



WORLD WAY INTERNATIONAL SCHOOL BHOPAL

SUMMER HOLIDAY HOMEWORK (2024-25)

CLASS - XI

Note – Do all Homework in subject registers.

1. ENGLISH

1. Read the book 'Up from Slavery by Booker T. Washington. Pick up any situation/event from the book and rewrite it in the form of a play. (250-300 words). The play should include the following:

Title

List of characters

Stage Setting

Opening Narration

Narrations related to expressions

Change of scene (if required)

Also make a beautiful cover page for the book.

2. Pick up any one lesson from the books 'Hornbill' or 'Snapshots'. Prepare a power point presentation on any one lesson covering the following points:

Information about the author

Period in which the story was written and its relevance in relation with those times

Brief hint about the plot

Theme

Characterisation

Message

3. Prepare a scrap book/file with various kinds of classified ads (situation vacant, situation wanted, lost and found, services offered, on sale, for rent, matrimonial etc.) and display or commercial ads. (5 each)

2. PHYSICS

1. Case based Question

It must be clearly understood that distance is not the same as displacement. Distance is a scalar quantity and is given by the total length of the path travelled by the body in a certain interval of time.

Displacement is a vector quantity and is given by the shortest distance (in a specified direction) between the initial and the final positions of the body. The direction of the displacement vector is from the initial position to the final position of the motion. Speed is a scalar quantity. The average speed and average velocity are different in many respects. The direction of the velocity vector is the same as that of the displacement vector. Acceleration is defined as the rate of change of velocity and it is a vector quantity.

(i) Mention a condition when displacement and distance are both equal.

(ii) Define average speed and average velocity.

(iii) Draw position-time graph of uniform accelerated motion.

(iv) What does the area under velocity-time graph and time axis signify?

(v) What does the slope of position-time graph and velocity-time graph represent at any instant?

(vi) Mention a condition when body is at rest but still it has acceleration.

(vii) A body is moving in circular path with uniform speed. What is the acceleration and average velocity during one complete revolution?

2. Case based Question

Kinematics is the branch of mechanics which deals with the study of motion of material objects without taking into account the factors affecting the motion. Rest and motion are relative concept and nothing is absolute. The Position of the object at a given instant of time is described in terms of position coordinates. The coordinate system along with a clock constitutes a frame of reference. Frame of reference can be of two types viz: inertial frame of reference and non-inertial frame of reference. When position of body change in a frame of reference, it is said to be in motion which is categorised as uniform and non-uniform. Motion of a body is studied in terms of position-time graph and velocity-time graph.

- (i) "Rest and motion are relative not absolute." Comment.
- (ii) What are different types of frames of reference? Explain.
- (iii) Draw position-time graph for uniform and Non-uniform motion.
- (iv) Draw velocity-time graph for uniform and non-uniform motion.
- (v) Relative velocity of two bodies is zero. What is nature of Position-time graph for it?

1. Value Based Question

Sita a student of class XII was suffering from malaria. The area is full of mosquitoes. She was not having mosquito net. Her friend Geeta has an extra net. She gave it to Sita. Also she took Gita to a Doctor, got her medicines. After a week Sita became normal

- (a) Comment upon the qualities of Sita.
- (b) The mosquito net over a 7 m X 4m bed is 3m high. The net has a hole at one corner of the bed through which a mosquito enters the net. It flies and sits at the diagonally opposite upper corner of the net (i) Find the magnitude of the displacement of the mosquito (ii) Taking the hole as the origin, the length of the bed as the X-axis, its width as the Y-axis and vertically up as the Z-axis, with the components of the displacement vector.

2. Value Based Question

An old woman crossing the road was holding a money purse. She was not able to walk .A pick pocket snatches away her purse. A school student of class X having seen this incident tries to help that old lady. He informs the police Inspector who stands nearby. The Inspector collects the money purse from the pickpocket and hand it over to the old lady.

- (a) What values do you find in the school student?
- (b) Also the police inspector in a jeep is chasing the pickpocket on a straight road.

The jeep is going at its maximum speed ' v '. The pickpocket rides on the motorcycle of a waiting friend when the jeep is at a distance ' d ' away and the motorcycle starts with a constant acceleration ' a '. Show that the pickpocket will be caught if $v \geq \sqrt{2ad}$.

3. CHEMISTRY

CASE STUDY -1

In the table given below to illustrate precision and accuracy. Study the table and answer the questions based on the table and related studied concepts.

Data to Illustrate Precision and Accuracy

Measurement in g	I	II	III	Average
student A	0.521 g	0.515 g	0.509 g	0.515 g
student B	0.516 g	0.515 g	0.514 g	0.515 g
student C	0.521 g	0.520 g	0.520 g	0.520 g

- (a) What is meant by precision?
- (b) What is accuracy?
- (c) If actual mass of a piece of metal is 0.520 g, data for which student is neither precise nor accurate.
- (d) Which student data is precise but not accurate?
- (e) The data of which student is both precise and accurate?
- (f) How many significant figures are in 0.520?
- (g) What is scientific notation for 0.520?

CASE STUDY -2

Chemistry play an important role in human needs for food, health care products and improving life. Cis platin and taxol are used in chemotherapy, AZT (Azido thymidine) is used for AIDS. SI units are international units of measurement. Matter is classified into elements, compounds and mixtures, which can be homogeneous as well as heterogeneous. A mixture can be separated by physical methods; compounds can be separated by chemical methods only. Atomic mass is average of masses of isotopes depending upon their natural abundance. Empirical formula is calculated with the help of percentage composition of elements in a compound and molecular mass helps to calculate molecular formula. A chemical equation must be balanced so as to follow laws of chemical combination.

- (a) Express 2.54 mm into S.I units.
- (b) Out of milk, diamond, air, petrol which is pure substance?
- (c) Balance the equation: $\text{NO}_2 + \text{H}_2\text{O} \rightarrow \text{HNO}_3 + \text{NO}$
- (d) What is percentage of Na in Na_2CO_3 ? (Na = 23u, C = 12, O = 16u)
- (e) $^{35}_{17}\text{Cl}$ and $^{37}_{17}\text{Cl}$ are in ratio of 3: 1 in nature. What is atomic mass of Cl?
- (f) What is empirical formula of $\text{C}_6\text{H}_{12}\text{O}_6$?

VALUE BASED QUESTIONS;

Q1 Two friends Riya and Pooja were discussing that which is better for expressing the concentration of a solution Molality or Molarity? Pooja told Riya that Molality is considered better for expressing the concentration as compared to Molarity and explained the reason as well.

- (a) What would be the explanation of Pooja?
- (b) What are the units of molarity and molality?
- (c) What is the difference between molarity and molality.

Q2 Mohan learnt the term mol in his chemistry class. He discussed the term mol with her elder sister Anshika. She explained him.

- (a) What was the probable answer given by Anshika?
- (b) What for term mol stand for.
- (c) What values are associated with Anshika

4. MATHS

Q-1. CASE STUDY

In a library, 25 students read physics, chemistry and mathematics books. It was found that 15 students read mathematics, 12 students read physics while 11 students read chemistry. 5 students read both mathematics and chemistry, 9 students read physics and mathematics. 4 students read physics and chemistry and 3 students read all three subject books.

Based on the above information, answer the following questions.

- (i) Find the number of students who reading

only chemistry

(ii) Find the number of students who reading

only mathematics

(iii) Find the number of students who reading only

one of the subjects

Q-2. VALUE BASED

Which of the following are sets ? Justify your answer.

(i) The collection of all the months of a year beginning with the letter J.

(ii) The collection of ten most talented writers of India.

(iii) A team of eleven best-cricket batsmen of the world.

(iv) The collection of all boys in your class.

(v) The collection of all natural numbers less than 100.

(vi) A collection of novels written by the writer Munshi Prem Chand.

(vii) The collection of all even integer

(viii) The collection of questions in this Chapter.

(ix) A collection of most dangerous animals of the world

Q.3 CASE STUDY

In a class 11 harshwardan explain vedant that to consider $A+B=\pi/4$ where A and B are acute angles and he asks on the basis of the above explanation the following question to his friend

1 find the value of $(1 +\tan A) (1 +\tan B)$

2 Find the value of $(\cot A -1) (\cot A +1)$

3 what moral value of harshwardan is depicted here?

q.4 where can be use trigonometric function in real life ?

5. BIO

Value based question

Question 1: Why is it important for scientists to classify organisms ?

Question 2: How does understanding biological classification promote respect for all forms of life? Value Focus: Recognition of the interconnectedness and value of all living organisms.

Case Study: A new species of flowering plant has been discovered in a remote rainforest. Describe the process scientists would use to classify and categorize this new species within the existing taxonomy system.

Case Study: A researcher has collected several specimens of insects from different locations around the world. How might they use morphological characteristics, genetic analysis, and ecological data to classify and categorize these insects into appropriate taxonomic groups?

6. INFORMATICS PRACTICES

Part 1: Case Studies

1. A computer lab in a school is experiencing frequent overheating issues, causing some computers to shut down unexpectedly. How would you address this problem? Outline measures to improve the cooling system and prevent overheating in the future.
2. A school wants to create a simple grading system using Python for its students. Develop a Python program that takes input for student marks in five subjects and calculates the total marks and average. Based on the average, assign a grade according to the following criteria:

Average \geq 90: Grade A

80 \leq Average < 90: Grade B

70 \leq Average < 80: Grade C

60 \leq Average < 70: Grade D

Average < 60: Grade F

Part 2: Practical File Questions

(Write the below mentioned programs in computer practical file)

1. To find average and grade for given marks.
2. To find sale price of an item with given cost and discount (%).
3. To calculate perimeter/circumference and area of shapes such as triangle, rectangle, square and circle.
4. To calculate Simple and Compound interest.
5. To calculate profit-loss for given Cost and Sell Price.
6. To calculate EMI for Amount, Period and Interest.
7. To calculate tax - GST / Income Tax.
8. To find the largest and smallest numbers in a list

Part 3: Previous year Questions

1. **What do you mean by computer system? Explain its components with help of diagram.**
2. **What do you understand by software? Explain the following in detail:**
 - i. **FLOSS**
 - ii. **Open source software**
 - iii. **Free software**
 - iv. **Freeware software**
3. **Write a short note on Python language. Discuss its advantages.**
4. **Explain the following terms:**
 - i. **Keywords**
 - ii. **Identifiers**
 - iii. **operator**
5. **write the rule which must be followed while naming a variable in python.**

7. PSYCHOLOGY

- Prepare the project Part 1
- Choose any one Method of enquiry from the following given options
 - Observation Method
 - Survey Method
 - Interview Method

- Questionnaire Method
- The Part A of the project should have the following sub Headings
 - Introduction to the topic
 - Definition
 - History
 - Types
 - Implementation of the test
 - Case study based on the method
 - Conclusion

Case Study based study question

Title: Psychology in Everyday Life: Case Study Worksheet

Instructions: Read the following case study carefully and answer the questions based on your understanding of psychology in everyday life. Each question is worth 2 marks. Provide detailed and accurate responses.

Case Study:

Mark is a 16-year-old high school student who has been experiencing difficulties with managing his time effectively and staying focused on his studies. He

often procrastinates on assignments and finds it challenging to concentrate during

class lectures. Despite his efforts to improve his study habits, Mark feels

overwhelmed by the work load and struggles to meet deadlines. He frequently experiences stress and frustration, which affects his overall well-being and academic performance. Questions:

- Identify and explain at least two psychological concepts related to memory that might help explain Mark's difficulties with staying focused on his studies.
- How might principles of motivation influence Mark's tendency to procrastinate on assignments?
- Discuss the role of stress in affecting Mark's ability to manage his time effectively and concentrate on his studies.
- Apply the concept of classical conditioning to explain how environmental cues in Mark's study environment might influence his study habits.
- Describe at least two cognitive biases that might impact Mark's perception of his academic performance and work load.

8. PAINTING

Draw and colour 15 sheets of portfolio (A2 size) and use acrylic colour

- 5 sheets of composition
- 5 sheets of objects (still life) and 5 sheets of nature study