FLORENCE INTERNATIONAL SCHOOL

(Senior Secondary Affiliated With CBSE | ISO 21001:2018 Certified)

SUMMER HOLIDAY HOMEWORK (2025-26)

GRADE – XI

SUBJECT– MATHEMATICS

Dear Students, Holidays are an integral part of a student's life.

It is a time for fun, a time to explore are given a meaningful direction, it results in a productive and enjoyable time. Let's use these holidays to pursue some hobbies and apply our minds creatively to learn new thing and to bring a change in the environment, in our own individual way.

General Instructions for Students:

- *Follow the instruction given carefully with each activity.*
- *You can take help of the internet, newspapers magazines, encyclopaedia to Collect information and pictures.*
- *Make you activity sheets presentable and attractive.*

A few suggestions for parents:

- *Spend quality time with your children and have fun time together*

- *Help the children to become independent by giving them responsibilities. Involve them in small household activities.*

- *Inculcate in them good manners, healthy habits and respect for elders.*

- *Converse with your children in English.*

- *Encourage your children to read books to enhance their language skills. Reading will also boost their interpretative skills and provide them valuable literary experience.*

- *Cultivate sportsmanship by encouraging your children to play various Indoor games.*

- *Remember that Summer Vacation is the time to relax and enjoy.*

- *So, spend these holidays creating a nurturing and stimulating environment filled with fun, frolic, learning and education.*

- *Have a family dinner every day.*

- *Play board games with your parents and sibling and show them who is the smartest.*

- *Spend some quality time with an elderly person in the family and ask them to share their childhood days.*

Instructions: -

1. Select any one topic from the list

2. Project file should contain- Index, Acknowledgement, Certificate, Introduction, Real life application, Concepts , Historical note, Bibliography.
   i) Sets
   ii) Relation & functions
   iii) conic sections
   iv) Probability
   v) Sequence & series

WORKSHEET
SETS, RELATION & FUNCTIONS, TRIGONOMETRIC FUNCTIONS

1. Write the set of all vowels in English alphabet which proceeds s.
2. Write the set X = {1,¼,1/9, 1/16, 1/25….. } in set builder form.
3. Describe the sets in set builder form :-
       (a) A= {1, ½, ⅓, ¼, ⅕…….}   (b) B ={0, 3,6,9,12….}
       (c) C = {0}   (d) D = {10, 11, 12, 13, 14, 15}

4- Which of the following pairs of sets are equal ?
     (i)   A = {x : x is a letter in word "LOYAL"}   B = {x : x is a letter of the word "ALLOY"}
     (ii) A = {x : x $\in$ Z and $x^2 \leq 8$}   B = {x : x $\in$ R and $x^2 - 4x +3 =0$ }

5- Write the following subsets of R as intervals -
       (i) {x : x $\in$ R, $-4 < x \leq 6$ }   (ii) {x : x $\in$R, $3 \leq x \leq 4$}
       (iii) {x : x $\in$R, $-12 < x < -10$ }   (iv) {x : x$\in$R, $0 \leq x < 7$}

6- Write all the subsets of the following -
       (i) {a}   (ii) {0,1}   (iii) {a,b,c}

7- If U = {2,3,5,7,9} & A = {3,7} , B = {2,5,7,9}. Prove that –

(i) (A U B)' = A' $\cap$B'   (ii) (A $\cap$ B)' = A' U B'

8. If A = {1,2,3,4,5} , B = {4,5,6,7,8} , C = {7,8,9,10,11} , D = {10, 11,12,13,14}. Find -
       (i) A $\cup$ B   (ii) A $\cup$ C   (iii) B $\cup$ C   (iv) B $\cup$ D   (v) A $\cup$ B $\cup$ C (vi) A $\cup$ B $\cup$ D
       (vii) B $\cup$ C $\cup$ D   (viii) A$\cap$ (B $\cup$ C)   (ix) (A $\cap$ B) $\cap$ (B $\cap$C)
       (x) (A $\cup$ D) $\cap$ (B $\cup$ C)
9. Let A = {3,6,12,15,18,21} , B = {4,8,12,16,20} C = {2,4,6,8,10,12,14,16} & D = {5, 10,15,20}.

Find (i) A -B   (ii) A - C   (iii) A - D   (iv) B - A   (v) C - A   (vi) D - A   (vii) B - C
(viii) B - D

10. Find the degree measure (i) -2 rad (ii) 11/16 rad

11. Find the radian measure : (i) -37°30'   (ii) 5°37'30"

12. Find in degrees the angle through which a pendulum swings if its length is 50 cm and the tip describes an Arc of length 10 cm.

13. The minute hand of a watch is 1.5 cm long. How far does it tip move in 40 minutes?

14. If cosx + sinx = √2 cosx, prove that cosx - sinx = √2 sinx

15. Find all the trigonometric ratios, if sinx = -2√6 /5 and x lies in the third quadrant.

16. Evaluate : (i) cos 7π /6   (ii) sin (-25π/4)

17. Prove that:-

(a) $\dfrac{\cos\left(\frac{\pi}{2}+x\right)\sec(-x)\tan(\pi-x)}{\sec(2\pi-x)\sin(\pi+x)\cot\left(\frac{\pi}{2}-x\right)} = -1$

(b) $4\sin x\sin\left(\dfrac{\pi}{3}+x\right)\sin\left(\dfrac{2\pi}{3}+x\right) = \sin 3x$

1. $\dfrac{\cos 6x+6\cos 4x+15\cos 2x+10}{\cos 5x+5\cos 3x+10\cos x} = \sin 3x$

(c) $\dfrac{\cos 2x}{1+\sin 2x} = \tan\left(\dfrac{\pi}{4}-x\right)$

(d) $\sqrt{2+\sqrt{2+\sqrt{2+2\cos 8x}}} = 2\cos x\,, 0 < x < \dfrac{\pi}{8}$

(e) $\dfrac{\cos 5x+\cos 4x}{1-2\cos 3x} = -\cos 2x-\cos x$

18. Find the domain & range of function $f(x) = \dfrac{x-2}{x-1}$

19. What is the domain of the real valued function $f(x) = \dfrac{1}{x-2}$

20. Find the domain and range of the function $f(x) = \sqrt{16-x^2}$

21. If the ordered pairs (x,-1) and (5,y) belong to set $\{(a,b): b = 2a - 3\}$, find the value of x and y.

22. Find the domain and range of the real function : $f(x) = \dfrac{x}{1+x^2}$

23. Give A={-2,-1,0,1,2} and B= {-3,-1,1,5}. List all elements of $f\{(x,y): y = 2x^2 - 3, x\in A,\ y\in B.$ Is f a function ?

24. Let A = {1,2,3,4}, B={1,4,9,16,25} and R be a relation defined from A to B as $R = \{(x,y): x\in A, y\in B\ and\ y = x^2\}$
    (a) Depict this relation using arrow diagram
    (b) Find domain of R
    (c) Find range of R
    (d) Write co-domain of R

25. Draw the graph of Greatest integer function, signum function, modulus function & write its domain and range.

ECONOMICS

Economics Project Files as Per CBSE
Effect on PPC due to various government policies
Opportunity Cost as an economic tool (taking real life examples)
Bumper production - Boon or Bane for the farmers
Micro and Small Scale Industries
Any newspaper article and it's evaluation on basis of economic principles

Worksheet

Statistics : Introduction
1. What is statistics?
2. Define data.
3. What is the importance of statistics in economics?
4. Distinguish between primary and secondary data.
5. What are the different methods of collecting primary data?
6. Define population and sample.
7. What is the role of statistics in decision-making?
8. Distinguish between qualitative and quantitative data.
9. What are the limitations of statistics?
10. Define statistical methods.

Microeconomics : Meaning and Scope of Microeconomics
11. What is microeconomics?
12. Define scarcity.
13. What is opportunity cost?
14. Explain the concept of rational behavior in microeconomics.
15. What is the difference between microeconomics and macroeconomics?
16. Define economic problem.
17. What is the role of prices in a market economy?
18. Explain the concept of marginal analysis.
19. What are the basic assumptions of microeconomic theory?
20. Define economic efficiency.

ENGLISH

ENGLISH CORE
PROJECT WORK FOR INTERNAL ASSESSMENT

Instructions:
There are 4 topics and you need do the project on any one
topic
You have to submit the project in your own handwriting.
Word limit: 1000 words max.

The Project-Portfolio should include the following:
Cover page with the title of the project, school details/details of students
Statement of purpose/objectives/goals
Acknowledgement
Certificate of Completion under the guidance of the teacher.

Index/Table of Contents
Body (1000 words - Introduction, Description/Report/Explanation, Conclusion)
If possible, photographs that capture the positive learning experiences of the student(s).
List of resources/ Bibliography.

TOPICS:
"It is always better to move ahead in life instead of lingering in the past." (With reference to 'The Address' by Marga Minco)
The enduring power of family: the value of family connections and the importance of respecting elders. (With reference to 'The Portrait of a Lady' by Khushwant Singh)
Even in the most dire situations, hope, perseverance, and a united effort can lead to a positive outcome. (With reference to 'We're not Afraid to die … if we can all be Together' by Gordon Cook and Alan East)
Commitment to family's reputation and moral values is more important than petty desires. (With reference to 'The Summer of the Beautiful White House' by William Saroyan)

WORKSHEET SECTION A (READING)

In recent years, the significance of mental health has gained global attention. Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. Just as physical health is essential for the body, mental health is crucial for a happy and productive life.

Stress, anxiety, and depression are common mental health issues faced by people of all ages. Students, in particular, face pressure from academics, peer competition, and expectations from parents. Ignoring mental health can lead to poor academic performance and low self-esteem.

Fortunately, mental health can be improved through simple practices. Regular exercise, meditation, maintaining a balanced diet, and talking to trusted people about your feelings are effective ways to stay mentally healthy. Schools and parents should work together to create an environment where children feel safe and supported.

Q1. Read the passage above and answer the following questions:
1. MCQ
What is meant by mental health?
a) Only the absence of illness
b) Physical fitness and diet
c) Emotional, psychological, and social well-being
d) Academic excellence

2. Assertion and Reason
Assertion (A): Students should not talk about their mental health problems.
Reason (R): It makes them appear weak in front of their peers.
Choose the correct option:
a) Both A and R are true, and R is the correct explanation of A.
b) Both A and R are true, but R is not the correct explanation of A.
c) A is false, but R is true.
d) Both A and R are false.

3. Fill in the blank
Regular _____ and a balanced diet help improve mental health.

4. Short Question

Why is it important for schools and parents to work together to support children's mental health?

4. Extract-Based MCQ

"Ignoring mental health can lead to poor academic performance and low self-esteem."
What is the tone of the author in this line?

a) Angry   b) Cautionary   c) Sarcastic   d) Confused

6. Vocabulary

Find a synonym of the word "crucial" from the passage.

7. Complete the sentence

If a person talks to trusted people about their feelings, _____.

SECTION B (GRAMMAR AND WRITING)

Q2. Fill in the blanks with the appropriate option given below:

If (a) _____ too late when Ravi saw the watch. He was taken over by the old fear that he might (b) _____ the train. Once he had missed the train and was stranded for whole night. He (c) _____ up and (d) _____ a taxi.

(a) (i) was getting (ii) got (iii) gets (iv) have missed
(b) (i) missed (ii) have missed (iii) miss (iv) misses
(c) (i) hurries (ii) hurried (iii) would hurry (iv) hurriedly
(d) (i) hires (ii) hired (iii) would hire (iv) hiring

Q3. The following passage has not been edited. There is one error in each line against which a blank is given. Write the incorrect word and the correction in your answer sheet as given below against the correct blank number. Remember to underline the word that you have supplied.

More of the fun and excitement in your life (a) _____

comes from use your senses. Senses open up (b) _____

a world who is full of sights, sounds, smells (c) _____

tastes and things to touch. They sharpen your

senses and the more you use it, the (d) _____

more enjoyable each of these becomes for you.

Q4. Rewrite the following sentences by placing the words in the correct order.

i) comes from / the / most of / flavour / its / of / aroma / food.
ii) grew up / of the / amidst / Siddharth / pleasure / the / at / royal court / Kapil-vastu

Q5. You are R.V. Singh looking for an independent house in East Delhi on rent. Draft a suitable advertisement to be published in Hindustan Times stating all your requirements and expected rent.

SECTION C (LITERATURE)

Q6. Read the stanza given below and answer the questions that follow:

And of this circumstance
There is nothing to say at all.
Its silence silences.

a) What does 'this circumstance' refer to?
b) Explain: 'Its silence silences.'
c) Identify the poetic device used in the above lines.

Q7. Answer the following questions: (40-50 words)
Explain 'terribly transient feet'
What significant event marked a turning point in the narrator's friendship with their grandmother?
How did Sue try to enliven the gloomy atmosphere?
What impression do you form about Khosrove?

Q8. Answer the following questions: (120-150 words)
Highlight the tremendous courage and endurance shown by the two children during the struggle of the ship to keep from sinking. (We're not Afraid to Die ... if we are together)
The poet Shirley Toulson has paid a tribute to her mother. Similar instances can be seen in The Portrait of a Lady. This made you think that writing about a loved one is much better than building their statues or drawing their portraits. Comment.

HISTORY

OBJECTIVES
Project work will help students:
To develop skill to gather data from a variety of sources, investigate diverse viewpoints and arrive at logical deductions.
To develop skill to comprehend, analyse, interpret, evaluate historical evidence, and understand the limitation of historical evidence.
To develop 21st century managerial skills of co-ordination, self-direction, and time management,
To learn to work on diverse cultures, races, religions, and lifestyles.
To leam through constructivism-a theory based on observation and scientific study.
To inculcate a spirit of inquiry and research.
To communicate data in the most appropriate form using a variety of techniques.
To provide greater opportunity for interaction and exploration.
To understand contemporary issues in context to our past.
To develop a global perspective and an international outlook.
To grow into caring, sensitive individuals capable of making informed, intelligent, and independent choices.
Steps involved in the conduct of the project: Students may work upon the following lines as Suggested:
Choose a Title Topic
Need of the Study, Objective of the Study
Hypothesis
Content-Timeline, Maps, Mind maps, Pictures, etc. (Organization of Material/Data Present Material/Data)
Analysing the Material/Data for Conclusion
Draw the Relevant Conclusion
Bibliography
2. Expected Checklist for the Project Work: Introduction of topic /title

2 Identifying the causes, events, consequences and/or remedies

3 Various stakeholders and effect on each of them

4 Advantages and disadvantages of situations or issues identified

5. Short-term and long-term implications of strategies suggested during research

6. Validity, reliability, appropriateness, and relevance of data used for research work and for presentation in the project file

7. Presentation and writing that is succinct and coherent in project file

8 Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.

SUGGESTIVE TOPICS FOR PROJECTS

Facets of the Industrialization in sixteenth-eighteenth centuries.

Crusades: causes; rationale, events; outcomes; Holy Alliance

Ancient History in depth: Mesopotamia

Greek Philosophy and City States

Contributions of Roman Civilization

Piecing together the past of Genghis Khan

WORKSHEET

Chapter 3 an Empire Across Three Continents
MCQ Questions

1. Question: Augustus, the first Roman Emperor was called the 'leading citizen' whose Latin term is

(a) 'Basileus'.   (b) 'Dominus'.   (c) 'Princeps'.   (d) 'Res gestae'.

2. Question: Which one of the following is a rive forms the boundary of the Roman Empire?

(a) Mekong River   (b) Rhine River   (c) Amur River   (d) Yangtze River

3. Question: The emperor who made Christianity the official religion in the Roman Empire was

(a) Alexander   (b) Augustus   (c) Constantine   (d) Nero

4. Question: The Roman emperor who consolidated the rise of provincial upper classes so as to exclude the senators from military command was

(a) Augustus   (b) Constantine   (c) Gallienus   (d) Tiberius

5. Question: The emperor who made Christianity the official religion in the Roman Empire Was

(a) Alexander   (b) Augustus   (c) Constantine   (d) Nero

6. Question: The Roman emperor who consolidated the rise of provincial upper classes so as to exclude the senators from military command was

(a) Augustus   (b) Constantine   (c) Gallienus   (d) Tiberius

7. Question: What were Amphorae?

(a) A type of army   (b) A type of container

(c) A type of district administrator   (d) None of the above

8. Question: The best kind of wine came to Rome from_

(a) Fayum   (b) Byzacium   (c) Galilee   (d) Campania

Short answer type questions

9. Briefly describe the sources which help to de construct Roman history.
10. What was the nature of Roman Reigns as established by the first emperor Augustus in 27 BCE.
11. What were amphorae and what were they used for?
12. what is meant by patrician and plebians?
13. How did the Roman cities treated the countryside?
14. Describe the conditions of workers and slaves in the Roman empire .
15. Why did the Romans come to prepare hired workers to slaves?
16. How was Roman empire a land of diverse culture?

Long answer type question

17. Describe the main features of the early Roman Empire .
18. Write a short note on slavery prevalent in the Roman empire.
19. How the third century crisis was different than the first and the second centuries of a peace?
20. List some important features of the late Empire which set it apart from the early Empire?

POLITICAL SCIENCE

SUGGESTIVE TOPICS FOR PROJECTS

1. Making of the constitution
2. Elections in India
3. Working of Indian Judiciary System

WORKSHEET

Ch- 1 Constitution: Why and How
Ch-2 rights in Indian constitution

MCQ Questions

1. Question: Democracy is a government of the people, by the people, and for the people. Whose statements is it?
   (a) Rousseau
   (b) J.S. Mill
   (c) T. H. Green
   (d) Abraham Lincoln

2. Question: Which of the following terms was not included in a "union of trinity" by Dr. B. R. Ambedkar in his concluding speech in the Constituent Assembly?
   (a) Liberty   (b) Flexibility   (c) Equality   (d) Fraternity

3. Question: The philosophy underlying the Indian constitution was embodied quite early in the Objective Resolution, which was moved in the first session of the Constituent Assembly (on 13 December 1946) by:
   (a) Pandit Jawaharlal Nehru   (b) Sardar Vallabhbhai Patel
   (c) Chakravarti Rajagopalachari   (d) Dr. Bhimrao Ramji Ambedkar

4. Question: The Governor of a State is appointed by the President on the advice of the Prime Minister
   (a) Vice- President   (b) Chief Minister   (c) Chief Justice

5. Question: What is the minimum age for appointment as a Governor ?
   (a) 35 years   (b) 40 years   (c) 25 years   (d) 30 years

6. Question: Chief Minister of a State is responsible to
   (a) Prime Minister   (b) Rajya Sabha   (c) Legislative Assembly   (d) Governor

7. Question: The President gives his resignation to the
   (a) Chief Justice   (b) Parliament   (c) Vice President   (d) Prime Minister

8. Question: For what period does the Vice President of India hold office?
   (a) 5 years   (b) Till the age of 65 years   (c) 6 years   (d) 2 years

Passage based objective type questions

8. Even within the Constituent Assembly, there were some members who felt that this constitution was not suited to the Indian situation. "The ideals on which this Constitution is framed have no manifest relation to the spirit of India. this constitution would not prove suitable and would break down soon after being brought into operation. 'Lakshminarayan Sahu.'
   (i) When did the Constitution of India come into force?
   (a) 26th January, 1950   (b) 27th January, 1951
   (c) 28th January, 1951   (d) 26th January, 1951

   (ii) words are referred in this passage.
   (a) Laxminarayan Sahu   (b) B.R. Ambedkar
   (c) Mahatma Gandhi   (d) Sardar Patel

(iii) Always privileges rights of the individuals over demands of social justice and community values.
   (a) Globalisation   (b) Privatisation
   (c) Classical liberalism   (d) All of these
(iv) The purpose behind strict separation is to safeguard the freedom of
   (a) masses   (b) individuals   (c) community   (d) None of these

Short answer type question

9. Write a note on constituent assembly.

10. Critically examine the features of Indian constitution

11. Supreme court is the protector of fundamental right explain.

12. What is the relation between fundamental rights and directive principles of State policy?

Long answer type question

13. Explain the writs which the supreme court can issue for the protection of fundamental rights .

14. What are the main provisions of the cabinet mission plan?

15. Critically examine the objectives, resolution and provisions of the constituent

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PSYCHOLOGY

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1. NCERT Textbook Questions (Chapters to Cover)

Make sure to answer all in-text and end-of-chapter questions.
Chapters to Focus On:
What is Psychology?
Define psychology, its goals, branches, and applications.
Methods of Enquiry in Psychology
Understand observation, experimentation, case study, survey, and psychological testing.
Human Development
Cover life span stages, developmental tasks, and influential theories (Piaget, Erikson).

2. Charts (Visual Aids for Display or File Submission)
   Suggested Chart Topics:
   Scope of Psychology in India and Abroad
   Include fields like clinical, counseling, industrial, school psychology, etc.
   Mention government and private sector roles.
   Different Personality Theories
   Freudian, Trait, Humanistic, and Social Cognitive approaches.

Chart Tips:
   Use bold titles, color-code sections, and add key thinkers with visuals.
   Keep it clear and readable from a distance.

3. Project Work (Choose 1 Topic)
   Suggested Project Topics:
   Human Development:
   "Developmental Milestones from Childhood to Adulthood"
   "Comparative Study of Cognitive Abilities Across Age Groups"
   Learning:
   "Impact of Rewards on Study Habits"
   "Role of Observation in Learning Behaviors"
   Emotion/Motivation:
   "Understanding Emotional Regulation in Teenagers"
   "What Motivates Students? A Survey-based Study"
Project Format:
   Title Page
   Introduction
   Objectives
   Methodology (if survey/interview is used)
   Observation/Findings
   Analysis
   Conclusion
   Bibliography

4. Activities
   Suggested Activity:

Interview an Older Family Member

Ask about:

Childhood memories

Education and career experiences

Major life challenges and achievements

Reflections on aging and psychological well-being

Present it as:

Introduction

Method (interview format)

Key responses

Summary & analysis (link to Erikson's or other developmental theories)

WORKSHEET

Chapters:

What is Psychology?

Methods of Enquiry in Psychology

SECTION A:

Define psychology in one sentence.

Who is considered the father of experimental psychology?

What is introspection?

Name one field where psychologists work.

What is the first step in the scientific method?

SECTION B:

Distinguish between behaviour and mental processes.

What is the role of observation in psychological enquiry?

Mention any two ethical guidelines in psychological research.

Define case study method with an example.

State two differences between naturalistic and controlled observation.

SECTION C

Explain three goals of psychological enquiry.

What is survey method? State one advantage and one limitation.

What is meant by psychological testing? Give two types of tests.

Explain the steps involved in experimentation in psychology.

Differentiate between independent and dependent variables with suitable examples.

SECTION D:

Describe the different branches of psychology and how they contribute to society.

Explain the characteristics of psychological data and the challenges faced while collecting it.

Discuss any five methods of psychological enquiry with suitable examples.

SECTION E: Case-Based/ Application-Based Questions

Riya wants to study the effect of sleep on academic performance.
(a) Frame a hypothesis for her study.
(b) Identify the independent and dependent variables.
(c) Suggest one method she can use to collect data.
(d) What precautions should she take while conducting her research?
(e) What ethical considerations should she keep in mind?

Case: A school counselor is interested in understanding why a group of students are frequently absent.
(a) Which method of enquiry would be most suitable?
(b) Why is this method appropriate?
(c) Suggest two data collection tools she could use.
(d) How can objectivity be maintained in such a study?
(e) Name two ethical issues to be considered.

Instructions:
Attempt all questions neatly in your psychology notebook.
Supplement answers with examples and diagrams wherever required.
Submit the completed homework on the reopening day after vacation.

PHYSICAL EDUCATION

Physical Education holiday homework often involves research, projects, and practical tasks related to the subject's core concepts. This can include topics like the history of sports, Olympic values, fitness testing, and different sports techniques.

Here's a breakdown of what you might expect:

Research and Writing:

Defining Physical Education: Explore different definitions of physical education and understand its aims and objectives.

Olympic Movement: Study the history, values, and significance of the Olympic Games, including the Olympic flag, motto, and oath.

Career Paths: Research various career options within the field of physical education.
Fitness and Wellness: Define physical fitness and wellness and discuss their importance.

Sports and Games: Learn about different sports and games, including their history, rules, and techniques.

Practical Tasks:

Fitness Testing:

Participate in fitness tests and record your results, potentially analyzing them using BMI.

BUSINESS STUDIES

BUSINESS STUDIES PROJECT WORK

Topic: - Economic Activities

Objective:

To study the types and features of economic activities and how they differ from non economic activities.

1. Introduction:
Define economic activities: Activities that are undertaken to earn a livelihood or generate income.

Mention the importance of economic activities in everyday life.

2. Types of Economic Activities:

a. Business:
   Involves production and sale of goods/services
   Example: A grocery store selling food items

b. Profession:
   Requires specialized knowledge or skills
   Example: A doctor treating patients

c. Employment:
   Working for others and receiving a salary or wage
   Example: A teacher working in a school

3. Differences Between Economic and Non-Economic Activities:

4. Conclusion:

Economic activities are vital for the functioning of the economy. They help people earn a living and contribute to the country .

WORKSHEET

Unit: Nature and Purpose of Business

A. Objective Type Questions
Multiple Choice Questions (MCQs)

i) The economic activities which are concerned with the production and distribution of goods and services are called:
   a) Profession   b) Business   c) Employment   d) None of these

ii) Which of the following is not a characteristic of business activity?
   a) Profit motive   b) Sale or exchange of goods and services
   c) Uncertainty of returns   d) Fixed working hours

14

True or False

 i) Business is an economic activity.

 ii) A person working as a doctor in a hospital on a salary basis is in a business.

B. Very Short Answer Questions:-
   Define business.
   What is the primary objective of a business?
   Name any two types of economic activities.

C. Short Answer Questions:-
   Differentiate between Business, Profession, and Employment.
   State any three characteristics of business.

D. Long Answer Questions:-
   Explain the objectives of business in detail.
   Discuss the role of profit in business.

Chapter: 2 – Forms of Business Organisation

A. Objective Type Questions
1. Multiple Choice Questions (MCQs)
i) A partner whose association with the firm is unknown to the general public is:
   a) Sleeping partner   b) Nominal partner
   c) Secret partner   d) Active partner

ii) The maximum number of partners in a firm as per the Companies Act, 2013 is:
   a) 20   b) 10 for banking and 20 for others
   c) 50   d) No limit

2. True or False
   i) A company has a separate legal entity.
   ii) In sole proprietorship, liability is limited.
   iii) Registration of a partnership firm is compulsory.

B. Very Short Answer Questions:-
   1. Define a Joint Hindu Family business.
   2. What is meant by unlimited liability?
   3. Mention any two merits of a sole proprietorship.
   4. Who is a nominal partner?

C. Short Answer Questions:-
   1. Explain any three features of a partnership firm.
   2. Differentiate between Joint Stock Company and Partnership (any three points).
   3. Write a short note on Cooperative Societies.

D. Long Answer Questions:-
1. Discuss the merits and limitations of the sole proprietorship form of business.
2. Explain the different types of partners in a partnership firm.
3. Describe the features, merits, and demerits of a Joint Stock Company.

ACCOUNTANCY

ACCOUNTANCY PROJECT WORK:-

Topic: - Accounting Principles

Objective:

To understand and explain the basic accounting principles and how they are applied in recording business transactions.

Introduction:

Accounting principles are the rules and guidelines that accountants follow when recording and reporting financial transactions. They ensure consistency, comparability, and reliability of financial statements.

List of Basic Accounting Principles:
1. Business Entity Concept:
2. Money Measurement Concept.
3. Going Concern Concept:
4. Cost Concept:
5. Accounting Period Concept:
6. Dual Aspect Concept:
7. Matching Principle:
8. Accrual Concept:

Conclusion:
Accounting principles form the foundation of proper accounting practice. They help in maintaining consistency and fairness in financial records and reporting.

ACCOUNTANCY WORKSHEET

Chapter: Basic Accounting Terms and Accounting principles.

Objective Type Questions:-

1. Fill in the blanks:
   a) The person who owes money to the business is called a _____.
   b) Amount invested by the owner in the business is called _____.
   c) Goods sold on credit are called _____ sales.
   d) The art of recording, classifying, and summarizing is known as _____.

2. True or False:
   a) Purchase of machinery is a revenue expenditure.
   b) A creditor is a person to whom the business owes money.

c) Trade discount is recorded in the books of accounts.

d) Depreciation is a non-cash expense.

Short Answer Type Questions:-

Define the following terms:

a) Asset

b) Liability

c) Capital

d) Expense

e) drawing

f) solvent

g) Insolvent

h) Business transactions

i) Entity

j) purchase

k) sales

Distinguish between:

a) Cash Discount and Trade Discount

b) Capital and Revenue Expenditure.

c) Capital and Revenue receipt.

3. Long answer type question:-

Principle of conservatism .

Matching principles

Revenue recognition principle

Full disclosure principle

Going concern principle

Accrual accounting principle

Materiality principle

Consistency principle

PHYSICS (WORKSHEET)
SECTION A

1. Which of the following has same dimension as that of Planck constant?   (1)

a) Angular momentum

b) Impulse

c) Linear momentum

d) Work

2. Force F is given by F = at + bt ,where t is time. What are the dimensions of a and b?   (1)

a) [MLT] and [MLT]   b) [MLT] and [MLT]

c) [MLT] and [MLT]   d) [MLT] and [MLT]

17

3. _____ are units of physical quantity that can be expressed as a combination of fundamental physical quantities. (1)
   a) Complex units
   b) Basic units
   c) Derived units
   d) Simple units

4. The equation of state of the gas is expressed as = nRT, where P = pressure, V = volume, T = temperature and n, a, b, R are constants. The dimensions of a will be: (1)
   a) [MLT]
   b) [L]
   c) [ML T]
   d) [L]

5. Horse power is unit of (1)
   a) Distance
   b) Time
   c) Power
   d) Current

6. The equation =Constant. The units of a are (1)
   a) dyne cm
   b) dyne cm
   c) dyne cm
   d) dyne cm

7. Planck's constant (h), speed of light in vacuum (c) and Newton's gravitational constant (G) are three fundamental constants. Which of the following combinations of these has the dimension of length? (1)
   a)
   b)
   c)
   d)

8. The result of rounding off 34.216 to 3 digits is
   a) 3.42
   b) 34.2
   c) 34.22
   d) 342
   (1)

9. Dimensions of electrical resistance are (1)
   a) [ML T A]
   b) [ML T A]
   c) [ML T A]
   d) [ML T A]

10. Young's modulus of steel is 1.9 10 N/m . When expressed in CGS units of dynes/cm , it will be equal to (1N = 10 dyne, 1m = 10 cm) (1)
    a) 1.9 10
    b) 1.9 10
    c) 1.9 10
    d) 1.9 10

11. The units of Planck's constant are: (1)
    a) Js
    b) Js
    c) J/s
    d) Js

12. Dimensional analysis can be used to (1)
    a) check the validity of an equation.
    b) deducing relations among the physical quantities.
    c) to check integration of the equation.
    d) check the order of an equation.

13. The dimension of angular velocity is (1)
    a) [M L T]
    b) [MLT]
    c) [M L T]
    d) [ML T]

14. Which of the following is a derived unit? (1)
    a) Unit of volume
    b) Unit of mass
    c) Unit of time
    d) Unit of length

15. If energy (E), velocity (V) and time (T) are chosen as the fundamental quantities, the dimensional formula of surface tension will be (1)

a) [EV T]   b) [EV T]   c) [EV T]   d) [E V T]

16. The unit of permittivity of free space is   (1)
    a) newton - metre /coulomb   b) coulomb /newton - metre
    c) coulomb/newton - metre   d) coulomb /(newton - metre)

17. The number of significant digits in 3.967 is   (1)
    a) 3   b) 5   c) 1   d) 4

18. The numbers 2.745 and 2.735 on rounding off to 3 significant figures will give   (1)
    a) 2.74 and 2.74   b) 2.75 and 2.74
    c) 2.75 and 2.73   d) 2.74 and 2.73

19. What are the dimensions of in the relation , where F is the force, x is distance and t is time?   (1)
    a) [LT]   b) [ML T]   c) [T]   d) [T]

20. The dimension of RC is   (1)
    a) square of time   b) time   c) inverse time   d) square of inverse time

21. **Assertion (A):** If power of an engine depends on mass, angular speed, torque and Angular momentum, then the formula of power is not derived with the help of the dimensional method.
    Reason (R): In mechanics, if a particular quantity depends on more than three quantities, then we cannot derive the formula of the quantity by the dimensional method.   (1)
    a) Both A and R are true and R is the correct explanation of A.
    b) Both A and R are true but R is not the correct explanation of A.
    c) A is true but R is false.
    d) A is false but R is true.

22. **Assertion (A):** The kinetic energy, with any reference, must be positive.   (1)
    Reason (R): In the expression for kinetic energy, the velocity appears with power 2.
    a) Both A and R are true and R is the correct explanation of A.
    b) Both A and R are true but R is not the correct explanation of A.
    c) A is true but R is false.
    d) A is false but R is true.

23. **Assertion (A):** Strain is a non - dimensional quantity.   (1)
    Reason (R): Strain is a constant quantity.
    a) Both A and R are true and R is the correct explanation of A.
    b) Both A and R are true but R is not the correct explanation of A.
    c) A is true but R is false.
    d) A is false but R is true.

24. **Assertion (A):** When we change the unit of measurement of a quantity, its numerical value changes.   (1)
    Reason (R): Smaller the unit of measurement smaller is its numerical value.
    a) Both A and R are true and R is the correct explanation of A.
    b) Both A and R are true but R is not the correct explanation of A.

c) A is true but R is false.

d) A is false but R is true.

25. **Assertion (A):** Radian is the unit of distance. (1)

Reason (R): One radian is the angle subtended at the centre radius of the circle.

a) Both A and R are true and R is the correct explanation of A.

b) Both A and R are true but R is not the correct explanation of A.

c) A is true but R is false.

d) A is false but R is true.

26. Solve and express the result to an appropriate number of given figure: (1)

27. If the velocity of light c, acceleration due to gravity g and atmospheric pressure p are the fundamental quantities, find the dimensions of length. (1)

28. The mean value of period of oscillation of a simple pendulum in an experiment is 2.825s. The arithmetic mean of all the absolute errors is 0.11s. Round off the period of simple pendulum to appropriate number of significant figures. Give reasons. (1)

29. Magnitude of force F experienced by a certain object moving with speed v is given by F = Kv , where K is a constant. Find the dimensions of K. (1)

30. Convert an acceleration of 2 km h into cm s . (1)

SECTION B

31. What is meant by the term measurement of a physical quantity? How is the result of measurement of a physical quantity expressed? (2)

32. The wavelength associated with a moving particle depends upon its mass m, its velocity v and Plank's constant h. Show dimensional relation between them. (2)

33. Differentiate between dimensional and non - dimensional variables. (2)

34. Distinguish between dimensional and non - dimensional constants. (2)

35. State the limitations of the method of dimensional analysis. (2)

36. If force F, length L and time T are taken as fundamental units then what will be the dimensions of mass? (2)

37. Out of formulae (2)

y = asin 2 t / T and

y = asin vt for the displacement y of particle undergoing a certain periodic motion, rule out the wrong formula on dimensional grounds, (where a = maximum displacement of the particle, v = speed of the particle, T = time period of motion).

38. A body of mass m is moving in a circle of radius r with angular velocity. Find expression for centripetal force acting on it by the method of dimensions. (2)

39. In the relation p = , p is the pressure, z is the distance, and is the temperature. What is the dimensional formula of b? (2)

40. Check the correctness of the relation, where is the torque acting on a body, I is inertia

20

and is angular acceleration. (2)

SECTION C

41. Round off the following numbers as indicated: (3)
    18.35 up to 3 digits
    143.45 up to 4 digits
    18967 up to 3 digits
    12.653 up to 3 digits
    248337 upto 3 digits
    321.135 upto 5 digits
    101.55 10 upto 4 digits
    31.325 10 upto 4 digits

42. A planet moves around the sun in nearly circular orbit. Its period of revolution Tdepends
    upon: (3)
    radius r of orbit
    mass Mof the sun and
    the gravitational constant G.
    Show dimensionally that T r .
    Taking the proportionality constant as 2, write the expression for T.

43. A book with many printing errors contains four different formulas for the displacement
    y of a particle undergoing a certain periodic motion: (3)
    (a = maximum displacement of the particle, v = speed of the particle. T = time - period
    of motion). Rule out the wrong formulas on dimensional grounds.

44. How will you convert a physical quantity from one unit system to another by method of
    dimensions? (3)

45. Explain this statement clearly: (3)
    To call a dimensional quantity large or small is meaningless without specifying a
    standard for comparison. In view of this, reframe the following statements wherever
    necessary:
    atoms are very small objects.
    a jet plane moves with great speed.
    the mass of Jupiter is very large.
    the air inside this room contains a large number of molecules.
    a proton is much more massive than an electron.
    the speed of sound is much smaller than the speed of light.

CHEMISTRY (PROJECT WORK)

Investigatory project for internal assessment Instructions:
● There are 4 topics and you need do the project on any one topic
● You have to submit the project in your own handwriting.
● Word limit: 1000 words max.

The Project-Portfolio should include the following:
● Cover page with the title of the project, school details/details of students
● Statement of purpose/objectives/goals
● Acknowledgement
● Certificate of Completion under the guidance of the teacher.
● Index/Table of Contents
● Body (1000 words - Introduction, Description/Report/Explanation, Conclusion)
● If possible, photographs that capture the positive learning experiences of the student(s).
● List of resources/ Bibliography.

Topics:
1. Chemistry in Food Preservation – Study how chemical preservatives affect shelf life and quality of food.
2. Environmental Chemistry: Effect of Acid Rain – Simulate acid rain and study its effects on materials and plants.
3. Preparation of Soap Using Cold and Hot Process Methods – Compare both techniques and analyze the results
4. Investigate the foaming capacity of different soaps.

WORKSHEET

Chapters: 1 – Some Basic Concepts of Chemistry, 7 – Redox Reactions
Total Marks: 25
Section A – Objective Type Questions (1 mark each)   **($4 \times 1 = 4$ marks)**

1. The number of atoms in 0.1 mole of a triatomic gas is:
   a) 1.8×10^{23} b) 6.022×10^{22} c) 3.011×10^{23} d) 1.2×10^{23}

2. The oxidation number of Cr in $Cr_2O_7^{2-}$ is:
   a) +3   b) +6   c) +7   d) +2

3. Which of the following is not an example of a redox reaction?
   a) $H_2 + Cl_2 \rightarrow 2HCl$ b) $Zn + CuSO_4 \rightarrow ZnSO_4 + Cu$
   c) $BaCl_2 + H_2SO_4 \rightarrow BaSO_4 + 2HCl$ d) $2Na + Cl_2 \rightarrow 2NaCl$

4. Which law states that matter is neither created nor destroyed during a chemical reaction?
   a) Law of Definite Proportions
   b) Law of Conservation of Mass
   c) Law of Multiple Proportions
   d) Avogadro's Law

Section B – Assertion and Reasoning Questions (1 mark each)   **($2 \times 1 = 2$ marks)**

Instructions: For the following questions, choose:
(a) Both Assertion and Reason are true, and Reason is the correct explanation.
(b) Both Assertion and Reason are true, but Reason is not the correct explanation.
(c) Assertion is true, Reason is false.
(d) Assertion is false, Reason is true.

5. **Assertion:** In redox reactions, oxidation and reduction occur simultaneously.
   Reason: Oxidation involves gain of electrons.

6. **Assertion:** One mole of water contains 6.022×10^{23} molecules.
   Reason: One mole of any substance contains Avogadro's number of entities.

Section C – Very Short Answer Type Questions (2 marks each)   **(2 × 2 = 4 marks)**

7. Define molarity and calculate the molarity of a solution prepared by dissolving 5 g of NaOH in 250 mL of solution.
   (Molar mass of NaOH = 40 g/mol)

8. Identify the oxidizing and reducing agents in the following reaction: $2Na + Cl_2 \rightarrow 2NaCl$

Section D – Short Answer Type Questions (3 marks each)   **(2 × 3 = 6 marks)**

9. A sample of calcium carbonate ($CaCO_3$) weighs 5 g. Calculate:
   (i) The number of moles
   (ii) The number of molecules
   (iii) The number of oxygen atoms (Molar mass of $CaCO_3$ = 100 g/mol)

10. Balance the following redox reaction using the ion-electron method in acidic medium:
    $MnO_4^- + Fe^{2+} \rightarrow Mn^{2+} + Fe^{3+}$
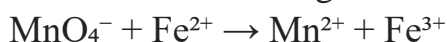
Section E – Case Study Based Question   **(1×4= 4 marks)**

Case Study:

A student was asked to determine the empirical and molecular formula of a compound. The compound contains 40% carbon, 6.67% hydrogen and 53.33% oxygen by mass. The molar mass of the compound is 180 g/mol.
Answer the following questions:

11. a) Calculate the empirical formula of the compound.   (2)
    b) Determine its molecular formula.   (2)

Section F - Long Answer type questions

Question: A solution is prepared by dissolving 5.8 g of NaCl in 100 g of water.
(a) Calculate the molarity of the solution if the final volume of the solution is 105 mL.   (2)
(b) Calculate the molality of the solution.   (1.5)
(c) Calculate the mole fraction of NaCl in the solution.   (1.5)
   (Atomic masses: Na = 23, Cl = 35.5)

HOLIDAY HOMEWORK
GRADE -XI (FINE ARTS)

Instructions:	**1.The Holiday assignment should be creative by using your own creativity.** **2.It should be related with particular theme**
WORK SPECIFICATION:	
Still Life:	Five coloured sheets with minimum three objects using any colour as a medium.
REFERENCE:	
Realistic Composition	Five figurative composition with minimum three human figures using any colour as a medium.
REFERENCE:	
Folk ART Painting	Five Folk Art Painting using Mandala Art, Madhubani Painting, Kali Ghat Painting, carli Art
REFERENCE:	
Portrait:	Five Portrait have to be made using Pencil shading, Water Color or Acrylic Color Medium
REFERENCE:	
Life Study:	Five Life study have to be made using pencil shading medium
REFERENCE:	
Object Study:	Create five detailed drawings of everyday objects using various mediums such as pencil, charcoal, or ink. Focus on capturing textures, shadows, and details.
REFERENCE:	
Abstarct Composition:	Five Abstarct Composition have to be made using Acrylic color medium
REFERENCE:	
Perpective Drawing &	Five Perpective drawing or Painting Have to be made using any color as a medium

Painting:	
REFERENCE:	
Nature Study:	Five Nature Drawing have to be made using any color as a medium
REFERENCE:	
Collage Art:	Three collage art have to be made using waste paper, Fabric, Mixed Media
REFERENCE:	
Mosaic Art:	Two Mosaic art have to be made using stone, glass, tiles, fevicrylmouldit clay
REFERENCE:	

❖ **Revise the P.T 1 SYLLABUS:**	**Chapter 1**- Introduction of ART
	Chapter 2- ART of Culture