REVISED

SYLLABUS

SESSION: 2024–25

CLASS – XI

ENGLISH LANGUAGE

Term 1
March
Unit 1
March

1 **Pattern of English language paper-ISC**

Learning outcome –
Through this particular exercise the students will come to know about the exact format of the ISCquestionpaper**.**

2 **The art of writing Essays [NARRATIVE ESSAY]**

Learning outcome –
Children will learn to write effective narratio**n**. This is the most common kind of essay selection.

The art of writing Essays [DESCRIPTIVE ESSAY]

Learning outcome –
Here the children will learn to describe an action, incident or a phenomenon through the art of descriptive writing.

+ Test paper-1

The art of writing Essays [REFLECTIVE AND DISCURSIVE ESSAY]

Learning outcome –
Children learn here to transform their ideas and channel them through reflection.

+ Test paper-2

The art of writing Essays [ARGUMENTATIVE AND ONE WORD ESSAY]

Learning outcome –
Children will learn to express their opinions which will enable them to remain highly opinionated throughout their life.

The art of writing Essays [SHORT STORY]

Learning outcome –
Students will be able to spin tall yarn into stories which will promote their creative thinking and writing.

April
3

(I) **Directed writing**

A **Article writing**

Learning outcome –
Students will learn to identify the difference between newspaper report and article writing, they will learn to describe an event, experience, place or person.

+ Test paper-3

B **Report Writing**

Learning outcome –
Student will learn to write magazine and newspaper Report. The exercise will help to sum up an event or an accident.

C **Book/Film review**

+ Test paper-4

Learning outcome –
Students will be able write and understand the art of review writing.

D **Speech Writing**

+ Test paper-5

Learning outcome –
The students will be able to write effective and eloquent speeches.

E **(II)** **Statement of purpose**

Learning outcome –
Students learn to write SoP’s which in long run will help them to build up their college portfolios.

May **Proposal Writing**

+ Test paper-6

Learning outcome –

Students will learn to write proposals which will benefit them in taking grants for academic purpose.

Grammar section

Learning outcome-

Students will learn to solve grammatical errors. It will help them perform better at prepositions and transformation of sentences.

July

4 **Comprehension**

+ Test paper-7-8

Learning outcome –

Students will be able to concentrate as the following exercise will boost their concentration and critical thinking.

I Unit Test Syllabus-

Proposal and transformation of sentences

5 Grammar section

Term 2

July

A **Subject verb agreement**

Learning outcome –

Students will be able to identify tenses in sentences.

August

Tenses and Sequence of Tenses

+ Test paper-9

Learning outcome –

Through this chapter students will be able to determine the order of events in a sentence.

B **The voice change**

Learning outcome –

Students will learn to transform active sentences into passive and vice-versa.

C **Direct and indirect speech**

Learning outcome –

Students will learn to transform direct sentences into indirect sentences and vice-versa.

+ Test paper-10

D **Comparison of adjectives**

+ Test paper-11

Learning outcome-

students will be able to adjudicate the degrees of comparison between adjectives.

September

E **Conditional sentences**

Learning outcome –

Children will learn the usages of hypothetical conditional sentences [imaginary sentences]

F **Transformation of sentences I**

Learning outcome –

Students will learn to define and transform sentences.

+ Test paper-12-13

G **Transformation of sentences II**

+ Test paper-14

Learning outcome –

Students will learn to define and transform sentences.

H **Prepositions and Phrasal verbs**

+ Test paper-15

Learning outcome –

Children will learn the usages of different types of Prepositions.

October **Test paper-16-20**

Term 3

November **Test paper-21-25**

December **Revision**

January **Revision**

February **Revision**

II Unit Test syllabus

Transformation of sentences and proposal writing.

ENGLISH LITERATURE

Term 1

March

Play **Act I Sc I and II (Pages 22 – 29) + WB**

Learning outcome –

Children learn about the introductory scene. They learn about the three witches and their prophecies throughout. Children will also learn about the malign forces in Nature and in human nature.

Prose **A Living God + WB**

Learning outcome –

Children will learn about sacrifice, selfless action and presence of mind.

Poetry **Abhisara – The Tryst + WB**

Learning outcome –

Students will be able to learn to demonstrate the values of love and compassion that may be found in unexpected persons under unusual circumstances.

April

Play **Act I Sc III – V (Pages 30 – 57) + WB**

Learning outcome –

Through these scenes children learn how the witches sowed the seed of deceit and temptation in the mind of Macbeth. They also learn about Lady Macbeth and how decisive, determined and cruel natured she was. They also learn how difficult it can be when you come across these types of people in your life.

Prose **Advice to Youth + WB**

Learning outcome –

Students here learn to explore the fact that youth are being sculpted and shaped to society's standards.

Poetry **Why I liked the Hospital + WB**

Learning outcome –

Through this poem, the children learn that perseverance depends on a gymnastics of skepticism and comedy, a dogged quest for authentic connection and the consolations of the natural world.

May

Play **Act I Sc VI and VII (Pages 58 – 69) + WB**

Learning outcome –

Children learn and anticipate the grim tragedy as well as they also learn about the medley of emotions in the heart of Macbeth.

Prose **A Living God + Advice to Youth**

Learning outcome –

Here their learning outcome is sacrifice, selfless action and presence of mind. They also learn here that today's youth are being sculpted and shaped to society's standard.

Poetry **Abhisara – The Tryst**

Learning outcome –

Students are able to learn to demonstrate the values of love and compassion.

July

Play **Act I Sc I – VII (Pages 22 – 69)**

Learning outcome –

They learn about the introductory scenes of the play and get introduced to various characters. they also learn here the atrocities of life.

Prose **The Paper Menagerie + WB**

Learning outcome –

Students learn the close relationship and bonding between a mother and son. How precious the bonding is. Also they learn how at times, a mother becomes helpless but for the sake of her child, she has to sacrifice so many things in her life.

Poetry **-**

I Unit Test Syllabus

A Living God

Term 2

July

Play **-**

Prose **-**

Poetry **Why I liked The Hospital**

Learning outcome –

Through this poem, the children learn that perseverance depends on a gymnastics of skepticism and comedy.

August

Play **Act II Scl + WB (Pages 70 – 75)**

Learning outcome –

Children learn about the contrasting thoughts lurking in the minds of Banquo and Macbeth.

Prose **-**

Poetry **Sonnet 116 + WB**

Learning outcome –

Students learn about the essence of true love and its consistency regardless of difficulties.

September

Play **Act II Sc II (Pages 76 – 83) + WB**

Learning outcome –

Students learn about the murder of king Duncan and also about the crisis of the play.

Prose **The Great Automatic Grammatizator + WB**

Learning outcome –

Students learn here the importance of learning the usages of talent How they can be benefitted in their real life by learning it in proper and coherent manner.

Poetry **Death of a Naturalist + WB**

Learning outcome –

Here the children learn two vital things, one their most precious childhood experiences and next is the formulation of adult identities and family relationships.

October

Play **-**

Prose **Thank You Ma'am + WB**

Learning outcome –

Life gives us many things but we all should have that power of choice while engaging with emotions of empathy, guilt, fear and kindness.

Poetry **-**

Term 3

November

Play **Act II Sc III (Pages 84 – 99) + WB**

Learning outcome –

Students learn how in an abnormal world of horror, the action has been moving.

Prose **-**

Poetry **Strange Meeting + WB**

Learning outcome –

Soldiers face many hardships in their lives, Students learn here how to escape the hell of battlefield, a soldier goes to the underworld, another difficult phase and falls intomore trouble.

December

Play **Act II Sc IV (Pages 100 – 105) + WB**

Learning outcome –
Students learn about two more characters here. Ross and Macduff, who are minor characters but have a very important part in the play.

Prose **Revision**

Poetry **Revision**

January
Play **Plot Development + Sub Plot**
Learning outcome –
Through Plot Development students learn action and event, change, wonder and surprises in a play. Through sub – plot students learn about the turns and twists in a story.

Prose **Revision**

Poetry **Revision**

February
Play **Character Description, Theme and Message (Revision)**
Learning outcome –
Students will be able brush up all the characters, Theme of the play and what message does it give.

Prose **Revision**

Poetry **Revision**

II Unit Test Syllabus
Act II Sc I – III

HINDI LANGUAGE

Term 1
March
निबन्ध 1. मेरे जीवन का लक्ष्य
सीखने का प्रतिफल–
''लक्ष्य निर्धारण से कार्य को करने के कारण का बोध होगा।''

निबन्ध 2. अविस्मरणीय यात्रा
सीखने का प्रतिफल–
संस्मरण विधा के लेखन का ज्ञान होगा।

निबन्ध 3. पुस्तक – एक उत्तम साथी
सीखने का प्रतिफल–
पुस्तकों के महत्त्व का ज्ञान होगा।

निबन्ध 4. वाद–विवाद प्रतियोगिता
सीखने का प्रतिफल–
विषय के दोनों पक्षों का ज्ञान प्राप्त होगा।

April
निबन्ध 5. आधुनिक शिक्षा प्रणाली
सीखने का प्रतिफल–
शिक्षा के वर्तमान स्वरूप का ज्ञान होगा।

निबन्ध 6. विज्ञान वरदान और अभिशाप
सीखने का प्रतिफल–
विज्ञान के सकारात्मक एवं नकारात्मक प्रभाव का ज्ञान प्राप्त होगा।

निबन्ध 7. महँगाई
सीखने का प्रतिफल–
महँगाई के कारण तथा निवारण के उपाय का ज्ञान।

निबन्ध 1. मेरे जीवन का लक्ष्य
2. अविस्मरणीय यात्रा

3. पुस्तक–एक उत्तम साथी
4. वाद विवाद प्रतियोगिता

अपठित गद्यांश पेज नं0 – 83 से 87
सीखने का प्रतिफल–
गद्यांश को समझकर पूछे गये प्रश्न का उत्तर देने की क्षमता का विकास।

मुहावरे पेज नं0 – 168 से 169
सीखने का प्रतिफल–
मुहावरों के प्रयोग से भाषा को प्रभावशाली बनाने का ज्ञान।

लोकोक्तियाँ पेज नं0 – 187 से 188
सीखने का प्रतिफल–
लोकोक्तियों के प्रयोग से भाषा के प्रभाव में वृद्धि।

May

निबन्ध 8. मेरा आदर्श – मेरे अध्यापक
सीखने का प्रतिफल–
अध्यापकों के प्रति श्रद्धा पूर्ण भावों का विकास।

निबन्ध 9. देश को कैसा नेता चाहिए।
सीखने का प्रतिफल–
राजनीति तथा समाज के पारस्परिक सम्बन्धों का ज्ञान।

निबन्ध 10. मनोरंजन के आधुनिक साधन
सीखने का प्रतिफल–
जीवन में मनोरंजन के महत्व का ज्ञान।

अपठित गद्यांश पेज नं0 – 88 से 91
सीखने का प्रतिफल–
प्रश्न का उत्तर देने की क्षमता में वृद्धि।

मुहावरे पेज नं0 – 171 से 172
सीखने का प्रतिफल–
मुहावरों के प्रयोग से भाषा के प्रभाव में वृद्धि।

लोकोक्तियाँ पेज नं0 – 189
सीखने का प्रतिफल–
लोकोक्तियाँ के प्रयोग से प्रभावशाली भाषा का विकास।

July **Revision**
निबन्ध 1 से 8
मुहावरे पेज नं0 – 168 से 172
लोकोक्तियाँ पेज नं0 – 187 से 189

I Unit Test Syllabus
मुहावरे तथा लोकोक्तियाँ (पेज नं0 – 168 से 169) पेज नं0 – 187 से 188
अपठित गद्यांश 1 से 3

Term 2
July
मुहावरे पेज नं0 – 189

August

निबन्ध 11. वार्षिक खेलकूद दिवस
सीखने का प्रतिफल–
प्रतिवेदन लिखने की क्षमता का विकास।

निबन्ध 12. प्रिय नेता – बापू
सीखने का प्रतिफल–
गाँधी जी के जीवन चरित्र से उच्चादर्शों की प्राप्ति।

निबन्ध 13. एक स्मरणीय धार्मिक स्थल की यात्रा
सीखने का प्रतिफल–
संस्मरण विधा के प्रयोग का ज्ञान।

निबन्ध 14. वनों का महत्त्व
सीखने का प्रतिफल–
पर्यावरण संरक्षण की प्रेरणा मिलेगी।

अपठित गद्यांश पेज नं0 – 92 से 95
सीखने का प्रतिफल–
प्रश्न का उत्तर देने की क्षमता में वृद्धि।

मुहावरे पेज नं0 – 173 से 174
सीखने का प्रतिफल–
मुहावरों के प्रयोग से भाषा प्रभावशाली हो जाती है।

September
निबन्ध 15. त्योहारों का महत्व
सीखने का प्रतिफल–
भारतीय सभ्यता एवं संस्कृति का ज्ञान प्राप्त होगा।

निबन्ध 16. निर्धनता
सीखने का प्रतिफल–
निर्धनता के कारण एवं निवारण के ज्ञान की प्राप्ति।

निबन्ध 17. देश – प्रेम
सीखने का प्रतिफल–
देश प्रेम की भावना का विकास होगा।

निबन्ध 18. सच्चरित्रता
सीखने का प्रतिफल–
सद्गुणों को अपनाने की प्रेरणा मिलेगी।

निबन्ध 19. मित्रता
सीखने का प्रतिफल–
मित्रता के महत्त्व बोध से सतसंगति की प्रेरणा मिलेगी।

मुहावरे पेज नं0 – 175 से 176
सीखने का प्रतिफल–
भाषा प्रवाहपूर्ण तथा प्रभावशाली बनेगी।

अपठित गद्यांश पेज नं0 – 96 से 100
सीखने का प्रतिफल–
प्रश्न का उत्तर देने की क्षमता का विकास होगा।

October
निबन्ध 20. मेरा प्रिय कविः 'कबीर'
सीखने का प्रतिफल–
कबीरदास जी के आदर्शों के आधार पर सामाजिक एकता की भावना का विकास होगा।

निबन्ध 21. देवी आपदाः भूकम्प
सीखने का प्रतिफल–
प्राकृतिक आपदाओं से बचाव के उपायों का ज्ञान।

निबन्ध 22. क्रिकेट का खेल
सीखने का प्रतिफल–
जीवन में खेलों के महत्व का ज्ञान।

Term 3
November
निबन्ध 23. भारतीय कृषक

सीखने का प्रतिफल–
भारतीय कृषक के जीवन से परिश्रम एवं कार्य–कुशलता की प्रेरणा मिलेगी।

निबन्ध 24. राष्ट्रभाषा हिन्दी
सीखने का प्रतिफल–
मातृभाषा को अपनाने की प्रेरणा मिलेगी।

निबन्ध 25. अशिक्षा – विकास में बाधक
सीखने का प्रतिफल–
जीवन में शिक्षा के महत्त्व का ज्ञान मिलेगा।

अपठित गद्यांश पेज नं0 – 101 से 104
सीखने का प्रतिफल–
प्रश्न का उत्तर देने की क्षमता का विकास होगा।

मुहावरे पेज नं0 – 177
सीखने का प्रतिफल–
मुहावरों के प्रयोग से भाषा प्रवाहपूर्ण एवं प्रभावशाली होगी।

December
निबन्ध 26. छात्र और अनुशासन
सीखने का प्रतिफल–
छात्रों को अनुशासित बनने की प्रेरणा मिलेगी।

निबन्ध 27. समाचार पत्र एवं वर्तमान युग
सीखने का प्रतिफल–
समाचार पत्रों के महत्त्व का ज्ञान मिलेगा।

निबन्ध 28. एक अध्यापक की आत्मकथा
सीखने का प्रतिफल–
एक आदर्श अध्यापक बनकर समाज सेवा की प्रेरणा मिलेगी।

अपठित गद्यांश पेज नं0 – 104 से 107
सीखने का प्रतिफल–
प्रश्न का उत्तर देने की क्षमता का विकास होगा।

January **Revision**

February **Revision**

II Unit Test Syllabus
मुहावरे पेज नं0 – 175 से 176
लोकोक्तियाँ पेज नं0 – 189
अपठित गद्यांश 4 से 8

HINDI LITERATURE

Term 1
March
काव्य मंजरी 1. साखी
सीखने का प्रतिफल–
ईश्वर की कृपा से प्रत्येक कार्य सम्भव है।

गद्य संकलन 1. पुत्र प्रेम
सीखने का प्रतिफल–
धन के लाभ में लिया गया निर्णय पछतावे का कारण बन जाता है।

April
काव्य मंजरी 1. साखी
2. बाल लीला
सीखने का प्रतिफल–
भगवान कृष्ण की बाललीला के माध्यम से वात्सल्य रस तथा बृज भाषा का सहज बोध।

गद्य संकलन 1. पुत्रप्रेम
2. गौरी

सीखने का प्रतिफल–
नारी की दृढ़ इच्छा शक्ति एवं कर्तव्य भाव का बोध।

May

नाटक आषाढ़ का एक दिन अंक–1

सीखने का प्रतिफल–
ऐतिहासिक पृष्ठभूमि के माध्यम से भारतीय समाज में नर–नारी के सम्बन्धों का ज्ञान।

July **Revision**

काव्य मंजरी 1. साखी 2. बाललीला
गद्य संकलन 1. पुत्र प्रेम 2. गौरी
नाटक आषाढ़ का एक दिन अंक–1

I Unit Test Syllabus

काव्य मंजरी साखी

Term 2

July

गद्य संकलन 3. शरणागत

सीखने का प्रतिफल–
भारतीय समाज में प्रचलित शरणागत की रक्षा जैसे उच्च आदर्श का ज्ञान प्राप्त होता है।

August

गद्य संकलन 3. शरणागत

नाटक आषाढ़ का एक दिन अंक–2

सीखने का प्रतिफल–
नाटककार के द्वारा व्यक्ति के अहंकार और उसके प्रभाव की सहज व्याख्या।

काव्य मंजरी 3. एक फूल की चाह

सीखने का प्रतिफल–
छुआछूत जैसी बुराई के दुष्परिणाम का ज्ञान तथा इससे बचने की प्रेरणा।

काव्य मंजरी 4. आः धरती कितना देती है।

सीखने का प्रतिफल–
प्राकृतिक संसाधन के रूप में पृथ्वी के महत्व का ज्ञान।

गद्य संकलन 4. सती

सीखने का प्रतिफल–
यात्रा के समय अपरिचित यात्री पर अंधविश्वास नही करना चाहिए।

September

काव्य मंजरी 5. नदी के द्वीप

सीखने का प्रतिफल–
सामाजिक परम्पराओं के पालन से व्यक्तित्व के विकास का ज्ञान।

गद्य संकलन 5. आउट साइडर

सीखने का प्रतिफल–
अविवाहित लड़कियों के द्वारा जिम्मेदारियों का निर्वहन करने के बाद भी उनका मायके में सम्मान प्राप्त न कर पाने की व्यथा का बोध।

गद्य संकलन 6. दासी

सीखने का प्रतिफल–
प्रत्येक मनुष्य समय के अनुसार चलने के लिए बाध्य होता है।

October

काव्य मंजरी 6. तुलसी के पद

सीखने का प्रतिफल–
भगवान राम के आदर्शों को अपनाने की प्रेरणा।

काव्य मंजरी 7. जाग तुझको दूर जाना है।

सीखने का प्रतिफल–
मनुष्य को सदैव आगे बढ़ने का प्रयास करना चाहिए।

Term 3
November
गद्य संकलन 7. क्या निराश हुआ जाए?
सीखने का प्रतिफल–
आज के समय में भी कर्तव्य परायणता तथा ईमानदारी विभिन्न रूपों में विद्यमान है।

December
नाटक आषाढ़ का एक दिन (अंक 1 व 2)
सीखने का प्रतिफल–
ऐतिहासिकता को समकालीन संदर्भों में देखते हुए नर–नारी सम्बन्धों का ज्ञान।

Revision

गद्य संकलन	1.	पुत्र प्रेम	2.	गौरी	3.	शरणागत
काव्य मंजरी	1.	साखी	2.	बाललीला	3.	एक फूल की चाह

January **Revision**

February **Revision**

II Unit Test Syllabus
गद्य संकलन 7. क्या निराश हुआ जाए?

HISTORY

Term 1
March
Chapter 1 **Growth of Nationalism**
Learning Outcome-
Learner will recognise the factors for the growth of nationalism in India.

April
Chapter 1 **Growth of Nationalism**
Chapter 6 **Urbanisation, Growth of Working Class and Workers' Movement**
Learning Outcome-
Learner will get the Impact of the second phase of Industrialization in Europe during late 19th and early 20th centuries.

Chapter 7 **The First World War 1914-18**
Learning Outcome-
Learner will get the causes & events leading to the First World War.

May
Chapter 1 **Growth of Nationalism**
Chapter 6 **Urbanisation, Growth of Working Class and Workers' Movement**
Chapter 7 **The First World War 1914-18**
Chapter 2 **Emergence of the Colonial Economy**
Learning Outcome-
Learner will recognise the factors for the emergence of the colonial economy with the means of transport, communication and modern Industries.

July
Chapter 1 **Growth of Nationalism**
Chapter 2 **Emergence of the Colonial Economy**
Chapter 6 **Urbanisation, Growth of Working Class and Workers' Movements**
Chapter 7 **The First World War 1914-18**

I Unit Test Syllabus:
Chapter 1 **Growth of Nationalism**

Term 2
July
Chapter 3 **Economic, Social and Cultural Impact of British Rule**
Learning Outcome-
Learner will get the details about the Economic, social movements during British rule.

August
Chapter 4 **Protest Movement Against Colonial Rule**
Learning Outcome-
Learner will recognise the protest movement against colonial rule and the response of the colonial authority.

Chapter 8 **Peace Settlement after the World War – I – Establishment of the League of Nations**
Learning Outcome-
Learner will get the details about the changes in map of Europe after peace settlements and the formation of the Leage of Nations.

September
Chapter 9 **The Great Depression : USA, Germany, Britain, France and Japan**
Learning Outcome-
Learner will get the causes of the great depression of 1929 and its impact on Europe.

Chapter 10 **Rise of Communism in Russia (1917-39)**
Learning Outcome-
Learner will get the causes of the Russian Revolution – 1917 and the role of Lenin.

October
Chapter 11 **Rise of Fascism in Italy (1922-39)**
Learning Outcome-
Learner will be able to know the causes for the rise of Fascism in Italy and main features of Mussolini's domestic policy.

Term 3
November
Chapter 5 **Gandhian Nationalism**
Learning Outcome-
Learner will get the details about Simon Commission, its boycott and the civil Disobedience Movement

December
Chapter 12 **Rise of Nazism in Germany (1933-39)**
Learning Outcome-
Learner will get the rise of Hitler and the Nazi State.

January
Chapter 13 **Rise of Militarism : Japan (1919-1941)**
Learning Outcome-
Learner will get the reasons for militarism in Japan between 1919 and 1941

February **Revision**

II Unit Test Syllabus
Chapter 5 **Gandhian Nationalism**

SOCIOLOGY

Term 1
March
Chapter 1 **Origin And Development of Sociology And Anthropology**
Learning Outcome-
Learner will recognise the emergence of Sociology and Anthropology, classical thinkers their theories and their contribution.

April
Chapter 1 **Origin And Development of Sociology And Anthropology (To be revised)**
Chapter 2 **Research Methodology**
Learning Outcome-
Learner will recognise the importance of research methodology, the methods of sociology and Anthropology.

May
Chapter 1 **Origin And Development of Sociology And Anthropology (To be revised)**
Chapter 2 **Research Methodology (To be revised)**

July
Chapter 1 **Origin And Development of Sociology And Anthropology (To be revised)**
Chapter 2 **Research Methodology (To be revised)**

I Unit Test Syllabus:
Chapter 1 **Origin And Development of Sociology And Anthropology**

Term 2
July
Chapter 3 **Basic Concepts**
Learning Outcome-
Learner will recognise the role of an individual and his relation to the society. They will also get the notion and attributes of culture.

August
Chapter 3 **Basic Concepts (To be continued)**

September
Chapter 4 **Social Structure**
Learning Outcome-
Learner will recognise the various social groups, status and Role and social process.

October
Chapter 4 **Social Structure (To be continued)**

Term 3
November
Chapter 5 **Social Problems**
Learning Outcome-
Learner will recognise about various social problems as poverty, unemployment, illiteracy etc.

December
Chapter 6 **Indian Sociologists**
Learning Outcome-
Learner will get the details of the contribution of the Indian thinkers in the field of Sociology.

January **Revision**
Chapter 1 **Origin And Development of Sociology and Anthropology**
Chapter 2 **Research Methodology**
Chapter 3 **Basic Concepts**
Chapter 4 **Social Structure**
Chapter 5 **Social Problems**

February **Revision**
Chapter 6 **Indian Sociologists**

II Unit Test Syllabus
Chapter 5 **Social Problems**

PHYSICS

Term 1
March
Chapter 1 **Physical World**
Learning Outcome-
After studying this chapter, students will be able to understand about scope of Physics and its branches, its relation to other sciences, fundamental laws and fundamental forces in nature and applications of physics in technology and society.

April
Chapter 1 **Physical World**
Chapter 2 **Units and Measurements – Accuracy and Errors**
Learning Outcome-
By studying this chapter, students will be able to understand about importance of measurement in scientific studies, system of units, fundamental quantities with their units, derived and supplementary physical quantities with their units etc.
They will be able to understand about accuracy of measurement, errors in measurement, types of error, combination of errors etc. Significant figures, their significance, rules for mathematical operations and order of magnitudes.

Experiment 1-
To determine diameter of a given body. Calculate volume with appropriate significant figures.

May

Chapter 2 **Units and Measurements – Accuracy and Errors**

Chapter 3 **Dimensional Analysis**

Learning Outcome-

After studying this chapter students will be able to understand about dimensions, dimensional formula, applications and uses of dimensional analysis and limitations of dimensional analysis.

Experiment 1-

To determine diameter of a given body. Calculate volume with appropriate significant figures.

Experiment 2-

To determine the diameter of wire using a screw gauge and to calculate its area of cross – section.

July

Chapter 1 **Physical World**

Chapter 2 **Units and Measurements – Accuracy and Errors**

Chapter 3 **Dimensional Analysis**

Chapter 4 **Motion in a straight line**

Learning Outcome-

In this chapter students are going to learn about frame of reference, concept of point mass, rest and motion, distance and displacement, speed and velocity, average speed and average velocity, uniform velocity, acceleration, instantaneous acceleration, s-t, v-t and a-t graphs, equations of motion for accelerated rectilinear motion and their derivation.

Students will be able to understand formulae for differentiation and integration of simple functions.

Experiment 1-

To determine diameter of a given body. Calculate volume with appropriate significant figures.

Experiment 2-

To determine the diameter of wire using a screw gauge and to calculate its area of cross – section.

Experiment 3-

To determine radius of curvature of spherical surface (watch glass) by spherometer.

I Unit Test Syllabus

Chapter 2 **Unites and Measurements – Accuracy and Errors.**

Term 2

July

Chapter 5 **Motion in a Plane – Vectors**

Learning Outcome-

Students will be able to understand about concept of vectors and types of vectors, scalar quantities, unit vectors denoted by $\hat{\imath}$, $\hat{\jmath}$, $\hat{k}$ orthogonal unit vectors along x, y and z axes.

Addition and subtraction of vectors, graphical and analytical treatment of vectors, triangle law and parallelogram law for addition of vectors, rectangular components of a vector, Multiplication of two vectors as scalar or Dot product i.e. $\vec{a} \cdot \vec{b}$ = ab cosθ and vector product (or cross) i.e. $\vec{a} \times \vec{b}$ = ab sinθ. $\hat{n}$

They will be able to understand about concept of relative velocity, projectile motion and terms related to projectile motion with examples etc.

August

Chapter 5 **Motion in a Plane – Vectors (continued…)**

Chapter 6 **Newton's Laws of Motion**

Learning Outcome-

After studying this chapter students will be able to understand about concept of inertia, momentum, Newton's three laws of motion along with their examples, principle of conservation of momentum, Impulse of force, free body diagram, and equilibrium and conditions of equilibrium of a rigid body under three coplanar force.

Chapter 7 **Friction**

Learning Outcome-

In this chapter students will be able to understand about concept of friction between two bodies, Laws and types of friction, coefficient of friction, motion under friction, motion along a rough horizontal and inclined plane (up and down motion), angle of friction and angle of repose etc.

Chapter 8 **Uniform Circular Motion**

Learning Outcome-

After studying this chapter students will be able to understand about uniform circular motion, angular displacement (θ), angular velocity (ω), angular acceleration (α) and relation between them, concept of centri

petal acceleration and centripetal force, motion in a vertical circle, banking of road and railway track etc.

Chapter 9 Work, Energy and Power
Learning Outcome-
Students will be able to understand about work done by a constant force and variable force, work done in stretching a spring which is conserved in the form of potential energy, kinetic energy and potential energy with their expression, Work-Energy theorem, Law of conservation of energy along with its verification, Power, collision of two bodies in one dimension, and collision in two dimensions.

Experiment 4-
To verify law of parallelogram of forces and to determine weight of a body.

Experiment 5-
To find the downward force acting along the inclined plane on a roller or trolley due to gravitational pull of earth and to study its relationship with angle of inclination by plotting graph between force and $\sin\theta$.

September
Chapter 10 Centre of Mass
Learning Outcome-
After studying this chapter students will be able to understand about idea of centre of mass, centre of mass of two particle system and n-particles system, motion of centre of mass, and centre of mass of a rigid body and a uniform rod.

Chapter 11 Rotational Motion – Moment of Inertia and Torque
Learning Outcome-
Students will be able to understand about moment of a force (Torque), concept of a rigid body and its kinetic energy rotating about a fixed axis, moment of inertia and radius of gyration, equations of rotational motion, Theorems of parallel and perpendicular axes with examples, angular momentum, and law of conservation of angular momentum.

Chapter 12 Gravitation – Gravitational Field
Learning Outcome-
In this chapter students will be able to understand about Newton's universal law of gravitation, variation in the value of g at different places, gravitational field and gravitational potential at a point in Earth's gravitational field, gravitational potential difference, and gravitational potential energy.
They will be able to understand about escape velocity, orbital velocity and time period, the concept of weightlessness, basic concept of polar satellites and their uses. Kepler's laws of planetary motion etc.

Chapter 13 Elasticity
Learning Outcome-
In this chapter you should be able to understand about nature of elasticity in solids, stress, strain, Hooke's law, brittle, ductile and malleable solids, Elastic hysteresis, Young's modulus, Poisson's ratio and applications of elasticity.

Chapter 14 Fluid Pressure and Viscosity
Learning Outcome-
After studying this chapter you should be able to understand about pressure in fluid, Atmospheric pressure, Pascal's law and it applications, Archimedes' principle, viscosity, stokes' law, variation of viscosity with temperature, comparison between friction and viscosity, applications of viscosity, Reynold's number, equation of continuity, Bernoulli's theorem and its applications.

Experiment 6-
To determine, coefficient of kinetic friction and to study the relationship with normal reaction.

Experiment 7-
To determine acceleration due to gravity by measuring the variation time period with effective length of simple pendulum by plotting the graph between T^2 Vs L.

October
Chapter 15 Surface Tension
Learning Outcome-
By studying this chapter you should be able to understand about the concept of surface tension, its explanation based on molecular theory, surface energy, shape of liquid drops, angle of contact, force of surface tension on a light ring floating on a liquid, capillarity, applications of capillarity and factors affecting surface tension.

Chapter 16 Thermal Properties of Matter
Learning Outcome-
In this chapter you should be able to understand about the concept of heat and temperature, Ideal gas equation and absolute scale, expansion of liquid and gases, specific heat capacity and heat capacity, change of state and phase diagram.

Chapter 17 Heat Transfer

Learning Outcome-

After studying this chapter you should be able to understand about heat transfer , conduction, thermal conductivity, thermal resistance, nature of heat flow, flow of heat through a composite slab, convection, the black body, determination of the temperature of the Sun, Newton's law of cooling, Laws of spectral distribution in a black body and greenhouse effect.

Chapter 18 Thermodynamics

Learning Outcome-

You should be able to understand about zeroth law of thermodynamics, internal energy, work and heat, specific heat capacity and heat capacity, Law of equipartition of energy, first law of thermodynamics, and thermodynamic processes.

Experiment 8-

To find acceleration due to gravity with loaded spiral spring by plotting a graph between T^2 and M. Also to find force constant of spring.

Term 3

November

Chapter 19 Carnot Cycle – Second law of Thermodynamics

Learning Outcome-

After studying this chapter you should be able to understand about reversible and irreversible process, Heat engine, cannot cycle, second law of thermodynamics, refrigerator and heat pump.

Chapter 20 Kinetic Theory

Learning Outcome-

After studying this chapter you should be able to understand about kinetic theory of matter, work done in compressing a gas, kinetic theory of gases, pressure exerted by a gas, kinetic interpretation of temperature, gas laws from kinetic theory of gases, degrees of freedom, law of equipartition of energy, specific heat capacities of gases, van der waals equation of state for actual gases, concept of mean free path and Avogadro's number.

Chapter 21 Simple Harmonic Motion

Learning Outcome-

After studying this chapter you should be able to understand about periodic motion, displacement, amplitude, time period and frequency, S.H.M., differential equation of S.H.M., K.E and P.E of a harmonic oscillator, uniform circular motion, phase and Epoch, graphical representation of SHM and angular SHM etc.

Experiment 9-

To study the variation in the frequency of air column with length using resonance column apparatus or a long cylinder and a set of tuning forks. Hence determine the velocity of sound in air at room temperature.

December

Chapter 23 Waves: Wave Motion

Learning Outcome-

After studying this chapter you should be able to understand about types of waves, formation of Transverse and Longitudinal waves, graphical representation of a harmonic wave, Equation of a progressive harmonic wave, Characteristics of a progressive wave, and intensity of a wave.

Chapter 24 Sound Waves

Learning Outcome-

In this you should be able to understand about production and propagation of sound as a wave motion, properties of sound, speed of wave motion, General formula for speed of sound, Laplace's correction, factor affecting speed of sound, concept of ultrasonic and Supersonic waves etc.

Chapter 25 Principle of Superposition of Waves

Learning Outcome-

After studying this chapter you should be able to understand about principle of superposition of waves, beats, standing or stationary waves, fundamental frequency, harmonics and overtones, vibrating tuning fork, modes of vibrations of air column, resonance tube and standing waves on a rod fixed at the middle.

Experiment 10-

To determine frequency of tuning fork using a sonometer.

January Revision

February Revision

II Unit Test Syllabus

Chapter 20 Kinetic Theory

REVISED

CHEMISTRY

Term 1

March

Chapter 1 **Some basic concepts of chemistry**

Learning outcome-

After studying this unit thoroughly, the students should be able to:

- Explain laws of chemical combination. Dalton's atomic theory.
- Explain isotopic (atomic) and molecular masses, mole concept and molar mass, percentage composition, empirical and molecular formula. Stoichiometry and calculations based on chemical reactions.

Practical work: Basic technique in laboratory
1- Cutting of glass tube

April

Chapter 1 **Some basic concepts of chemistry**

Chapter 2 **Structure of atom**

Learning outcome-

After studying this unit thoroughly, the students should be able to:

- Have an idea about discovery of fundamental particleselectron, proton and neutron),atomic number, isotopes and isobars.
- Have an idea about Thomson's model and its limitations. Rutherford's experimental model and its limitations.
- Explain dual nature of matter and light. Bohr's atomic model and itslimitations (de Broglie's equation, Heisenberg’s uncertainty principle)
- Learn Quantum numbers, shapes of s, p and d orbitals.
- Explain Rules for filling electrons in orbitals Aufbau principle, Pauli's exclusion principle and Hund's rule of maximum multiplicity.
- Have an idea about electronic configuration of atoms,stability of half- filled and completely filled orbitals.

Chapter 3 **Classification of elements and periodicity in properties**

Learning outcome-

After studying this unit thoroughly, the students should be able to:

- Have an idea about Significance of classification; Mendeleev’s periodic law and its study of limitations; Modern PeriodicLaw and periodic trends in properties of elements.
- Have an idea about nomenclature of elements with atomicnumber greater than 100.
- Have an idea about ionisation enthalpy, electron gain enthalpy, elctronegativity and variation in groups and periods.

Practical work: Basic technique in laboratory
1- Bending of glass tube
2- Drawing a glass jetQualitative analysis
(i) Cation: Zero group: NH_4^+, First group: Pb^{+2}Anion: CO_3^{2-} ,CH_3COO^-

May

Chapter 3 **Classification of elements and periodicity in properties**

Chapter 4 **Chemical bonding and molecular structure**

Learning outcome-

After studying this unit thoroughly, the students should be able to:

- Learn ionic bond character, covalent bond, bond parameters, Lewis structure, polar character of covalent bond,
- Explain VSEPR theory, geometry of covalent molecules, valence bond theory.
- Have an idea about concept of hybridisation involving s, p and d orbitals and shapes of some simple molecules.
- Explain coordinate bond. Molecular orbital theory of mononuclear diatomicmolecules. Resonance and hydrogen bond.

Practical work: Qualitative analysis
(i) Cation: Group II:Cu^{2+}, Group III: Al^{3+}
Anion: SO_4^{2-}, Cl^-
Titration: Sodium carbonate solution/dil. H_2SO_4 or dil. HCl using methyl orange indicator

July

Chapter1 **Some basic concepts of chemistry**

Chapter2 **Structure of atom**

Chapter3 **Classification of elements and periodicity in properties**

Chapter4 **Chemical bonding and molecular structure**

Chapter 7 **Redox reaction**

Learning outcome-

After studying this unit thoroughly, the students should be able to:

- Students will be able to explain oxidation and reduction, redox reactions,
- Students will be able to explain oxidation number, change in oxidation number, balancing redox reactions. Applications of redox in various types of chemical reactions.

Practical work:

Basic technique in laboratory
1- Cutting of glass tube
2- Bending of glass tube
3- Drawing a glass jet
Qualitative analysis
(i) Cation: Zero group: NH_4^+, First group: Pb^{+2}Anion: CO_3^{2-} ,CH_3COO^-
(ii) Cation: Group II:Cu^{2+}, Group III: Al^{3+}Anion: SO_4^{2-}, Cl^-
Titration: Sodium carbonate solution/dil. H_2SO_4 or dil. HCl using methyl orange indicator

I Unit Test Syllabus:

Chapter 1 **Some basic concepts of chemistry**

Term 2

July

Chapter 5 **Chemical thermodynamics**

Learning outcome-

After studying this unit thoroughly, the students should be able to:

- Have an idea about Introduction, concepts, types of system, surroundings, extensive, intensive properties and state functions.
- Have an idea about First Law of Thermodynamics, enthalpy, heat capacity and specific heat.
- Explain Hess's law of constant heat summation, enthalpy of bond dissociation, combustion, formation, atomisation, sublimation,
- Have an idea about spontaneity, entropy, spontaneous and non-spontaneous process. Gibb’s freeenergy.

August

Chapter 5 **Chemical thermodynamics**

Learning outcome-

After studying this unit thoroughly, the students should be able to:

- Have an idea about Introduction, concepts, types of system, surroundings, extensive,intensive properties and state functions.
- Have an idea about First Law of Thermodynamics, enthalpy, heat capacity and specific heat.
- Explain Hess's law of constant heat summation, enthalpy of bond dissociation,combustion, formation,atomisation,sublimation,
- Have an idea about spontaneity, entropy, spontaneous and non-spontaneous process.Gibb’s freeenergy.

Practical work:

Titration: NaOH or KOH solution/ dil. H_2SO_4 or dil. HCl using methyl orange indicator
Qualitative analysis
Cation: Group III: Fe^{3+}, Anion: NO_3^-

September

Chapter 6A **Equilibrium: Chemical Equilibrium**

Learning outcome-

After studying this unit thoroughly, the students should be able to:

- Have an idea about equilibrium, law of mass action, equilibrium constant and factors affecting equilibrium. Le-Chatelier's principle and its applications.
- Have an idea about introduction of physical and chemical equilibrium and its characteristics.

Chapter 6B **Equilibrium: Ionic Equilibrium**

Learning outcome-

After studying this unit thoroughly, the students should be able to:

- Have an idea about electrolyte, non-electrolyte, ionisation, degree of ionisation ofacid, concept of pH, pH indicators, buffer solution, common ion effect.
- Have an idea about Henderson equation, hydrolysis of salts, solubility and solubility product.

Practical work:

Preparation of inorganic compound
(i) Preparation of potash Alum/ Mohr’s salt
Qualitative analysis
Cation: Group IV: Zn^{2+},Mn^{2+}, Ni^{2+}, Co^{2+}
Anion: PO_4^{3-}, $C_2O_4^{2-}$, NO_2^-

October
Chapter 8 **Organic chemistry: Some basic principles and techniques**
Learning outcome-
After studying this unit thoroughly, the students should be able to:
- Have an idea about IUPAC nomenclature of organic compounds and isomerism.
- Have an idea about methods of purification, qualitative and quantitative analysis.
- Have an idea about inductive effect, electromeric effect, resonance and hyperconjugation. Homolytic and heterolytic bond fissionof a covalent bond.
- Have an idea about free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions.

Practical work: Qualitative analysis
Cation: Group V: Ba^{2+}, Ca^{2+}, Sr^{2+}
Anion: SO_3^-
Preparation of Crystalline $FeSO_4$

Term 3
November
Chapter 8 **Organic chemistry: Some basic principles and techniques**
Learning outcome-
After studying this unit thoroughly, the students should be able to:
- Have an idea about IUPAC nomenclature of organic compounds and isomerism.
- Have an idea about methods of purification, qualitative andquantitative analysis.
- Have an idea about inductive effect, electromeric effect, resonance and hyperconjugation. Homolytic and heterolytic bond fissionof a covalent bond.
- Have an idea about free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions.

Practical work: Qualitative analysis
Cation: Group VI: Mg^{2+}
Anion: Cl^-, SO_4^{2-}

December
Chapter 9 **Hydrocarbons**
Learning outcome-
After studying this unit thoroughly, the students should be able to:
- Have an idea about Alkanes conformation of ethane physical and chemical properties.
- Learn Alkenes -methods ofpreparation; physical properties, chemical properties (Markownikoff's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition.
- Learn Alkynes - methods of preparation; physical and chemical properties: acidic character of alkynes, addition reactions.
- Learn benzene: resonance, aromaticity, chemical properties: mechanism of electrophilic substitution. Nitration,sulphonation, halogenation, Friedel Crafts alkylation and acylation, directive influence of functional group in monosubstituted benzene.

Practical work: Preparation of crystalline $CuSO_4$
Preparation of chromatogram: Separation of pigments from extracts of leaves and flowers/ ink mixtures

January **Revision**
February **Revision**

II Unit Test Syllabus:
Chapter 12 **Organic chemistry: Some basic principles and techniques**

REVISED
BIOLOGY

Term 1
March
Chapter 1 **The living world**
Learning outcome-
After studying this chapter you should be able to understand the following topics-
* Biodiversity –Classification and its need
* Three domains of life
* Concept of taxonomy and systematic
* Binomial nomenclature
* Three systems of classification

Experiment 1:
To study the parts of dissecting and compound Microscope

April
Chapter 1 The living world

Chapter 2 Biological classification five kingdom classification
Learning outcome-
After studying this chapter you should be able to understand the following topics-
* Concept of five kingdom classification
* Salient features and classification of Kingdom Monera, Kingdom Protista,
* Kingdom Fungi, Kingdom Plantae , and Kingdom Animalia.
* Concept of lichens and Mycorrihiza, Virus and viroid

Chapter 3 Kingdom Monera
Learning outcome-
After studying this chapter you should be able to understand the following topics-
* Concept of Bacteria, its classification according to shape, nutrition and mode of respiration
* Types of reproduction in bacteria-Asexual modes-Binary fission and budding
* Sexual modes Sexual reproduction-Transduction, conjugation and transformation
* Economic importances of bacteria with reference to role of bacteria in sewage treatment, antibiotics, energy production and house hold products (curd and cheese).
* Concept of archbacteria, halophiles and thermoacidophils .

Chapter 4 Kingdom Protista
Learning outcome-
After studying this chapter you should be able to understand the following topics-
* General characteristics & examples of Protista
* Characteristics of subgroups of Kingdom Protista
(i) Chrysophytes (ii) Dinoflagellates (iii) Euglenoids (iv) Slime moulds.
Characteristics of Protozoans under rhizopods, flagellates, ciliates and sporozoans with examples

Experiment 1:
To study the parts of dissecting and compound Microscope

Experiment 2:
To test the food samples for the presence of- (i) Starch (ii) Sugar (glucose) (iii) Sucrose (iv) lipid and (v) protein.

Experiment 3:
Separation of plant pigments from leaves by chromatography.

Experiment 4:
To demonstrate the process of Plasmolysis using onion bulb.

May
Chapter 1 The living world
Chapter 2 Biological classification five kingdom classification
Chapter 3 Kingdom Monera
Chapter 4 Kingdom Protista
Chapter 5 Kingdom Fungi
Learning outcome-
After studying this chapter you should be able to understand the following topics-
* General characteristics and modes of reproduction of fungi
* Concept of isogamy, anisogamy, oogamy, plasmogamy, karyogamy,dikaryophase.
* General characteristics of Zygomycetes, Ascomycetes, Basidiomycetes Deuteromycetes with examples
* Role of fungi in the field of medicine, bakery and environmental decomposition
* Concept of lichens and mycorrhiza.

Chapter 26 Excretory products and their elimination
Learning outcome-
After studying this chapter you should be able to understand the following topics
* Excretory products-Modes of excretion-Ammonotelism, Ureotelism, Uricotlism
* Human excretory system-Structure & function, urine formation, osmoregulation, regulation of kidney function-renin -angiostensin, atrial natriuretic factor and ADH.
* Role of erthyropoietin.
* Role of lungs, skin and liver in excretion
* Disorders of excretory system-Uraemia, Renal failure, Renal calculi, Nephritis.
* Dialysis and artificial kidney, Kidney transplant

Experiment 1:
To study the parts of dissecting and compound Microscope

Experiment 2:
To test the food samples for the presence of- (i) Starch (ii) Sugar (glucose) (iii) Sucrose (iv) lipid and (v) protein.

Experiment 3:
Separation of plant pigments from leaves by chromatography.

Experiment 4:
To demonstrate the process of Plasmolysis using onion bulb.

Experiment 5:
Identification of the following specimens-
(i) Liverworts (ii) Moss (iii) Fern (iv) Pinus (v) Agaricus (Mushroom) (vi) one monocot plant(Bamboo) (vii) one dicot plant-Petunia (viii) Sponge (ix) Hydra (x) Tapeworm (xi) Leech.

July

Chapter 1	**The living world**
Chapter 2	**Biological classification five kingdom classification**
Chapter 3	**Kingdom Monera**
Chapter 4	**Kingdom Protista**
Chapter 5	**Kingdom Fungi**
Chapter 26	**Excretory products and their elimination**

Experiment 1:
To study the parts of dissecting and compound Microscope

Experiment 2:
To test the food samples for the presence of- (i) Starch (ii) Sugar (glucose) (iii) Sucrose (iv) lipid and (v) protein.
To test the food samples for the presence of- (i) Starch (ii) Sugar (glucose) (iii) Sucrose (iv) lipid and (v) protein.

Experiment 3:
Separation of plant pigments from leaves by chromatography.

Experiment 4:
To demonstrate the process of Plasmolysis using onion bulb.

Experiment 5:
Identification of the following specimens-
(i) Liverworts (ii) Moss (iii) Fern (iv)Pinus (v)Agaricus (Mushroom) (vi)one monocot plant(Bamboo) (vii) one dicot plant-Petunia (viii) Sponge (ix)Hydra (x) Tapeworm (xi) Leech. Silk worm (xiii)Rohu fish

I Unit Test Syllabus-

Chapter 1	**The living world**
Chapter 2	**Biological classification five kingdom classification**

Term 2
July

Chapter 6	**Plant Kingdom**

Learning outcome-
After studying this chapter you should be able to understand the following topics-
*Characteristics of Algae and examples of chlorophyceae, Phaeophyceae, Rhodophyceae
*Economic importance of Algae.
* Characteristics of Bryophyta and features of Liverworts and mosses
* Graphic outline of lifecycle of Funaria
* Concept of Alteration of generation
* Economic importance of Bryophyta
* Characteristics of Pteriodophya and its classification into different classes
* Graphic outline of lifecycle of Fern
* Economic importance of Pteriodophyta
* Characteristics of Gymnosperms & graphic outline of lifecycle of Pinus
* Economic importance of Gymnosperms

August

Chapter 6	**Plant Kingdom**
Chapter 7	**Animal Kingdom**

Learning outcome-

After studying this chapter you should be able to understand the following topics-

* Animal body plan blind sac plan, cell aggregate plan tube within tube plan.
* Animal symmetry (Spherical, radial, and bilateral symmetry).
* Coelom development (diploblastic& triploblastic) acoelomate ,coelomate,segmentation.
* Classification of Animal kingdom into Non-chordates and Chordates with examples and distinguishing characters.

Chapter 8 Morphology of flowering plants

Learning outcome-

After studying this chapter you should be able to understand the following topics-

* Morphology and modifications of roots, Stems & leaves with examples.
* Morphology of flower, fruit and seed.
* Structure of a typical flower, types of inflorescence (Recemose and cymose).

Chapter 9 Anatomy of flowering plants-Plant tissues

Learning outcome-

After studying this chapter you should be able to understand the following topics-

* Types of plant tissues.
* Meristematic and permanent tissues.
* Classification of Meristematic and permanent tissues.
* Structure, classification and functions of permanent tissues.
* Location, structure, classification and functions of complex tissues (xylem and phloem).
* Internal structure of Root, stem& leaf.

Chapter 27 Locomotion and movement

Learning outcome-

After studying this chapter you should be able to understand the following topics

* Types of movements-Ciliary, flagellar, and muscular.
* Skeletal muscles-Contractile proteins and muscle contraction
* Skeletal system and its functions
* Different bones of Axial & appendicular skeleton
* Joints (types, location, example and their roles)
* General prpperties of muscles, structure of skeletal muscles-Sliding filament theory of muscle contraction.
* Chemical events during muscle contraction
* Concepts of summation, tetanus, rigermortis
* Differences between Red & White muscles.
* Disorders of Skeletal system-(i)Muscular dystrophy (ii)Tetany (iii)Myasthenia gravis (iv)Osteoporosis (v)Gout (vi)Arthritis

Experiment 6:

To demonstrate the process of Osmosis in a living plant cell using potato osmoscope.

Experiment 7:

To study about the morphology and modification of Roots, Stems and leaves

Experiment 8:

To prepare a temporary slide of Rhizopus / Mucor

September

Chapter 11 Morphology and anatomy of different systems of Frog

Learning outcome-

After studying this chapter you should be able to understand the following topics-

* Morphology, anatomy and functions of different systems of Frog -Digestive, circulatory, respiratory, nervous and reproductive systems.

Chapter 12 Cell-The unit of life

Learning outcome-

After studying this chapter you should be able to understand the following topics-

-cell the unit of lie, its basic structure.

* Prokaryotic and eukaryotic cell and differences among them
* Plant cell and animal cell and differences among them
* Cell theory.
* Cell organelles of Plant cell and animal cell. Diagrams related to it.
* Ultra structure and functions of cell wall and cell membrane.
* Fluid mosaic model, functions of plasma membrane.
  Microbodies, cytoskeleton (microfilaments and microtubule), Cilia and flagella,centrioles

Chapter 13 Biomolecules

Learning outcome-
After studying this chapter you should be able to understand the following topics-
* General classification, structure and functions of carbohydrates, Proteins and lipids (fats & oils).

Chapter 14 Enzymes
Learning outcome-
After studying this chapter you should be able to understand the following topics-
* General properties, nomenclature and classification of enzymes.
* Factors affecting enzyme activity.
* Co-factors and coenzymes

Chapter 15 Cell cycle and cell division
Learning outcome-
After studying this chapter you should be able to understand the following topics-
* Definition of C-value Concept of cell cycle& its different stages. Mitosis – different stages with diagrams.
* Meiosis –Prophase I stages with diagrams.
* Significances of Mitosis and Meiosis and differences among them

Experiment 9:
To prepare temporary slide of a Plant cell using onion peel

Experiment10:
To study the Stages of Mitosis in onion root tips.

Experiment 11:
To prepare temporary slides of-
(i) T.S. of dicot and monocot root.
(ii)T.S. of dicot and monocot stem

October
Chapter 21 Seed dormancy
Learning outcome-
After studying this chapter you should be able to understand the following topics
Concept of dormancy and quiescence causes and methods of breaking dormancy
Definition of hypogeal, epigram, and viviparous germination with examples

Chapter 28 Neural control and Coordination
Learning outcome-
After studying this chapter you should be able to understand the following topics
* Concept of neuron and nerves
* Nervous system in humans-CNS, PNS and viseral nervous system.
* Generation and conduction of Nerve impulse

Chapter 29 Chemical Coordination and integration
Learning outcome –
After studying this chapter you should be able to understand the following topics
* Endocrine glands and hormones
* Human endocrine systems-Hypothalamus, Pituitary, Pineal, Thyroid, Parathyroid, Adrenal, Pancreas and Gonads.
* Mechanism of hormone action.
* Role hormones as messenger and regulators.
* Hypo and hyper activity of hormones
* Disorders of Endocrine hormones-Dwarfism, Acromegaly, Cretinism, Goitre, Diabetes mellitus and Diabetes insipidus. Grave's disease and Addison's disease.

Experiment 12:
To study the effect of CO_2 concentration on the rate of photosynthesis.

Experiment 13:
Identification of different stages of Meiosis

Term 3
November
Chapter 18 Photosynthesis in higher plants
Learning outcome- After studying this chapter you should be able to understand the following topics
* Contribution of Priestley, Sacs Englemann, van Neil
* Photosynthesis as a mean of Autotrophic nutrition, site of Photosynthesis.
* Pigments involved in photosynthesis.
* Photochemical and biosynthetic phase
* Cyclic and non- cyclic photophosphorylation

* Photorespiration,C_3 and C_4 pathways.
* Factors affecting Photosynthesis
* Blackman's law of limiting factor.

Chapter 20 Plant growth and development

Learning outcome-

After studying this chapter you should be able to understand the following topics

* Phases of Plant growth, differentiation, dedifferentiation, sequence of developmental process in plant cell.
* Measurement of growth by direct method and by Auxanometer.
* Growth regulators-Auxin, Gibberellin, cytokinin, ethylene, ABA their roles.
* Applications of growth regulators

Experiment 14:

Comment on experimental setup in physiology
(a)Osmosis (b) Transpiration (c) Photosynthesis (d) Transpiration pull

December

Chapter 19 Cellular respiration in plants

Learning outcome-

After studying this chapter you should be able to understand the following topics

* Exchanges of gases cellular respiration-Glycolysis , fermentation, Kreb's cycle, Electron transport system.
* Number of ATP molecules generated.
* Amphibolic pathway, Respiratory quotients, R.Q values of carbohydrates, proteins and fats.

Chapter 24 Breathing and exchange of gases

Learning outcome-

After studying this chapter you should be able to understand the following topics

* Respiratory organs in Animals
* Respiratory organs in humans (location, structure, and function)
* Mechanism of breathing & its regulation, exchange of gases (O_2 and CO_2 trans port)
* Respiratory volumes
* Disorders related to respiration- Asthma, emphysema, occupational respiratory disorders

Chapter 25 Body fluids and circulation

Learning outcome-

After studying this chapter you should be able to understand the following topics

* Composition of blood, blood groups, coagulation of blood, composition of blood and lymph and its functions
* Human circulatory system-Structure of human heart and blood vessels, cardiac cycle, cardiac output, ECG, Double circulation
* Regulation of cardiac activity
* Disorders related to circulatory system-Hypertension, Coronary artery disease, Angina pectoris and heart failure.

Experiment 15:

To study the effect of thawing, heat and alcohol on the permeability of beet root cells.

Experiment 16:

Identification of stained preparation of the following-

(i) Stages of meiosis
(ii) Mammalian blood cells
(iii) Bacteria
(iv) Spirogyra
(v) Amoeba
(vi) Yeast

January Revision

February Revision

II Unit test Syllabus-

Chapter 18 Photosynthesis in higher plants

BIOTECHNOLOGY

Term 1

March

Chapter 1 Historical background of Biotechnology

Learning outcome-

After studying the chapter you should be able to understand the following topics-

* Concept of Biotechnology
* Concept of traditional and modern techniques of Biotechnology and their applications.
* Quality control management of the products.
* Good laboratory practices.

Experiment 1-

Determination of blood group using Antisera

April

Chapter 1 Historical background of Biotechnology

Chapter 2 Scope and importance of Biotechnology

Learning outcome-

After studying the chapter you should be able to understand the following topics-

* Different branches of Biotechnology and different regulatory guidelines
* Ethical, legal and social issues (ELSI) that a biotechnologist comes across while doing the work.
* Various organisations in the field of Biotechnology
* Intellectual Property Rights in Biotechnology
* Biosafety issues-Release of genetically modified organisms into the environment
* Biotechnology-global and Indian scenario, various institutes, centers, and funding agencies-NATB,CCMB,ICGEB,ICMR,ICAR,DBT,DST which deal with biotechnology and bioinformatics in India.

Chapter 3 Basic concepts Biochemical technology

Learning outcome-

After studying the chapter you should be able to understand the following topics-

* Concept of Biochemical technology
* Understanding of various statistical methods involved in biotechnology
* Concept of buffer, type and preparation of buffers, *PH*, *p*hysical variables &fermentation.
* Concept of bio-reactors, idea of sampling-quadrate and transect
* Measures of central tendency-Mean, median mode.
* Standard deviation and standard error, concept of probability-theoretical & experimental

Experiment 1-

Determination of blood group using Antisera

Experiment 2-

Identification of different types of blood cells by preparing blood smear using Leishmann's stain.

Experiment 3-

To know about the instruments used in Biotechnology laboratory.

May

Chapter 1 Historical background of Biotechnology

Chapter 2 Scope and importance of Biotechnology

Chapter 3 Basic concepts Biochemical technology

Chapter 4 Cell: Basic unit of life

Learning outcome-

After studying the chapter you should be able to understand the following topics-

* Cell: justification of cell as a basic unit of life.
* Prokaryotic and eukaryotic cell
* Components of cell with special reference to nucleus.
* Cytological techniques used in identifying the cell and chromosomes.
* Concept of Gram+ and gram – bacteria.
* Classification of chromosome on the basis position of centromere, basic idea about telomere, chromatin and nucleosome.
* Idea about banding patterns (Q, R, C and G) and their application.
* Concept of chromosomal number in different species, e.g. man, mouse, Drosophila and pea.
* Techniques in cytology-microscopy, Karyotyping and centrifugation.

Experiment 1-

Determination of blood group using Antisera

Experiment 2-

Identification of different types of blood cells by preparing blood smear using Leishmann's stain.

Experiment 3-
To know about the instruments used in Biotechnology

Experiment 4-
To find out the p^H of water by using p^H meter or p^H paper on tap water and water containing acid, base

Experiment 5-
Observation of various stages of meiosis under the microscope.

July
Chapter 1 **Historical background of Biotechnology**
Chapter 2 **Scope and importance of Biotechnology**
Chapter 3 **Basic concepts Biochemical technology**
Chapter 4 **Cell: Basic unit of life**
Chapter 5 **Cell division and cell cycle**
Learning outcome-
After studying the chapter you should be able to understand the following topics-
* Types of cell division (mitosis and meiosis) and various other activities of cell such as biochemical transformations
* Significances of cell division.
* Basic concept of cell cycle and cell regulation-by CdK method
* Concept of Mitotic index

Experiment 1-
Determination of blood group using Antisera

Experiment 2-
Identification of different types of blood cells by preparing blood smear using Leishmann's stain.

Experiment 3-
To know about the instruments used in Biotechnology

Experiment 4-
To find out the p^H of water by using p^H meter or p^H paper on tap water and water containing acid, base

Experiment 5-
Observation of various stages of meiosis under the microscope

Experiment 6-
To test the given food samples for the presence of (i) Starch (ii) Protein (iii) Lipids

I Unit test syllabus
Chapter 1 **Historical background of Biotechnology**

Term 2
July
Chapter 6 **Biological transformation**
Learning outcome-
After studying the chapter you should be able to understand the following topics-
* Concept of Biochemical transformations, different biochemical pathways involved in respiration-aerobic and anaerobic.
* Aerobic respiration-Glycolysis, Kreb's cycle, electron transport chain and oxidative phosphorylation. Anaerobic respiration-brief concept of lactic acid, fermentation and alcohol fermentation

August
Chapter 6 **Biological transformation**
Chapter 7 **Errors in Cell division**
Learning outcome-
After studying the chapter you should be able to understand the following topics
* Concept of errors in cell division
* Understanding of numerical and structural abnormalities.
* Mutation and its types.
* Concept of meiotic non-disjunction, mitotic non-disjunction and sex chromosome non-disjunction.
* Concept of numerical chromosomal aberrations with respect to autosomes.
* Concept of structural chromosomal abnormalities
* Polyploidy and its significance in plants.
* Inborn errors of metabolism in humans-basic concept and examples like albinism, sickle cell anaemia, phenylketonuria and alkaptonuria.

Experiment 7-
To observe the steps of Mitosis by using the root tip of onion.

Experiment 8-
To measure the mitotic index (MI).

September
Chapter 8 Biomolecules and their Separation techniques
Learning outcome-
After studying the chapter you should be able to understand the following topics
* Introduction to biomolecules-definition and types.
* Carbohydrates, proteins, lipids, vitamins and enzymes-their structure and properties.

Chapter 10 Animal and Plant Development
Learning outcome-
After studying the chapter you should be able to understand the following topics-
* Concept of Animal and plant development
* Development of an organism from zygotic cell in both plants and animals
  Animal development- fetilisation, zygote to blastocyst formation
* Plant development-Double fertilisation including formation of primary endosperm nucleus.

Experiment 9-
To find out the effect of temperature on curdling of milk by using *Lactobacillus* bacteria at 37^0C, 60^0C, and 10^0C .

Experiment 10-
To find out the purity of milk by using lactometer.

October
Chapter 11 Defense Mechanism and Strategies in living organisms
Learning outcome-After studying the chapter you should be able to understand the following topics-
* Concept of defense strategies in living organisms
* Immune system in higher animals
* Concept of immunity, immunization antigen and antibody.
* Concept of human leukocyte antigens with reference to organ transplantation.
* Types of immunity-innate and acquired.
* Concept of ELISA technique.
* Secondary metabolites in plants and their significance.
* Defense strategies in bacteria-endospores and R plasmids.

Experiment 11-
Construction of pedigree showing different types of inheritance of rolling of tongue, attached ear lobe, widow's peak hairline

Term3
November
Chapter 13 Laws of inheritance
Learning outcome-
After studying the chapter you should be able to understand the following topics-
* Concept of Mendel's experiments on pea plant and laws of inheritance.
* Concept of trait, gene, allele, phenotype, genotype, homozygosity heterozygosity and hemizygosity.
* Types of inheritance autosomal inheritance- dominant, co-dominant, recessive, polygenic pleiotropic and cytoplasmic inheritance.
* Pedigree construction using different standard symbols.
* Sex chromosome inheritance –with special reference to X chromosomal inheritance with suitable examples (colour blindness & haemophilia).

Experiment 12-
Demonstration of any metaphasic plate of Mitosis.

December
Chapter 14 Gene Mapping and Cancer Genetics
Learning outcome-
After studying the chapter you should be able to understand the following topics-
* Mapping of genes on chromosomes with respect to COV (Crossing over value).
* Basic concept of linkage and crossing over.
* Concept of genetic recombination.
* Cancer: Causes (physical, chemical, biological-TSG and onocogenes): diagnosis & treatment.

Chapter 15 Genes in Populations
Learning outcome-
After studying the chapter you should be able to understand the following topics-
* Concept of behavior of genes from generation to generation.
* Concept of Population genetics

* Concept of gene pool and allele frequency, definition of Hardy Weinberg law,its applications.
* Possibility of disease resistant and susceptible genes in population.
* Definition and application of pharmacogenetics and pharmacogenomics.

Experiment 13-
Collecting the samples by using quadrat and transect sampling techniques.

Experiment 14-
To collect primary and secondary data.

January **Revision**

February **Revision**

II Unit test syllabus
Chapter 13 **Laws of inheritance**

ACCOUNTS

For further details, students must go through I.S.C. 2026 Syllabus Booklet.

Term 1
March
Chapter 1 **Evolution of Accounting and Basic Accounting Terms**
Learning Outcome-
After studying this chapter you should be able to understand:
Background of accounting and accountancy; types of accounts; basic terms used in accounting, and Accounting Equation.
(i) Evolution of accounting: The three phases.
(ii) Basic Terms: Event, Transaction, Vouchers, Capital, Assets (intangible, tangible, fixed, current, liquid, wasting and fictitious), Liabilities (internal and external – current, long-term and contingent), Trade Debtors, Trade Creditors, Purchases, Sales, Goods traded in, Stock (raw material, work in progress and finished goods), Profit, Loss, Expense, Revenue, Income and Drawings.

April
Chapter 2 **Accounting Equations**
Learning Outcome-
After studying this chapter you should be able to understand:
(iii) Accounting equation: Meaning and usefulness.
NOTE: Practical problems in Accounting Equation are not required.

Chapter 3 **Meaning, Objectives, Scope and Nature of Accounting**
Learning Outcome-
After studying this chapter you should be able to understand:
(iv) Meaning and definition of Book-keeping, Accounting and Accountancy; difference between book-keeping, accounting and accountancy; accounting cycle.
(v) Users of accounting information.
(vi) Subfields of accounting: Meaning of financial accounting, cost accounting and management accounting.

Chapter 4 **Double Entry System**
Learning Outcome-
After studying this chapter you should be able to understand:
(a) Classification of Accounts- traditional classification or modern approach.
(b) Double Entry System.

Chapter 5 **Books of Original Entry – Journal**
Learning Outcome-
After studying this chapter you should be able to understand:
(i) Journal: recording of entries in journal with narration.
(c) Rules of journalizing – traditional classification or modern approach.
(d) Meaning of journal; Advantages of using a journal.
(e) Format of journal. (f) Simple and compound journal entries. (g) Opening Journal entry.

Chapter 6 **Accounting for Goods and Service Tax (GST)**
Learning Outcome-
After studying this chapter you should be able to understand:
(h) Journal Entries- Input CGST and Input SGST / Input IGST; Output CGST and Output SGST/ Output

IGST) / Setting off Input GST against Output GST.

May

Chapter 9 Ledger

Learning Outcome-

After studying this chapter you should be able to understand:
(ii) Ledger: posting from journal to respective ledgers. (a) Meaning of ledger. (b) Format of a ledger.
(c) Mechanics of posting. (d) Closing / Balancing of ledger accounts– expenses and revenues to be closed by transferring to Trading / P/L Account depending upon their direct/ indirect nature and balances of Assets, Liabilities and Capital to be carried down. (e) Adjusting and closing journal entries.

Chapter 10 Trial Balance

Learning Outcome-

After studying this chapter you should be able to understand:
(iv) Trial Balance. (a) Meaning, objectives, advantages and limitations of a Trial Balance.
(b) Preparation of the Trial Balance by the balance method from the given ledger account balances.

Chapter 14 Generally Accepted Accounting Principles (GAAP)

Learning Outcome-

After studying this chapter you should be able to understand:
(i) GAAP: Going Concern, Accounting Entity, Money Measurement, Accounting Period, Complete Disclosure, Revenue Recognition, Verifiable Objective, Matching Principle, Historical Cost, Accrual Concept, Dual Aspect Concept, Materiality, Consistency, Prudence and Timeliness, Industry Practice, Substance over legal form.

Chapter 15 Bases of Accounting

Learning Outcome-

After studying this chapter you should be able to understand:
(ii) Basis of accounting – cash basis and accrual basis (meaning; difference).

Chapter 16 Accounting Standards and International Financial Reporting Standards (IFRS)

Learning Outcome-

After studying this chapter you should be able to understand:
(iii) Accounting Standards: Meaning; Utility/ Advantages.
(iv) IFRS (International Financial Reporting Standards) - Meaning; Need for IFRS; Fundamental Assumptions in IFRS- Going Concern, Accrual, Measuring Unit, Purchasing Power; difference between IFRS and Indian GAAP; Procedure for implementation of IFRS; India and IFRS.

July

Chapter 1 Evolution of Accounting and Basic Accounting Terms

Learning Outcome-

After studying this chapter you should be able to understand:
Background of accounting and accountancy; types of accounts; basic terms used in accounting, and Accounting Equation.
(i) Evolution of accounting: The three phases.
(ii) Basic Terms: Event, Transaction, Vouchers, Capital, Assets (intangible, tangible, fixed, current, liquid, wasting and fictitious), Liabilities (internal and external – current, long-term and contingent), Trade Debtors, Trade Creditors, Purchases, Sales, Goods traded in, Stock (raw material, work in progress and finished goods), Profit, Loss, Expense, Revenue, Income and Drawings.

Chapter 2 Accounting Equations

Learning Outcome-

After studying this chapter you should be able to understand:
(iii) Accounting equation: Meaning and usefulness.
NOTE: Practical problems in Accounting Equation are not required.

Chapter 3 Meaning, Objectives, Scope and Nature of Accounting

Learning Outcome-

After studying this chapter you should be able to understand:
(iv) Meaning and definition of Book-keeping, Accounting and Accountancy; difference between book-keeping, accounting and accountancy; accounting cycle.
(v) Users of accounting information.
(vi) Subfields of accounting: Meaning of financial accounting, cost accounting and management accounting.

Chapter 4 Double Entry System

Learning Outcome-

After studying this chapter you should be able to understand:

(a) Classification of Accounts- traditional classification or modern approach.
(b) Double Entry System.

Chapter 5 Books of Original Entry – Journal

Learning Outcome-

After studying this chapter you should be able to understand:
(i) Journal: recording of entries in journal with narration.
(c) Rules of journalizing – traditional classification or modern approach.
(d) Meaning of journal; Advantages of using a journal.
(e) Format of journal. (f) Simple and compound journal entries. (g) Opening Journal entry.

Chapter 6 Accounting for Goods and Service Tax (GST)

Learning Outcome-

After studying this chapter you should be able to understand:
(h) Journal Entries- Input CGST and Input SGST / Input IGST; Output CGST and Output SGST/ Output IGST) / Setting off Input GST against Output GST.

Chapter 9 Ledger

Learning Outcome-

After studying this chapter you should be able to understand:
(ii) Ledger: posting from journal to respective ledgers. (a) Meaning of ledger. (b) Format of a ledger.
(c) Mechanics of posting. (d) Closing / Balancing of ledger accounts– expenses and revenues to be closed by transferring to Trading / P/L Account depending upon their direct/ indirect nature and balances of Assets, Liabilities and Capital to be carried down. (e) Adjusting and closing journal entries.

Chapter 10 Trial Balance

Learning Outcome-

After studying this chapter you should be able to understand:
(iv) Trial Balance. (a) Meaning, objectives, advantages and limitations of a Trial Balance.
(b) Preparation of the Trial Balance by the balance method from the given ledger account balances.

Chapter 14 Generally Accepted Accounting Principles (GAAP)

Learning Outcome-

After studying this chapter you should be able to understand:
(i) GAAP (Generally Accepted Accounting Principles):
(i) GAAP: Going Concern, Accounting Entity, Money Measurement, Accounting Period, Complete Disclosure, Revenue Recognition, Verifiable Objective, Matching Principle, Historical Cost, Accrual Concept, Dual Aspect Concept, Materiality, Consistency, Prudence and Timeliness, Industry Practice, Substance over legal form.

Chapter 15 Bases of Accounting

Learning Outcome-

After studying this chapter you should be able to understand:
(ii) Basis of accounting – cash basis and accrual basis (meaning; difference).

Chapter 16 Accounting Standards and International Financial Reporting Standards (IFRS)

Learning Outcome-

After studying this chapter you should be able to understand:
(iii) Accounting Standards: Meaning; Utility/ Advantages.
(iv) IFRS (International Financial Reporting Standards) - Meaning; Need for IFRS; Fundamental Assumptions in IFRS- Going Concern, Accrual, Measuring Unit, Purchasing Power; difference between IFRS and Indian GAAP; Procedure for implementation of IFRS; India and IFRS.

I Unit Test Syllabus:

Chapter 5 Books of Original Entry – Journal

Term 2

July

Chapter 7 Books of Original Entry – Cash Book

Learning Outcome-

After studying this chapter you should be able to understand:
(iii) Sub-division of journal - cash book [including simple cash book and triple column cash book (cash, bank

and discount) with - contra entry pertaining to receipt of cheque not deposited on the same day; adjustments pertaining to a definite cash balance to be maintained / overdraft facility to be availed at the end of the month. Petty cash book (including analytical and imprest system).
(a) Cash book [including simple cash book and triple column cash book (cash, bank and discount) with - contra entry pertaining to receipt of cheque not deposited on the same day; adjustments pertaining to a definite cash balance to be maintained / overdraft facility to be availed at the end of the period].
(b) Petty cash book (including analytical and imprest system).
NOTE: Transactions with GST is excluded in Cash Book.

August

Chapter 7 Books of Original Entry – Cash Book

Learning Outcome-

After studying this chapter you should be able to understand:
(iii) Sub-division of journal - cash book [including simple cash book and triple column cash book (cash, bank and discount) with - contra entry pertaining to receipt of cheque not deposited on the same day; adjustments pertaining to a definite cash balance to be maintained / overdraft facility to be availed at the end of the month. Petty cash book (including analytical and imprest system).
(a) Cash book [including simple cash book and triple column cash book (cash, bank and discount) with - contra entry pertaining to receipt of cheque not deposited on the same day; adjustments pertaining to a definite cash balance to be maintained / overdraft facility to be availed at the end of the period].
(b) Petty cash book (including analytical and imprest system).
NOTE: Transactions with GST is excluded in Cash Book.

Chapter 8 Books of Original Entry – Special Purpose Subsidiary Books

Learning Outcome-

After studying this chapter you should be able to understand:
Sales day book, purchases day book, sales return day book, purchases return day book and Journal proper.
(c) Sales day book, purchases day book- Simple (Date, Particulars, I. No, L.F, Details, Amount); Columnar (Date, Particulars, I. No, L.F, Details, Net Invoice, Goods, Carriage, GST-Input CGST and Input SGST / Input IGST; Output CGST and Output SGST / Output IGST- Amount or percentage given).
(d) Sales return day book, purchases return day book- Simple (Date, Particulars, Credit/ Debit Note No., L.F, Details, Amount. (e) Journal proper. (f) Mechanics of posting from special subsidiary books.
NOTE: Transactions with GST is excluded in Returns Books

September

Chapter 12 Depreciation

Learning Outcome-

After studying this chapter you should be able to understand:
Depreciation, Methods of charging depreciation, Method of recording depreciation.
(i) Depreciation: meaning, need, causes, objectives and characteristics.
(ii) Methods of charging depreciation: Straight Line and Written Down Value method; advantages, limitations of both the methods and differences between the two.
(iii)Methods of recording depreciation: charging to asset account, creating provision for depreciation / accumulated depreciation.
(iv) Problems relating to purchase and sale of assets (with or without asset disposal account) incorporating the application of depreciation under the two stated methods.
NOTE: Questions on change of method from SLM to WDV and vice-versa are not required.

Chapter 13 Bills of Exchange

Learning Outcome-

After studying this chapter you should be able to understand:
(i) Introduction to Negotiable Instruments: explanation of basic terms.
Meaning of negotiable instruments; Bills of exchange, promissory note (including specimen and distinction), cheque, advantages and disadvantages of Bills of Exchange, explanation of basic terms - drawer, drawee, payee, endorser, endorsee, bill on demand / bill on sight, bill after date, bill after sight, tenure of the bill, days of grace, due date, endorsement and discounting of bills, bill sent for collection, dishonour of a bill, holder of a bill, noting charges, notary public, renewal of a bill, retirement of a bill and insolvency of the drawee/acceptor.
(ii) Practical problems on the above in the books of drawer, drawee and endorsee- Journal entries and Ledger accounts. Self explanatory.
NOTE: • Accommodation Bill is not required. • Recording in the books of the bank not required.

Chapter 17 Capital and Revenue

Learning Outcome-

After studying this chapter you should be able to understand:

(i) Capital and Revenue Expenditure/Income.

(a) Meaning and difference between capital expenditure and revenue expenditure with examples.

(b) Meaning and difference between capital receipts and revenue receipts with examples.

(c) Meaning and difference between capital profit/income and revenue profit/ income with examples.

(d) Meaning and difference between capital loss and revenue loss with examples.

(e) Meaning of deferred revenue expenditure with examples.

Chapter 18 Provisions and Reserves

Learning Outcome-

After studying this chapter you should be able to understand:

(ii) Provisions and Reserves. Meaning, importance; difference between provisions and reserves; types of reserves-revenue reserve, capital reserve, general reserve, specific reserve and secret reserve.

October

Chapter 19 Final Accounts

Learning Outcome-

After studying this chapter you should be able to understand:

(iii) Trading, Profit and Loss Account and Balance Sheet of a sole trader, (Horizontal Format) without adjustments. Meaning, objectives, importance and preparation of Trading, Profit and Loss Account and Balance Sheet of a sole trader.

Chapter 20 Final Accounts – With Adjustments

Learning Outcome-

After studying this chapter you should be able to understand:

(iv) Preparation of Trading Account, Profit and Loss Account and Balance Sheet with necessary adjustments. Adjustments relating to closing stock, outstanding expenses, prepaid expenses, accrued income, income received in advance, depreciation, bad debts, provision for doubtful debts, provision for discount on debtors, manager's commission (on the net profit before and after charging such commission), goods distributed as free samples, goods taken by the owner for personal use and abnormal loss; Treatment of Adjusted Purchases and calculation of cost of goods sold.; Input CGST and Input SGST/ Input IGST and Output CGST and Output SGST/ Output IGST given in the Trial Balance to offset against each other in the Balance Sheet.

(v) Marshalling of a Balance Sheet: Order of permanence and order of liquidity.

(vi) Adjusting, closing and transfer entries. GST is excluded in Adjustments.

NOTE:1. Practical problems on preparation of provision for doubtful debts account are not required.

2. Since creating provision for doubtful debts accounts involves being prudent, in the absence of any information of the amount of the new provision, it will be assumed that the amount of the new provision will be the same as the old provision unless the remaining debtors are good.

Term 3

November

Chapter 21 Errors and their Rectification

Learning Outcome-

After studying this chapter you should be able to understand:

Errors and types of errors: Rectification of errors after the preparation of trial balance and rectification of errors after the preparation of Final Accounts.

(i) Types of Errors: errors of omission, errors of commission, errors of principle, compensating errors.

(ii) Rectification of errors after the preparation of trial balance and through suspense account if required.

(iii) Rectification of errors after the preparation of Final Accounts through P/L Adjustment A/c if required.

NOTE: Redrafting of Balance Sheet not required.

December

Chapter 23 Accounts of Not–for–Profit Organizations

Learning Outcome-

After studying this chapter you should be able to understand:

(i) Non-Trading Organization: meaning, objectives, necessity and treatment of specific items.

Self-explanatory.

(ii) Different books maintained and differences between them.

(a) Receipts and Payments Accounts: meaning, features, differences between Receipts and Payments Account and Cash Book.

(b) Income and Expenditure Accounts: meaning, features, difference between Income and Expenditure account and Profit and Loss account.

(c) Balance Sheet and its role.

(iii) Preparation of Income and Expenditure Account and Closing Balance Sheet. Preparation of Income and Expenditure Account and Balance Sheet when Receipts and Payments Account and other information is given.

(a) Entrance, admission fees, life membership fees, legacies, special grants and special donations are to be capitalised.

(b) General donations, general grants and all receipts of a recurring nature such as membership fees/ subscriptions are to be taken as revenue receipts.

(c) Preparation of accounts of incidental activities such as restaurant accounts are not required.

NOTE: Preparation of a Receipt and Payments Account only or an Income and Expenditure Account with a Balance Sheet from incomplete records need not be covered (in horizontal format).

January **Revision**

February **Revision**

II Unit Test Syllabus

Chapter 21 **Errors and their Rectification**

ECONOMICS

For further details, students must go through I.S.C. 2026 Syllabus Booklet.

Term 1

March

Chapter 1 **Definition of Economics**

Learning Outcome-

After studying this chapter you should be able to understand:

1. Understanding Economics

(i) Definition of Economics: Adam Smith, Alfred Marshall, Lionel Robbins, Samuelson.

Basic understanding of economics and economic phenomena to be explained especially in the context of the concept of scarcity and allocation of resources. Students may be introduced to the main points on which the various definitions of economics could be analyzed. Features of definitions and two- three criticisms.

(ii) Micro and Macro Economics – Meaning and Difference.

April

Chapter 2 **Basic Concepts of Economics**

Learning Outcome-

After studying this chapter you should be able to understand:

(ii) Basic concepts: utility, price, value, wealth, welfare, money, market, capital, investment, income, production, consumption, saving, Business cycle, Aggregate demand and Aggregate supply. A conceptual understanding of the terms: Human wants-classification; factors of production; utility – types and features, total utility, marginal utility and diminishing marginal utility; price – definition and general rise and fall in price; value – real vs nominal value; wealth – explanation of the term, classification (personal and social); welfare – economic welfare, social welfare and relation between wealth and welfare; money – barter economy vs money economy; market – meaning and size; capital – meaning; investment –meaning, investment as a process of capital formation; income – meaning, factor incomes; production – meaning, consumption – meaning; saving – meaning; individual saving and aggregate savings. The above terms to be explained with the help of relevant examples.

May

Chapter 3 **Basic Problems of an Economy**

Learning Outcome-

After studying this chapter you should be able to understand:

(iii) Basic problems of an economy: what to produce; how to produce; for whom to produce; efficient use of resources. The basic problem of scarcity and choice must be emphasized. As this problem is universal in character, i.e. faced by all economies, irrespective of the economic system they follow, it must be explained using the concept of Production Possibility Curve. The three problems - what to produce, how to produce and for whom to produce - must be highlighted. The role of technology in shift and rotation in the Production Possibility Curve (assumptions and features) must be explained.

July

Chapter 1 **Definition of Economics**

Learning Outcome-

After studying this chapter you should be able to understand:

1. Understanding Economics

(i) Definition of Economics: Adam Smith, Alfred Marshall, Lionel Robbins, Samuelson.
Basic understanding of economics and economic phenomena to be explained especially in the context of the concept of scarcity and allocation of resources. Students may be introduced to the main points on which the various definitions of economics could be analyzed. Features of definitions and two- three criticisms.
(ii) Micro and Macro Economics – Meaning and Difference.

Chapter 2 Basic Concepts of Economics
Learning Outcome-
After studying this chapter you should be able to understand:
(ii) Basic concepts: utility, price, value, wealth, welfare, money, market, capital, investment, income, production, consumption, saving, Business cycle, Aggregate demand and Aggregate supply. A conceptual understanding of the terms: Human wants-classification; factors of production; utility – types and features, total utility, marginal utility and diminishing marginal utility; price – definition and general rise and fall in price; value – real vs nominal value; wealth – explanation of the term, classification (personal and social); welfare – economic welfare, social welfare and relation between wealth and welfare; money – barter economy vs money economy; market – meaning and size; capital – meaning; investment –meaning, investment as a process of capital formation; income – meaning, factor incomes; production – meaning, consumption – meaning; saving – meaning; individual saving and aggregate savings. The above terms to be explained with the help of relevant examples.

Chapter 3 Basic Problems of an Economy
Learning Outcome-
After studying this chapter you should be able to understand:
(iii) Basic problems of an economy: what to produce; how to produce; for whom to produce; efficient use of resources. The basic problem of scarcity and choice must be emphasized. As this problem is universal in character, i.e. faced by all economies, irrespective of the economic system they follow, it must be explained using the concept of Production Possibility Curve. The three problems - what to produce, how to produce and for whom to produce - must be highlighted. The role of technology in shift and rotation in the Production Possibility Curve (assumptions and features) must be explained.

Chapter 4 Types of Economies
Learning Outcome-
After studying this chapter you should be able to understand:
(iv) Types of economies: developed and developing; Economic systems: capitalism, socialism and mixed economy; mechanism used to solve the basic problems faced by each economy. Characteristics of developed and developing economies; India: introducing regional and global economic grouping such as SAARC, European Union, ASEAN, G-8, G-20 (basic knowledge); different types of economic systems; definition, features, merits and demerits of capitalism, socialism and mixed economic system; mechanisms used to solve the basic problems under each economic system to be explained with the help of examples. The role of government along with the price mechanism to be emphasized. Price mechanism as a tool to solve economic problem.

I Unit Test Syllabus:

Chapter 2 Basic Concepts of Economics

Term 2
July
Chapter 15 Meaning of Statistics and Collection, Classification, Presentation of Data
Learning Outcome-
After studying this chapter you should be able to understand:
(i) Statistics: definition, scope and limitations of statistics.

August
Chapter 15 Meaning of Statistics and Collection, Classification, Presentation of Data
Learning Outcome-
After studying this chapter you should be able to understand:
(i) Statistics: Special emphasis to be laid on importance of statistics in economics.
(ii) Collection, organization and presentation of data.
Collection of data - Sources of data: primary, secondary. Methods of collecting data: Some important sources of collecting secondary data; ways of collecting primary data; Organization of data: meaning and types of variables, frequency; Presentation of data: tabular and diagrammatic presentation (bar diagram, pie, line, histogram, polygon and ogive curve).

Chapter 16 Measures of Central Tendency or Averages
Learning Outcome-
After studying this chapter you should be able to understand:
(iii) Measures of Central Value: average defined; type of averages: arithmetic mean; simple and weighted; median and mode; ungrouped and grouped data; numericals, relationship between mean, median and mode. Numericals only on mean, median and mode for both ungrouped and grouped data. Relationship between

mean, median and mode – the nature of the frequency distribution – symmetrical, positively skewed and negatively skewed.

September

Chapter 17 Measures of Dispersion

Learning Outcome-

After studying this chapter you should be able to understand:

(iv) Measures of dispersion: definition, methods of studying variation - range; standard deviation; quartile deviation; the mean or average deviation; coefficient of variation. Numericals on measures of dispersion required.

Chapter 18 Correlation

Learning Outcome-

After studying this chapter you should be able to understand:

(v) Correlation: introduction, scatter diagram; Karl Pearson's coefficient of correlation; Spearman's coefficient of correlation. Meaning and significance of correlation to be explained along with types and degrees. Scatter diagram, Karl Pearson's method (two variables, ungrouped data); Spearman's Rank Correlation to be explained with the help of numericals.

October

Chapter 19 Index Number

Learning Outcome-

After studying this chapter you should be able to understand:

(vi) Index numbers: simple and weighted - meaning, types and purpose. Problems involved in constructing a Price Index Number.

What does an Index number show, measure or indicate (like a Price Index Number). Difference between simple and weighted – Price weighted or quantity weighted.

Laspayre's, Paasche and Fisher's methods of index numbers (to be explained with the help of numericals). Wholesale Price Index, Consumer Price Index and Index of Industrial Production should be explained. Uses of Index Numbers. Problems involved in constructing Price Index Number – the choice of the base year, the number of commodities to be included (coverage), choice of prices and the method to be used.

Chapter 20 Mathematical Tools Used in Economics: Some Basic Concepts

Learning Outcome-

After studying this chapter you should be able to understand:

(vii)Some Mathematical Tools used in Economics. Equation of a straight line and slope of a straight line.

<u>Term 3</u>

November

Chapter 5 Indian Economy in the Post Liberalisation Period

Learning Outcome-

After studying this chapter you should be able to understand:

(i) Introduction. Indian economy post liberalization: Main features, problems and policies of agriculture, industry and foreign trade.

Chapter 6 Parameters of Development: Per Capita Income (PCI) and Human Development Index (HDI)

Learning Outcome-

After studying this chapter you should be able to understand:

(ii) Parameters of development: per capita income (definition and limitations); meaning and construction of Human Development Index (HDI). India and HDI as per the UNDP report.

Chapter 7 Planning and Economic Development in India

Learning Outcome-

After studying this chapter you should be able to understand:

(iii)Planning and Economic Development in India: a brief explanation. Major objectives of all the Five-Year Plans. NITI Aayog: objectives and role.

Chapter 8 Structural Changes in the Indian Economy after Liberalisation

Learning Outcome-

After studying this chapter you should be able to understand:

(iv) Structural Changes in the Indian Economy after liberalization.

Need, meaning, significance and features of liberalization, globalization and privatization of the Indian Economy; disinvestment: meaning.

December

Chapter 9 Problem of Poverty

Learning Outcome-

After studying this chapter you should be able to understand:

(v) Current challenges facing the Indian Economy. Poverty – absolute and relative, vicious circle of poverty, main programmes for poverty alleviation: A critical assessment of PAPs (Poverty Alleviation Programmes).

Chapter 10 Problem of Unemployment

Learning Outcome-

After studying this chapter you should be able to understand:

(v) Unemployment-types of unemployment, causes for unemployment, Policy measures (after 2000).

Chapter 11 Indian Agriculture

Learning Outcome-

After studying this chapter you should be able to understand:

(v) Rural development- Rural Credit (need, purpose and sources); Agricultural marketing: defects and government measures to improve agricultural marketing; role of cooperatives, agricultural diversification; alternate farming /organic farming: meaning and importance.

Chapter 12 Human Capital Formation

Learning Outcome-

After studying this chapter you should be able to understand:

(v) Human Capital formation: How people become resource; role of human capital in economic development; Growth of education sector in India; Education – formal and informal (Meaning only).

Chapter 13 Economic Growth and Development: A Comparative Study between Indian and Chinese Economy

Learning Outcome-

After studying this chapter you should be able to understand:

(vi) Economic Growth and Development – Meaning and difference.

Chapter 14 Environment and Sustainable Economic Development

Learning Outcome-

After studying this chapter you should be able to understand:

(vii) Sustainable Development. Effect of Economic Development on Resources and Environment. Understanding the concept of Sustainable development; Need for sustainable development for improving the quality of life - looking at the deteriorating quality of air, water, food over time, developing an appreciation to sustain at least what exists for the generations to come. Global warming – meaning and effects.

January Revision

February Revision

II Unit Test Syllabus

Chapter 8 Structural Changes in the Indian Economy after Liberalisation

COMMERCE

For further details, students must go through I.S.C. 2026 Syllabus Booklet.

Term 1

March

Chapter 1 Classification of Human Activities-Economic and Non-economic

Learning Outcome-

After studying this chapter you should be able to understand:

(i) Classification of human activities-economic and non-economic. Types of economic activities. Distinction between business, profession and employment.

April

Chapter 2 Nature and Objectives of Business

Learning Outcome-

After studying this chapter you should be able to understand:

(ii) Definition and concept of business; Definition of business. Characteristics of business.

(iii) Business objectives: economic; social; human and national. Role of Profit in business.

Chapter 3 Classification of Business Activities

Learning Outcome-

After studying this chapter you should be able to understand:

(ii) Classification of business activities: (a) Industry: types of industries on the basis of activity (primary and secondary) and on the basis of size (micro, small, medium and large). Role of small businesses in India.

(b) Commerce: branches of Commerce. Commerce - its nature and functions; importance of Commerce. Branches of Commerce - trade and aids to trade. Relationship between commerce, trade and industry.

May

Chapter 4 Introduction to Business Organisations

Learning Outcome-

After studying this chapter you should be able to understand:

(i) Introduction to business organizations. Meaning, characteristics, types (private sector, public sector Public Private Partnership (PPPs) /Joint Sector). Comparison between different types of organizations.

Chapter 5 Sole Trader

Learning Outcome-

After studying this chapter you should be able to understand:

(ii) Sole trader - objectives; formation; merits and demerits. Meaning and definition of sole trader; characteristics and objectives of sole trader; merits and demerits.

July

Chapter 1 Classification of Human Activities-Economic and Non-economic

Learning Outcome-

After studying this chapter you should be able to understand:

(i) Classification of human activities-economic and non-economic. Types of economic activities. Distinction between business, profession and employment.

Chapter 2 Nature and Objectives of Business

Learning Outcome-

After studying this chapter you should be able to understand:

(ii) Definition and concept of business; Definition of business. Characteristics of business.

(iii) Business objectives: economic; social; human and national. Role of Profit in business.

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Learning Outcome-

After studying this chapter you should be able to understand:

(ii) Classification of business activities: (a) Industry: types of industries on the basis of activity (primary and secondary) and on the basis of size (micro, small, medium and large). Role of small businesses in India.

(b) Commerce: branches of Commerce. Commerce - its nature and functions; importance of Commerce. Branches of Commerce - trade and aids to trade. Relationship between commerce, trade and industry.

Chapter 4 Introduction to Business Organisations

Learning Outcome-

After studying this chapter you should be able to understand:

(i) Introduction to business organizations. Meaning, characteristics, types (private sector, public sector Public Private Partnership (PPPs) /Joint Sector). Comparison between different types of organizations.

Chapter 5 Sole Trader

Learning Outcome-

After studying this chapter you should be able to understand:

(ii) Sole trader - objectives; formation; merits and demerits. Meaning and definition of sole trader; characteristics and objectives of sole trader; merits and demerits.

I Unit Test Syllabus:

Chapter 2 Nature and Objectives of Business

Chapter 3 Classification of Business Activities

Term 2

July

Chapter 6 Partnership

Learning Outcome-

After studying this chapter you should be able to understand:

(iii) Partnership (a) Meaning, features.

August

Chapter 6 Partnership

Learning Outcome-

After studying this chapter you should be able to understand:

(iii) Partnership (a) types of partners and partnership firms. Meaning and definition of partnership; features of partnership firms; types of partners and partnerships.

(b) Registration of Partnership firms. Formation, meaning and contents of partnership deed; registration and consequences of non-registration.

(c) Evaluation of partnership; merits and demerits. Self-explanatory.

(d) Comparison of sole proprietorship and partnership. Self-explanatory.

Chapter 7 Joint Stock Company

Learning Outcome-
After studying this chapter you should be able to understand:
(iv) Corporate Organisations.
(a) Joint Stock Company: meaning, features, merits, demerits and objectives.

Chapter 8 Types of Companies
Learning Outcome-
After studying this chapter you should be able to understand:
(h) Types of companies- Classification of companies on the basis of mode of incorporation, liability of members, public interest, ownership, control and nationality. Public and private companies and their comparative studies, privileges of private companies.
(i) Global enterprises – Meaning, characteristics, merits and demerits of Global Enterprises.

Chapter 9 Formation of a Company
Learning Outcome-
After studying this chapter you should be able to understand:
(b) Stages of Formation of a Company.
(c) Promotion, meaning, role and types of promoters.
(d) Incorporation of a company -Meaning and steps of incorporation (including filing of documents), certificate of incorporation.
(e) Memorandum of Association and Articles of Association (excluding alterations) and distinction between the two documents. Meaning and contents of MOA and AOA. Distinction between the MOA and AOA.
(f) Commencement of business. Steps, Certificate of Commencement.
(g) Prospectus and statement in lieu of prospectus – meaning and contents only.

September
Chapter 10 Public Enterprises, Public Utilities and Public-Private Partnerships
Learning Outcome-
After studying this chapter you should be able to understand:
(v) Public Sector Undertakings.
(a) Meaning; characteristics, objectives, role and forms of Public Sector Undertakings (Departmental Undertakings, Public Corporations and Government Companies).
Public Sector Undertakings – meaning; characteristics, objectives, role and criticisms. Forms of Public Sector Undertakings (Departmental undertakings; Public Corporations and Government companies – definitions, features, merits and demerits).
(b) Public Private Partnerships. Meaning and features of PPPs.

Chapter 11 Cooperative Organisation
Learning Outcome-
After studying this chapter you should be able to understand:
(vi) Co-operative organisations - meaning; characteristics and types. Co-operative organizations - meaning; characteristics, advantages and disadvantages; Types of cooperative organizations, distinction between joint stock companies and cooperative organizations.

Chapter 12 Social Responsibility of Business and Business Ethics
Learning Outcome-
After studying this chapter you should be able to understand:
3. Social Responsibility of Business and Business Ethics: Concept and need for social responsibility. Responsibility towards owners, investors, consumers, employees, government and community; Responsibility of business towards protection of environment; Meaning and importance of Business ethics.

October
Chapter 13 E-Business and Outsourcing
Learning Outcome-
After studying this chapter you should be able to understand:
(i) E-business. Scope and benefits, Resources required for successful e-business implementation, online transactions, payment mechanisms, security and safety of business transactions.
(ii) Outsourcing. Concept, need and scope of BPO and KPO
(iii) Smart Cards. Meaning and utility.

<u>Term 3</u>
November
Chapter 14 Stock Exchange
Learning Outcome-
After studying this chapter you should be able to understand:
(i) Meaning and importance. (ii) Functions and services.
(iii) Major Stock Exchanges in India (BSE, NSE, DSE, ASE) – types and locations.
(iv) Types of operators – Brokers, jobbers, Bulls and Bears.
(v) Terms used in Stock Exchange- ex-dividend, cum dividend, spot delivery, forward delivery.
(vi) SEBI – functions and objectives. Self-explanatory

Chapter 15 Wholesale Trade (Wholesalers)

Learning Outcome-

After studying this chapter you should be able to understand:

(i) Wholesalers. Meaning and services of wholesaler to retailer, customer and producer.

Chapter 16 Retail Trade (Retailers)

Learning Outcome-

After studying this chapter you should be able to understand:

(ii) (a) Retail trade – Meaning and characteristics. Retail trade - meaning, characteristics of retail trade. Distinction between wholesale and retail trade.

(b) Types of retail trade - Itinerant and small scale fixed shops: departmental store, chain store, mail order houses, tele shopping, franchise, consumer cooperative stores, hypermarkets and automatic vending machines. Meaning, features, merits and demerits to be covered.

Chapter 17 Procedure and Documents used in Home Trade

Learning Outcome-

After studying this chapter you should be able to understand:

(c) Documents used in home trade. Documents and procedure used in home trade - inquiry; quotation; catalogues; order; invoice; debit note; credit note. Price quotations - cash discount and trade discount

December

Chapter 18 Chambers of Commerce and Industry

Learning Outcome-

After studying this chapter you should be able to understand:

(iii) Role of Chambers of Commerce and Industry and Trade Associations. Meaning and functions of Chambers of Commerce and trade associations.

Chapter 19 Nature and Scope of Foreign Trade

Learning Outcome-

After studying this chapter you should be able to understand:

(i) Meaning, difference between internal trade and external trade. Meaning and characteristics of international trade, problems of International trade; advantages and disadvantages of international trade.

Chapter 20 Export Trade

Learning Outcome-

After studying this chapter you should be able to understand:

(ii) Export trade – Meaning, objectives and procedure of export trade. Self-explanatory.

(iv) Documents involved in international trade. Documents involved in export trade, such as: indent, letter of credit, shipping order, shipping bill, mate's receipt, bill of lading, certificate of origin, consular invoice, documentary bill of exchange (DA/DP), all need to be explained.

Chapter 21 Import Trade

Learning Outcome-

After studying this chapter you should be able to understand:

(iii) Import trade – Meaning and functions of import trade; objectives, purpose and procedure.

(iv) Documents involved in international trade. Documents involved in import trade, such as: import license, indent, letter of credit, documentary bill of exchange, bill of entry, bill of sight, port trust dues receipt, application to import, advice note, bill of lading, all need to be explained.

Chapter 22 World Trade Organisation (WTO)

Learning Outcome-

After studying this chapter you should be able to understand:

(v) World Trade Organisation. WTO-meaning and objectives.

Chapter 23 Business Risks and Insurance

Learning Outcome-

After studying this chapter you should be able to understand:

(i) Insurance – Meaning, objectives and purpose. Meaning, objectives and purpose of insurance; Concept of re-insurance and double insurance.

(ii) Risks in business - insurable and non-insurable: meaning and examples of both. Characteristics of insurable risks.

(iii) Principles of insurance. Fundamental principles to be explained: utmost good faith; insurable interest; indemnity; contribution; doctrine of subrogation; causa proxima. mitigation of loss.

Chapter 24 Types of Insurance

Learning Outcome-

After studying this chapter you should be able to understand:

(iv) Types of insurance: life and non-life. Types of insurance – life, health, fire, marine, motor, social and fidelity insurance (Meaning and importance only).

January **Revision**

February **Revision**

II Unit Test Syllabus

Chapter 14 **Stock Exchange**

COMPUTER SCIENCE

Term 1

March

Chapter 1 **Numbers**

Learning Outcome-

Students will learn Representation of numbers in different bases and interconversion between them (e.g. binary, octal, decimal, hexadecimal). Addition and subtraction operations for numbers in different bases. Introduce the positional system of representing numbers and the concept of a base. Discuss the conversion of representations between different bases using English or pseudo code. These algorithms are also good examples for defining different functions in a class modelling numbers (when programming is discussed). For addition and subtraction (1's complement and 2's complement) use the analogy with decimal numbers, emphasize how carry works (this will be useful later when binary adders are discussed).

Chapter 2 **Encodings**

Learning Outcome-

Students will learn Binary encodings for integers and real numbers using a finite number of bits (sign- magnitude, 2's complement, mantissa- exponent notation). Signed, unsigned numbers, least and most significant bits. Sign-magnitude representation and its shortcomings (two representations for 0, addition requires step); two's-complement representation. Operations (arithmetic, logical, shift), discuss the basic algorithms used for the arithmetic operations. Floating point representation: normalized scientific notation, mantissa-exponent representation, binary point (discuss trade-off between size of mantissa and exponent). Single and double precision.

Characters and their encodings (e.g. ASCII, ISCII, Unicode). Discuss the limitations of the ASCII code in representing characters of other languages. Discuss the Unicode representation for the local language. Java uses Unicode, so strings in the local language can be used (they can be displayed if fonts are available) – a simple table lookup for local language equivalents for Latin (i.e. English) character strings may be done.

April

Chapter 2 **Encodings**

Learning Outcome-

Students will learn Binary encodings for integers and real numbers using a finite number of bits (sign- magnitude, 2's complement, mantissa- exponent notation). Signed, unsigned numbers, least and most significant bits. Sign-magnitude representation and its shortcomings (two representations for 0, addition requires step); two's-complement representation. Operations (arithmetic, logical, shift), discuss the basic algorithms used for the arithmetic operations. Floating point representation: normalized scientific notation, mantissa-exponent representation, binary point (discuss trade-off between size of mantissa and exponent). Single and double precision.

Characters and their encodings (e.g. ASCII, ISCII, Unicode). Discuss the limitations of the ASCII code in representing characters of other languages. Discuss the Unicode representation for the local language. Java uses Unicode, so strings in the local language can be used (they can be displayed if fonts are available) – a simple table lookup for local language equivalents for Latin (i.e. English) character strings may be done.

Chapter 3 **Propositional logic and Hardware implementation**

Learning Outcome-

Students will learn Propositional logic, well-formed formulae, truth values and interpretation of well formed formulae, truth tables. Propositional variables; the common logical connectives ((not)(negation), ∧ (and)(conjunction), ∨ (or)(disjunction), ⇒ (implication), ⇔ (equivalence)); definition of a well-formed formula (wff); representation of simple word problems as wff (this can be used for motivation); the values true and false; interpretation of a wff; truth tables; satisfiable, unsatisfiable and valid formulae. Logic and hardware, basic gates (AND, NOT, OR) and their universality, other gates (NAND, NOR, XOR, XNOR), half adder, full adder. Show how the logic in hardware in the form of gates. These gates can then be combined to implement the basic operations for arithmetic.

Chapter 4 Introduction to Object Oriented Programming using Java

Learning Outcome-

Students will learn Objects as data (attributes) + behaviour (methods or methods); object as an instance of a class. Difference between object and class should be made very clear.

Analysis of some real-world programming examples in terms of objects and classes. Use simple examples like a calculator, date, number etc. to illustrate how they can be treated as objects that behave in certain well- defined ways and how the interface provides a way to access behaviour. Illustrate behaviour changes by adding new methods, deleting old methods or modifying existing methods. Basic concept of a virtual machine; Java Virtual Machine (JVM); compilation and execution of Java programs (the javac and java programs). Compile time and run time errors; basic concept of an exception, the Exception class, try-catch, throw, throws and finally. Differentiate between compile time and run time errors. Run time errors crash the program. Recovery is possible by the use of exceptions. Explain how an exception object is created and passed up until a matching catch is found. This behaviour is different from the one where a value is returned by a deeply nested method call.

May

Chapter 5 Primitive Values, Wrapper Classes, Types of Castings

Learning Outcome-

Students will learn Primitive values and types: byte, int, short, long, float, double, boolean, char. Corresponding wrapper classes for each primitive type. Class as type of the object. Class as mechanism for user defined types. Changing types through user defined casting and automatic type coercion for some primitive types, primitive types are defined for efficiency reasons; each primitive type has a corresponding wrapper class. Classes as user defined types. In some cases types are changed by automatic coercion or casting – e.g. mixed type expressions. However, casting in general is not a good idea and should be avoided, if possible.

Chapter 6 Variables and Expression in java

Learning Outcome-

Students will learn Variables as names for values; named constants (final), expressions (arithmetic and logical) and their evaluation (operators, associativity, precedence). Assignment operation; difference between left-hand side and right-hand side of assignment. Difference between variables denoting primitive values and object values – variables denoting objects are references to those objects. The assignment operator = is special. The variable on the LHS of = denotes the memory location while the same variable on the RHS denotes the contents of the location e.g. i=i+2. NOTE: Library functions for solving expressions may be used as and when required.

Chapter 7 Statements and Their Scope

Learning Outcome-

Students will learn Statements; conditional (if, if else, if else if, switch case) ternary operator, looping (for, while, do while), continue, break; grouping statements in blocks, scope and visibility of variables. Describe the semantics of the conditional and looping statements in detail. Evaluation of the condition in conditional statements. Nesting of blocks. Variables with block scope, method scope, class scope. Visibility rules when variables with the same name are defined in different scopes.

July

Chapter 1 Numbers
Chapter 2 Encodings
Chapter 3 Propositional logic and Hardware implementation
Chapter 4 Introduction to Object Oriented Programming using Java
Chapter 5 Primitive Values, Wrapper Classes, Types of Castings
Chapter 6 Variables and Expression in java
Chapter 7 Statements and Their Scope

(Note:-- Chapter- Methods, Constructors, Strings and Arrays(1-D and 2-D) also included in Term 1 syllabus based on class X Syllabus i.e output and all java programs)

I Unit Test Syllabus:

Chapter 1 Numbers

Term 2

July

Chapter 8 Methods and Constructor

Learning Outcome-

Students will learn Methods and Constructors (as abstractions for complex user defined operations on objects), methods as mechanisms for side effects; formal arguments and actual arguments in methods; different behaviour of primitive and object arguments. Static methods and variables. The **this** operator. Examples of algorithmic problem solving using methods (number problems, finding roots of algebraic equations etc.). Methods are like complex operations where the object is implicitly the first argument. Operator **this** denotes the current object. Methods typically return values. Illustrate the difference between primitive values and object values as arguments (changes made inside methods persist after the call for object values). Static definitions as class variables and class methods visible and shared by all instances. Need for static methods and variables. Introduce the main method – needed to begin execution. Constructor as a special kind of method; the **new** operator; multiple constructors with different argument structures; constructor returns a reference to the object.

August

Chapter 8 Methods and Constructor

Learning Outcome-

Students will learn Methods and Constructors (as abstractions for complex user defined operations on objects), methods as mechanisms for side effects; formal arguments and actual arguments in methods; different behaviour of primitive and object arguments. Static methods and variables. The **this** operator. Examples of algorithmic problem solving using methods (number problems, finding roots of algebraic equations etc.). Methods are like complex operations where the object is implicitly the first argument. Operator **this** denotes the current object. Methods typically return values. Illustrate the difference between primitive values and object values as arguments (changes made inside methods persist after the call for object values). Static definitions as class variables and class methods visible and shared by all instances. Need for static methods and variables. Introduce the main method – needed to begin execution. Constructor as a special kind of method; the **new** operator; multiple constructors with different argument structures; constructor returns a reference to the object.

Chapter 9 Arrays and Strings

Learning Outcome-

Students will learn Structured data types – arrays (single and multi- dimensional), strings. Example algorithms that use structured data types (searching, finding maximum/minimum, sorting techniques, solving systems of linear equations, substring, concatenation, length, access to char in string, etc.). Storing many data elements of the same type requires structured data types – like arrays. Access in arrays is constant time and does not depend on the number of elements. Sorting techniques (bubble, selection, insertion), Structured data types can be defined by classes – String. Introduce the Java library String class and the basic operations on strings (accessing individual characters, various substring operations, concatenation, replacement, index of operations).

September

Chapter 9 Arrays and Strings

Learning Outcome-

Students will learn Structured data types – arrays (single and multi- dimensional), strings. Example algorithms that use structured data types (searching, finding maximum/minimum, sorting techniques, solving systems of linear equations, substring, concatenation, length, access to char in string, etc.). Storing many data elements of the same type requires structured data types – like arrays. Access in arrays is constant time and does not depend on the number of elements. Sorting techniques (bubble, selection, insertion), Structured data types can be defined by classes – String. Introduce the Java library String class and the basic operations on strings (accessing individual characters, various substring operations, concatenation, replacement, index of operations).

Chapter-10 Basic input/output Data File Handling

Learning Outcome-

Students will learn Basic input/output using Scanner and Printer classes. Input/output exceptions. Tokens in an input stream, concept of whitespace, extracting tokens from an input stream (String Tokenizer class). The Scanner class can be used for input of various types of data (e.g. int, float, char etc.) from the standard input stream. Similarly, the Printer class handles output. Only basic input and output using these classes should be covered. Discuss the concept of a token (a delimited continuous stream of characters that is meaningful in the application program – e.g. words in a sentence where the delimiter is the blank character). This naturally leads to the idea of delimiters and in particular whitespace and user defined characters as delimiters. As an example show how the String Tokenizer class allows one to extract a sequence of tokens from a string with user defined delimiters.

October

Chapter 10 Basic input/output Data File Handling

Learning Outcome-

Students will learn Basic input/output using Scanner and Printer classes. Input/output exceptions. Tokens in an input stream, concept of whitespace, extracting tokens from an input stream (String Tokenizer class). The Scanner class can be used for input of various types of data (e.g. int, float, char etc.) from the standard input stream. Similarly, the Printer class handles output. Only basic input and output using these classes should be covered. Discuss the concept of a token (a delimited continuous stream of characters that is meaningful in the application program – e.g. words in a sentence where the delimiter is the blank character). This naturally leads to the idea of delimiters and in particular whitespace and user defined characters as delimiters. As an example show how the StringTokenizer class allows one to extract a sequence of tokens from a string with user defined delimiters.

Term 3

November

Chapter 11 Recursion in Java

Learning Outcome-

Students will learn Concept of recursion, simple recursive methods (e.g. factorial, GCD, binary search, conversion of representations of numbers between different bases). Many problems can be solved very elegantly by observing that the solution can be composed of solutions to 'smaller' versions of the same problem with the base version having a known simple solution. Recursion can be initially motivated by using recursive equations to define certain methods. These definitions are fairly obvious and are easy to understand. The definitions can be directly converted to a program. Emphasize that any recursion must have a base case. Otherwise, the computation can go into an infinite loop.

Chapter 12 Package

Learning Outcome-

Students will learn Definition, creation of packages, importing user defined packages, interaction of objects across packages. Java Application Programming Interface (API), development of applications using user defined packages.

December

Chapter 14 Trends in computing and ethical issues

Learning Outcome-

Students will learn (a) Artificial Intelligence, Internet of Things, Virtual Reality and Augmented Reality. Brief understanding of the above and their impact on Society. (b) Cyber Security, privacy, netiquette, spam, phishing. Brief understanding of the above. (c) Intellectual property, Software copyright and patents and Free Software Foundation. Intellectual property and corresponding laws and rights, software as intellectual property. Software copyright and patents and the difference between the two; trademarks; software licensing and piracy. free Software Foundation and its position on software, Open Source Software, various types of licensing (e.g. GPL, BSD). Social impact and ethical issues should be discussed and debated in class. The important thing is for students to realise that these are complex issues and there are multiple points of view on many of them and there is no single 'correct' or 'right' view.

Chapter 13 Practical Programs(Solved &unsolved)

Learning Outcome-

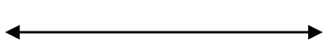
Students will practice High order programming in this chapter related to all chapters covered.

January Revision

February Revision

II Unit Test Syllabus:

Chapter-11 Recursion in Java



REVISED

MATHEMATICS

Term 1

March **Section (A)**

Chapter 9 **Complex numbers**

Learning Outcome-

Students will know the difference between real numbers and complex numbers.
Students will know how to plot complex numbers in Argand plane.
Students will get to know algebraic operations on the complex numbers, its polar form; multiplicative inverse, modulus and argument.
Students will know the method of finding the square root of the complex numbers.

Chapter 10 **Quadratic Equations**

Learning Outcome-

Students will learn the method of solving the quadratic equations and nature of roots.
Students will know how to represent quadratic equation in a Cartesian plane.

April **Section (A)**

Chapter 1 **Sets**

Learning Outcome-

Students will know different type of sets, their union, intersection, complements, difference of two sets and De-Morgan's law.

May **Section (C)**

Chapter 29 **Correlation Analysis**

Learning Outcome-

Students will know how to represent scatter diagrams, covariance of X and Y.
Students will know the Karl Pearson's co-efficient of correlation.

Section (B)

Chapter 26 **Points and their co-ordinates in 3-Dimensions**

Learning Outcome-

Students will know about Quadrants and Octants and their sign convention. They will learn to plot co-ordinates on the axis, in the plane and in the Octants.
Students will understand distance formula, section formula, mid point formula and centroid of a triangle.

July

Chapter 9 **Complex numbers**

Learning Outcome-

Students will know how to plot complex numbers in Argand plane.
Students will get to know algebraic operations on complex numbers, its polar form, multiplicative inverse, modulus and argument.

Chapter 10 **Quadratic Equations**

Learning Outcome-

Students will learn method of solving the quadratic equations and nature of roots.
Students will know how to represent quadratic equation in a Cartesian plane.

Chapter 1 **Sets**

Learning Outcome-

Students will know different types of sets, their union, intersection, complements, difference of sets and De-Morgan's law.

Section (C)

Chapter 29 **Correlation Analysis**

Learning Outcome-

Students will know how to represent scatter diagrams, covariance of X and Y.
Students will know the Karl's Pearson co-efficient of correlation.

Section (A)

Chapter 26 **Points and their co-ordinates in 3-Dimensions**

Learning Outcome-

Students will know about Quadrants and octants and their sign convention. They will learn to plot co-ordinates on the axis, in the plane and in the octants.
Students will understand distance formula, section formula, mid point formula and centriod of a triangle.

I Unit Test Syllabus

Chapter 9 **Complex number**

Term 2

July **Section (A)**

Chapter 3 **Angles and Arc Lengths**

Learning Outcome-

Students will learn convention of sign of angles, magnitude of an angle and the relation between radians and degree.

Students will learn the definition of trigonometric functions with the help of unit circle.

Students will learn the truth of the identify $\sin^2 x + \cos^2 x = 1$.

August **Section (A)**

Chapter 2 **Relations and Functions**

Learning Outcome-

Students will know about ordered pairs, method of finding the Cartesian product.

Students will understand the concept of domain, range and co-domain of a functions.

Students will know different types of real-valued functions with their graphs.

Chapter 4 **Trignometrical Functions**

Learning Outcome-

Students will learn the relationship between the trignometric functions, sign of trignometric functions, their domain, range and graph.

Students will learn about the periods of trignometric functions.

Chapter 5 **Compounds and Multiple Angles**

Learning Outcome-

Students will learn about addition and subtraction formula, double angle, triple angle, half angle as a special case.

Students will understand the formula's for sum and differences as products and Product to sum or difference.

Chapter 20 **Measures of Central Tendency**

Learning Outcome-

Students will learn how to find mean of raw data, grouped data with help of direct method, shortcut method and step-deviation method.

Chapter 21 **Measures of Dispersion**

Learning Outcome-

Students will learn about range, mean deviation about mean and median, variance and standard deviation of ungrouped / grouped data.

Students will learn to find standard deviation with help of direct, shortcut and step-deviation method.

Section (C)

Chapter 28 **Statistics (continued from chapter 20)**

Learning Outcome-

Students will learn about combined mean and standard deviation.

Students will understand the concept of median, Quartiles, and Mode of grouped and ungrouped data.

September

Chapter 12 **Permutations and Combinations**

Learning Outcome-

Students will understand the term factorial notations, and the difference between Permutation and Combination.

Students will know how to implement the formulas of Permutations and Combinations in different problems.

Chapter 22 **Probability**

Learning Outcome-

Students will learn the term probability, outcomes, events, sample space, equally likely events, mutually exclusive events, exhaustive events and random experiment.

Students will learn the use of special terms and all the important results in the different problems.

Section (B)

Chapter 23 **Parabola**

Learning Outcome-

Students will learn the basic terms of parabola such as latus rectum, focus, directrix and vertex.

Students will learn how to find equation of a parabola when foci and directrix are given.

Chapter 24 **Ellipse**

Learning Outcome-

Students will learn the general term such as major axis, minor axis, focus, latus rectum and directrix of ellipse.

Students will learn how to find equation of ellipse when focus and directrix are given.

Chapter 25 **Hyperbola**

Learning Outcome-

Students will learn about transverse and conjugate axes, Latus rectum, vertices, foci and directrix of hyperbola.

Section (B)

Chapter 27 **Mathematical Reasoning**

Learning Outcome-

Students will understand the use of “if and only if”, “implies”, “and / or”, “implied by”, “there exist” in mathemtics and real life.

Students will understand difference between contradiction, converse and contrapositive.

October **Section (A)**

Chapter 15 **Basic Concept of Points and their co-ordinates**

Learning Outcome-

Students will learn the concept of points and how to plot their coordinates in Cartesian plane.

Chapter 16 **Straight line**

Learning Outcome-

Students will learn about slope of a line, angle between two lines, various forms of line and General equation of a line.

Students will learn how to find distance of a point from a line.

Students will understand the concept of locus and how to find equation of a locus.

Chapter 17 **Circles**

Learning Outcome-

Students will learn about the different forms of equation of a circle.

Students will learn how to find equation of a circle when centre and radius are given.

Term 3

November **Section (A)**

Chapter 18 **Limits**

Learning Outcome-

Students will learn about notion and meaning of limits.

Students will learn about limits of algebraic, trigonometric, exponential and logarithmic functions.

Students will learn about Indeterminate form and how to use it while calculating limits.

Chapter 19 **Differentiation**

Learning Outcome-

Students will learn the geometrical interpretation of derivatives.

Students will learn the formulas for solving the derivatives of algebraic or trignometric functions.

Students will learn to do the differentiation using first principles.

Students will learn to find the derivatives of sum / difference functions, products of functions and quotient of functions.

December **Section (A)**

Chapter 11 **Linear Inequations**

Learning Outcome-

Students will learn how to find solutions of linear inequalities and represent them on a number line.

Students will learn the method of intervals for solving quadratic inequalities.

Chapter 14 **Sequences and Series**

Learning Outcome-

Students will know the term sequence and series, arithmetic progression, Geometric progression and the Arithmetic Mean and Geometric Mean.

Students will know the special types of sequences and will be able to find nth term and sum to n terms.

Chapter 13 **Binomial theorem**

Learning Outcome-

Students will understand the concept of Pascal’s triangle, and how to find general and middle term of binomial expansion.

Students will understand the use of Binomial theorem.

Section (C)

Chapter 30 **Index numbers**

Learning Outcome-

Students will understand about the term price index or price relative.

Students will learn different methods of finding index numbers.

Chapter 31 **Moving Averages**

Learning Outcome-
Students will learn the meaning and purpose of moving averages.
Students will learn how to plot moving averages on graph.

January **Revision**

February **Revision**

II Unit Test Syllabus
Chapter 19 **Differentiation**

PHYSICAL EDUCATION

Term 1

March
Theory
Chapter 1 **Concept of Physical Education**
Learning Outcome-
Students will get enabled to understand the meaning, aims, objectives, importance, misconceptions, play, recreation, games and sports.

Practical:- **Cricket**
Learning Outcome-
The students will get enabled to understand the rules of play and field practically.

April
Theory
Chapter 1 **Concept of Physical Education**
Chapter 2 **Individual Aspects and Group Dynamics**
Learning Outcome-
The students will get enabled to understand the meaning of interest, methods of interest and attitude.

Practical:- **Football and Cricket**
Learning Outcome-
The students will get enabled to learn and follow the rules of the game on the field while playing.

May
Theory
Chapter 1 **Concept of Physical Education**
Chapter 2 **Individual Aspects and Group Dynamics**
Chapter 3 **Effects of Physical Exercise on Body Systems**
Learning Outcome-
The students will get enabled to understand the impacts of various exercise on different organ systems.

Practical:- **Cricket, Football and Hockey**
Learning Outcome-
The students will get enabled to understand and follow the rules of the play and field.

July
Theory
Chapter 1 **Concept of Physical Education**
Chapter 2 **Individual Aspects and Group Dynamics**
Chapter 3 **Effects of Physical Exercise on Human Body Systems**

Practical **Cricket, Football, Hockey and Basketball**
Learning Outcome-
The students will get enabled to learn and follow the rules of the play and field while playing.

I Unit Test Syllabus
Theory
Chapter 1 **Concept of Physical Education**

Term 2
July
Theory
Chapter 4 **Nutrition, Weight Control and Exercise**
Learning Outcome-
The students will get enabled to learn about nutrients and weight control techniques.

Practical:- **Badminton**
Learning Outcome-
The students will get enabled to understand the rules of the play and field.

August
Theory
Chapter 4 **Nutrition, Weight Control and Exercise**
Learning Outcome-
The students will get enabled to learn about nutrients and weight control techniques.

Practical:- **Badminton**
Learning Outcome-
The students will get enabled to understand the rules of the play and field.

September
Practical **Volleyball**
Learning Outcome-
To enable the students to learn and follow the rules of play and the field while playing.

October
Theory
Chapter 6 **Games and Sports – A Global Perspective**
Learning Outcome-
To enable the students to make them learn and follow the rules of play and field.

Practical:- **Tennis**
Learning Outcome-
The students will get enabled to play the game having a proper knowledge of rules of play and field.

Term 3
November
Theory
Chapter 5 **Physical Fitness and Wellness**
Learning Outcome-
The students will get enabled to play the game having a proper knowledge of rules of play and field.

Practical:- **Swimming**
Learning Outcome-
The students will get enabled to understand the rules of the play and the field.

December
Theory
Chapter 2 **Individual and Group Dynamics**
Learning Outcome-
The students will get enabled to understand the meaning of interest, methods of interest and attitude.

Practical:- **Athletics**
Learning Outcome-
The students will get enabled to understand the rules of track and field events and to follow them while playing.

January
Theory **Revision**

February
Theory **Revision**

II Unit Test Syllabus
Chapter 5 **Physical Fitness and Wellness**

S.U.P.W

Term 1
March
Chapter- 4 **Community Service**
Learning Outcome-
After studying this chapter you should be able to understand:
Community Service: Using the bus time-table, information given in bus time table, Services provided by the Post-Office, Adult literacy programme, volunteer work during fairs and festivals.

April
Chapter- 8 Dyeing and Printing
Learning Outcome-
After studying this chapter you should be able to understand:
Dyeing and Printing: meaning, tie and dye of simple articles.

May
Chapter- 18 Clothing and Textile
Learning Outcome-
After studying this chapter you should be able to understand:
Clothing and Textile: classification of fibres, Cotton: hand-made and machine made cotton and its properties, Silk: properties of silk, Wool: properties of wool, Man-made fibres: Nylon and its properties.

Community Service 1: Record book page number 54 to 62.

July
Chapter- 4 Community Service
Learning Outcome-
After studying this chapter you should be able to understand:
Community Service: Using the bus time-table, information given in bus time table, Services provided by the Post-Office, Adult literacy programme, volunteer work during fairs and festivals.

Chapter- 8 Dyeing and Printing
Learning Outcome-
After studying this chapter you should be able to understand:
Dyeing and Printing: meaning, tie and dye of simple articles.

Chapter- 18 Clothing and Textile
Learning Outcome-
After studying this chapter you should be able to understand:
Clothing and Textile: classification of fibres, Cotton: hand-made and machine made cotton and its properties, Silk: properties of silk, Wool: properties of wool, Man-made fibres: Nylon and its properties.

Term 2
July
Chapter- 9 Book Keeping
Learning Outcome-
After studying this chapter you should be able to understand:
Book Keeping: Basic terms. Cash Book: Simple Cash Book. Petty cash, Balancing the Cash Book, Purchases: Posting the Purchase Book, Sales Book: Posting of the sales book.

August
Chapter- 9 Book Keeping
Learning Outcome-
After studying this chapter you should be able to understand:
Book Keeping: Basic terms. Cash Book: Simple Cash Book. Petty cash, Balancing the Cash Book, Purchases: Posting the Purchase Book, Sales Book: Posting of the sales book.

Craft/Skill 1: Record book page number 83 to 89.

September
Chapter- 12 Gardening
Learning Outcome-
After studying this chapter you should be able to understand:
Gardening: Growing seasonal flowers, Preparing of Seed Bed, Planting Seeds, Transplanting, watering the plants, fertilizers and maintenance of lawn.

Community Service 2: Record book page number 64 to 72.

October
Chapter- 12 Gardening
Learning Outcome-
After studying this chapter you should be able to understand:
Gardening: Growing seasonal flowers, Preparing of Seed Bed, Planting Seeds, Transplanting, watering the plants, fertilizers and maintenance of lawn.

Term 3

November
Chapter- 22 Leather Work

Learning Outcome-
After studying this chapter you should be able to understand:
Leather Work: Making leather articles.

Craft/Skill 2: Record book page number 91 to 97.

December
Chapter- 25 Electronics
Learning Outcome-
After studying this chapter you should be able to understand:
Symbols used for different electric devices, instruments and tools used for electronic equipment, electronic devices.

January Revision

February Revision