 2: OLYMPISM</b>
<b>Periodic Test</b> <b>PA - 2</b>  <b>40 Marks</b>	<b>SYLLABUS</b> <b>UNIT 6: TEST, MEASUREMENT &amp; EVALUATION</b> <b>UNIT 7: FUNDAMENTALS OF ANATOMY, PHYSIOLOGY IN SPORTS</b>
<b>Mid Term Exam</b>  <b>Theory / Prac</b> <b>70/30</b>	<b>SYLLABUS</b> <b>UNIT 1: CHANGING TRENDS AND CAREERS IN PHYSICAL EDUCATION</b> <b>UNIT 2: OLYMPISM</b> <b>UNIT 3: YOGA</b> <b>UNIT 4: PHYSICAL EDUCATION AND SPORTS FOR CHILDREN WITH SPECIAL NEEDS</b> <b>UNIT 5: PHYSICAL FITNESS, HEALTH AND WELLNESS</b>
<b>Annual Exam</b>  <b>Theory / Prac</b> <b>70/30</b>	<b>SYLLABUS</b> <b>FULL SYLLABUS FROM UNITS - 1 TO 10.</b>

# 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 IMPORTANCE OF INORGANIC MOLECULES IN SUPPORTING ORGANIC BIOLOGICAL SYSTEMS

### 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 revitalize the global partnership for sustainable development

MONTH	UNIT	LEARNING OUTCOMES : STUDENTS WILL BE ABLE TO	SDG
April	<ul style="list-style-type: none"> <li>SOME BASIC CONCEPTS OF CHEMISTRY</li> </ul>	<ul style="list-style-type: none"> <li>Compare the characteristics of three states of matter.</li> <li>Classify different substances into elements, compounds and mixtures.</li> <li>State various laws of chemical combination.</li> <li>Describe the terms – mole and molar mass.</li> <li>Calculate the mass percent of the component elements constituting a compound.</li> <li>Determine empirical formula and molecular formula for a compound from the given experimental data.</li> <li>Perform the stoichiometric calculations.</li> </ul>	SDG – 13 ; 14 & 15
MAY	<ul style="list-style-type: none"> <li>IUPAC NOMENCLATURE OF ORGANIC COMPOUNDS.</li> <li>STRUCTURE OF ATOM</li> </ul>	<p>Name the compounds according to the IUPAC system of nomenclature and also derive their structures from the given names.</p> <ul style="list-style-type: none"> <li>Describe Thomson, Rutherford and Bohr atomic models</li> <li>Tell the important features of the quantum mechanical model of atoms.</li> <li>Explain the nature of electromagnetic radiation and Planck's quantum theory.</li> <li>Explain the photoelectric effect and describe features of atomic spectra.</li> <li>State the de Broglie relation and Heisenberg uncertainty principle.</li> </ul>	SDG-4  SDG-4

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

AUGUST	<ul style="list-style-type: none"> <li>CHEMICAL BONDING AND MOLECULAR STRUCTURE.</li> </ul>	<ul style="list-style-type: none"> <li>Express KÖssel-Lewis approach to chemical bonding.</li> <li>Draw Lewis structures of simple molecules.</li> <li>Explain the formation of different types of bonds.</li> <li>Predict the geometry of simple molecules.</li> <li>Explain the valence bond approach for the formation of covalent bonds.</li> <li>Predict the directional properties of covalent bonds.</li> <li>Compare the different types of hybridisation involving s, p and d orbitals and draw shapes of simple covalent molecules.</li> <li>Sketch the molecular orbital Diagram of homonuclear diatomic molecules.</li> <li>Apply the concept of hydrogen bond.</li> </ul>	SDG- 6 ; 10 & 12
September	<ul style="list-style-type: none"> <li>THERMODYNAMICS (TILL FIRST LAW)</li> </ul>	<ul style="list-style-type: none"> <li>Discriminate between close, open and isolated systems.</li> <li>Explain internal energy, work and heat.</li> <li>State first law of thermodynamics and express it mathematically.</li> <li>Calculate energy changes as work and heat contributions in chemical systems.</li> <li>Explain state functions: U, H.</li> <li>Correlate <math>\Delta U</math> and <math>\Delta H</math>.</li> <li>Measure experimentally <math>\Delta U</math> and <math>\Delta H</math>.</li> <li>Define standard states for <math>\Delta H</math>.</li> </ul>	SDG-9 & 16

OCTOBER	<ul style="list-style-type: none"> <li>THERMODYNAMICS CONTD.</li> </ul>	<ul style="list-style-type: none"> <li>Calculate enthalpy changes for various types of reactions.</li> <li>State and apply Hess's law of constant heat summation.</li> <li>Differentiate between extensive and intensive properties.</li> <li>Define spontaneous and nonspontaneous processes.</li> <li>Explain entropy as a thermodynamic state function and apply it for spontaneity.</li> <li>Establish relationship between <math>\Delta G</math> and spontaneity, <math>\Delta G</math> and equilibrium constant.</li> </ul>	<p><b>SDG-9 &amp; 16</b></p>
	<ul style="list-style-type: none"> <li>REDOX</li> </ul>	<ul style="list-style-type: none"> <li>Identify redox reactions as a class of reactions in which oxidation and reduction reactions occur simultaneously</li> <li>Define the terms oxidation, reduction, oxidant (oxidising agent) and reductant (reducing agent).</li> <li>Explain mechanism of redox reactions by electron transfer process.</li> <li>Use the concept of oxidation number to identify oxidant and reductant in a reaction</li> <li>Classify redox reaction into combination (synthesis), decomposition, displacement and disproportionation reactions;</li> <li>Suggest a comparative order among various reductants and oxidants.</li> <li>Balance the redox reactions.</li> <li>Learn the concept of redox reactions in terms of electrode processes.</li> </ul>	<p><b>SDG-13</b></p>



NOVEMBER	EQUILIBRIUM	<ul style="list-style-type: none"> <li>• Identify the dynamic nature of equilibrium involved in physical and chemical processes.</li> <li>• State the law of equilibrium.</li> <li>• Explain characteristics of equilibria involved in physical and chemical processes.</li> <li>• Write expressions for equilibrium constants.</li> <li>• Establish a relationship between <math>K_p</math> and <math>K_c</math>.</li> <li>• Explain various factors that affect the equilibrium state of a reaction.</li> <li>• Classify substances as acids or bases according to Arrhenius, Bronsted-Lowry and Lewis concepts.</li> <li>• Classify acids and bases as weak or strong in terms of their ionization constants.</li> <li>• Explain the dependence of degree of ionization on concentration of the electrolyte and that of the common ion;</li> <li>• Describe pH scale for representing hydrogen ion concentration.</li> <li>• Explain ionisation of water and its dual role as acid and base.</li> <li>• Describe ionic product (<math>K_w</math>) and <math>pK_w</math> for water.</li> <li>• Judge use of buffer solutions.</li> <li>• Calculate solubility product constant.</li> </ul>	SDG-3 ; 14 & 15.
DECEMBER	ORGANIC CHEMISTRY (SOME BASIC PRINCIPLES AND TECHNIQUES)	<ul style="list-style-type: none"> <li>• Understand reasons for tetravalence of carbon and shapes of organic molecules.</li> <li>• Write structures of organic molecules in various ways;</li> <li>• Classify the organic compounds.</li> <li>• Name the compounds according to IUPAC system of nomenclature and also derive their structures from the given names.</li> <li>• Understand the concept of organic reaction mechanism.</li> </ul>	SDG3,9,12 &16.

		<ul style="list-style-type: none"> <li>• Explain the influence of electronic displacements on structure and reactivity of organic compounds.</li> <li>• Recognise the types of organic reactions.</li> </ul> <p>Write the different isomers of a given organic compound.</p>	
JANUARY	HYDROCARBONS.	<ul style="list-style-type: none"> <li>• Name hydrocarbons according to IUPAC system of nomenclature.</li> <li>• Recognise and write structures of isomers of alkanes, alkenes, alkynes and aromatic hydrocarbons.</li> <li>• Learn about various methods of preparation of hydrocarbons.</li> <li>• Distinguish between alkanes, alkenes, alkynes and aromatic hydrocarbons on the basis of physical and chemical properties.</li> <li>• Draw and differentiate between various conformations of ethane.</li> <li>• Predict the formation of the addition products of unsymmetrical alkenes and alkynes on the basis of electronic mechanism.</li> <li>• Comprehend the structure of benzene, explain aromaticity and understand mechanism of electrophilic substitution reactions of benzene.</li> <li>• Predict the directive influence of substituents in monosubstituted benzene ring.</li> </ul>	<b>SDG-3;9,12 &amp; 16</b>
FEBRUARY	REVISION		

## ASSESSMENT PLANNER

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

# PHYSICS

MONTH	CHAPTER	LEARNING OUTCOMES
April & May	Motion in a straight line  Topics covered:  Frame of reference, Motion in a straight line, Elementary concepts of differentiation and	The student will be able to <b>differentiate</b> between certain physical quantities- such as distance and displacement, Speed and velocity, Rectilinear and curvilinear motions, Average, relative and instantaneous velocity and speed.  The student will be able to <b>Derive formulae and equations</b> - kinematic equations for uniformly accelerated motion.  The student will be able to <b>analyze and interpret</b> data, graphs and figures and <b>draw conclusions</b> - different types of rectilinear

	<p>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>motion, uniform and uniformly accelerated motion (v-t &amp; x-t graphs) and will be able to <b>explain the concept</b> of change in velocity due to acceleration.</p> <p>The student <b>Applies concept</b> of vectors and motion in a plane <b>in daily life with reasoning while decision making and solving problems</b>- 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 <b>uses</b> the International system of units, symbols, nomenclature of physical quantities and <b>applies</b> 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 using symbols for SI unit Newton, Pascal, Joule, Watt, Hertz, Kelvin</p> <p>The Student can <b>explain</b> processes, phenomena and laws with the <b>understanding</b> of the relationship between nature and matterhorn scientific basis.</p> <p>The student <b>understands</b> the need for accuracy, precision, errors and uncertainties in measurement.</p> <p>The student <b>can derive formulae and equation</b> - dimensional formulae and dimensional equation.</p> <p>The student can <b>understand the significance and importance</b> of dimensional analysis of any physical quantity.</p>
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,</p>	<p>The student will be able to <b>understand the concept</b> of addition, subtraction, multiplication of vectors and will be able to <b>apply it to solve problems</b>.</p> <p>The student will be able to <b>derive formulae and equations</b> 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 <b>analyze and interpret data</b>, graphs and <b>figures and draw conclusions</b> of motion in a plane.</p>

	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.	
August	<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 <b>recognizes the concepts</b> of physics related to various natural phenomena- Force, Momentum.</p> <p>The student can <b>explain</b> processes, phenomena and laws with the <b>understanding</b> 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 <b>exhibits creativity</b> and <b>out -of-the-box thinking</b> 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 <b>applies</b> 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>
August & September	<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:</p>	<p>The student <b>recognizes the concepts</b> 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 <b>derives the formulae and proof</b> 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 <b>applies the concept taught</b> to solve the numerical problems associated with natural phenomena and daily life.</p>

	<p>non- conservative forces, motion in a vertical circle; elastic and inelastic collisions in one 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 <b>able to understand the concept</b> 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 <b>derives the formulae and proof</b> 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 <b>applies the concepts</b> taught in solving numerical problems.</p> <p>The student does <b>research and thinks critically</b> 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, 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</p>	<p>The student will be able to <b>understand the concept</b> of center of mass, torque, angular momentum, moment of inertia.</p> <p>The student will be able to <b>derive the formulae and equations</b> 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 down an inclined plane.</p> <p>The student will be <b>able to apply the concepts taught</b> in solving the real life problems in the form of numerical examples.</p>

December	<p>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>The student will be <b>able to understand the concept</b> of elasticity, stress , strain and their types, Hooke's law, modulus of elasticity.</p> <p>The student will be <b>able to apply the concepts</b> of stress, strain and elastic modulus for solving numericals and problems related to construction of different structures etc.</p>
DECEMBER	<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.</p> <p>Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity, Bernoulli's 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>The student will be <b>able to understand the practicality</b> of fluid dynamics in real life ( Pascal's law, Bernoulli's theorem, Magnus effect).</p> <p>The student will be <b>able to understand the concept</b> of surface tension, surface energy, excess pressure, viscosity and will be <b>able to apply these concepts to solve practical problems</b> in the form of numericals.</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; <math>C_p</math>, <math>C_v</math> - 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 <b>able to understand the concept</b> 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 <b>able to derive the formula</b> for the relations between the coefficients of thermal expansions, thermal conductivity, Newton's law of cooling.</p> <p>The students will be <b>able to apply the concepts</b> of thermal conductivity, specific heat, latent heat , principle of calorimetry, thermal expansion to solve various numerical problems associated with daily life.</p>
JANUARY	<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 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</p>	<p>The student <b>will be able to understand</b> the difference between periodic , oscillatory, harmonic motion and simple harmonic motion, forced vibration and resonance.</p> <p>The student <b>will be able to derive equations</b> 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>The student <b>will be able to apply the concepts taught</b> in solving the numerical problems.</p>



	<p>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 equipartition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path, Avogadro's number.</p>	<p>The student <b>will be able to understand the basic concept</b> 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 <b>able to understand the concept</b> 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 <b>able to derive the expression</b> pressure due to an ideal gas, kinetic energy per molecule.</p>
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,</p>	<p>The student <b>will be able to understand</b> the zeroth, first and second law of thermodynamics, isothermal and adiabatic processes, principle of refrigerator and heat engine.</p> <p>The student <b>will be able to derive</b> the relation between the two specific heats of an ideal gas, working formula of carnot engine and will be <b>able to apply the concepts and formulae to solve</b> numerical problems.</p>

	Second law of thermodynamics: gaseous state of matter, change of condition of gaseous state -isothermal, adiabatic, reversible, irreversible, and cyclic processes.	
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## **PHYSICS (PRACTICAL)**

April & May	<p>Experiments</p> <ol style="list-style-type: none"> <li>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.</li> <li>2. To measure diameter of a given wire and thickness of a given sheet using screw gauge</li> <li>3. To find the weight of a given body using parallelogram law of vectors</li> <li>4. Using a simple pendulum, plot its L-T<sup>2</sup> graph and use it to find the effective length of second's pendulum.</li> </ol>	<p>Activities</p> <ol style="list-style-type: none"> <li>1. To make a paper scale of given least count, e.g. 0.2cm, 0.5 cm.</li> <li>2. To measure the force of limiting friction for rolling of a roller on a horizontal plane.</li> <li>3. To study the variation in range of a projectile with angle of projection.</li> </ol>
July, August	<ol style="list-style-type: none"> <li>5. To find the force constant of a helical spring by plotting a graph between load and extension.</li> <li>6. To determine the coefficient of viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.</li> <li>7. To study the relation between frequency and length of a given wire under constant tension using a sonometer.</li> <li>8. To study the relation between the length of a given wire and tension for constant frequency using a sonometer.</li> </ol>	<ol style="list-style-type: none"> <li>4. To study the conservation of energy of a ball rolling down on an inclined plane (using a double inclined plane).</li> <li>5. To study dissipation of energy of a simple pendulum by plotting a graph between square of amplitude and time.</li> <li>6. To study the factors affecting the rate of loss of heat of a liquid.</li> </ol>
September		

## ASSESSMENT PLANNER

Periodic test -1  40 marks	Syllabus  Motion in a straight line
Periodic test-2  40 marks	Rotational motion & Gravitation
Half yearly Exam  Theory- 70 marks  Practical-30 marks	Units, Measurement and dimensions  Motion in a straight line  Motion in a plane  Work, power & energy  4 practical experiments, 3 activities
Annual examination  Theory- 70 marks  Practical-30 marks	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