

**ST. COLUMBA'S SCHOOL**  
**CLASS XII 2023-2024**  
**CONTINUOUS LEARNING PLAN & ASSESSMENT**

**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

**MARCH & APRIL**

**1. The Last Lesson (Flamingo)**

(SDG 4: Quality education

SDG 16: Peace justice and strong institution)

- Summarize the story 'The Last Lesson' in a gap-filling exercise. (Understand)
- Recall the important points of the story through a short answer type quiz and multiple-choice answer quiz. (Remember)
- Write the character sketch of Mr. M. Hamel. (Create)
- Practice time management and overcome the habit of procrastination (Apply)
- Infer the meaning of metaphorical statements in the story (Analyze)
- Evaluate the linguistic chauvinism of Germans who forced their language upon the French (Evaluate)

**2. My Mother at Sixty six (Flamingo)**

(SDG3: Good health and well being)

- paraphrase the poem 'My Mother at Sixty-six' by Kamala Das in a cloze exercise, MCQ and Fill in exercise. (Remember)
- identify the figures of speech used in the poem (Remember)
- justify the title of the poem by writing a note on it. (Evaluate)
- analyse the important phrases in the poem by attempting a reference to context

**MAY**

**1. The Third Level (Vistas)**

(SDG 11: Sustainable cities and communities

SDG 16: Peace justice and strong institutions)

- Summarize the story in a gap-filling exercise. (Understand)
- Recall the important points of the story through a questionnaire, fill-in, reference to the context and MCQ quiz. (Remember)
- Write the character sketch of Mr. Charley (Create)
- The role of Charley's Psychiatrist (Analyze)
- Debate if Charlie had visited third level by writing a short note on it. (Evaluate)

**2. A Thing of Beauty (Flamingo)**

(SDG 15: Life on Land)

- acquaint themselves with the life and works of John Keats
- Explain why the poet describes beauty as a constant source of joy.
- Enumerate the things of beauty listed by the poet in nature
- Justify how beauty can also be found in the grand tales of great lives.
- Discuss the effect of beauty in uplifting spirits and
- identify the poetic devices and their use in the

exercise. (Analyse)

### **3. Aunt Jennifer's Tigers (Flamingo)**

(SDG 5: Gender Equality)

- Describe the tigers created by Aunt Jennifer
- Contrast the personality of the tigers with that of her own
- Identify the figures of speech
- Co-relate the tigers with Aunt Jennifer's desire to escape the oppression of her marriage
- Discuss how Aunt Jennifer is a representative of women all over the world who could not break away from the chains of marriage.

#### **4. Letter to the Editor**

- 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.

**SDG 11 - Sustainable cities and communities**

**SDG 16 - Peace Justice and Strong institution**

#### **5. School Notices and General (Writing)**

- comprehend the purpose of writing notices.
- apply the correct format while writing a notice
- recognise the kind of notices that appear for school events.
- arrange and present relevant information based on inputs provided for the notice.
- compose notices with relevant content on a variety of topics

poem

### **3. Lost Spring (Flamingo)**

(SDG 1: No poverty)

SDG 2: Zero hunger)

- Summarize the stories in a gap-filling exercise. (Understand)
- Recall the important points of the story through a short answer type quiz, multiple-choice answer quiz, reference to the context, and true and false. (Remember)
- Write the character sketch of Saheb and Mukesh (Create)
- Infer the meaning of metaphorical statements and other figures of speech in the story by writing a short note on them (Analyze)
- Discuss the perpetual state of poverty, hazards of engaging children in child labour, the culprits who keep them bound to a life of poverty (Evaluate)
- Reflect on the title of the story.

#### **4. Formal & Informal Invitations and Replies (Writing)**

- Comprehend the purpose of writing informal invitations and their replies.
- apply the correct format while writing an invitation
- recognise the kind of invitations given out to people depending on their relationship with the writer.
- arrange and present relevant information based on inputs provided for the invitation.
- compose invitations with relevant content for a variety of events

## JULY

### 1. Indigo (Flamingo)

(SDG 10: Reduce inequalities.

SDG 16: Peace justice and strong institutions)

- Recall from their history lessons the anecdotes about India's freedom struggle
- Recognize instances of leadership shown by Gandhi
- Compare and contrast the changes brought about in Champaran after Gandhi's visit
- Empathise with the poor farmers always living in fear and under subjugation
- Evaluate the role of Gandhi and his method of work through the chapter
- compose well-structured answers based on their comprehension of the lesson

### 2. Tiger King (Vistas)

(SDG 15: Life on land

SDG3: Good health and well being

SDG 16: Peace justice and strong institution)

- familiarize themselves with specific Royal Indian background information of the author/history of cruel insensitive kings who found pleasure in hunting and killing innocent animals.
- understand the importance of becoming sincere and trustworthy in thought and action.
- Being more sensitized to be understanding, responsible, tolerant and have respect for class identities – democratic citizenship.
- Understand the importance of wildlife conservation and discuss the methods to sustain ecological balance

### 3. Deep water (Flamingo)

(SDG 3: Good health and well being)

- Identify the characteristics of an autobiographical account
- Recount the unpleasant experiences suffered by William that set the fear of drowning within him.

## AUGUST

### 1. Keeping Quiet (Flamingo)

(SDG 16: Peace justice and strong institutions

SDG 12: Responsible consumption and production)

- Identify the benefits of keeping quiet mentioned by the poet
- Explain the poet's call for introspection for all human beings who have divided themselves on the basis of race, language and nationalities.
- Discuss the futility of self-destructive activities and war, carried out by mankind
- Practice sitting in silence to introspect upon one's actions and future plans.
- Identify the poetic devices and explain their use

### 2. Job application - (Writing)

- 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.

### 3. The Interview (Flamingo)

(GOAL 9: Industry, Innovation and Infrastructure

SDG 17 Partnerships for the goals

SDG 4 Quality Education)

- students will be familiar with the prominent personalities discussed in the chapter.
- comprehend the concept and intricacies of an interview
- acquire a new set of vocabulary through the chapter.
- compare and extrapolate what they read in

<ul style="list-style-type: none"> <li>● Relate the experience of inexplicable fear and ways to overcome it.</li> <li>● Describe the intensive training undertaken by the narrator to become a swimmer</li> <li>● Recall how the author tested if he still had residual fears of drowning</li> <li>●</li> </ul> <p><b><u>4. Journey to the end of the Earth (Vistas)</u></b></p> <p>(SDG 13: Climate action)</p> <p>SDG 17: Partnerships for the goals</p> <p>SDG 12: Responsible consumption and production)</p> <ul style="list-style-type: none"> <li>● Foster understanding and respect among the students for the planet</li> <li>● Develop insight in students about how visiting Antarctica gives a glimpse of Earth’s past, present and future</li> <li>● Analyze the threats of global warming on the polar regions</li> <li>● Engage youth as active citizens to save the planet</li> <li>● Instill youth to develop the initiatives for global sustainability</li> </ul>	<p>the chapter with the kind of interviews they have seen on television or have read in newspapers.</p> <ul style="list-style-type: none"> <li>● self-assess their understanding of the text through practice questions.</li> </ul> <p><b><u>4. On the Face of It (Vistas)</u></b></p> <p>(SDG3: Good health and well being)</p> <ul style="list-style-type: none"> <li>● Identify the deformities suffered by Derry and Mr. Lamb</li> <li>● Contrast the personalities of both characters and their attitude towards life.</li> <li>● Explain how Mr. Lamb encourages Derry to look at the bright side of things and adapt to the reality of life bravely.</li> <li>● Empathise with victims of various deformities who feel the sense of alienation and lack of acceptance</li> <li>● Justify the title ‘On the Face of It’</li> </ul> <p><b><u>5. REPORT WRITING (School magazine + general)</u></b></p> <ul style="list-style-type: none"> <li>● understand the use of formal language and need for objectivity while writing reports.</li> <li>● identify points for the introduction, body and conclusion</li> <li>● choose words and phrases to make the content effective</li> <li>● write reports on a variety of topics for newspapers/ school magazines</li> </ul>
<p><b><u>SEPTEMBER</u></b></p> <p><b><u>1. The Rattrap (Flamingo)</u></b></p> <p>(SDG 1: No poverty)</p> <p>SDG2: Zero hunger</p> <p>SDG3: Good health and well being</p> <p>SDG 10: Reduce inequalities.)</p> <ul style="list-style-type: none"> <li>● Recall the synopsis of the story.</li> <li>● analyze the values and thought processes of the peddler throughout the story.</li> <li>● identify the insecurity while tackling personal fears and horrors that lurk in the recesses of our mind.</li> </ul>	<p><b><u>OCTOBER</u></b></p> <p><b><u>1. A Roadside Stand - (Flamingo)</u></b></p> <p>(SDG 10: Reduce inequalities)</p> <p>SDG 1: No poverty)</p> <ul style="list-style-type: none"> <li>● acquaint themselves with the life and works of Robert Browning.</li> <li>● Analyse the central theme of the poem</li> <li>● Identify the poetic devices used in the poem</li> <li>● Paraphrase the poem to convey meaning effectively.</li> <li>● Be sensitised towards the sorrow of the rural folk who yearn to make a decent living.</li> </ul>

- Explain the life-altering effect of Edla's act of kindness towards the peddler.
- Discuss whether the change in the peddler would be a lasting one.

## **2. The Enemy (Vistas)**

(SDG3: Good health and well being)

SDG 4: Quality Education

SDG 16: Peace justice and strong institutions)

- Recall the Second World War as the background of the story that eventually culminates in dropping of atom bombs on Hiroshima and Nagasaki by America.
- List the reasons why Dr. Sadao was considered indispensable for Japan and the General in particular
- Discuss why he and his wife decide to bring an enemy soldier to their house
- Describe the attitude of the servants towards the enemy soldier, the doctor and his wife.
- Justify the actions of the doctor who rose above narrow prejudice and valued humanity
- Elaborate how Dr. Sadao managed to remain loyal to both his country and his profession.
- Justify "The Enemy" as a befitting title for the story

## **2. Memories of Childhood (Vistas)**

(SDG 10: Reduce inequalities

SDG 16: Peace justice and strong institutions)

- Become aware about problems related to casteism and racial discrimination.
- Compare and Contrast the lives and circumstances of the two protagonists
- connect similar situations in different storylines/life experiences.
- Initiate the role of an ambassador in the world ridden with racial and class differences.
- recognize the universal/global theme of inequality.

## **3. ARTICLE ( Writing)**

- understand the language of propaganda and persuasion
- use persuasive language in articulating and defending one's opinion
- identify points for the introduction, body and conclusion
- choose words and phrases to make the content effective
- write articles on a variety of topics

## **4. Going Places (Flamingo)**

(SDG 10: Reduce inequalities.

SDG 3: Good health and well being)

- Discuss the theme of adolescent fantasizing and hero worship
- Identify the teenage aspirations created by Sophie through her vivid imagination
- Recall the instances where Sophie is lost in her imaginative world.
- Distinguish, when Sophie is saying the truth and when she is making up things
- Analyze the need for the writer to explore such a theme.

<p><b><u>NOVEMBER</u></b></p> <p><b><u>1. Poets and Pancakes - (Flamingo)</u></b></p> <p>(SDG 8: Decent work in economic growth SDG 17 Partnerships for the goals)</p> <ul style="list-style-type: none"> <li>● Discuss the narrative which gives an insight into how different people work together despite their casual dislike for each other</li> <li>● Evaluate how the reel life is different from real life</li> <li>● Recount and do a character sketch of Kothamanglam Subbu, Office boy and the Lawyer</li> <li>● Familiarize themselves with one of India’s pioneering and influential film-producing organisations of India, Gemini Studios of Madras (Chennai)</li> <li>● Infer, from the autobiographical text, how the narrator, even though he was entrusted with the clerical task of cutting and pasting newspaper articles, learned a lot about the functioning of Gemini Studios.</li> </ul>	
<p><b><u>DECEMBER</u></b></p> <p>EXAMS</p>	<p><b><u>JANUARY</u></b></p> <p>EXAMS</p>

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

**ASSESSMENT PLANNER**

<p><b>Periodic Test - 1</b></p> <p><b>40 Marks</b></p>	<p><b>SYLLABUS</b></p> <p>Comprehension, Last Lesson, The Third Level, My mother at 66, Aunt Jennifer’s Tigers, Notice Writing, Letter to the Editor</p>
<p><b>Half Yearly Exam</b></p> <p><b>100 Marks</b></p> <p><b>Theory / Prac</b></p> <p><b>80/20</b></p>	<p><b>SYLLABUS</b></p> <p>Comprehension</p> <p>Writing: Notice,, Letter to the Editor, Report Writing and Invitation and Replies</p> <p>Literature: Last Lesson, The Third Level, My mother at 66, On the Face of It, Deep Water, Lost Spring, A Thing of Beauty, Aunt Jennifer’s Tigers, Keeping Quiet, Indigo, Tiger king, Journey to the end of the earth, Interview</p>

<b>PRE BOARD – 1 &amp; 2</b>	<b>SYLLABUS</b>
<b>100 Marks</b>	Comprehension, Notice, Formal/Informal Invitation and Reply, Letter (Application for a Job, Letters to the Editor), Article, Report Writing,
<b>Theory / Prac</b>	Flamingo & Vistas - All Prose and Poems prescribed in CBSE curriculum 2023-24
<b>80/20</b>	

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## **ECONOMICS**

### **(Introductory Macroeconomics and Indian Economic Development)**

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 industrialization, 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

## **MARCH & APRIL**

### **INDIAN ECONOMY ON THE EVE OF INDEPENDENCE (SDG 1, 2, 4, 8, 10, 16, 17)**

Learning Outcomes:

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

- appreciate the state of the Indian economy on the eve of independence
- describe the state of agriculture in the economy
- state the impediments to industrial growth during the British rule
- assess the foreign trade policies introduced by the British
- interpret the demographic condition of the country
- summarize the occupational structure
- discuss the infrastructural development in India during the Colonial rule

## **INDIAN ECONOMY 1950-1990 (SDG 1, 2, 3, 4, 5, 7, 9, 10)**

### Learning Outcomes:

Study of the topic will enable students to

- comprehend the state of the Indian economic system at the time of independence
- appreciate the need for FYPs to be adopted
- justify the common goals of the Five Year Plans
- State the major policy initiatives introduced in Agricultural sector
- List the main features and problems of agriculture (institutional aspects and new agricultural strategy)
- Describe the state of industry in India
- Appreciate the policy initiatives to improve industrial development (IPR 1956; SSI – role & importance)
- Elucidate the state of foreign trade in India

## **MONEY AND BANKING (SDG 8, 9, 12)**

### Learning Outcomes:

On completion of the topic, the students will have the ability to

- Define money and appreciate its primary and secondary functions
- Comprehend what supply of money in an economy includes
- Examine the process of money creation by the commercial banking system
- Hypothesize, using examples, how deposit creation takes place.
- List and appreciate the range of functions of the Central bank
- Relate the policy measures introduced by the RBI to the requirements of the current economic situation

## **GOVERNMENT BUDGET AND THE ECONOMY (SDG 1, 6, 7, 11, 15)**

### Learning Outcomes:

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

- describe the Government budget – its meaning
- appreciate and assess the objectives of the budget
- list and classify its components
- Classify receipts into revenue receipts and capital receipts
- Differentiate between revenue expenditure and capital expenditure
- Discuss the government budget surplus and deficits - revenue deficit, fiscal deficit, primary deficit
- Draw inferences from the various deficits
- Discuss the best strategy for a developing country like India

## **MAY**

## **LIBERALIZATION, PRIVATIZATION, GLOBALIZATION (SDG 8, 9, 17)**

### Learning Outcomes:

On completing the unit, the students will be able to

- Illucidate the features of liberalization and do an appraisal of its benefits
- list the features and assess the advantages of globalization

- state the features and do a critique of the desirability of privatization (LPG policy)
- critically assess the need and success /failure of demonetization and GST in the country

## **JULY**

### **NATIONAL INCOME ACCOUNTING AND RELATED AGGREGATES (SDG 8, 9, 12)**

Learning Outcomes:

Study of the topic will enable students to

- Define Macroeconomics and distinguish it from Micro
- Interpret and classify consumption goods, capital goods, final goods, intermediate goods
- Differentiate between stocks and flows
- Compare gross and net investment
- comprehend depreciation and contrast it with capital loss
- elucidate the circular flow of income (two sector model)
- understand and use the method of calculating National Income - Value Added or Product method
- Appreciate and apply the Expenditure method
- Compute NY using the Income method
- understand and contrast the difference between the aggregates related to National Income: Gross National Product (GNP), Net National Product (NNP), Gross Domestic Product (GDP) and Net Domestic Product (NDP)
- differentiate the estimates at market price and at factor cost
- compare Real and Nominal GDP and defend their relevance
- appreciate the connection between GDP and Welfare

### **RURAL DEVELOPMENT (SDG 2, 8, 9, 11, 16)**

Learning Outcomes:

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

- Comprehend the distinction between rural development versus agricultural growth
- Discuss the main issues of rural credit and marketing
- Appraise the role of cooperatives
- Appreciate the need for agricultural diversification
- Defend the need for and advantages of organic farming

## **AUGUST**

### **DETERMINATION OF INCOME AND EMPLOYMENT (SDG 8, 12)**

Learning Outcomes:

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

- Define Aggregate demand and its components
- Relate to the concepts of propensity to consume and propensity to save (average and marginal)
- Express the Short-run equilibrium output
- outline the investment multiplier and show the working of its mechanism
- Define and contrast the meaning of full employment and involuntary unemployment

- Debate the problems of excess demand and deficient demand
- Discuss and appraise the measures to correct them - changes in government spending, taxes and money supply through Bank Rate, CRR, SLR, Repo Rate and Reverse Repo Rate, Open Market Operations, Margin requirement

### **HUMAN CAPITAL FORMATION IN INDIA (SDG 1, 2, 3, 4, 5, 16)**

Learning Outcomes:

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

- Understand and appreciate how people become a resource
- Identify and express the Role of human capital in economic development
- Discuss the state of human capital formation in India
- outline the education system in India
- Do a critical analysis of its flaws and strengths

### **SUBMISSION OF ECO PROJECT**

Learning Outcomes:

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
- analyze, evaluate and examine the material and break information into parts by identifying motives or causes
- Plan, evaluate and summarize the information collected
- Make inferences and find evidence to support generalizations
- Defend opinions by making judgments about information, validity of ideas, etc
- Compile information together to propose alternative solutions.

### **SEPTEMBER**

### **ENVIRONMENT AND SUSTAINABLE DEVELOPMENT (SDG 2, 13, 14, 15, 17)**

Learning Outcomes:

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

- State the functions and evaluate the role of the environment for human and economic growth and development
- Describe the state of India's environment
- Define the meaning of Sustainable development
- List the effects of economic development on the natural resources and environment, including global warming
- Appreciate the importance and need for sustainable development

### **FIRST TERM EXAMS**

## **OCTOBER**

### **FOREIGN EXCHANGE RATE & BALANCE OF PAYMENTS (SDG 10, 17)**

Learning Outcomes:

Study of the topic will enable students to

- Comprehend the Balance of payments account
- Define the meaning and classify the components of the BOP account
- Discuss the determination of Foreign exchange rate through the demand and supply analysis
- Comprehend the meaning of fixed and flexible rates
- Appreciate their advantages and disadvantages
- Debate the advantages of a managed floating exchange rate regime
- Express the meaning of a deficit and surplus in the BOP account
- Contrast between autonomous and accommodating items in the BOP account
- List ways to meet a deficit

### **EMPLOYMENT (SDG 2, 3, 4, 5, 8)**

Learning Outcomes:

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

- Comprehend the changing structure of employment in India
- Appreciate the growth and changes in work force participation rate in formal and informal sectors
- Identify the problem of general unemployment and growth of informal unemployment
- Evaluate the co-existence of formal and informal sectors in India
- List the policies adopted to improve the employment situation in the economy

## **NOVEMBER**

### **COMPARATIVE DEVELOPMENT EXPERIENCE OF INDIA AND ITS NEIGHBOURS (SDG 10, 11, 17)**

Learning Outcomes:

After studying the topic, the students will be able to

- Compare the development experience of India, China and Pakistan
- Contrast and analyze the programmes and policy initiatives in all three countries
- Paraphrase the rates of economic growth, population transitions, sectoral development and other Human Development Indicators of India, China, Pakistan
- Assess and appraise development strategies adopted in all three countries

### **PROJECT VIVA**

### **DECEMBER - PREBOARD EXAM 1**

### **JANUARY - PREBOARD EXAM 2**

## ASSESSMENT PLANNER

<b>Periodic Assessment - 1</b>  <b>40 Marks</b> <b>15-20 May</b>	<b>SYLLABUS</b>  <u>Macroeconomics:</u> 1 Money and Banking 2. Government Budget and the economy <u>Indian Economy:</u> 1. Indian economy on the eve of Independence 2. Indian economy 1950-1990 3. New Economic policy - Liberalization, Privatization, Globalization
<b>Half Yearly Exam</b>  <b>Theory / Prac</b> <b>80/20</b>  <b>12-22 Sept.</b>	<b>SYLLABUS</b>  <u>Macroeconomics:</u> 1. National Income Accounting and Related Aggregates 2. Determination of Income and Employment 3. Money and Banking 4. Government Budget and the Economy <u>Indian Economy:</u> 1. Indian Economy on the eve of Independence 2. Indian economy 1950-1990 3. Liberalization, Privatization, Globalization 4. Rural Development 5. Human Capital Formation
<b>PRE BOARD – 1 &amp; 2</b>  <b>Theory / Prac</b> <b>80/20</b>  <b>2-11 Dec</b> <b>9-19 Jan</b>	<b>SYLLABUS</b>  <b>Theory Exam: Full Syllabus</b> <b>Practical: Project File + Viva based on chosen topic</b>

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# ENTREPRENEURSHIP

## LEARNING OUTCOMES

- TO UNDERSTAND THE CONCEPTS AND ELEMENTS OF ENTREPRENEURSHIP
- TO FORM BUSINESS ENTITIES
- DISTINGUISH AMONG VARIOUS FORMS OF BUSINESS ENTERPRISE
- TO GET FIRST HAND KNOWLEDGE ABOUT THE FUNCTIONING OF AN INDUSTRY
- USE SIMPLE BUSINESS ARITHMETIC
- UNDERSTAND THE VARIOUS SOURCES OF FUNDS REQUIRED FOR A FIRM

## MARCH

### UNIT – 1

#### ENTREPRENEURIAL OPPORTUNITIES

- SENSING ENTREPRENEURIAL OPPORTUNITIES
- ENVIRONMENT SCANNING

## APRIL

- PROBLEM IDENTIFICATION
- SPOTTING TRENDS
- CREATIVITY AND INNOVATION

### UNIT – 2

#### ENTREPRENEURIAL PLANNING

- FORMS OF BUSINESS ENTITIES
- BUSINESS PLAN
- ORGANISATIONAL PLAN
- OPERATIONAL AND PRODUCTION PLAN
- FINANCIAL PLAN
- MARKETING PLAN
- HUMAN RESOURCE PLANNING

## MAY

### UNIT – 3

#### ENTERPRISE MARKETING

- MARKETING AND SALES STRATEGY
- BRANDING, LOGO , TAGLINE
- PROMOTION STRATEGY

## JULY

### UNIT – 4

#### ENTERPRISE GROWTH STRATEGIES

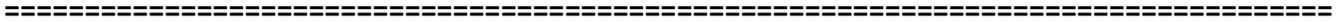
- FRANCHISING: CONCEPTS AND TYPES, ADVANTAGES AND DISADVANTAGES TO FRANCHISOR AND FRANCHISEE
- MERGER AND ACQUISITION: CONCEPT REASON AND TYPES
- REASON FOR MERGERS AND ACQUISITIONS

<p><b><u>AUGUST</u></b>  <b><u>UNIT – 5</u></b>  <b><u>BUSINESS ARITHMETIC</u></b></p> <ul style="list-style-type: none"> <li>• UNIT OF SALE, UNIT COST, UNIT PRICE FOR MULTIPLE PRODUCT</li> <li>• BREAKEVEN ANALYSIS FOR MULTIPLE PRODUCT</li> <li>• SUBMISSION OF PROJECT - 1</li> </ul>	<p><b><u>SEPTEMBER</u></b></p> <ul style="list-style-type: none"> <li>• COMPUTATION OF WORKING CAPITAL</li> <li>• INVENTORY CONTROL AND EQQ</li> <li>• ROI /ROE</li> </ul>
<p><b><u>OCTOBER</u></b>  <b><u>UNIT – 6</u></b>  <b><u>RESOURCE MOBILISATION</u></b></p> <ul style="list-style-type: none"> <li>• CAPITAL MARKET : CONCEPT</li> <li>• PRIMARY MARKET: CONCEPT, METHODS OF ISSUE</li> <li>• SUBMISSION OF PROJECT - 2</li> </ul>	<p><b><u>NOVEMBER</u></b></p> <ul style="list-style-type: none"> <li>• ANGEL INVESTOR: FEATURES</li> <li>• VENTURE CAPITAL : FEATURES AND FUNDING</li> <li>• REVISION OF PAST YEAR PAPERS</li> </ul>
<p><b><u>DECEMBER</u></b></p>	<p><b><u>JANUARY</u></b></p>

**ASSESSMENT PLANNER**

<p>Periodic Test - 1</p> <p>40 Marks</p> <p>15-20 MAY</p>	<p><b>SYLLABUS</b></p> <ul style="list-style-type: none"> <li>• UNIT 1 - ENTREPRENEURIAL OPPORTUNITIES</li> <li>• UNIT 2 – ENTREPRENEURIAL PLANNING</li> </ul>
<p>Half Yearly Exam</p> <p>Theory / Prac</p> <p>70/30</p> <p>80/20</p> <p>60/40</p> <p>Theory</p> <p>100 Marks</p> <p>11-22 SEPTEMBER</p>	<p><b>SYLLABUS</b></p> <ul style="list-style-type: none"> <li>• UNIT 1 - ENTREPRENEURIAL OPPORTUNITIES</li> <li>• UNIT 2 – ENTREPRENEURIAL PLANNING</li> <li>• UNIT 3 – ENTERPRISE MARKETING</li> </ul>

<p><b>PRE BOARD – 1 &amp; 2</b></p> <p>Theory / Prac 70/30 80/20 60/40</p> <p>Theory 100 Marks</p>	<p><b>SYLLABUS</b></p> <ul style="list-style-type: none"> <li>• UNIT 1 - ENTREPRENEURIAL OPPORTUNITIES</li> <li>• UNIT 2 – ENTREPRENEURIAL PLANNING</li> <li>• UNIT 3 – ENTERPRISE MARKETING</li> <li>• UNIT 4 – ENTERPRISE GROWTH STRATEGIES</li> <li>• UNIT 5 – BUSINESS ARITHMETIC</li> <li>• UNIT 6 – RESOURCE MOBILISATION</li> </ul>
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## **MATHEMATICS**

<p><u><b>MARCH</b></u></p> <ul style="list-style-type: none"> <li>• INVERSE TRIGONOMETRIC FUNCTIONS(ITF)</li> </ul>	<p><u><b>APRIL</b></u></p> <ul style="list-style-type: none"> <li>• INVERSE TRIGONOMETRIC FUNCTIONS(ITF) continued</li> <li>• CONTINUITY &amp; DIFFERENTIABILITY</li> <li>• APPLICATIONS OF DERIVATIVES (AOD)</li> </ul>
<p><u><b>MAY</b></u></p> <ul style="list-style-type: none"> <li>• APPLICATIONS OF DERIVATIVES (AOD CONTD.)</li> <li>• INDEFINITE INTEGRALS</li> </ul>	<p><u><b>JULY</b></u></p> <ul style="list-style-type: none"> <li>• INDEFINITE INTEGRALS (CONTD.)</li> <li>• DEFINITE INTEGRALS</li> </ul>
<p><u><b>AUGUST</b></u></p> <ul style="list-style-type: none"> <li>• DEFINITE INTEGRALS(CONTD.)</li> <li>• APPLICATIONS OF INTEGRATION (A.O.I)</li> <li>• DIFFERENTIAL EQUATIONS (D.E.)</li> </ul>	<p><u><b>SEPTEMBER</b></u></p> <ul style="list-style-type: none"> <li>• MATRICES &amp; DETERMINANTS</li> <li>• RELATIONS &amp; FUNCTIONS</li> </ul>
<p><u><b>OCTOBER</b></u></p> <ul style="list-style-type: none"> <li>• RELATIONS &amp; FUNCTIONS(CONTD.)</li> <li>• LINEAR PROGRAMMING</li> <li>• PROBABILITY</li> </ul>	<p><u><b>NOVEMBER</b></u></p> <ul style="list-style-type: none"> <li>• PROBABILITY (CONTD.)</li> <li>• VECTORS</li> <li>• 3D GEOMETRY</li> </ul>

<b><u>DECEMBER</u></b>  <b>PREBOARD 1</b>	<b><u>JANUARY</u></b>  <b>PREBOARD 2</b>
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**ASSESSMENT PLANNER**

<p><b><u>Periodic Test - 1</u></b></p> <p>40 Marks</p>	<p><b><u>SYLLABUS</u></b></p> <ul style="list-style-type: none"> <li>• INVERSE TRIGONOMETRIC FUNCTIONS</li> <li>• CONTINUITY &amp; DIFFERENTIABILITY</li> <li>• AOD</li> </ul>
<p><b><u>Half Yearly Exam</u></b></p> <p>Theory / Practicals</p> <p>80/20</p> <p><b>TOTAL</b> 100 Marks</p>	<p><b><u>SYLLABUS</u></b></p> <ul style="list-style-type: none"> <li>• PA1 SYLLABUS AND</li> <li>• INTEGRALS</li> <li>• AOI</li> <li>• DIFFERENTIAL EQUATIONS</li> </ul>
<p><b><u>PRE BOARD – 1 &amp; 2</u></b></p> <p>Theory / Practicals</p> <p>80/20</p> <p><b>TOTAL</b> 100 Marks</p>	<p><b><u>SYLLABUS</u></b></p> <ul style="list-style-type: none"> <li>• COMPLETE SYLLABUS</li> </ul>

## **LEARNING OUTCOMES**

### **CH- 1 RELATIONS & FUNCTIONS**

The students will be able to:

- i. Identify the various types of relations and functions, apply the concepts to solve related problems.
- ii. Compute the composite and inverse of a function.

### **CH- 2 INVERSE TRIGONOMETRIC FUNCTIONS**

The students will be able to:

- i. Identify the Inverse Trigonometric functions (ITFs) and discuss their principal ranges.
- ii. List the properties of different ITFs
- iii. Apply the concept to solve related problems by associating with their respective domain and range.

### **CH- 3 & 4 MATRICES AND DETERMINANTS:**

The students will be able to:

- i. Represent and solve the given problem using Matrices and Determinants.
- ii. Compute the product and inverse of matrices and solve simultaneous equations using determinants.
- iii. Apply the concept of determinants to find equation of a line, area of a triangle, collinearity of points.

### **CH- 5 CONTINUITY & DIFFERENTIATION**

The students will be able to:

- i. Identify the characteristics of a continuous and differentiable function,
- ii. Distinguish between LHL and RHL, LHD and RHD
- iii. Compare the continuity of different types of functions
- iv. Identify the type of function and the method of differentiation to be used.
- v. Apply the concepts to solve related problems.

### **CH- 6 APPLICATION OF DERIVATIVES (A.O.D)**

The students will be able to:

- i. Recognize the role of derivatives in our day-to-day life.
- ii. Relate the concept of derivatives with rate of change of variables.
- iii. Identify increasing and decreasing functions.
- iv. Visualize the geometrical interpretation of derivatives.
- v. Compute maxima and minima of a function.
- vi. Apply the concepts to solve related problems.

## **CH-7 INTEGRALS**

The students will be able to:

- i. Point out the difference between derivatives and integrals and compare the geometrical interpretation of both and relate it to various problems.
- ii. Distinguish between the various functions given, identify the different techniques of integration, and apply them to solve related problems.
- iii. Compute integrals as a limit of a sum.
- iv. Recognise the properties of definite integrals and use them to solve problems.
- v. Compare definite and indefinite integrals.

## **CH- 8 APPLICATION OF INTEGRALS**

The students will be able to:

- i. Apply the concept of integration to compute the area under curves.
- ii. Recognise the different kinds of areas and use appropriate methods to compute them.

## **CH- 9 DIFFERENTIAL EQUATIONS**

The students will be able to:

- i. Formulate and solve differential equations.
- ii. Identify the various types of differential equations and choose the appropriate method to solve them.

## **CH- 10, 11: VECTORS & 3-D**

The students will be able to:

- i. Visualise the concepts of vectors and 3-D and be able to correlate them suitably.
- ii. Reduce a problem to the basic, visualise it and apply the concepts to solve various complex problems.

## **CH- 12 LINEAR PROGRAMMING**

The students will be able to:

- i. Recognise and formulate a LPP.
- ii. Describe the concept of feasible region, corner points, bounded & unbounded region and illustrate them using graph.
- iii. Apply the concept to solve manufacturing problems, diet problems and transportation problems.

## **CH- 13 PROBABILITY**

The students will be able to:

- i. Recall the concepts of probability taught in class XI, appreciate the concept of conditional probability and solve the related problems.

- ii. Distinguish between dependent and independent events and solve the related problems.
- iii. Apply the multiplication theorem, Bayes theorem and Binomial distribution suitably.
- iv. Compute the mean and variance of a probability distribution.
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## **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 SYSTEM

#### **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

### MARCH

Students were requested to revise the basic concepts of organic chemistry before they join the classes in March

#### SOLUTIONS( SDG 13, 14,15 & 6)

- to identify the formation of different types of solutions on the basis of different solute and solvent
- to express concentration of solution in different units

### APRIL

#### SOLUTIONS( SDG 13, 14,15 & 6)

- to state and explain Henry's law and Raoult's law for different solutions and solve problems based on them.
- to distinguish between Ideal and non-ideal solutions
- to identify the deviations from Raoult's law for various solutions
- to describe colligative properties of solutions and correlate these with molar mass of solute
- to explain Abnormal colligative properties exhibited by solutes in solutions

#### ELECTROCHEMISTRY ( SDG 9,7,12 &4)

- to understand and demonstrate the working of Galvanic cells and SHE
- to define and paraphrase resistivity, conductivity, cell constant, molar conductivity, study and derive the relation between them

<p><b><u>MAY</u></b> <b><u>ELECTROCHEMISTRY (contd)</u></b></p> <ul style="list-style-type: none"> <li>to describe the method for the measurement of the quantities mentioned and discussed in April.</li> <li>to justify the variation of molar conductivity and conductivity with concentration</li> <li>to enunciate Kohlrausch's law and learn it's application</li> <li>to differentiate between ionic and metallic conductance</li> <li>to state the various laws of electrolysis and apply them to solve numericals based on them</li> <li>to outline the working of various cells and their types</li> <li>to discuss and compare the various methods used to prevent corrosion and it's nature.</li> </ul> <p><b><u>CHEMICAL KINETICS (SDG 4 &amp;5)</u></b></p> <ul style="list-style-type: none"> <li>to define and differentiate between the average and instantaneous rate of reaction</li> <li>to express the rate of reaction with respect to change in concentration of reactants and products with time</li> <li>To define rate constant and examine its variation with temperature using the Arrhenius equation</li> <li>to derive integrated rate equations for the zero and first order reactions</li> <li>to describe collision theory of reaction rates and use it to describe the effect of concentration, temperature and catalyst on the rate of reaction</li> <li>to differentiate between molecularity and order of a reaction and learn to calculate them using the reaction mechanisms given</li> </ul>	<p><b><u>JULY</u></b></p> <p><b><u>Haloalkanes And Haloarenes (SDG 3,9,12 &amp;16)</u></b></p> <ul style="list-style-type: none"> <li>to study and apply the various IUPAC nomenclature rules to name Haloalkanes and haloarenes</li> <li>to study, describe and apply the reactions of haloalkanes and haloarenes and their uses in industries</li> <li>to understand the stereochemistry involved in the reactions of haloalkanes</li> <li>To develop ways to inter convert organic compounds based on the reactions studied above</li> </ul> <p><b><u>ALCOHOL, PHENOL AND ETHERS (SDG 4,9 12 &amp;16)</u></b></p> <ul style="list-style-type: none"> <li>To apply the nomenclature rules for naming various alcohols ,ethers and phenols</li> <li>To learn and inter-relate the preparation, properties and uses of alcohols, ethers and phenols</li> <li>To develop ways to inter convert organic compounds based on the reactions studied above</li> </ul>
<p><b><u>AUGUST</u></b></p> <p><b><u>ALDEHYDES, KETONES AND CARBOXYLIC ACIDS (SDG 3,9 12 &amp;16)</u></b></p> <ul style="list-style-type: none"> <li>To study and apply the nomenclature rules for aldehydes, ketones and carboxylic acids</li> <li>To learn and associate the preparation,</li> </ul>	<p><b><u>SEPTEMBER</u></b></p> <p><b><u>BIOMOLECULES (SDG 1,2,3,14 &amp;16)</u></b></p> <ul style="list-style-type: none"> <li>To define biomolecules like carbohydrates proteins and nucleic acids</li> <li>classify carbohydrates, proteins and</li> </ul>

<p>properties and uses of aldehydes, ketones and carboxylic acids</p> <ul style="list-style-type: none"> <li>• To distinguish between different functional groups given in the chapter</li> <li>• To develop ways to inter convert organic compounds based on the reactions studied above</li> </ul> <p><b><u>ORGANIC COMPOUNDS CONTAINING NITROGEN (SDG 3,9 12 &amp;16)</u></b></p> <ul style="list-style-type: none"> <li>• to classify amines as -primary, secondary and tertiary amines and name them according to IUPAC and common nomenclature</li> <li>• to study and associate the preparation, properties and uses of various amines</li> <li>• To distinguish between primary, secondary and tertiary amines</li> <li>• To develop ways to inter convert organic compounds based on the reactions studied above</li> </ul>	<p>nucleic acids according to their structures.</p> <ul style="list-style-type: none"> <li>• to explain the difference between DNA and RNA</li> <li>• to express the various sources of vitamins and explain their deficiency diseases</li> </ul>
<p><b><u>OCTOBER</u></b></p> <p><b><u>d AND f- BLOCK ELEMENTS (SDG 8,9,11,14 &amp;15)</u></b></p> <ul style="list-style-type: none"> <li>• Understand, interpret and predict the occurrence electronic configuration trends in physical and chemical properties of transition metals</li> <li>• To demonstrate and explain the general trends in properties of first row transition metals that is the metallic nature ,ionization enthalpy, oxidation states ,color catalytic properties, magnetic properties ,interstitial compounds an alloy formation</li> <li>• Lanthanoids and Actinoids - to compare and understand the difference between their configuration, Oxidation states, lanthanide contraction and interpret its consequences</li> </ul>	<p><b><u>NOVEMBER</u></b></p> <p><b><u>COORDINATION COMPOUNDS (SDG 3&amp;7)</u></b></p> <ul style="list-style-type: none"> <li>• To define, compute and express coordination compounds ,O.S , C.N, ligands and study various types of ligands</li> <li>• To understand and predict the magnetic properties, shapes and IUPAC nomenclature of coordinate compounds</li> <li>• To understand and explain bonding using Werner's theory valence bond theory and crystal field theory in coordinate compounds</li> </ul>
<p><b><u>DECEMBER</u></b></p> <p>Revision of the syllabus and completion of topics left from the previous month.</p> <p>Project work</p> <p>Practical Exam</p> <p><b><u>Pre board</u></b></p>	<p><b><u>JANUARY</u></b></p> <p><b><u>Pre board</u></b></p>

## ASSESSMENT PLANNER

<b>Periodic Test - 1</b>  <b>40 Marks</b>	<b>SYLLABUS</b> <b>ELECTROCHEMISTRY</b> <b>SOLUTIONS</b> <b>BASICS OF ORGANIC CHEMISTRY OF CLASS 11</b>
<b>Half Yearly Exam</b>  <b>Theory / Prac</b> <b>70/30</b> <b>Total 100 Marks</b>	<b>SOLUTIONS</b> <b>ELECTROCHEMISTRY</b> <b>CHEMICAL KINETICS</b> <b>HALOALKANES AND HALOARENES</b> <b>ALCOHOLS, PHENOLS AND ETHER</b> <b>ORGANIC COMPOUNDS CONTAINING NITROGEN</b>  <b>PRACTICALS</b> <b>TITRATION OF POTASSIUM PERMANGANATE AND MOHRS SALT</b> <b>TITRATION OF POTASSIUM PERMANGANATE AND OXALIC ACID</b> <b>ANALYSIS OF FOOD COMPONENTS</b> <b>IDENTIFICATION OF FUNCTIONAL GROUP</b> <b>CHROMATOGRAPHY</b>
<b>PRE BOARD – 1 &amp; 2</b>  <b>Theory / Practicals</b> <b>70/30</b>  <b>Total</b> <b>100 Marks</b>	<b>SYLLABUS</b> <b>SOLUTIONS</b> <b>ELECTROCHEMISTRY</b> <b>HALOALKANES AND HALOARENES</b> <b>ALCOHOLS, PHENOLS AND ETHER</b> <b>ALDEHYDES, KETONES AND CARBOXYLIC ACIDS</b> <b>ORGANIC COMPOUNDS CONTAINING NITROGEN</b> <b>d AND f BLOCK ELEMENTS</b> <b>CHEMICAL KINETICS</b> <b>CO-ORDINATION CHEMISTRY</b> <b>BIOMOLECULES</b>  <b>PRACTICAL</b>  <b>TITRATION OF POTASSIUM PERMANGANATE AND MOHRS SALT</b> <b>TITRATION OF POTASSIUM PERMANGANATE AND OXALIC ACID</b> <b>ANALYSIS OF FOOD COMPONENTS</b> <b>IDENTIFICATION OF FUNCTIONAL GROUP</b> <b>CHROMATOGRAPHY</b> <b>INORGANIC SALT ANALYSIS</b>

# ACCOUNTS

## 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.

## MARCH & APRIL

### TOPICS WITH LEARNING OUTCOMES

#### **Analysis of Financial Statements:**

#### **Financial Statements of a Company:**

##### LEARNING OUTCOMES

The student will be able to :

- . Locate and Choose the correct placement of the Accounting information.
- . Interrelate the items from the various financial statements.
- . Organize and explain its relevance.

Financial statements of a company:

Balance sheet, Profit and loss account or Statement of profit and loss, Notes to accounts. Format of balance sheet heads and contents of balance sheet statement of profit and loss format of statement of profit and loss heads and contents of statement of profit and loss

#### **Financial Statement Analysis:**

The student will be able to :

- . Recall the meaning of financial statement analysis,
  - . Apply the tools or techniques of financial statement analysis,
  - . Enumerate the types of financial statement analysis,
  - . Distinguish between horizontal analysis and vertical analysis,
  - . Assess the process of financial statement analysis,
  - . Restate the purposes and significance of financial statement analysis,
  - . Explain the uses of financial statement analysis,
  - . Express the parties interested in financial statement analysis,
- Outline the limitations of financial statement analysis.

#### **Analysis**

#### **Accounting Ratios :**

The study of this chapter would enable the student to:

- . Recite the meaning of ratio and accounting ratio,

- . List the meaning of ratio analysis,
- . Describe the objectives and advantages of ratio analysis, limitations of ratio analysis,
- . Classify the types of accounting ratios:
- . Interpret and solve:
  - liquidity ratios,
  - solvency ratios,
  - activity ratios,
  - profitability ratios.

## MAY

### TOPICS WITH LEARNING OUTCOMES

#### Cash Flow Statements:

The study of this chapter will enable the student to

- . Demonstrate the meaning of cash flow and cash flow statement,
- . Lay out the objectives of cash flow statement,
- . State the importance or uses of cash flow statement,
- . Express the limitations of cash flow statement,
- . Computation of cash flow from different activities:
  - cash flow from operating activities
  - cash flow from investing activities
  - cash flow from financing activities,
- . Preparation of cash flow statement.

#### Project Work

## JULY

### TOPICS WITH LEARNING OUTCOMES

#### Partnership Accounting

##### Partnership Accounting:

Fundamentals: The study of the chapter would enable the student to

- . Understand the meaning and definition of partnership,
- . Enumerate the essential features and characteristics of partnership,
- . Tell the rights of partners,
- . Generalise the partnership deed,
- . Infer the provisions affecting accounting treatment in the absence of partnership deed,
- . Treatment of interest on loan by the partner to the firm and by the firm to the partner,
- . Clarity of the distribution of profit among partners –
- . Drawing up of Profit and Loss appropriation account,
- . Using special aspects of partnership accounts:
  - . conceptual base of
    - partner's capital accounts - under fixed and fluctuating methods,
    - salary or commission to partners,
    - interest on partners' capital,
    - interest on partners drawings,
    - adjustments for incorrect appropriations of profits in the past,

- . Solve using accounting base the guarantee of profit.

**Goodwill (Nature & Valuation) :** The study of this chapter would enable students to:  
Know the meaning of goodwill, c

- . Understand the characteristics or features and nature of goodwill,
  - . Express the need for valuing Goodwill,
  - . List the factors affecting the value of goodwill,
  - . State classification of goodwill,
  - . Name methods of valuation of goodwill :
    - average profit method,
    - simple average profit method ,
    - weighted average profit method,
    - super profit method,
- capitalisation method – capitalisation of average profit, capitalisation of super profit,
- . Locate difference between average profit and super profit.

**Change in profit sharing ratio:** The study of this chapter would enable the students to :

- . Recognize the concept of reconstitution of partnership,
- . Point the meaning of change in profit sharing ratio among the existing partners,
- . Determination of sacrificing ratio and gaining ratio,
- . Computation and Calculation of  
accounting of goodwill,  
accounting of reserves,  
accumulated profits and losses,
- . Formulate Revaluation of Assets and reassessment of liabilities,
- . Preparation of balance sheet of the reconstituted firm.

## AUGUST

### TOPICS WITH LEARNING OUTCOMES

**Admission of a partner :** The study of this chapter would enable students to :

- . Know admission of a partner,
- . Quote the effects of admission of a partner,
- . Infer the meaning and calculation of new profit sharing ratio,
- . Understand and apply the meaning and calculation of  
sacrificing ratio,  
valuation and adjustment of goodwill as per accounting Standard 26,  
revaluation of Assets and reassessment of liabilities,
- . Preparation of revaluation account,
- . Illustrate adjustment of deferred revenue expenditure,
- . Interpret the accounting of reserves,  
accumulated profits and losses.

**Retirement of a Partner:**

The students would be able to :

- . Describe the meaning of retirement of a partner,
- . Determine new profit sharing ratio of the remaining or continuing partner's after retirement of a partner,
- . Calculate gaining ratio of the remaining or continuing partners,
- . Distinguish between sacrificing ratio and gaining ratio,
- . Value and adjust the goodwill on retirement of a partner,
- . Revalue the Assets and Reassess the liabilities on retirement of a partner,
- . Adjust reserves accumulated losses and profits on retirement of a partner, c
- . Compute of amount due to the retiring partner,
- . Apply the methods of payments of the amount due to the retiring partner.

## SEPTEMBER

### TOPICS WITH LEARNING OUTCOMES

Death of a partner: The study of the chapter would enable students to:

- . Conceptualise the death of a partner with change in profit sharing ratio:
- . Computate new profit -sharing ratio and gaining ratio of the remaining for continuing partners after death of a partner,
- . Adjust goodwill on death of a partner,
- . Match the revaluation of Assets and reassessment of liabilities,
- . Recall adjustment of reserves accumulated profits and losses,
- . Work out the share of profit or loss of deceased partner in the year of death,
- . Computation of the amount due to deceased partner, payment of amount due to legal heirs or executors of the deceased partner.

Dissolution of the Firm: The study of the chapter would enable the student to:

- . Explain the meaning of dissolution of partnership firm,
- . Remember the modes of dissolution of a firm,
- . Distinguish between dissolution of firm and dissolution of partnership,
- . Draw settlement of accounts,
- . Distinguish between firm's debt and private debt's,
- . Accounting on dissolution of partnership firm,
- . Distinguish between revaluation account and realisation account.

## OCTOBER

### TOPICS WITH LEARNING OUTCOMES

Accounting for Companies:

Issue of Shares: The study of this chapter would enable the student to:

- . Explain the meaning and characteristics of a company,

- . Distinguish between partnership and company,
  - . Recall kinds of companies,
  - . Express the meaning of share Capital,
  - . Classify kinds of shares,
  - . Clarity of the accounting treatment of issue of shares for cash at par and at premium,
  - . Demonstrate the oversubscription of shares, undersubscription of shares,
  - . Follow the accounting treatment of calls in arrears and calls in advance,
  - . Apply the accounting treatment of shares issued for consideration other than cash,
  - . Evaluate the procedure and accounting treatment of forfeiture and reissue of shares,
  - . Define the concept of preferential allotment,
- concept of private placement of shares,  
concept of employees stock option plan.

## NOVEMBER

### TOPICS WITH LEARNING OUTCOMES

Issue of Debentures: The study of this chapter would enable the student to:

- . Explain the meaning and characteristics of features of debenture,
- . Outline the meaning of bond,
- . Distinguish between debenture and share, debenture holder and shareholder,
- . Classify the types of debentures,

The study of this chapter would enable the student to :

Know the Accounting treatment of  
issue of debentures for cash at par,  
at premium and discount,

issue of debentures for consideration other than cash,

issue of debentures as collateral security,

. Infer the accounting treatment of interest on debentures, writing off discount or loss on issue of debentures.

## DECEMBER

### TOPICS WITH LEARNING OUTCOMES

### Revision

## ASSESSMENT PLANNER 2023-2024

<b>Periodic Test - 1</b> <b>40 Marks</b> <b>15<sup>th</sup> May to 20<sup>th</sup> May</b>	<b>SYLLABUS</b> Analysis of Financial Statements: Financial Statements of a Company Analysis Tools of Financial Statements Accounting Ratios Cash Flow Statements
<b>Half Yearly Exam</b> <b>Theory / Prac</b> <b>80/20</b> <b>Theory</b> <b>80 Marks</b> <b>11<sup>th</sup> – 22<sup>nd</sup> Sept.</b>	<b>SYLLABUS</b> Analysis of Financial Statements: Financial Statements of a Company Analysis Accounting Ratios Cash Flow Statements  Partnership Accounting: Fundamentals Goodwill (Nature & Valuation) Change in profit sharing ratio Admission of a partner Retirement & Death of a Partner Dissolution of the Firm
<b>PRE BOARD – 1 &amp; 2</b> <b>Theory / Prac</b> <b>80/20</b> <b>Theory</b> <b>80 Marks</b> <b>(30<sup>th</sup> Nov to 11<sup>th</sup> Dec)</b> <b>(9<sup>th</sup> Jan to 20<sup>th</sup> Jan)</b>	<b>SYLLABUS</b> Analysis of Financial Statements: Financial Statements of a Company Analysis Tools of Financial Statements Accounting Ratios Cash Flow Statements Partnership Accounting: Fundamentals Goodwill (Nature & Valuation) Change in profit sharing ratio Admission of a partner Retirement & Death of a Partner Dissolution of the Firm Issue of Shares Issue of Debentures

# 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:**

#### **MARCH- APRIL**

#### **Chapter-1: Nature and Significance of Management (SDG -5, 6 , 7 and 10)**

- **Concept includes meaning and features**
- **Management as a Science, Art and Profession**
- **Levels of management**
- **Objectives and importance of management**
- **Management functions**
- **Coordination- concept and importance**

#### **LEARNING OUTCOMES**

#### **Chapter-1**

- **Summarize the concept of management.**
- **Examine the nature of management as a science, art and profession.**
- **State the role of levels of management.**
- **Match the functions of management.**
- **Outline the characteristics and importance of coordination.**

<p><b><u>Chapter-2: Principles of Management (SDG-3, 5, 6, 7 and 10)</u></b></p> <ul style="list-style-type: none"> <li>Principles of management- concept and significance</li> <li>Fayol’s principles of management</li> </ul>	<p><b><u>Chapter-2</u></b></p> <ul style="list-style-type: none"> <li>Identify the concept of principles of management.</li> <li>Summarize the principles of management developed by Fayol.</li> </ul>
<p style="text-align: center;"><b><u>MAY</u></b></p> <p><b><u>Chapter-2</u></b></p> <ul style="list-style-type: none"> <li>Taylor’s Scientific management- principles and techniques</li> <li>PA 1 Exam</li> </ul>	<p><b><u>LEARNING OUTCOMES</u></b></p> <p><b><u>Chapter-2</u></b></p> <ul style="list-style-type: none"> <li>Compare the contributions of Fayol and Taylor.</li> <li>Discuss the taylor’s principles and techniques.</li> </ul>
<p style="text-align: center;"><b><u>JULY</u></b></p> <p><b><u>Chapter-3: Business Environment (SDG-4, 6, 7, 8 and 9)</u></b></p> <ul style="list-style-type: none"> <li>Business environment-concept and importance</li> <li>Dimensions of business environment</li> <li>Demonetization- concept and features.</li> </ul> <p><b><u>Chapter-4: Planning (SDG- 8 and 9)</u></b></p> <ul style="list-style-type: none"> <li>Concept, importance and limitation.</li> <li>Planning process</li> <li>Single use and standing plans.</li> </ul> <p><b><u>Chapter-5: Organising (SDG- 8 and 9)</u></b></p> <ul style="list-style-type: none"> <li>Concept and importance</li> <li>Organising Process</li> <li>Organisation Structure-Functional and Divisional</li> </ul>	<p><b><u>LEARNING OUTCOMES</u></b></p> <p><b><u>Chapter-3</u></b></p> <ul style="list-style-type: none"> <li>Identify and give examples of business environment.</li> <li>Classify the dimensions of business environment.</li> <li>Examine the concept and features of demonetization</li> </ul> <p><b><u>Chapter-4</u></b></p> <ul style="list-style-type: none"> <li>Examine the concept of planning.</li> <li>List the steps in the process of planning.</li> <li>Classify and differentiate the types of plans.</li> </ul> <p><b><u>Chapter-5</u></b></p> <ul style="list-style-type: none"> <li>State the concept of organizing and express the importance of organising.</li> <li>Outline the steps in the process of organising.</li> <li>Classify functional and divisional structures of organisation and interrelate the concepts of formal and informal organization</li> </ul>
<p style="text-align: center;"><b><u>AUGUST</u></b></p> <p><b><u>Chapter-5: Organising (SDG- 8 and 9)</u></b></p> <ul style="list-style-type: none"> <li>Delegation-Concept, elements and importance</li> <li>Decentralization-Concept and importance</li> </ul> <p><b><u>Chapter-11: Marketing Management (SDG-8, 9 and 11)</u></b></p> <ul style="list-style-type: none"> <li>Marketing- Concept, Functions and Philosophies</li> <li>Marketing Mix- Concept and elements</li> <li>Product-Branding, Labelling and Packaging</li> <li>Price-Concept, Factors determining</li> </ul>	<p><b><u>LEARNING OUTCOMES</u></b></p> <ul style="list-style-type: none"> <li>Discuss the concept and elements of delegation.</li> </ul> <p>Express the concept of decentralisation and distinguish between delegation and decentralisation.</p> <p><b><u>Chapter-11</u></b></p> <ul style="list-style-type: none"> <li>Describe the functions of marketing and classify the marketing philosophies. Explain the concept of marketing mix and distinguish the elements of marketing mix.</li> <li>Generalise the concept of product as an element of marketing mix.</li> <li>Define the concept of price as an</li> </ul>

<p>price</p> <ul style="list-style-type: none"> <li>• Physical Distribution- concept, components and channels of distribution.</li> <li>• Promotion- Concept and elements, advertising, Personal Selling, Sales Promotion and Public Relations.</li> </ul> <p><b><u>Chapter-12: Consumer Protection (SDG- 5, 8 and 10)</u></b></p> <ul style="list-style-type: none"> <li>• Concept and importance of consumer protection</li> <li>• Consumer Protection Act, 2019:</li> <li>• Meaning of consumer</li> <li>• Rights and responsibilities of consumers</li> <li>• Who can file a complaint?</li> <li>• Redressal machinery</li> <li>• Remedies available</li> </ul> <p>Consumer awareness- Role of consumer organizations and NGO's.</p>	<p>element of marketing mix and state the factors determining price of a product.</p> <ul style="list-style-type: none"> <li>• Define the concept of physical distribution and categorise the various channels of distribution.</li> <li>• State the concept of promotion as an element of marketing mix and describe the elements of promotion mix.</li> </ul> <p>•</p> <p><b><u>Chapter-12</u></b></p> <ul style="list-style-type: none"> <li>• Define the concept of consumer protection and judge the scope of Consumer Protection Act, 2019.</li> <li>• Infer the concept of a consumer according to CPA, 2019.</li> <li>• Identify the consumer rights.</li> <li>• Point out the responsibilities of consumers.</li> <li>• Describe who can file a complaint and against whom?</li> <li>• Categorise the legal redressal machinery under CPA, 2019.</li> <li>• Examine the remedies available and the role of NGO's in protecting consumer's interests.</li> <li>•</li> </ul>
<p style="text-align: center;"><b><u>SEPTEMBER</u></b></p> <p><b><u>Chapter-6: Staffing (SDG-5, 8 and 9)</u></b></p> <ul style="list-style-type: none"> <li>• Concept and importance of staffing</li> <li>• Staffing as a part of HRM</li> <li>• Staffing process</li> <li>• Recruitment process</li> <li>• Selection process</li> <li>• Training and Development- Concept, importance and methods of training.</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>• Discuss the importance of staffing.</li> <li>• List the specialised duties and activities performed by HRM.</li> <li>• Outline the steps in the process of staffing.</li> <li>• Define the meaning of recruitment and classify the sources of recruitment.</li> <li>• Memorize the steps involved in the process of selection</li> <li>• Define the concept of training and development.</li> <li>• Classify on the job and off the job methods of training.</li> </ul>

<p style="text-align: center;"><b><u>OCTOBER</u></b></p> <p><b><u>Chapter-7: Directing (SDG- 5, 8, 9 and 10)</u></b></p> <ul style="list-style-type: none"> <li>• Concept and importance</li> <li>• Elements of directing</li> <li>• Maslow’s need hierarchy theory of motivation and incentives.</li> <li>• Concept and styles of leadership.</li> <li>• Communication-concept, types and barriers to communication.</li> </ul> <p><b><u>Chapter-8: Controlling (SDG- 8, 9 and 10)</u></b></p> <ul style="list-style-type: none"> <li>• Concept and importance</li> <li>• Relationship between planning and controlling.</li> <li>• Steps in process of control.</li> </ul>	<p style="text-align: center;"><b><u>LEARNING OUTCOMES</u></b></p> <p><b><u>Chapter-7:</u></b></p> <ul style="list-style-type: none"> <li>• Define the concept of directing.</li> <li>• List the various elements of directing.</li> <li>• Draw Maslow’s Need Hierarchy Theory of Motivation.</li> <li>• Distinguish the various styles of leadership.</li> <li>• List the elements of the communication process and list the various barriers to effective communication</li> </ul> <p><b><u>Chapter-8:</u></b></p> <ul style="list-style-type: none"> <li>• Define and express the concept of controlling.</li> <li>• Interrelate planning and controlling functions.</li> <li>• List down the steps in the process of controlling.</li> </ul>
<p style="text-align: center;"><b><u>NOVEMBER</u></b></p> <p><b><u>Chapter-9: Financial Management( SDG- 8 and 9)</u></b></p> <ul style="list-style-type: none"> <li>• Concept, role and objectives of financial management.</li> <li>• Financial decisions- investment, financing and dividend- meaning and factors affecting.</li> <li>• Financial Planning- concept and importance.</li> <li>• Capital Structure- Concept and factors affecting capital structure.</li> <li>• Fixed and Working Capital- Concept and factors affecting their requirements.</li> </ul> <p><b><u>Chapter-10: Financial market (SDG- 8 and 9)</u></b></p> <ul style="list-style-type: none"> <li>• Financial Markets: Concept, Functions and types</li> <li>• Money Market.</li> <li>• Capital market and its types.</li> <li>• Stock Exchange- Functions and trading procedure.</li> <li>• SEBI -Objectives and Functions</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>• Define the concept of financial management and outline the objectives of financial management.</li> <li>• Compare three financial decisions and the factors affecting them.</li> <li>• Point out the objectives and importance of financial planning.</li> <li>• Determine the factors determining the choice of an appropriate capital structure of a company.</li> <li>• Organise the factors determining the requirements of fixed and working capital.</li> </ul> <p><b><u>Chapter-10</u></b></p> <ul style="list-style-type: none"> <li>• Explain the concept of financial market and outline the functions of financial market.</li> <li>• Examine the concept of money market and identify the various money market instruments.</li> <li>• Interrelate primary and secondary markets as types of capital market.</li> </ul>

	<ul style="list-style-type: none"> <li>• Identify the methods of floating new issues in the primary market.</li> <li>• Point out the functions of a stock exchange and recall the trading procedure in a stock exchange.</li> <li>• State the objectives and functions of SEBI.</li> </ul>
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**ASSESSMENT PLANNER**

<p><b><u>Periodic Test - 1</u></b></p> <p>40 Marks FROM 15<sup>th</sup> MAY TO 20<sup>th</sup> MAY</p>	<p><b><u>SYLLABUS</u></b></p> <p>Chapter-1: Nature and Significance of management Chapter-2: Principles of management</p>
<p><b><u>Half Yearly Exam</u></b></p> <p>Theory / Prac 80/20 FROM 12<sup>th</sup> SEPT TO 22<sup>nd</sup> SEPT</p>	<p><b><u>SYLLABUS</u></b></p> <p>Chapter-1: Nature and Significance of management Chapter-2: Principles of management Chapter-3: Business Environment Chapter-4: Planning Chapter-5: Organising Chapter-11: Marketing Management</p>
<p><b><u>PRE -BOARD – 1 &amp; 2</u></b></p> <p>Theory / Prac 80/20 30<sup>th</sup> NOV TILL 11<sup>th</sup> DEC: PB1 EXAM 9<sup>th</sup> JAN TILL 20<sup>th</sup> JAN: PB2 EXAM</p>	<p><b><u>SYLLABUS</u></b></p> <p>Theory- 80 marks- Full Syllabus Practical- 20 marks- Project Based</p>

# **INFORMATICS PRACTICES**

## **GENERAL LEARNING OUTCOMES**

- Create Series, Data frames and apply various operations.
- Visualize data using relevant graphs.
- Design SQL queries using Aggregate functions.
- Import/Export data between SQL database and Pandas.
- Learn terminology related to networking and internet.
- Identify internet security issues and configure browser settings.
- Explain the impact of technology on society including gender and disability issues.

## **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

## **MAR-APRIL 2023**

### **DATA HANDLING USING PANDAS –I (DATA STRUCTURES, SERIES, DATAFRAMES)**

#### **LEARNING OUTCOMES**

- Introduction to Python libraries- Pandas, Matplotlib.
- Data structures in Pandas - Series and Data Frames.
- Series: Creation of Series from – ndarray, dictionary, scalar value; mathematical operations; Head and Tail functions; Selection, Indexing and Slicing..

## **MAY 2023**

### **SOCIETAL IMPACTS**

#### **LEARNING OUTCOMES**

- Understand the impact of technology on society, including gender and disability issues.
- Understand what is cybercrime and the need of Cyber Security
- Overview of Indian IT Act.
- E-waste: hazards and management.
- Awareness about health concerns related to the usage of technology.

## **JULY 2023**

### **DATA HANDLING USING PANDAS – II**

#### **LEARNING OUTCOMES**

- Data Frames: creation - from dictionary of Series, list of dictionaries, Text/CSV files; display; iteration; Operations on rows and columns: add, select, delete, rename;
- Head and Tail functions; Indexing using Labels, Boolean Indexing;
- Importing/Exporting Data between MySQL database and Pandas

## **AUGUST 2023**

### **DATA VISUALIZATION**

#### **LEARNING OUTCOMES**

- Purpose of plotting; drawing and saving following types of plots using Matplotlib – line plot, bar graph, histogram, piechart, frequency polygon, box plot and scatter plot.
- Customizing plots: color, style (dashed, dotted), width; adding label, title, and legend in plots

## **SEPTEMBER 2023**

### **DATABASE QUERY USING SQL**

#### **LEARNING OUTCOMES**

- Learn how to retrieve and manipulate data from one or more tables.
- Learn how to filter data based upon multiple conditions.
- Update and insert data into the existing tables.
- Understand how the relationships between tables will affect the SQL

## **OCTOBER – NOVEMBER 2023**

### **INTRODUCTION TO COMPUTER NETWORKS**

#### **LEARNING OUTCOMES**

- Introduction to networks, Types of network: LAN, MAN, WAN.
- Network Devices: modem, hub, switch, repeater, router, gateway
- Network Topologies: Star, Bus, Tree, Mesh
- Introduction to Internet, URL, WWW and its applications- Web, email, Chat, VoIP.
- Website: Introduction, difference between a website and webpage, static vs dynamic web page, web server and hosting of a website.
- Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies.

### **ASSESSMENT PLANNER**

<b>Periodic Test PA - 1  40 Marks</b>	<b>SYLLABUS DATA HANDLING USING PANDAS – I SOCIETAL IMPACTS</b>
<b>Mid Term Exam  Theory / Prac 70/30</b>	<b>SYLLABUS DATA HANDLING USING PANDAS - I SOCIETAL IMPACTS DATA HANDLING USING PANDAS - II DATA VISUALIZATION DATABASE QUERY USING SQL  PRACTICALS ✓ PYTHON ✓ MYSQL ✓ PROJECT + PRACTICAL FILE</b>
<b>PRE BOARD – 1 &amp; 2  Theory / Prac 70/30</b>	<b>SYLLABUS FULL SYLLABUS  PRACTICALS ✓ PYTHON ✓ MYSQL ✓ PROJECT + PRACTICAL FILE</b>

# **INFORMATION TECHNOLOGY (802)**

## **UNIT 1: DATABASE CONCEPTS – RDBMS TOOL**

**MARCH, APRIL AND MAY 2023**

**Students will be able to :**

- Understand and Explain Relational Database Management System.
- Describe Database and its purpose.
- Define the Components of a table
- Understand and discuss the Relational Database Model
- Define the Terminology (Relation, Tuple, Attribute, Cardinality)
- Understand and explain Keys (Primary, Candidate, Alternate, Foreign)
- Understand and work with SQL Commands for:
  - Creating and Opening Databases.
  - Creating and populating tables.
  - Modifying the content and structure of table.
  - Ordering and Grouping.
  - Operating with multiple tables.

**MAY 2023**

**Students will prepare their Practical files.**

**Students will start work on their Projects**

## **UNIT 4: WORK INTEGRATED LEARNING IT – DMA**

**Students will work at :**

- Identification of Work Areas.
- Getting hands-on Work Experience.

## **UNIT 2: OPERATING WEB BASED APPLICATIONS**

**JULY 2023**

**Students will be able to :**

- Understand, Analyze and Discuss:
  - Online Reservation Systems.
  - E-Governance.
  - Online Shopping and Bill payments.
  - Online Tutorials and Tests.
- Understand and explain the phases of Project Management in Web Based Application development.
- Implement the phases of Project Management in their own Projects.

## **UNIT 3: FUNDAMENTALS OF JAVA PROGRAMMING**

**AUGUST TO OCTOBER 2023**

**Students will be able to :**

- Appreciate the concept of Oriented Programming

- Understand the basics of the Java Language
- Understand and implement Operators
- Understand and implement Control Flow
- Understand and define Arrays
- Appreciate the concepts of Class Design
- Appreciate Exception Handling.
- Understand Assertions
- Understand Multithreading and Threads
- Understand and define Wrapper Classes
- Implement String Manipulation

## **EMPLOYABILITY SKILLS**

### **NOVEMBER TO DECEMBER 2023**

- 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>UNIT 1: DATABASE CONCEPTS – RDBMS TOOL</b>	<b><u>APRIL</u></b> <b>UNIT 1: DATABASE CONCEPTS – RDBMS TOOL</b>
<b><u>MAY</u></b> <b>UNIT 1: DATABASE CONCEPTS – RDBMS TOOL</b>	<b><u>JUNE</u></b>
<b><u>JULY</u></b> <b>UNIT 2: OPERATING WEB BASED APPLICATIONS</b>	<b><u>AUGUST</u></b> <b>UNIT 3: FUNDAMENTALS OF JAVA PROGRAMMING</b>
<b><u>SEPTEMBER</u></b> <b>UNIT 3: FUNDAMENTALS OF JAVA PROGRAMMING</b>	<b><u>OCTOBER</u></b> <b>UNIT 3: FUNDAMENTALS OF JAVA PROGRAMMING</b>
<b><u>NOVEMBER</u></b> <b>EMPLOYABILITY SKILLS</b>	<b><u>DECEMBER</u></b> <b>EMPLOYABILITY SKILLS</b>

<b><u>JANUARY</u></b> <b>REVISION</b>	<b><u>FEBRUARY</u></b> <b>REVISION</b>
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### **ASSESSMENT PLANNER**

<b>Periodic Test - 1</b>  <b>40 Marks</b>	<b>SYLLABUS</b> <b>UNIT 1: DATABASE CONCEPTS – RDBMS TOOL</b>
<b>Half Yearly Exam</b>  <b>Theory / Prac</b> <b>60/40</b>	<b>SYLLABUS</b> <b>THEORY</b> <b>UNIT 1: DATABASE CONCEPTS – RDBMS TOOL</b> <b>UNIT 2: OPERATING WEB BASED APPLICATIONS</b>  <b>PRACTICALS</b> <b>UNIT 1: DATABASE CONCEPTS – RDBMS TOOL</b> <b>UNIT 2: OPERATING WEB BASED APPLICATIONS</b>
<b>PB1 AND PB2</b>  <b>Theory / Prac</b> <b>60/40</b>	<b>SYLLABUS</b> <b>COMPLETE SYLLABUS (Including First Term)</b> <b>EMPLOYABILITY SKILLS</b>  <b>PRACTICALS</b> <b>UNIT 1: DATABASE CONCEPTS – RDBMS TOOL</b> <b>UNIT 2: OPERATING WEB BASED APPLICATIONS</b> <b>UNIT 3: FUNDAMENTALS OF JAVA PROGRAMMING</b>

## **HISTORY**

<b>APRIL</b>		
<b>TOPIC</b>	<b>LEARNING OBJECTIVES</b>	<b>LEARNING OUTCOMES</b>
<b>BRICKS, BEADS AND BONES</b> <b>KINGS, FARMERS AND TOWNS</b> <b>KINSHIP, CASTE, AND CLASS</b>	The student will be familiarized with the nature of early urban centers as economic and social institutions. Introduce the ways in which new data can lead to a revision of existing notions of history. They will become aware of the major trends in the political and economic history of the subcontinent. Introduced to inscriptional analysis and the ways in which these have shaped the understanding of political and economic processes. They will become familiar with issues in social history and be introduced to the strategies of textual analysis and their use by reconstructing social	At the completion of this chapter the student should be able to: <ul style="list-style-type: none"> <li>• State and deduce the multilateral aspects of Harappan civilization to understand the first civilization of the world.</li> <li>• Develop the ability to use and analyze socio-economic and political aspects of Harappa.</li> <li>• Investigate and interpret historical and contemporary sources and viewpoints of ASI and historians of Harappa.</li> <li>• Explain major trends in the 6<sup>th</sup> century BCE to understand the ways in which these have shaped the understanding of political and economic</li> </ul>

	history.	processes. <ul style="list-style-type: none"> <li>Analyze social norms to understand the perspectives of society given in the scriptures of ancient India.</li> </ul>
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**MAY**

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
THINKERS, BELIEFS AND BUILDINGS THROUGH THE EYES OF THE TRAVELLERS	The student will discuss the major religious developments in early India. Introduce strategies of visual analysis and their use in reconstructing the theories of religion. Familiarize the learner with the salient features of social histories described by travelers and discuss how these can be used as sources of social history.	At the completion of this chapter the student should be able to: <ul style="list-style-type: none"> <li>Compare the different religious facets to understand the religious developments in ancient India.</li> <li>Identify the accounts of travelers to understand the social, cultural, political and economic life of the people during the rule of different kings in the medieval period.</li> <li>Compare the perspectives of travelers.</li> </ul>

**JULY**

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
BHAKTI AN IMPERIAL CAPITAL - VIJAYNAGAR	The student will be familiarized with the religious developments. Discuss ways of analyzing devotional literature as sources of history. They will learn about the buildings built during the Vijayanagar rule and discuss the way in which monuments can help us to reconstruct history.	At the completion of this chapter the student should be able to: <ul style="list-style-type: none"> <li>Analyze the philosophies of different Bhakti and Sufi saints to understand religious development in the medieval period.</li> <li>Examine the impact of the movements to bring about harmony.</li> <li>Identify features of architecture in the South.</li> <li>Analyze accounts of foreign travelers to reconstruct the Vijayanagar period in Indian history.</li> </ul>

**AUGUST**

TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
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PEASANTS, ZAMINDARS AND THE STATE COLONIALISM AND THE COUNTRYSIDE	The student will be familiarized with developments in agrarian relations. Discuss whether state formation is possible in nomadic societies. The student will discuss how colonialism affected zamindars, peasants and artisans. Comprehend the problems and limits of using official sources for understanding the lives of people.	At the completion of this chapter the student should be able to: <ul style="list-style-type: none"> <li>Identify the facets of agrarian developments to understand the relationship between the state and agriculture during the Mughal period.</li> <li>Trace the changes in agriculture in the 16<sup>th</sup> and 17<sup>th</sup> centuries.</li> <li>Analyze the colonial official records to understand the divergent interests of British and Indians.</li> <li>Comprehend the revenue systems introduced by the British to analyze the economic aspects of colonization in India.</li> </ul>
<b>SEPTEMBER</b>		
<b>TOPIC</b>	<b>LEARNING OBJECTIVES</b>	<b>LEARNING OUTCOMES</b>
REBELS AND THE RAJ	The student will be able to discuss how the events of 1857 are being interpreted. Show how visual material can be used by historians.	At the completion of this chapter the student should be able to: <ul style="list-style-type: none"> <li>Corelate the planning and coordination of the rebels of 1857 to infer its domains and nature.</li> <li>Analyze how revolt created a vision of unity among the Indians.</li> </ul>
<b>OCTOBER</b>		
<b>TOPIC</b>	<b>LEARNING OBJECTIVES</b>	<b>LEARNING OUTCOMES</b>
MAHATMA GANDHI AND THE NATIONALIST MOVEMENT	The student will explore the significant elements of the Nationalist Movement. Discuss how Gandhi was perceived by different groups. Analyzing newspapers, diaries and letters served as invaluable resource to interpret history to draw inferences.	At the completion of this chapter the student should be able to: <ul style="list-style-type: none"> <li>Analyze the causes, events, and phases of the freedom struggle.</li> <li>Evaluate Gandhiji's contribution to the mass movement.</li> <li>Infer from newspapers, letters and diaries aspects of the struggle</li> </ul>
<b>NOVEMBER</b>		
<b>TOPIC</b>	<b>LEARNING OBJECTIVES</b>	<b>LEARNING OUTCOMES</b>
FRAMING THE CONSTITUTION	The student will be familiarized with the processes of framing the Indian Constitution. Understand the way historians interpret debates and discussions.	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 leading to the framing of the Constitution.</li> <li>Analyze the role played by debate and discussion in the framing of the Constitution.</li> </ul>

		<ul style="list-style-type: none"> <li>To analyze the role played by the Constituent Assembly.</li> </ul>
<b>DECEMBER</b>		
<b>TOPIC</b>	<b>LEARNING OBJECTIVES</b>	<b>LEARNING OUTCOMES</b>
REVISION PROJECT WORK	Final touches will be given to project work. Doubts on entire syllabus will be cleared in class.	The student should be able to: <ul style="list-style-type: none"> <li>Understand how historical knowledge develops.</li> <li>Form individual opinions on the topics studied with the help of perspectives provided by historians.</li> <li>Compare developments in different situations.</li> <li>Appreciate the role played by historians in reconstructing the past with various sources.</li> </ul>

### SYLLABUS PLANNER 2023-2024

<u>APRIL</u>  1. BRICKS, BEADS AND BONES 2. KINGS, FARMERS AND TOWNS 3. KINSHIP, CASTE AND CLASS	<u>MAY</u>  1. <u>THINKERS, BELIEFS AND BUILDINGS</u> 2. THROUGH THE EYES OF TRAVELLERS
<u>JULY</u>  1. BHAKTI – SUFI TRADITIONS 2. AN IMPERIAL CAPITAL – VIJAYNAGAR	<u>AUGUST</u>  1. PEASANTS, ZAMINDARS AND THE STATE 2. COLONIALISM AND THE COUNTRYSIDE
<u>SEPTEMBER</u>  1. REBELS AND THE RAJ	<u>OCTOBER</u>  1. MAHATMA GANDHI AND THE NATIONALIST MOVEMENT
<u>NOVEMBER</u>  1. FRAMING THE CONSTITUTION	<u>DECEMBER</u>  REVISION

### ASSESSMENT PLANNER

<b>PERIODIC TEST - 1</b>  <b>40 MARKS</b>	<u>SYLLABUS</u>  1. BRICKS, BEADS AND BONES 2. KINGS, FARMERS AND TOWNS
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<b>HALF YEALY EXAM</b>  <b>THEORY / PRAC</b> <b>80/20</b>  <b>100 MARKS</b>	<u><b>SYLLABUS</b></u>  <b>BOOK I: THEMES IN INDIAN HISTORY PART I</b> <b>BOOK II: THEMES IN INDIAN HISTORY PART II</b>
<b>PRE- BOARD – 1 &amp; 2</b>  <b>THEORY / PRAC</b> <b>80/20</b> <b>100 MARKS</b>	<u><b>SYLLABUS</b></u>  <b>BOOK I: THEMES IN INDIAN HISTORY PART I</b> <b>BOOK II: THEMES IN INDIAN HISTORY PART II</b> <b>BOOK III: THEMES IN INDIAN HISTORY PART III</b>

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## **POLITICAL SCIENCE**

<u><b>BROAD COMPETENCIES AND OUTCOME</b></u>  <b>CONTEMPORARY WORLD POLITICS:</b> <b>COMPETENCY:</b> Understanding, analyzing the contemporary world politics. <b>OUTCOMES:</b> The students will be able to: Understand the contemporary world. Understand the key political events and processes in the post-Cold War era. Analyze various global institutions, processes and events shaping their lives, <b>POLITICS IN INDIA AFTER INDEPENDENCE</b> <b>COMPETENCY:</b> Critically evaluate and understand, analyze politics in India after Independence. <b>OUTCOMES:</b> The students will be able to: Understand and analyze constitutional institutions, figures and their working in the post-Independence period, political events, trends, other facts and figures and contribution of eminent personalities from the post-Independence to contemporary period. Develop the capacity to link political policies and processes with contemporary realities. Encourage the students to understand and analyze the challenges faced by contemporary India.	
<u><b>APRIL</b></u>  1. THE END OF BIPOLARITY 2. NEW CENTRES OF POWER 3. CONTEMPORARY SOUTH ASIA	<u><b>MAY</b></u>  1. UNITED NATIONS AND ITS ORGANIZATIONS 2. SECURITY IN CONTEMPORARY WORLD

<u><b>JULY</b></u>  1. ENVIRONMENT AND NATURAL RESOURCES 2. GLOBALIZATION	<u><b>AUGUST</b></u>  1. CHALLENGES OF NATION BUILDING 2. PARTIES AND PARTY SYSTEM IN INDIA
<u><b>SEPTEMBER</b></u>  1. DEMOCRATIC RESURGENCE 2. INDIAN POLITICS, TRENDS AND DEVELOPMENTS	<u><b>OCTOBER</b></u>  1. REGIONAL ASPIRATIONS
<u><b>NOVEMBER</b></u>  1. INDIAN FOREIGN POLICY 2. PLANNED DEVELOPMENT	<u><b>DECEMBER</b></u>  REVISION

### ASSESSMENT PLANNER

<b>PERIODIC TEST - 1</b>  <b>40 MARKS</b>	<u><b>SYLLABUS</b></u>  1. THE END OF BIPOLARITY 2. NEW CENTRES OF POWER
<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>  <b>BOOK I CONTEMPORARY WORLD POLITICS</b>
<b>PRE- BOARD – 1 &amp; 2</b>  <b>THEORY / PRAC</b> <b>80/20</b> <b>OR</b> <b>THEORY</b> <b>100 MARKS</b>	<u><b>SYLLABUS</b></u>  <b>BOOK I CONTEMPORARY WORLD POLITICS</b> <b>BOOK II IPOLITICS IN INDIA SINCE INDEPENDENCE</b>

APRIL		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES

<p>THE END OF BIPOLARITY NEW CENTRES OF POWER CONTEMPORARY SOUTH ASIA</p>	<ul style="list-style-type: none"> <li>• The student will be familiarized with the factors that shaped contemporary politics.</li> <li>• They will understand the key events and developments that led to the disintegration of the USSR.</li> <li>• They will learn about American dominance in world politics and the rise of new centers of power.</li> <li>• The conditions prevalent in South Asia and the quest for democracy will be another aspect that they will become aware of.</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 led to American supremacy.</li> <li>• Develop the ability to use and analyze socio-economic and political factors that led to the disintegration of the USSR and its impact on world politics.</li> <li>• Investigate and interpret current events to draw conclusions about contemporary power struggles.</li> <li>• Explain major trends in the world today.</li> <li>• Analyze struggles today in the light of past events.</li> </ul>
<p><b>MAY</b></p>		
<p><b>TOPIC</b></p>	<p><b>LEARNING OBJECTIVES</b></p>	<p><b>LEARNING OUTCOMES</b></p>
<p>UNITED NATIONS AND ITS ORGANIZATION SECURITY</p>	<ul style="list-style-type: none"> <li>• The student will discuss the major developments that gave rise to the formation of the UN.</li> <li>• Familiarize the learner with the composition of the UN and its functions.</li> <li>• Analyze reasons that necessitate the restructuring of the UN, keeping in mind the contemporary realities.</li> <li>• Understand the meaning of security and its importance in international relations</li> </ul>	<p>At the completion of this chapter the student should be able to:</p> <ul style="list-style-type: none"> <li>• Identify developments that necessitate the existence of an international body.</li> <li>• Highlight the successes and failures of the UN.</li> <li>• Build arguments to further India's quest for a permanent seat in the UN.</li> <li>• Compare the modern and traditional notion of security</li> </ul>
<p><b>JULY</b></p>		
<p><b>TOPIC</b></p>	<p><b>LEARNING OBJECTIVES</b></p>	<p><b>LEARNING OUTCOMES</b></p>
<p>ENVIRONMENT AND NATURAL RESOURCES GLOBALIZATION</p>	<ul style="list-style-type: none"> <li>• The student will be familiarized with the importance of environmental concerns for human survival.</li> <li>• Discuss the environmental policy pursued by India and the North – South divide on this issue.</li> <li>• They will analyze movements both national and international that espouse the cause of environment.</li> <li>• They will learn about the process of globalization, and its political, economic, and cultural consequences.</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 environmental issues.</li> <li>• Examine the approach of the North and the South on these issues.</li> <li>• Identify features of globalization and its impact on our daily lives.</li> <li>• Analyze the impact of environment and globalization on the politics of the world.</li> </ul>

AUGUST		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
CHALLENGES OF NATION BUILDING PARTIES AND PARTY SYSTEM	<ul style="list-style-type: none"> <li>The student will be familiarized with the challenges the country faced post Partition.</li> <li>Learn about the party system prevalent in India in the first few decades after Independence.</li> <li>Discuss the reasons for the dominance of the Indian National Congress.</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 challenges India faced after it became free.</li> <li>Trace the difficulties the country faced in the process of integration and highlight the role played by Sardar Vallabhbhai Patel.</li> <li>Analyze the reasons why the INC exercised dominance up to 1967.</li> <li>Comprehend the change that took place when Mrs. Gandhi took up the leadership of the INC.</li> </ul>
SEPTEMBER		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
DEMOCRATIC RESURGENCE INDIAN POLITICAL TRENDS AND DEVELOPMENTS	<ul style="list-style-type: none"> <li>The student will be able to trace the electoral history of India since 1967.</li> <li>They will learn about Jaya Prakash Narayan, Ram Manohar Lohia and Pandit Deen Dayal Upadhyaya's contribution to Indian politics.</li> <li>Explore the period of Emergency and its aftermath.</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 role played by leaders in democratic resurgence and National Emergency.</li> <li>Appreciate the participation of a wide variety of people in the democratic process.</li> <li>Analyze the different trends that eventually gave rise to alliance politics.</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
REGIONAL ASPIRATIONS	<ul style="list-style-type: none"> <li>The student will explore the significant elements of the regional struggles in post independent India.</li> <li>Discuss the types of conflicts prevalent in Northeast India.</li> <li>Learn in detail about the Kashmir issue.</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 phases of regional struggles.</li> <li>Evaluate the impact of these conflicts on integration.</li> <li>Explore solutions to these problems</li> </ul>
NOVEMBER		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES

INDIAN FOREIGN POLICY PLANNED DEVELOPMENT	The student will be familiarized with the processes of framing the Indian foreign policy. <ul style="list-style-type: none"> <li>• Understand the different issues that affect India's relationship with the different countries of the world.</li> <li>• Learn about the changing nature of India's economic development</li> </ul>	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 leading to the framing of the foreign policy.</li> <li>• Analyze the impact of contemporary developments on India's foreign policy.</li> <li>• Evaluate the changing nature of economic development in India.</li> </ul>
DECEMBER		
TOPIC	LEARNING OBJECTIVES	LEARNING OUTCOMES
REVISION PROJECT WORK	Final touches will be given to project work. Doubts on entire syllabus will be cleared in class.	At the completion of the syllabus, the student should be able to: <ul style="list-style-type: none"> <li>• Understand and analyze contemporary politics.</li> <li>• Form individual opinions on the topics studied with the help of perspectives provided by magazines and newspapers.</li> <li>• Compare developments in different situations and appreciate the role played by figures and their working in post-independent India.</li> <li>• Encourage students to understand and analyze the challenges for contemporary India.</li> </ul>

## WEB APPLICATIONS (803)

## **ITDC–410 Movie Editing Tools.**

**MARCH, APRIL AND MAY 2023**

**Students will be able to :**

- Understand and Explain the concept of Movie Editing Tools.
- Identify and Outline the different Movie Editing Tools.
- Interpret, Breakdown and Describe the interface of Windows Movie Maker(WMM).
- Point out and Describe the different Panes in WMM.
- Compare and Contrast the different Views in WMM.
- Identify, Categorize and Explain using Examples, the different file formats recognized by WMM.
- Discover and Operate the different Options in WMM.
- Demonstrate proficiency by Designing and Constructing short Movies or Clips using WMM by Illustrating:
  - Importing Media into WMM.
  - Adding Transitions.
  - Combining Clips.
  - Splitting Clips.
  - Trimming Clips.
  - Adding Title and Credits.
  - Saving and Publishing Movies.
- Compare and Contrast the operations of Splitting, Trimming and Combining Clips
- Compare and Contrast the operations of Saving a Project and Publishing a Movie in WMM.

## **ITDC–411 Customizing and Embedding Multimedia components in Web Pages.**

**MAY 2023**

**Students will be able to :**

- Differentiate and Distinguish different types of Media.
- Define, Explain and Illustrate with the help of Examples, Multimedia.
- Enumerate, Explain and Illustrate with Examples the advantages and Disadvantages of Embedding Multimedia in Web pages.
- Identify and Describe the various compatible Multimedia (Images, Movies, Sound) file formats for Web pages.
- Understand and Demonstrate the use of the BGSOUND, EMBED, OBJECT and PARAM, AUDIO, VIDEO tags and their Attributes.
- Demonstrate proficiency by Designing and Constructing web pages that contain embedded multimedia elements.
- Understand, Define and Illustrate with Examples, Helper Applications, Plugins and MIDI.
- Discover and Explore different tools for embedding different types of Multimedia.

**Students will prepare their Practical files.**

**Students will start work on their Projects.**

## **ITDC–412 Web Scripting – Java Script.**

**JULY 2023**

**Students will be able to :**

- Describe and Explain the features and applications of Javascript.
- State and Explain with examples, the advantages of using Javascript.
- Explain and Demonstrate the different ways to write Javascript.
- Define variables and Explain with examples the need for variables.
- Classify and Interpret the different data types supported by Javascript.
- Demonstrate proficiency by Designing and Constructing scripts using variables to store different types of data.
- Demonstrate proficiency by Designing and Constructing scripts to Illustrate the manipulation of different types of data.
- Identify, Classify and Differentiate between different types of Operators.
- Demonstrate proficiency by Designing and Constructing scripts to Illustrate the working of different Operators.

### **AUGUST 2023**

#### **Students will be able to :**

- Define and Summarize the different decision constructs or selection statements and Illustrate their importance in coding.
- Demonstrate proficiency by Designing and Constructing scripts to Illustrate the working of different types of selection statements (if-else / switch-case).
- Define and Summarize the different types of iterations / loops and Illustrate their importance in coding.
- Demonstrate proficiency by Designing and Constructing scripts to Illustrate the working of different types of loop statements (while / do-while / for).

### **SEPT 2023**

#### **Students will be able to :**

- Identify, Differentiate and Define the different popup boxes (alert / confirm / prompt) in Javascript.
- Demonstrate proficiency by Designing and Constructing scripts to Illustrate the usage of popup boxes (alert / confirm / prompt) in Javascript.
- Appraise and Define what is a function.
- Enumerate and Explain with examples the advantages of functions.
- Express, Differentiate and Demonstrate function parameters and function arguments.
- Define, Explain and Demonstrate the return keyword.
- Demonstrate proficiency by Designing and Constructing scripts to Illustrate different User-Defined functions.
- Understand, Define and Demonstrate the scope of variables (Local / Global).
- Demonstrate proficiency by Designing and Constructing scripts that Incorporate Local and Global variables.

### **OCTOBER 2023**

#### **Students will be able to :**

- Discover and Explain the DOM (Document Object Model) in Javascript.
- Breakdown, Point out and explore the different Objects in the DOM.
- Discuss, Define and Illustrate with examples, Objects and their properties and functions.
- Explore, Discover and Explain the properties and functions of the Math Object.
- Demonstrate proficiency by Designing and Constructing scripts that use the properties and functions of the Math Object.
- Explore, Discover and Explain the properties and functions of the String Object.

- Demonstrate proficiency by Designing and Constructing scripts that use the properties and functions of the String Object.
- Explore, Discover and Explain the properties and functions of the Array Object.
- Demonstrate proficiency by Designing and Constructing scripts that use the properties and functions of the Array Object.
- Discover, Explain and Define events and event handling.
- Demonstrate proficiency by Designing and Constructing scripts that respond to events.

## **ITDC-413 Work Integrated Learning - Advanced Features of Web Design – WA-II.**

### **NOVEMBER 2023**

#### **Students will be able to :**

- Discuss and Define the need for Microsoft Expression Web (MEW)
- Discover and Explore the CODE View of MEW.
- Understand the need for, Define and Demonstrate the Use of Snippets, Add-Ins.
- Apply Page Transitions to Web pages.
- Examine and Describe Dynamic Web Templates, and Infer the benefits therefrom.
- Demonstrate proficiency by Designing and Constructing web pages using Dynamic Web Templates.
- Define and Explain Search Engine Optimization (SEO).
- Demonstrate proficiency by Designing and Constructing web pages using Forms.
- Discuss, Understand and Define the Concepts of Publishing Web pages in MEW.
- Explore and Identify tools to examine the Structure of a Web site.
- Examine and Test a Web site to Infer whether it is optimized or not
- Demonstrate and Explain how to Optimize a Web site.
- Understand and Define Web Hosting and Web Servers.
- Explain the need for CSS and Demonstrate how to use CSS templates in MEW.
- Explore, Discover and Describe different Web Authoring Tools.

### **EMPLOYABILITY SKILLS**

#### **OCTOBER TO DECEMBER 2023**

- 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

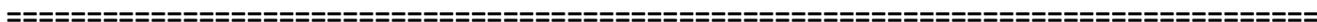
#### **RECAP**

<b><u>MARCH</u></b> ITDC-410 Movie Editing Tools.	<b><u>APRIL</u></b> ITDC-410 Movie Editing Tools.
<b><u>MAY</u></b> ITDC-410 Movie Editing Tools. ITDC-411 Customizing and Embedding Multimedia components in Web Pages.	<b><u>JUNE</u></b>
<b><u>JULY</u></b> ITDC-412 Web Scripting – Java Script.	<b><u>AUGUST</u></b> ITDC-412 Web Scripting – Java Script.
<b><u>SEPTEMBER</u></b> ITDC-412 Web Scripting – Java Script.	<b><u>OCTOBER</u></b> ITDC-412 Web Scripting – Java Script. EMPLOYABILITY SKILLS
<b><u>NOVEMBER</u></b> ITDC-413 Work Integrated Learning - Advanced Features of Web Design – WA-II. EMPLOYABILITY SKILLS	<b><u>DECEMBER</u></b> ITDC-413 Work Integrated Learning - Advanced Features of Web Design – WA-II.
<b><u>JANUARY</u></b> RECAP	<b><u>FEBRUARY</u></b> RECAP

### **ASSESSMENT PLANNER**

Periodic Test - 1  40 Marks	<b>SYLLABUS</b> ITDC-410 Movie Editing Tools. ITDC-411 Customizing and Embedding Multimedia components in Web Pages.
Half Yealy Exam  Theory / Prac 60/40	<b>SYLLABUS</b> <b>THEORY</b> ITDC-410 Movie Editing Tools. ITDC-411 Customizing and Embedding Multimedia components in Web Pages. ITDC-412 Web Scripting – Java Script.  <b>PRACTICALS</b> ITDC-410 Movie Editing Tools. ITDC-411 Customizing and Embedding Multimedia components in Web Pages. ITDC-412 Web Scripting – Java Script.

<b>Annual Exam</b>  <b>Theory / Prac</b> <b>60/40</b>	<b>SYLLABUS</b> <b>COMPLETE SYLLABUS (Including First Term)</b> <b>EMPLOYABILITY SKILLS</b>  <b>PRACTICALS</b> <b>ITDC–410 Movie Editing Tools.</b> <b>ITDC–411 Customizing and Embedding Multimedia components in Web Pages.</b> <b>ITDC–412 Web Scripting – Java Script.</b>
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## **PHYSICAL EDUCATION**

### **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**

#### **MAR-APRIL 2023**

#### **UNIT 1: MANAGEMENT OF SPORTING EVENTS**

##### **LEARNING OUTCOMES**

- Describe the concept of planning in sports.
- Classify the committees and its responsibilities in sports event.
- Differentiate the different type of tournament.
- Prepare fixtures of knock out and league.
- Distinguish between Intramural and Extramural tournaments.

#### **MAY 2023**

#### **UNIT 2: CHILDREN AND WOMEN IN SPORTS**

##### **LEARNING OUTCOMES**

- Understand the concept of motor development and factors affecting it.
- Discuss exercise guidelines for different stages of growth and development.
- Classify common postural deformities and identify corrective measures.
- Recognize the role and importance of sports participation of women in India.
- Identify special consideration relate to menarche and menstrual dysfunction.
- Express female athlete triad according to eating disorders.

## **JULY 2023**

### **UNIT 3: YOGA AND LIFESTYLE**

#### **LEARNING OUTCOMES**

- Identify the asanas beneficial for different types of ailments and health problems.
- Recognize the importance of various asanas for preventive measures of obesity, diabetes, asthma, hypertension, back pain.
- Describe the procedure for performing variety of asanas for maximal benefits.
- Distinguish the contraindications associated with performing of different asanas.
- Outline the role of yogic management for various health benefits and preventive measures.

## **AUGUST 2023**

### **UNIT 4: PHYSICAL EDUCATION AND SPORTS FOR CWSN**

#### **LEARNING OUTCOMES**

- Describe the concept of Disability and Disorder.
- Outline types of disability and describe its causes and nature.
- Outline types of disorder and describe its causes and nature.
- Explain various disability etiquettes.
- List the advantages of physical activities for children with special needs.
- Explain Strategies to make physical activities accessible for children with special needs.

## **SEPTEMBER 2023**

### **UNIT 5: SPORTS AND NUTRITION**

#### **LEARNING OUTCOMES**

- Understand the concept of balanced diet and nutrition.
- Classify Nutritive and Non-Nutritive components of Diet.
- Identify and classify Macro and Micro Nutrients, their food sources and their functions.
- Identify the ways to maintain healthy weight.
- Discover and Point out foods commonly causing food intolerance.
- Recognize the pitfalls of dieting.
- Breakdown and Assess common Food myths.

## **SEPTEMBER 2023**

### **UNIT 6: TEST AND MEASUREMENT IN SPORTS**

#### **LEARNING OUTCOMES**

- Perform 50 M Standing Start, 600 M Run/ Walk, sit and Reach, Partial Curl Up, Push Ups (Boys), Modified Push Ups (Girls), Standing Broad Jump, Agility – 4x 10 M Shuttle Run.
- Demonstrate Barrow three item general motor ability test.
- Compute BMR
- Compute physical fitness Index through Harvard Step Test/Rockport Test.
- Describe the procedure of Rikli and Jones - Senior Citizen Fitness Test.

## **OCTOBER 2023**

### **UNIT 7: PHYSIOLOGY AND INJURIES IN SPORTS**

#### **LEARNING OUTCOMES**

- Recognize the physiological factors determining the components of physical fitness.
- Comprehend the effects of exercise on Muscular and Cardio respiratory system.
- Know the effects of exercise on cardio respiratory system.
- Figure out the physiological changes due to ageing.

- Identify and classify sports injuries.
- Recognize and demonstrate the aims and objectives of First Aid.

## **OCTOBER 2023**

### **UNIT 8: BIOMECHANICS AND SPORTS**

#### **LEARNING OUTCOMES**

- Recognize the concept of sports biomechanics.
- Know the importance of biomechanics in sports.
- Classify the various types of movements (such as flexion, extension, abduction and adduction) as well as know the forces involved in it.
- Define Newton's laws of Motion and identify their applicability in sports.
- Define friction and its usage in sports.

## **NOVEMBER 2023**

### **UNIT 9: PSYCHOLOGY AND SPORTS**

- Classify different types of personality and its relationship with sport performance.
- Recognize concept of motivation and Identify various types of motivation.
- Illustrate various strategies of motivation used in sports.
- Illustrate various reasons to exercise and its associated benefits.
- Identify strategies for promoting exercise adherence.
- Differentiate types of aggression in sports.

### **UNIT 10: TRAINING IN SPORTS**

- Understand the concept of Talent identification and development in sports.
- Classify Isometric, Isotonic and Isokinetic training.
- Understand different methods of endurance development.
- Differentiate various methods to improve flexibility.
- Explain Coordinative Abilities.
- Describe Circuit Training.

## **ASSESSMENT PLANNER**

<b>Periodic Test</b> <b>PA - 1</b>  <b>40 Marks</b>	<b>SYLLABUS</b> <b>UNIT 1: MANAGEMENT OF SPORTING EVENTS</b> <b>UNIT 2: CHILDREN AND WOMEN IN SPORTS</b>
<b>Mid Term Exam</b>  <b>Theory / Prac</b> <b>70/30</b>	<b>SYLLABUS</b> <b>UNIT 1: MANAGEMENT OF SPORTING EVENTS</b> <b>UNIT 2: CHILDREN AND WOMEN IN SPORTS</b> <b>UNIT 3: YOGA AND LIFESTYLE</b> <b>UNIT 4: PHYSICAL EDUCATION AND SPORTS FOR CWSN</b> <b>UNIT 5: SPORTS AND NUTRITION</b> <b>UNIT 6: TEST AND MEASUREMENT IN SPORTS</b>
<b>PRE BOARD –</b> <b>1 &amp; 2</b>  <b>Theory / Prac</b> <b>70/30</b>	<b>SYLLABUS</b> <b>FULL SYLLABUS</b>

# ENGINEERING GRAPHICS

## LEARNING OUTCOMES

1. Develop clear concepts and perception of geometric shapes, forms & proportion of 2D and 3D objects and application / using these concepts to express pictorially.
2. Develop the skill of expressing three-dimensional and two-dimensional objects into professional (engineering) language and vice versa.
3. Acquire the ability to draw neat sketches, often needed in "On-job situations".
4. Develop a clear understanding of plane and solid Geometry and machine drawing so as to apply the same in relevant practical fields such as technology and industry.
5. Acquire speed and accuracy in use of drawing instruments.
6. Use technology (CAD) in developing isometric and orthographic projections of simple object

### MARCH

1. Introduction to Isometric drawing.
2. Drawing Isometric Scale

**Learning objectives:** Develop an understanding of what it is all about and why it is so important.

### APRIL

1. Isometric Projection of solids such as triangular, square, pentagonal and hexagonal pyramids and prisms & cone.
2. Isometric Projection of frustums of solids such as triangular, square, pentagonal and hexagonal pyramids and prisms & cone.

**Learning objectives:** To develop clear concepts of how it is drawn. Enhance visualization power. Acquire speed and accuracy in use of drawing instruments.

### MAY

1. Isometric Projection of combination of solids.
2. Threads– Square, Knuckle, BSW and Metric
3. Machine parts such as nuts and bolts.

**Learning objectives:** To develop clear understanding of the various machine parts and their types and specifications. Enhance visualization power. Acquire speed and accuracy in use of drawing instruments.

### JULY

1. Free Hand sketches of rivets and studs
2. Assembly and Disassembly of
  - (a) Open Bearing,
  - (b) Bushed Bearing

**Learning objectives:** To develop clear concepts of drawing the non-sectional and sectional views of the Assemblies. Enhance visualization power. Acquire speed and accuracy in use of drawing instruments.

### AUGUST

1. Assembly and Disassembly of
  - (a) Sleeve and Cotter joint,
  - (b) Gib and Cotter joint,

### SEPTEMBER

1. Assembly and Disassembly of
  - (a) Turn Buckle joint
  - (b) Flange Pipe joint

<p><b>Learning objectives:</b> To develop clear concepts of drawing the non-sectional and sectional views of the Assemblies. Acquire the ability to draw neat sketches, often needed in "On-job situations". Acquire speed and accuracy in use of drawing instruments.</p>	<p><b>Learning objectives:</b> To develop clear concepts of drawing the non-sectional and sectional views of the Assemblies. Acquire the ability to draw neat sketches, often needed in "On-job situations". Acquire speed and accuracy in use of drawing instruments.</p>
<p><b><u>OCTOBER</u></b></p> <p>Revision</p> <p><b>Learning objectives:</b> To develop speed and accuracy and solve even the most difficult of problems with ease. Acquire speed and accuracy in use of drawing instruments.</p>	<p><b><u>NOVEMBER</u></b></p> <p>Revision</p> <p><b>Learning objectives:</b> To develop speed and accuracy and solve even the most difficult of problems with ease. Acquire speed and accuracy in use of drawing instruments.</p>
<p><b><u>DECEMBER</u></b></p> <p>Revision</p> <p><b>Learning objectives:</b> To develop speed and accuracy and solve even the most difficult of problems with ease. Acquire speed and accuracy in use of drawing instruments.</p>	<p><b><u>JANUARY</u></b></p> <p>Revision</p> <p><b>Learning objectives:</b> To develop speed and accuracy and solve even the most difficult of problems with ease. 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><b>SYLLABUS</b></p> <ol style="list-style-type: none"><li>1. Isometric Projection of solids such as triangular, square, pentagonal and hexagonal pyramids and prisms. Isometric Projection of cone.</li><li>2. Isometric Projection of frustums of solids such as triangular, square, pentagonal and hexagonal pyramids, prisms &amp; cone.</li><li>3. Isometric Projection of combination of solids.</li><li>4. Threads– Square, Knuckle, BSW and Metric (External and Internal).</li><li>5. Machine parts such as nuts and bolts.</li><li>6. Free Hand sketches of rivets, studs,</li><li>7. Assembly and Disassembly of<ol style="list-style-type: none"><li>(a) Open Bearing,</li><li>(b) Bushed Bearing,</li></ol></li></ol>
<p><b>Half Yearly Exam</b></p> <p><b>Theory / Practical</b> <b>70/30</b></p>	<p><b>SYLLABUS</b></p> <ol style="list-style-type: none"><li>1. Isometric Projection of solids such as triangular, square, pentagonal and hexagonal pyramids and prisms &amp; cone.</li><li>2. Isometric Projection of frustums of solids such as triangular, square, pentagonal and hexagonal pyramids and prisms &amp; cone.</li><li>3. Isometric Projection of combination of solids.</li><li>4. Threads– Square, Knuckle, BSW and Metric</li><li>5. Machine parts such as nuts and bolts.</li><li>6. Free Hand sketches of rivets, studs,</li><li>7. Assembly and Disassembly of<ol style="list-style-type: none"><li>(c) Open Bearing</li><li>(d) Bushed Bearing</li><li>(c) Sleeve and Cotter joint</li><li>(e) Gib and Cotter joint</li><li>(f) Turn Buckle joint</li></ol></li></ol>
<p><b>PRE BOARD – 1 &amp; 2</b></p> <p><b>Theory / Practical</b> <b>70/30</b></p>	<p><b>SYLLABUS</b></p> <ol style="list-style-type: none"><li>1. Drawing Isometric Scale</li><li>2. Isometric Projection of solids such as triangular, square, pentagonal and hexagonal pyramids and prisms &amp; cone.</li><li>3. Isometric Projection of frustums of solids such as triangular, square, pentagonal and hexagonal pyramids and prisms &amp; cone.</li><li>4. Isometric Projection of combination of solids.</li><li>5. Threads– Square, Knuckle, BSW and Metric</li><li>6. Machine parts such as nuts and bolts.</li><li>7. Free Hand sketches of rivets, studs,</li><li>8. Assembly and Disassembly of<ol style="list-style-type: none"><li>a. Open Bearing</li><li>b. Bushed Bearing</li><li>c. Sleeve and Cotter joint</li><li>d. Gib and Cotter joint</li><li>e. Turn Buckle joint</li><li>f. Flange Pipe joint</li></ol></li></ol>

# **BIOLOGY**

**MARCH/APRIL**

**UNIT – VI**

## **Chapter-2: Sexual Reproduction in Flowering Plants**

Flower structure; development of male and female gametophytes; pollination - types, agencies and examples; outbreeding devices; pollen-pistil interaction; double fertilization; post fertilization events - development of endosperm and embryo, development of seed and formation of fruit; special modes- apomixis, parthenocarpy, polyembryony; Significance of seed dispersal and fruit formation.

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

**Students will be able to:**

1. Draw & label the parts of a L. S section of flower.
  2. Elaborate on the structure of stamen & pollen grains.
  3. List the importance of Tapetum.
  4. Analyze the mechanism of Microsporogenesis.
  5. Draw & Label parts of pistil.
  6. Elaborate on types of ovules found in plants.
  7. Analyze the structure of Megasporangium.
  8. Explain the formation of Embryo Sac with diagrams.
  9. Define Pollination.
  10. Explain types of Pollination involved in plants.
  11. Elaborate the adaptations of plants which are pollinated by different agents.
  12. Define various outbreeding devices used by plants to prevent self-pollination.
  13. Elaborate about pollen pistil compatibility interactions.
  14. Explain double fertilization process in plants.
  15. Analyze the new plant breeding technique for Artificial Hybridisation.  
officially.
  16. Draw & Explain the formation of Endosperm, Embryo & Seed.
- XVII) Understand & Elaborate the process of Apomixis & Polyembryony.

**APRIL - MAY**

## **Chapter-3: Human Reproduction**

Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis - spermatogenesis and oogenesis; menstrual cycle; fertilization, embryo development up to blastocyst formation, implantation; pregnancy and placenta formation (elementary idea); parturition (elementary idea); lactation (elementary idea).

## **LEARNING OUTCOMES / COMPETENCIES:**

**Students will be able to: -**

1. Draw & Explain parts of Male Reproductive System.
2. List functions of Accessory ducts & glands in male reproductive system.
- 3 Define testis, Epididymis, vas deferens, vasa efferentia, Rete testis.
4. Define Gametogenesis.
5. Explain the process of Spermatogenesis.
6. Analyze & Interpret the Hormonal Control of Spermatogenesis.
7. Draw & label the structure of a sperm.
8. Explain the process of Oogenesis.
9. Explain the structure of Ovum in detail.
10. Understand & Analyze Menstrual Cycle and it's different phases.
11. Interpret & List the sequences of Hormonal Control of Menstrual Cycle.
12. Understand & Interpret various steps of FERTILIZATION.
13. Analyze various cortical Reactions to the entry of the sperms.
14. List the significance of Fertilization.
15. Understand the process of IMPLANTATION & Cleavage.
16. Analyze the process of EMBRYONIC DEVELOPMENT in mothers.
17. Define Parturition & Lactation.
18. Analyze & Interpret the mechanism of Parturition.
19. List the importance of Colostrum In mothers' milk.

**MAY-JULY**

## **Chapter-4: Reproductive Health**

Need for reproductive health and prevention of Sexually Transmitted Diseases (STDs); birth control - need and methods, contraception and medical termination of pregnancy (MTP); amniocentesis; infertility and assisted reproductive technologies - IVF, ZIFT, GIFT (elementary idea for general awareness).

## **LEARNING OUTCOMES / COMPETENCIES:**

**Students will be able to: -**

1. Define Reproductive Health & Contraception.
2. Illustrated the problems & strategies to control Population Explosions.
3. Analyze the various types of Contraceptives Used.
4. Differentiate between vasectomy & Tubectomy.
5. List the conditions for Medical Termination of Pregnancies. (MTP)
6. Analyze mode of transmission, causal organism & symptoms of Sexually Transmitted diseases.
7. Define & Understand the mechanism of Infertility.
8. Analyze the different Assisted Reproductive Techniques used for treating INFERTILITY.

## JULY

### **Chapter-10: Microbes in Human Welfare**

Microbes in food processing, industrial production, sewage treatment, energy generation and microbes as bio-control agents and bio-fertilizers. Antibiotics; production and judicious use.

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

Students will be able to: -

1. Understand the usage of microbes in food industry.
2. Interpret the importance of microbes in sewage treatment plant
3. Understand the role of microbes as: BIO-CONTROL AGENT
4. Analyze the role of microbes in ANTIBIOTICS production.

### **Chapter-8: Human Health and Diseases**

Pathogens; parasites causing human diseases (malaria, dengue, chikungunya, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse.

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

Students will be able to:

1. Define Health & Diseases.
2. Differentiate b/w Infectious & Non Infectious Diseases.
3. Analyse & Interpretation various Causal Organism of common Human diseases,
  - a. It's Symptoms & Mode of Treatment.
4. Define Immunity
5. Classify Immunity.
  - b. 6. Explain the mechanism of NATURAL & ACQUIRED Immunity.
6. Differentiate between ACTIVE & PASSIVE IMMUNITY.
7. Understand & Analyse the various response our immune system develops to any invasion of pathogen.
8. Draw & Label the Structure of ANTIBODY.
9. List various types of Antibodies formed in our body.
10. Define Allergy.
11. List the major Allergens.
12. Enumerate the Mechanism involved in our Immune system to cause Allergy.
13. State the Treatment given for Allergy.
14. Define Autoimmunity.
15. Analyse the various types of Autoimmune diseases caused in Human body.
16. Understand its basic cause, symptoms & treatment involved in it .
17. Understand how it is different from ALLERGY.
18. Understand & list the various organs that play a role in IMMUNE SYSTEM of our body.
19. Analyse the mechanism of how each work & what kind of responses are generated by our body
20. Elaborate on AIDS , it's causal organism , spread & cure .
21. Analyse the mechanism of how CANCER is caused , its cure & its treatment .
22. Understand & Analyse the various composition & structures of Drugs used by Adolescent .
23. Interprets the preventive methodology of abuse of DRUGS

## AUGUST

### **Unit-VII Genetics and Evolution**

**Chapter-5: Principles of Inheritance and Variation Heredity and variation:** Mendelian inheritance; deviations from Mendelism – incomplete dominance, co-dominance, multiple alleles and inheritance of blood groups, pleiotropy; elementary idea of polygenic inheritance; chromosome theory of inheritance; chromosomes and genes; Sex determination - in human being, birds and honey bee; linkage and crossing over; sex linked inheritance - haemophilia, colour blindness; Mendelian disorders in humans -thalassemia; chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.

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

Students will be able to :

- I) Define various important terms used in GENETICS.
- II) Understand the mechanism used by Gregor Mendel.
- III) Analyse why he is called the “Father of Genetics”
- IV) Interpret his experiment, observation & inference given by him.
- V) State the laws of Inheritance.
- VI) Explain the law of Inheritance with examples in MONOHYBRID CROSS & DIHYBRID CROSSES.
- VII) Explain the Incomplete Dominance with the help of cross
- VIII) Explain the Co dominance state with the help of cross.
- IX) Analyze why these do not follow LAW OF DOMINANCE & LAW OF SEGREGATION.
- X) Understand the Gene interactions as in Mono gene , Multiple gene in the Chromosomes .
- XI) Define & Explain the process of Epistasis.
- XII) Explain the Pleiotropic Effect of gene.
- XIII) Define & Explain Polygenic Inheritance in Plants & Animals .
- XIV) Interpret - why Mendel’s work was not recognized earlier in 18 th century.
- XV) Explain what was the contribution of Sutton & Boveri in understanding the pattern of Inheritance.
- XVI) Analyze the similarities in between Mendel’s work & Chromosomal Theory of Inheritance.
- XVII) Describe Morgon’s work in the field of Genetics.
- XVIII) Analyze through the crosses the sex-linked genes to an eye color of Drosophila.
- XIX) State the reason for Morgon to work only on Drosophila melanogaster.
- XX) Define linkage, crossing over & recombinants.
- XXI) Explain how the concept of Linkage was given by Morgon .
- XXII) Differentiate between Complete & Incomplete Linkages.
- XXIII) Define & Calculate the Gene map of a chromosomes.
- XXIV) Understand the relation between map units & recombinant frequencies.
- XXV) Define linkage, crossing over & recombinants.
- XXVI) Explain how the concept of Linkage was given by Morgon .
- XXVII) Differentiate between Complete & Incomplete Linkages.
- XXVIII) Define & Calculate the Gene map of a chromosomes.
- XXIX) Understand the relation between map units & recombinant frequencies.
- XXVI) Define Mutation.
- XXVII) Classify the types of Mutation based on change in Genotypes & Phenotypes.
- XXVIII) Interpret & Define Pedigree Analysis.
- XXIX) Elaborate on Mendelian Disease: Hemophilia (causes, symptoms & cure) in detail along with crosses.

XXXI) Elaborate on Mendelian Disease: Sickle cell Anaemia & phenylketonuria (causes, symptoms & cure) in detail

XXXII) Elaborate on Colour Blindness (causes, symptoms & cure) in detail along with crosses.

XXXIII) Elaborate on DOWN SYNDROME, TURNER SYNDROME & KLINE FELTER'S SYNDROME (causes, symptoms & cure) in detail along with crosses.

## **Chapter-6: Molecular Basis of Inheritance**

Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central Dogma; transcription, genetic code, translation; gene expression and regulation - lac operon; Genome, Human and rice genome projects; DNA fingerprinting.

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

Students will be able to :-

1. Differentiate b/w DNA & RNA
2. Elaborate on Chargaff's rule .
3. Discuss & prove the Genetic material by series of experiments .
4. Understand how the DNA is packed inside the chromosomes .
5. Explain the transcription , translation & elongation mode of proteins in our body .
6. Explain the expression & gene regulation .
7. Understand & analyze Human Genome / Rice Genome projects .
8. Explain the procedure of DNA FINGERPRINTING

## **SEPTEMBER**

### **Chapter-7: Evolution**

Origin of life; biological evolution and evidences for biological evolution (paleontology, comparative anatomy, embryology and molecular evidences); adaptive radiation; Biological evolution: Lamarck's theory of use and disuse of organs, Darwin's theory of evolution; mechanism of evolution - variation (mutation and recombination) and natural selection with examples, types of natural selection; Gene flow and genetic drift; Hardy - Weinberg's principle; brief account of evolution; human evolution.

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

1. Study the various theories put forward by different scientist / evolutionist for Origin of life on Earth.
2. Define & explain with examples how Adaptive Radiation is observed in organism.
3. Compare the Lamarck's Theory with Darwin's Theory of Evolution.
4. Explain Natural selection, Speciation process
5. Explain the hardy -Weinberg's principle to explain various types of natural selection.
6. Elaborate on the human evolution in detail.

## **Unit-IX Biotechnology and its Applications**

### **Chapter-11: Biotechnology - Principles and Processes**

Genetic Engineering (Recombinant DNA Technology).

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

Students will be able to: \_

1. Understand the mechanism of Recombinant DNA Technology.
2. Analyze the various tools used to for creating recombinant DNA.

#### **OCTOBER**

### **Chapter-12: Biotechnology and its Application.**

Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms - Bt crops; transgenic animals; biosafety issues, biopiracy and patents.

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

Students will be able to: -

1. Apply the knowledge of various biotech technology in HEALTH & AGRICULTURE market.
2. Understand the process of creating Artificial Human insulin chains.
3. Analyze how Biotechnology processes can be used in Vaccine production.
4. Interpret the various issues like GENE THERAPY, GMO ORGANISMS, BISAFTY ISSUES, BIOPIRACY & PATENT related issues in GENERAL

## **Unit-X Ecology and Environment**

### **Chapter-13: Organisms and Populations.**

Organisms and environment: Habitat and niche, population and ecological adaptations; population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution.

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

Students will be able to: -

1. Define Niche, Habitat, population, community, Biomes, Ecosystem.
2. Understand & explain the various population interactions observed on our planet.
3. Explain how populations attributes, like birth rate, death rate , age distribution affects the POPULATION in AN AREA.

## **NOVEMBER**

### **Chapter-14: Ecosystem**

Ecosystem: structure and function; productivity and decomposition; energy flow; pyramids of number, biomass, energy; nutrient cycles (carbon and phosphorous); ecological succession; ecological services - carbon fixation, pollination, seed dispersal, oxygen release (in brief).

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

1. Define Ecosystem .
2. State the structure & function of various types of Ecosystem
3. Explain the 10% Law of Energy transfer in the ecosystem in different foodchain.
4. Elaborate the Ecological succession .
5. List & comment on the important ecological services provided by different processes in the Ecosystem.

### **Chapter-15: Biodiversity and its Conservation**

Biodiversity - Concept, patterns, importance; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, Sacred Groves, biosphere reserves, national parks, wildlife, sanctuaries and Ramsar sites.

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

##### **Students will be able to: -**

1. Define biodiversity.
2. Elaborate on the causes for the loss of biodiversity in a region.
3. Explain what are Hotspots, Red Data book, Sacred Groves.
4. Differentiate between Biosphere Reserves, national park, wild life sanctuaries.
5. Explain the famous Ramsar sites used as an example for conservation for biodiversity

#### **REVISION OF BOARD PAPERS AFTER ALL THIS (IF TIME PERMITS)**

## ASSESSMENT PLANNER 2023-2024

PA 1 SYLLABUS

40 MARKS

- SEXUAL REPRODUCTION IN FLOWERING PLANTS
- HUMAN REPRODUCTION
- REPRODUCTIVE HEALTH

SA1/ HALF

\* PA 1 SYLLABUS +YEARLY EXAMS CHAPTERS GIVEN BELOW

THEORY / PRACTICAL 70/30

- \* MICROBES IN HUMAN WELFARE
- \* HUMAN HEALTH & DISEASES
- \* PRINCIPLES OF INHERITANCE & VARIATION
- \* EVOLUTION
- \* MOLECULAR BASIS OF INHERITANCE
- \* BIOTECHNOLOGY: PRINCIPLES & PROCESSES

PRE-BOARD 1 & 2  
THEORY / PRAC

HALF YEARLY SYLLABUS + THE BELOW GIVEN CHAPTERS.  
70/30

- \* BIOTECHNOLOGY & ITS APPLICATION
- \* ORGANISM & POPULATIONS
- \* ECOSYSTEM
- \* BIODIVERSITY & CONSERVATION

*ANY CHANGES IN THE SYALLBUS FROM CBSE WILL BE NOTIFIED TO THE STUDENTS DIRECTLY.*

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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 learn about different methods used in Psychology like observation, interview, psychological testing and case study method to understand and describe human behavior.
- 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, socially aware while analyzing the human behavior in their daily life experiences.

Month	Topic	Sub Topics	Learning Outcomes
March & April 2023	Unit I : Variations in Psychological Attributes	1 ) Introduction 2. Individual Differences in Human Functioning 3. Assessment of Psychological Attributes 4. Intelligence 5. Theories of Intelligence: a) Psychometric Theories of Intelligence, b) Information Processing Theories 6) Individual Differences in Intelligence 7. Culture and Intelligence 8. Emotional Intelligence 9. Special Abilities: Aptitude: Nature and Measurement 10 .Creativity	The students will be able to- <b>1) Explain</b> various psychological attributes on which people differ from each other. <b>2) classify</b> different methods of assessment <b>3) explain</b> various theories of intelligence. <b>4) identify</b> symptoms of differently abled persons. <b>6) classify</b> intelligence in different cultures. <b>7) Differentiate</b> between intelligence and aptitude.
	Psychology Practical -1	Assessment of an Intelligence test.	The students will be able to learn to administer, interpret the results and writing the report of a fellow student.
May 2023	CHAPTER-3: MEETING LIFE CHALLENGES	1) Introduction 2) Nature, Types and Sources of Stress. 3) Effects of Stress on Psychological Functioning & Health. 4) Coping with Stress Stress Management Techniques 5) Promoting Positive Health and Well-being.	<b>The students will be able to-</b> <b>1.</b> Describe the nature, types and sources of stress as life challenges. <b>2.</b> Examine the effects of stress on psychological functioning. <b>3.</b> Illustrate ways to cope with stress. <b>4.</b> Apply life skills that









<b>SYLLABUS</b>	
<b>PRE BOARD – 1 &amp; 2</b>	Chapter -1 : Variations in Psychological Attributes Chapter 2 :Self and Personality Chapter 3 Meeting Life Challenges
<b>Theory / Practical 70/30</b>	Chapter 4 Psychological Disorders Chapter 5 Therapeutic Approaches Chapter 6 Attitude and Social Cognition Chapter 7 Social Influence and Group Processes

# PHYSICS

## GENERAL LEARNING OUTCOMES

1. Emphasis on basic conceptual understanding of the content.
2. Emphasis on use of S.I. units, symbols, nomenclature of physical quantities and formulation as per international standards.
3. Expose the learners to different processes used in physics- related industrial and technological applications.
4. Develop process-skills and experimental, observational, manipulative, decision making and investigatory skills in the learners.
5. Develop conceptual competence in the learners and make them realise and appreciate the interface of physics with other disciplines

MONTH	TOPICS	SUB-TOPICS	LEARNING OUTCOME
APRIL	<b>Unit1 (Electrostatics)</b>		
	Ch 1 Electric charges and fields	1) Electric Charges; Conservation of charge, Coulomb's law-force between two point charges, forces between multiple charges; superposition principle and continuous charge distribution. 2) Electric field, electric field due to a point charge, electric field lines, electric dipole, electric field due to a dipole, torque on a dipole in uniform electric field. 3) Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside).	Students acquire the basic knowledge of Electric charges, concept of electrostatic force in vector form different distribution of charges, Electric field produced by different distribution of charges and its mathematical analysis. Student will be able to relate the phenomena of charging of a body with daily life.
	Ch 2 Electrostatic Potential and Capacitance	1) Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges; equipotential surfaces, electrical potential energy of a system of two point charges and of electric dipole in an electrostatic field. 2) Conductors and insulators, free charges and bound charges inside a conductor. 3) Dielectrics and electric polarisation, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor. (No derivation, formula only)	Student will be able to relate the Electrical potential with electric field.  Student will be able to understand the working of charge storing device i.e. capacitor.

<b>Unit 2 Current Electricity.</b>			
<b>MAY AND JULY</b>	Ch 3 Current Electricity	<p>1) Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current; Ohm's law, electrical resistance, V-I characteristics (linear and nonlinear)</p> <p>2) Electrical energy and power, electrical resistivity and conductivity; temperature dependence of resistance. Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel</p> <p>3) Kirchhoff's laws and simple applications, Wheatstone bridge.</p>	<p>learners will understand the concept Electricity, resistance and resistivity and the parameters affecting it with its link to our daily life. learners understand the concept of different electrical devices like wheat stone bridge and its application. Students will be able to understand the practical application of resistors and cells and its different combination in real life. Students will be able to operate different electrical instruments like Galvanometer, Voltmeter, ammeter etc. also they learned to find the least count of given measuring instrument</p>
	<b>Unit 3 Magnetic effects of current and Magnetism</b>		
<b>JULY</b>	Ch 4 Moving charges and Magnetism	<p>1) Concept of magnetic field, Oersted's experiment.</p> <p>2) Biot-Savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire. Straight solenoids (only qualitative treatment), force on a moving charge in uniform magnetic and electric fields,</p> <p>3) Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors- definition of ampere, torque experienced by a current loop in uniform magnetic field; Current loop as a magnetic dipole and its magnetic dipole moment</p> <p>4) moving coil galvanometer-its current sensitivity and conversion to ammeter and voltmeter.</p>	<p>learners understand the concept of relation between electricity and magnetism and analysis of magnetic field for different kind of symmetrical structure.</p> <ul style="list-style-type: none"> <li>• Student will learn about the relation between electricity and Magnetism and different methods to find the Magnetic field due to different types of conductor.</li> <li>• Student will learn about the force between two parallel conductors and its mathematical analysis depending upon the directions of current. Also how to convert galvanometer into voltmeter and ammeter</li> </ul>
	Ch 5 Magnetism and Matter	<p>1) Bar magnet, bar magnet as an equivalent solenoid (qualitative treatment only), magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis, torque on a magnetic dipole (bar magnet) in a uniform magnetic field (qualitative treatment only), magnetic field lines.</p> <p>2) Magnetic properties of materials- Para-, dia- and ferro - magnetic substances with examples, Magnetization of materials, effect of temperature on magnetic properties.</p>	<p>Learners will understand the different kinds of magnetic material. It will help them understand the concept of application of magnetic field and how it's used in nature.</p>

<b>Unit 4 EMI and AC</b>			
<b>AUGUST</b>	Ch 6 EMI	1)Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law 2)Self and mutual induction	Students will learn about the different method to induce an emf in a given conductor which is useful to understand the concept of Mutual and self- induction.
	Ch 7 AC	1)Alternating currents, peak and RMS value of alternating current/voltage; reactance and impedance; LCR series circuit(phasors only), resonance; power in AC circuits, wattless current.2)AC generator and transformer	Students acquires the basic knowledge about the principle ,construction ,working and real life application of Transformer and Dynamo
<b>Unit 5 Electromagnetic Wave</b>			
<b>SEPTEMBER</b>	Ch 8 EMW	1)Basic idea of displacement current, Electromagnetic waves, their characteristics, their Transverse nature (qualitative ideas only). 2)Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, Xrays, gamma rays) including elementary facts about their uses.  <b>REVISION</b>	learners understand the generation and real life application of electromagnetic wave depending upon the value of wavelength and frequency. Student acquires knowledge about the Practical application of EMW in our Daily life.
<b>Unit 6 Optics</b>			
<b>SEPTEMBER AND OCTOBER</b>	Ch 9 Ray Optics and Optical Instruments	1)Ray Optics: Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal reflection and optical fibres, refraction at spherical surfaces, lenses, thin lens formula, lens maker's formula, magnification, power of a lens, combination of thin lenses in contact, refraction of light through a prism.  2)Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.	Student will learn about the different types of mirror and lenses and respective ray diagrams for image formation along the mathematical tactics and Analysis.  Student will learn the different optical instruments which are used in our labs and life .
	Ch 10 Wave Optics	1)Wave optics: Wave front and Huygen's principle, reflection and refraction of plane wave at a plane surface using wave fronts. 2)Proof of laws of reflection and refraction using Huygen's principle. 3)Interference, Young's double slit experiment and expression for fringe width(No derivation final expression only), coherent sources and sustained interference of light, diffraction due to a single slit, width of central maximum(qualitative treatment only).	To make the learners to understand the difference between ray optics and wave optics and different optical phenomena such as interference, diffraction.

<b>OCTOBER</b>	<b>Unit 7 Dual Nature of Radiation and Matter</b>		
	Ch 11 Dual Nature of Radiation and Matter	1)Dual nature of radiation, Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation-particle nature of light. Experimental study of photoelectric effect 2)Matter waves-wave nature of particles, de-Broglie relation.	Learners will be able to understand the dual nature of light (Wave and Particle) along with experimental and mathematical verification
<b>OCTOBER AND NOVEMBER</b>	<b>Unit 8 Atoms and Nuclei</b>		
	Ch 12 Atoms	1)Alpha-particle scattering experiment; Rutherford's model of hydrogen atom; Expression for radius of nth possible orbit, velocity and energy of electron in his orbit, of hydrogen line spectra (qualitative treatment only).	learners will understand the basic structure of atoms and nucleus proposed by different scientists and its importance in our life.
	Ch 13 Nuclei	1)Composition and size of nucleus, nuclear force. 2)Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number; nuclear fission, nuclear fusion	Learners will be able to understand the Concept of atoms and nuclei with help of different models developed by different scientists (Rutherford's model, Bohr's model etc.)
<b>NOVEMBER</b>	<b>Unit 9 Electronic Devices</b>		
	Ch 14 Semiconductor Electronics: Materials, Devices and Simple Circuits  REVISION	Energy bands in conductors, semiconductors and insulators (qualitative ideas only) Intrinsic and extrinsic semiconductors- p and n type, p-n junction Semiconductor diode - I-V characteristics in forward and reverse bias, diode as a rectifier;	Learners will be able to understand the Concept of Conductors, Insulator and semiconductor with the help of Band Energy Theory. Learners will be able to understand the Classification of semiconductors along with Practical applications in PN diode, Rectifiers.
<b>ASSESSMENT PLANNER</b>			
<b>MAY</b>	<b>PERIODIC ASSESSMENT 1</b>  40 MARKS	*ELECTRIC CHARGES AND FIELDS *ELECTROSTATIC POTENTIAL AND CAPACITANCE	
<b>SEPTEMBER</b>	<b>TERM 1</b>  THEORY/PAC. 70/30	THEORY—CHAPTER-1 ONWARDS UPTO E.M. WAVES  PRACTICALS -5 EXPERIMENTS, ACTIVITY FILE	

<b>DECEMBER</b>	PREBOARD 1 THEORY/PRAC. 70/30	COMPLETE SYLLABUS FOR THEORY PRACTICALS-ALL 8 EXPERIMENTS, ACTIVITY FILE, PROJECT	
<b>JANUARY</b>	PREBOARD 2 THEORY/PRAC. 70/30	COMPLETE SYLLABUS FOR THEORY PRACTICALS – ALL 8 EXPERIMENTS, ACTIVITY FILE, PROJECT	

### PHYSICS PRACTICAL SYLLABUS

<b>APRIL, MAY, JULY AUGUST</b>	<b>EXPERIMENTS</b> 1. To determine resistivity of two / three wires by plotting a graph for potential difference versus current. 2. To find resistance of a given wire / standard resistor using metre bridge. 3. To verify the laws of combination (series) of resistances using a metre bridge 4.To determine resistance of a galvanometer by half-deflection method and to find its figure of merit. 5.To find the focal length of a convex lens by plotting graphs between u and v or between $1/u$ and $1/v$ .	<b>ACTIVITIES</b> 1.To assemble the components of a given electrical circuit. 2.To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram. 3.To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source 4.To study the nature and size of the image formed by a (i) convex lens, or (ii) concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
<b>OCTOBER, NOVEMBER</b>	6.To find the value of v for different values of u in case of a concave mirror and to find the focal length. 7.To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation. 8.To draw the I-V characteristic curve for a p-n junction diode in forward and reverse bias PROJECT WORK	5.To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items. 6.To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.

# **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 industrialization, 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 XII for the subject Computer Science for class XII**

### **OVERALL LEARNING OUTCOMES –**

- a. Create and analyse of function and recursion.
- b. Compose and Implement Python libraries.
- c. Understand and implement the concept of file handling.
- d. Evaluate the efficiency of algorithms and computing in general.
- e. Illustrate basic data structure: Stacks and Queues and connect with live problems.
- f. Understand basics of computer networks and implement in form of case studies.
- g. Integrate Database concepts, SQL along with connectivity between Python and SQL.

### **April**

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

#### **Chapter : Python-Function**

- a. Define a function and understand the advantages of creating a function
- b. Create a function which can receive argument and return a value
- c. Differentiate between user defined and built in functions
- d. Understand the difference in output when mutable and immutable arguments are passed
- e. To understand the different scope a variable which exists
- f. The order followed by python- LEGB
- g. Accessing a global variable in presence of local variable with same name
- h. Able to write complex program involving functions with mutable and immutable arguments.

#### **Chapter :Python Library Functions**

- a. Conceptualize the presence of module.
- b. Define a module practically
- c. Label each part of module
- d. Import String,Random and Math module.
- e. To evaluate the output of function associated with modules.

### **May**

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

#### **Chapter :File Handling**

- a. To understand the concept of file in connection to python.
- b. Relevance of file for saving data entered while executing a program
- c. Difference between text and binary files
- d. Concept of accessing text file using an object
- e. Implementation of the following operations in a text file
  - i. Opening
  - ii. Closing

- iii. Reading
- iv. Writing
- v. Modifying
- vi. Removing

### July

## **After the classes conducted during July, students will be able to** **Chapter :File Handling Continued**

- a. Different type of file modes available while handling file
- b. Different types error streams implementations.
- c. Implementation of the following operations in a CSV file
  - i. Opening
  - ii. Closing
  - iii. Reading
  - iv. Writing
- d. Implementation of the following operations in a Binary file
  - i. Opening
  - ii. Closing
  - iii. Reading
  - iv. Writing
  - v. Modifying

### August

## **After the classes conducted during August, students will be able to** **Chapter : SQL**

- a. Introduction to DBMS terms
  - a. Attribute
  - b. Tuple
  - c. Relation
  - d. Database
  - e. Keys
- b. Commands DDL:
  - a. Create
  - b. Drop
  - c. Alter
- c. Commands DML
  - a. Insert
  - b. Update
  - c. Delete
  - d. Select
- d. Operators in MYSQL
  - a. Logical operator
  - b. Special operator Like, in and between
- e. Implement each of DDL and DML command
- f. Comprehend the need of constraints in a table.

- g. Detail implementation of various types of constraints.
- h. The need of creating a join in a table.
- i. Extracting data from more than one tables in sql by providing a join
- j. Application based question on writing command involving joins.

### **September**

**After the classes conducted during September, students will be able to**  
**Chapter: Connectivity with SQL database**

- a. Steps required for Connecting SQL with Python
- b. Creating Database connectivity Applications

### **October**

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

**Chapter: Connectivity with SQL database Continued**

- a. Performing following operations
  - a. Insert
  - b. Update
  - c. Delete queries
- b. Code to display data from database by using
  - a. fetchone()
  - b. fetchall()
  - c. rowcount()

### **November**

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

**Chapter: Data structures: Stacks and queues**

- a. Label the different data structures in a programming language
- b. Differentiate between datatype and data structure
- c. Categorization of data structure as simple and compound
- d. Understanding of following terminology
  - a. Stacks
  - b. Queues
- e. Operations in Stack
  - a. Push
  - b. Pop
  - c. Display

## Chapter : Networking

- a. Define networking with respect to its implementation in form of computer network (SDG 7,8)
- a. Categorize the different types of networks on basis of the area covered by each type of network.
- b. Draw and explain the various ways of arranging computers in a network.
- c. Compare the various types of arrangement before deciding the best suitable layout.
- d. List the various types transmission media use for networking.
- e. Understand the need of different types of devices.
- f. Differentiate between the installation of devices for connecting networks.
- g. Usage of need of protocols like HTTP,TCP/IP,HTML,PPP

**Please Note: In November students will be revising all the topics using board questions. Learning Outcome will be to familiarize with each part of question paper.**

### ASSESSMENT PLANNER-XII

<b>Periodic Test - 1</b>  <b>40 Marks</b>	<b>SYLLABUS</b>  <b>1. <u>Functions</u></b> <b>2. <u>Built in Functions</u></b> <b>3. <u>Text File Opening , Reading and Writing.</u></b>
<b>Half Yearly Exam</b>  <b>Theory / Prac</b> <b>70/30</b>	<b>SYLLABUS</b>  <b>1. Functions</b> <b>2. Built in Functions</b> <b>3. File handling in Python</b> <b>4. SQL</b> <b>5. Class XI python</b>
<b>PRE BOARD – 1 &amp; 2</b>  <b>Theory / Prac</b> <b>70/30</b>	<b>SYLLABUS</b>  <b>1. Functions</b> <b>2. Built in Functions</b> <b>3. SQL</b> <b>4. Connectivity of python with SQL</b> <b>5. File handling in Python(Text File,Binary File and CSV File)</b> <b>6. Networking</b> <b>7. Data Structures</b> <b>8. Class XI python</b>