THE ASIAN SCHOOL, DEHRADUN

Half Yearly Syllabus for 2026-27

Class -IX

English

Literature

Kaveri
Chapter-1 How I taught my grandmother to read
Chapter-2 The Pot Maker
Chapter-3 Winds of Change
Chapter-4 Vitamin – M

Poetry
Poem-1 Bharat our Land
Poem-2 Gifts of Grace :Honouring Our Vocations
Poem- 3 Canvas of Soil
Poem-4 I Cannot Remember My Mother

Grammar
1. Tenses – Gap Filling
2. Modals
3. Subject- Verb Concord
4. Determiners

Writing Skills
1.Letter to Editor
2. Notice Writing
3. Informal Invitation
4. Factual Description

Hindi :

गद्यभाग
Chapter- 1 दोबैलों की कथा
Chapter- 2 क्या लिखूँ?
Chapter-3 संवादहीन
Chapter- 4 ऐसी भी बाते होती हैं
Chapter- 8 रैदास
Chapter- 6 रीढ़ की हड्डी
Chapter- 9 राम लक्ष्मण परशुराम संवाद

काव्य भाग :
Chapter-10 भारती, जय,विजय करे

व्याकरण भाग:
1. शब्दनिर्माण–उपसर्ग, प्रत्यय
2. अनुच्छेद
3. पत्रलेखन–(अनौपचारिक)
4. अलंकार (अनुप्रास, यमक, श्लेष)
5. अर्थ के आधार पर वाक्य भेद
6. संज्ञा
7. अपठितगद्यांश
8. अपठितकाव्यांश
9.सूचनालेखन
10.संवादलेखन

Mathematics :
Chapter-1 Number System
Chapter-2 Polynomials
Chapter-3 Sequence And Progressions
Chapter-4Exploring Algebraic Identities
Chapter-5 Linear Equation In Two Variables
Chapter-6 Coordinate Geometry
Chapter-7 Introduction to Euclids Geometry
Chapter-8LINES AND ANGLES

Science :

PHYSICS
Chaptper-4 Describing Motion Around Us
Chapter-6 How Forces Affect Motion

CHEMISTRY
Chapter-5 Exploring Mixtures and their Separation
Chapter-8 Journey Inside the Atom

BIOLOGY
Chapter-2 Cell : The Building Block of Life
Chapter-3 Tissues in Action

Social Studies :

History :
Chapter-1 Understanding Social Science
Chapter -4 Beginning of Civilisation

Political Science :
Chapter-6 Democracy
Chapter-7 Elections

Geography :
Chapter- Shaping of the Earth's Surface
Chapter- 2Atmosphere & Climate

Economics :
Chapter- Building Blocks in Economics
Chapter-12 The Price Puzzle : What drives the market why prices change : The Story of Demand and Supply

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Information Technology :

EMPLOYABILITY SKILLS :Chapter-1 Communication Skills
Chapter-2Self Management Skills
Chapter-3ICT skills

SUBJECT SKILLS :
Chapter-1IT AND ITeS
Chapter-2 Digital Documentation

French :
Chapter-1 La Famille
Chapter-2 Au Lycée
Chapter-3 Unejournée de Pauline
Chapter-4 Les saisons

Head Senior School

Principal

23/5/24

THE ASIAN SCHOOL, DEHRADUN

HOLIDAY HOMEWORK- SUMMER VACATION 2026 FOR CLASS IX

English:

Note: All work is to be done in a separate thin notebook and submitted after the vacation.

1) Write the value points, message and central theme of the following lessons:

a. Winds of Change
b. Vitamin-M

2) Write an essay in 200 words on the following topics

a. A Morning in the Mountains
b. The Day Everything Went Wrong and Right

3) Prepare any Two of the following topics for ASL (2-3 minutes)

a. Are We Really Connected Through Social Media?
b. Should Teenagers Have Digital Detox Days?
c. Why Silence Makes People Uncomfortable
d. Cancel Culture: Accountability or Bullying?
e. If My Thoughts Had a Group Chat

4) Grammar

Tenses – Correct the Errors

1. She go to school every day.
2. We was watching a movie when the lights went out.
3. They has completed the project yesterday.
4. I am knowing the answer to this question.
5. By next month, he finish the course.
6. The children is playing in the garden now.
7. She did not went to the market yesterday.
8. While I slept, the phone was ringing continuously.
9. My brother have been living here since 2020.
10. If it will rain, we will cancel the trip.

Subject–Verb Agreement – Correct the Errors

1. The list of items are on the table.
2. Neither the teacher nor the students was ready.
3. Each of the players have a separate locker.
4. Mathematics are my favourite subject.
5. The news were shocking.
6. One of the boys play football very well.
7. Either Riya or her friends has broken the vase.
8. The bouquet of roses smell wonderful.
9. A pair of shoes were lying outside the room.
10. Bread and butter are his usual breakfast.

Hindi:

1–रानी लक्ष्मीबाई के जीवन की घटनाओं, उनकी वीरता और पराक्रम को समाचार वाचक की तरह समाचार रूप में सचित्र प्रस्तुत कीजिए।

2–रामचरित मानस के बालकाण्ड से राम लक्ष्मण परशुराम संवाद के प्रसंग का मंचन लोक नाट्य,रामलीला और कठपुतली कला में बड़ी जीवतंता के साथ किया जाता सकता है। पाठ्य पुस्तक में वर्णित चौपाईयों के आधार पर एक दृश्य नाटक के रूप में सचित्र प्रस्तुत कीजिए।

3–कागज पर एक चित्र बनाइए–इसे नाम दीजिए भाषा वृक्ष। इसकी जड़ में लिखिए–भारतीय संस्कृति, तने पर और शाखाओं पर लिखिए–हिन्दी ,मराठी, तमिल, बांग्ला, गुजराती आदि। हर शाखा पर उस भाषा का एक प्यारा शब्द जोड़िए।

4–लता मंगेशकर के जीवन के प्रेरित वाक्यों और गीतों का चित्रमय कोलाज बनाइए।

सामान्य निर्देश–

1–चित्र, चार्ट व रंगो का उपयोग करें

2–रचनात्मकता का उपयोग करें।

3–प्रत्येक कार्य में तिथि अवश्य लिखें

4–कार्य क्रमबद्ध एवं आकर्षक बनाइए

5–भाषा शुद्धता का ध्यान रखते हुए सम्पूर्ण कार्य करें

विशेष निर्देश–1–गृह कार्य उत्तर पुस्तिका में किया जायेगा।

2–सम्पूर्ण कार्य आन्तरिक मूल्याकंन के अन्तर्गत जांचा जायेगा।

Mathematics

(A):- THE STUDENTS HAVE TO PREPARE A PORTFOLIO/ PROJECT , FOR THE INTERNAL ASSSESSMENTS IN MATHEMATICS, AS PER THE GUIDELINES ISSUED BY CBSE.

GUIDELINES FOR THE PORTFOLIO/ PROJECT FOR MATHEMATICS

TOPIC FOR THE PORTFOLIO :

"EUCLID'S GEOMETRY FORMS AN IMPORTANT PART OF MATHEMATICS".

KEY-POINTS ABOUT THE TOPIC . (USE IN POINT-B, UNDER THE HEADING INSTRUCTIONS) ***

- **INTRODUCTION**
- **DEFINITION OF EUCLID,S GEOMETRY. (HISTORY)**
- **TERMS USED IN EUCLID,S GEOMETRY.**
- **NEED OF THE EUCLID,S GEOMETRY.**
- **SOME OF THE AREAS WHERE EUCLID,S GEOMETRY IS USED IN REAL LIFE. (WITH EXAMPLES)**
- **SOME INTERESTING PHENOMENA WHERE EUCLID,S GEOMETRY IS USED.**

***** (FOR STUDENTS HELP)**

INSTRUCTIONS:

WHAT SHOULD BE INCLUDED IN THE PORTFOLIO.

(A). COVER PAGE IN THE FORMAT GIVEN BELOW.

WELCOME TO MY PORTFOLIO

NAME: .....
CLASS AND SECTION.....
NAME OF SCHOOL.....
SCHOOL ADDRESS.....
NAME OF SUBJECT TEACHER.....
SESSION.....
SUBJECT: MATHEMATICS

STUDENTS PHOTO

FINISH THE FOLLOWING SENTENCES:-

GOAL SHEET:

- MY STRENGTH IN MATH INCLUDE: _____
  _____
- MY WEAKNESSES IN MATH INCLUDE: _____
  _____
- THE AREAS IN WHICH I HAVE IMPROVED IN MATHS ARE :
  _____
  _____
  _____

(B). NOTE ON WHAT YOU HAVE LEARNT .....

C). PORTFOLIO REFLECTION

1). DATE OF START.....
2). DATE OF COMPLETION.....
3). AREAS OF IMPROVEMENT IN PORTFOLIO.....

(D). SELF ASESSMENT QUESTIONS IN THE PORTFOLIO RELEVANT TO THE TOPIC (MIN. 5 QUESTIONS)

(E). TEACHERS COMMENTS (TO BE DONE BY THE TEACHER).

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NAME OF STUDENT..... **TEACHERS SIGNATURE**.....

*** NOTE:**

- **MAKE A CREATIVE PORTFOLIO.**
- **USE PROJECT SHEETS. (MINIMUM 8 SHEETS)**
- **USE GRAPH SHEETS IF REQUIRED**
- **COLOR PEN AND PENCIL CAN BE USED**
- **STICK FILE TO BE USED FOR THE PORTFOLIO**

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(B):- THE STUDENTS HAVE TO PREPARE MATHS ACTIVITY FILE FOR THE INTERNAL ASSSESSMENTS IN MATHEMATICS, AS PER THE GUIDELINES ISSUED BY CBSE.

GUIDELINES AND INSTRUCTIONS FOR PREPARING THE ACTIVITY FILE:

- **The activities should be done in a loose ruled project sheets and fixed in a stick file.**
- **It should contain the following in the order**
  - **INDEX**
  - **ACKNOWLEDGEMENT**
  - **The figures should be drawn with pencil.**
  - **The headings should be written in black in and the content in blue ink.**
  - **Use the graph sheets wherever required.**
  - **Color pencil and pen can be used.**
  - **Mention NAME OF THE SCHOOL, your NAME, CLASS AND SECTION, SUBJECT and SESSION in the activity file.**
  - **Prepare a neat and clean creative activity file.**

NOTE: THE PDF OF THE ACTIVITIES TO BE COMPLETED WIL BE SHARED IN THE CLASS WHATASPP GROUPS BY THE SUBJECT TEACHER.

THE HOLIDAY HOMEWORK HAS TO BE SUBMITTED AFTER THE SUMMER VACATIONS.

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(C). Solve the question paper of UT-1 in the MATHS NOTEBOOKS.

SCIENCE :

1) SCIENCE PORTFOLIO:

Prepare a Portfolio on any one concept of Chapter-14 "Natural Resources" from Science NCERT book emphasizing on their **Sustainable Management**. Students can connect the above topic as how all different spheres (Hydrosphere, Lithosphere& Atmosphere) of nature can heal themselves and support Biosphere of the world if the greed of humans is taken away.

Some topics for the portfolio are mentioned below. Students can select any one topic out of the following:

Natural Resources and their conservation/The Breath of Life: Air/ Water: A wonder liquid/ Mineral Riches in the Soil/Coal and Petroleum conservation/Biogeochemical cycles/Ozone layer and its depletion/Sustainability of Natural Resources.

Note: Any other relevant topic/idea can be tossed by students.

Instructions:

(i) The portfolio should be neatly handwritten in A-4 size Project sheets.

(ii) All the pages should have borders.

(iii) The portfolio should not exceed 10 pages.

(iv) The portfolio should contain a Cover page showing Name of the school, Subject, Title of the portfolio, Academic session and Student information.

(v) Credit will be awarded to the original drawings and illustrations.

(vi) All pictures should be labelled and acknowledged.

(vii) Check the relevant web sites and references for the Portfolio.

2) SCIENCE QUESTIONS :

PHYSICS : Chapter-4 DESCRIBING MOTION AROUND US

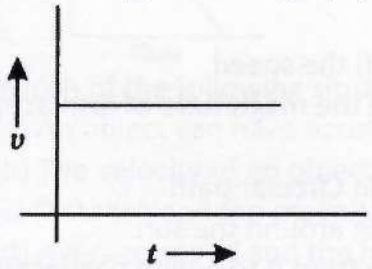
INSTRUCTIONS:

(i) Homework is to be done neatly in Physics Homework Notebook.

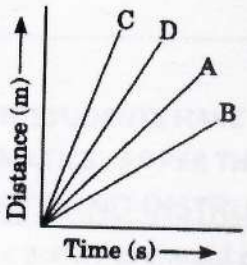
(ii) There are 40 Questions. Students have to write all 40 Questions and their Answers in the Notebook.

MULTIPLE CHOICE QUESTIONS

1. A particle is moving in a circular path of radius r. The displacement after half a circle would be:
   (a) Zero(b) πr(c) 2r(d) $2\pi r$
2. The numerical ratio of displacement to distance for a moving object is
   (a) always less than 1(b) always equal to 1
   (c) always more than 1(d) equal or less than 1
3. If the displacement of an object is proportional to square of time, then the object moves with
   (a) uniform velocity(b) uniform acceleration(c) increasing acceleration
   (d) decreasing acceleration
4. From the given υ – t graph, it can be inferred that the object is

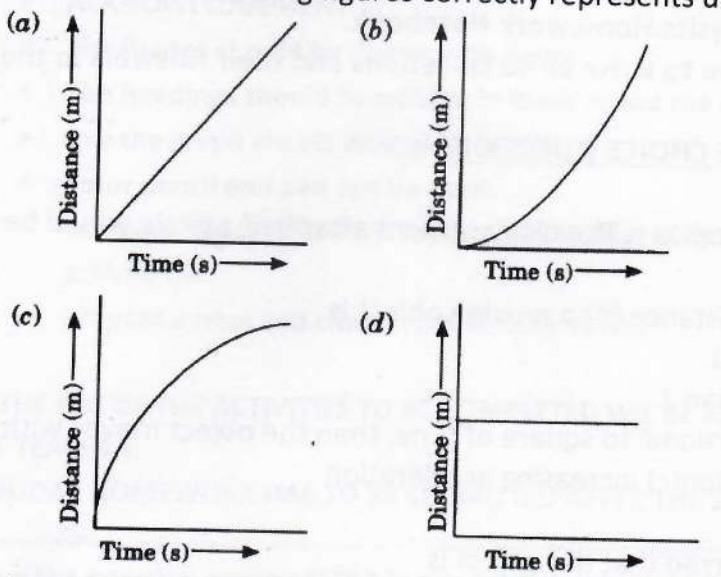


   (a) in uniform motion
   (b) at rest
   (c) in non-uniform motion
   (d) moving with uniform acceleration
5. Suppose a boy is enjoying a ride on a merry-go-round which is moving with a constant speed of 10 ms^{-1} It implies that the boy is
   (a)at rest (b) moving with no acceleration (c) in accelerated motion (d) moving with uniform velocity
6. Area under a υ -1 graph represents a physical quantity which has the unit
   (a) m^2 (b) m (c) m^3 (d) ms^{-1}
7. Four cars A, B, C and D are moving on a levelled road. Their distance versus time graphs are shown in the adjacent figure. Choose the correct statement.



(a) Car A is faster than car D. (b) Car B is the slowest.
(c) Car D is faster than car C. (d) Car C is the slowest.

8. Which of the following figures correctly represents uniform motion of a moving object?

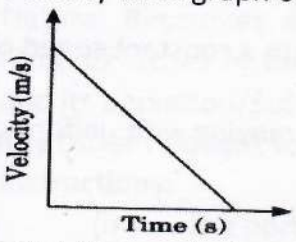


9. Slope of a velocity-time graph gives
(a) the distance (b) the displacement (c) the acceleration (d) the speed

10. In which of the following cases of motions, the distance moved and the magnitude of displacement are equal?
(a) If the car is moving on a straight road (b) If the car is moving in Circular path
(c) The pendulum is moving to and fro (d) The earth is revolving around the sun.

11. A boy goes from A to B with a velocity of 20 m/min and comes back from B to A with a velocity of 30 m/min. The average velocity of the boy during the whole journey is
(a) 24 m/min (b) 25 m/s (c) Zero (d) 20 m/min

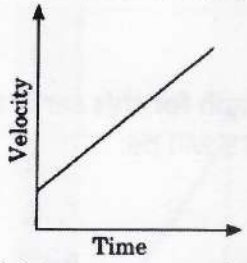
12. Velocity-time graph of an object is given below. The object has



(a) Uniform velocity (b) Uniform speed (c) Uniform retardation (d) Variable acceleration

13. A body is projected vertically upward from the ground. Taking vertical upward direction as positive and point of projection as origin, the sign of displacement of the body from the origin when it is at height h during upward and downward journey will be
(a) Positive, positive (b) Positive, negative (c) Negative, negative (d) Negative, positive

14. According to the given velocity-time graph, the object



(a) is moving with uniform velocity (b) has some initial velocity

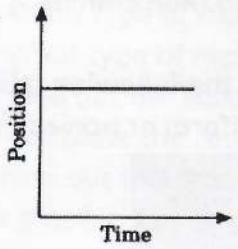
(c) is moving uniformly with some initial velocity (d) is at rest

15. The ratio of speed to the magnitude of velocity when the body is moving in one direction is

(a) Less than one (b) Greater than one (c) Equal to one (d) Greater than or equal to one

16. A car is moving along a straight road with uniform velocity. It is shown in the graph.

(a)



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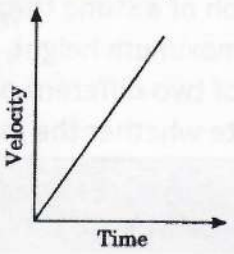
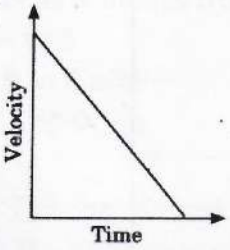
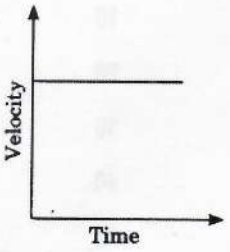


(c)



(d)



17. Which of the following situations is possible?

(a) An object can have acceleration, but constant velocity.

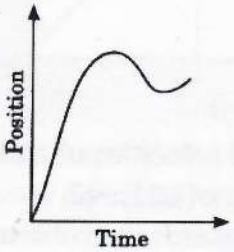
(b) The velocity of an object may be zero but acceleration is not zero.

(c) Distance and the magnitude of displacement are equal in circular motion.

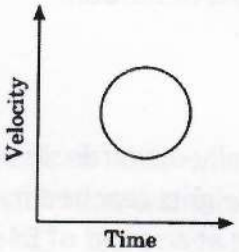
(d) Average speed and the magnitude of average velocity are always equal in circular motion.

18. Which of the following graphs is not possible?

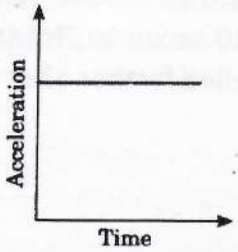
(a)



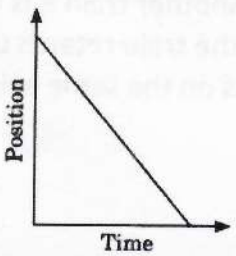
(b)



(c)



(d)



19. Which of the following statement is correct regarding velocity and speed of a moving body?

(a) Velocity of a moving body is always higher than its speed

(b) Speed of a moving body is always higher than its velocity
(c) Speed of a moving body is its velocity in a given direction
(d) Velocity of a moving body is its speed in a given direction

20. A car of mass 1000 kg is moving with a velocity of 10 m/s. If the velocity-time graph for this car is a horizontal line parallel to the time axis, then the velocity of the car at the end of 25 s will be:
(a) 40 m/s (b) 25 m/s (c) 10 m/s (d) 250 m/s

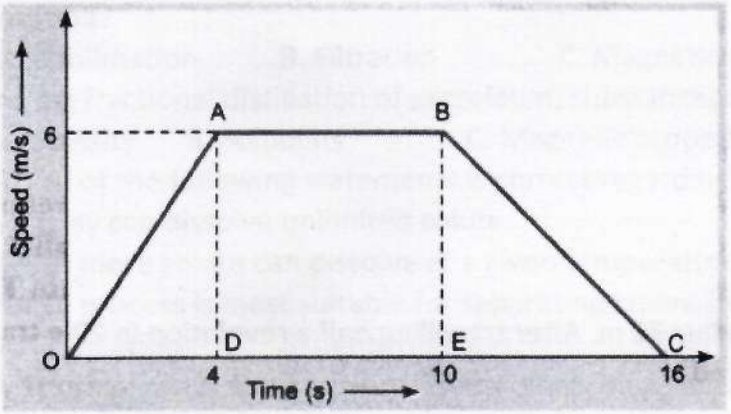
SUBJECTIVE QUESTIONS

21. Differentiate between distance and displacement.
22. What are the uses of a distance-time graph?
23. Draw a velocity versus time graph of a stone thrown vertically upwards and then coming downwards after attaining the maximum height.
24. The data regarding the motion of two different objects P and Q is given in the following table. Examine them carefully and state whether the motion of the objects is uniform or non-uniform.

Time	Distance travelled by object P in metres	Distance travelled by object Q in metres
9:30 am	10	12
9:45 am	20	19
10:00 am	30	23
10:15 am	40	35
10:15 am	50	37
10:45 am	60	41
11:00 am	70	44

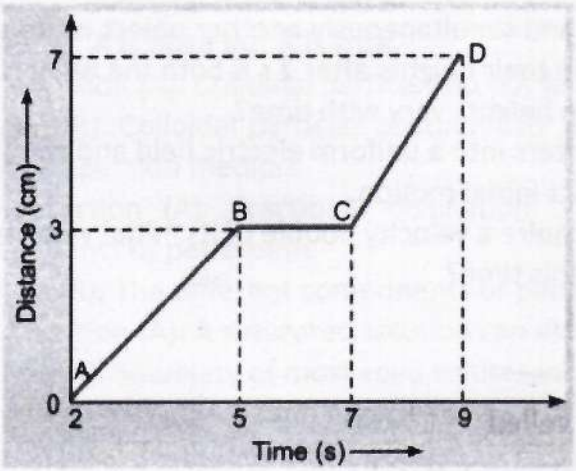
25. How will you show that the slope of displacement-time graph gives velocity of the body ?
26. What are the characteristics of distance-time graph for an object moving with a non-uniform speed?
27. Deduce the following equations of motion:
(i) $v = u + at$
(ii) $s = ut + {}^1/_2\, at^2$
(iii) $v^2 = u^2 + 2as$
28. Two stones are thrown vertically upwards simultaneously with their initial velocities u] and w2 respectively. Prove that the heights reached by them would be in the ratio of u21:u22.
29. The driver of train A travelling at a speed of 54 kmh^{-1} applies brakes and retards the train uniformly. The train stops in 5 seconds. Another train B is travelling on the parallel with a speed of 36 kmh^{-1}. Its driver applies the brakes and the train retards uniformly; train B stops in 10 seconds. Plot speed-time graphs for both the trains on the same axis. Which of the trains travelled farther after the brakes were applied?

30. Study the speed-time graph of a body given here and answer the following questions:



(a) What type of motion is represented by OA?
(b) What type of motion is represented by AB?
(c) What type of motion is represented by BC?
(d) Find out the acceleration of the body.
(e) Calculate the retardation of the body.
(f) Find out the distance travelled by the body from A to B.

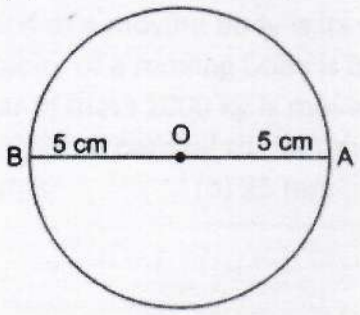
31. The graph given below shows the positions of a body at different times. Calculate the speed of the body as it moves from
(i) A to B
(ii) B to C and
(iii) C to D.



32. A body starts to slide over a horizontal surface with an initial velocity of 0.5 m/s. Due to friction, its velocity decreases at the rate 0.05 m/s^2. How much time will it take for the body to stop?

33. A particle moves in a circle with O as centre and AO = OB = 5 cm, as radius, as shown in the figure. It starts from A. Calculate:
(a) the distance covered, and

(b) the displacement, when it reaches B.



34. A body travels along a circular path of radius 70 m. After travelling half a revolution in 20 s, find the
(i) average velocity,
(ii) average speed.
35. A cheetah is the fastest land animal and can achieve a peak velocity of 100 km/h up to distances less than 500 m. If a cheetah spots its prey at a distance of 100 m, what is the minimum time it will take to get its prey, if the average velocity attained by it is 90 km/h?
36. The brakes applied to a car produce an acceleration of 6 ms^{-2} in the opposite direction to the motion. If the car takes 2s to stop after the application of brakes, calculate the distance it travels during this time.
37. A car starts from rest and moves along the x-axis with constant acceleration 5 ms^{-2} for 8 seconds. If it then continues with constant velocity, what distance will the car cover in 12 seconds since it started from the rest?
38. A motorcyclist drives from A to B with a uniform speed of 30 kmh^{-1} and returns back with a speed of 20 kmh^{-1}. Find its average speed.
39. An object is dropped from rest at a height of 150 m and simultaneously another object is dropped from rest at a height 100 m. What is the difference in their heights after 2 s if both the objects drop with same accelerations? How does the difference in heights vary with time?
40. An electron moving with a velocity of 5×10^4 ms^{-1} enters into a uniform electric field and acquires a uniform acceleration of 104 ms^{-2} in the direction of its initial motion.
(i) Calculate the time in which the electron would acquire a velocity double of its initial velocity.
(ii) How much distance the electron would cover in this time?

CHEMISTRY

Chapter-5 EXPLORING MIXTURES AND THEIR SEPARATION

INSTRUCTIONS:

(i) Homework is to be done neatly in Chemistry Homework Notebook.

(ii) There are 40 Questions. Students have to write all 40 Questions and their Answers in the Notebook.

1. Which of the following mixtures can be separated by using a separating funnel?
A. Salt and water B. Oil and water C. Sand and iron filings D. Sugar and water

2. A student wants to obtain pure copper sulphate crystals from its solution. Which sequence of methods should be used?
A. Filtration → Sublimation B. Evaporation → Crystallisation
C. Sedimentation → Decantation D. Centrifugation → Distillation

3. Which property is mainly used in chromatography to separate colours in ink?
A. Difference in boiling point B. Difference in solubility and adsorption
C. Difference in particle size D. Difference in density

4. A mixture contains ammonium chloride, sand and iron filings. Which method should be used first for separation?

A. Sublimation B. Filtration C. Magnetic separation D. Sedimentation

5. During fractional distillation of petroleum, substances are separated mainly on the basis of:

A. Density B. Solubility C. Magnetic property D. Difference in boiling points

6. Which of the following statements is correct regarding saturated solutions?

A. They can dissolve unlimited solute. B. Solubility decreases on heating.

C. No more solute can dissolve at a given temperature. D. They are always heterogeneous.

7. Which process is most suitable for separating cream from milk?

A. Distillation B. Centrifugation C. Chromatography D. Sublimation

8. A student heats a mixture of iodine and common salt. Purple vapours are formed and collected separately. Which method is used here?

A. Filtration B. Distillation C. Sublimation D. Crystallisation

9. Why is evaporation not considered suitable for obtaining sugar from sugar solution?

A. Sugar decomposes on heating B. Sugar is insoluble in water

C. Water evaporates very slowly D. Sugar particles are too small

10. Which of the following pairs represents a homogeneous mixture?

A. Sand and water B. Oil and water C. Salt dissolved in water D. Chalk powder in water

In Q 11 to Q15, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the c correct choice as:

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

B. Both A and R are true, and R is not the correct explanation of A.

C. A is true but R is false.

D. A is false but R is true.

11. Assertion (A): Colloidal particles do not settle down on standing.

Reason (R): Colloidal particles continuously move in a zig-zag manner due to collisions with molecules of the dispersion medium.

12. Assertion (A): Fractional distillation is more suitable than simple distillation for separating components of petroleum.

Reason (R): The different components of petroleum have very close boiling points.

13. Assertion (A): A saturated solution can dissolve more solute when heated.

Reason (R): Solubility of most solid solutes increases with rise in temperature.

14. Assertion (A): Filtration cannot be used to separate salt from salt solution.

Reason (R): The dissolved salt particles are small enough to pass through the pores of filter paper.

15.Assertion (A): Centrifugation is preferred over filtration for separating cream from milk.

Reason (R): The components of milk have different densities, and rapid spinning helps separate the heavier and lighter particles.

16. Differentiate between homogeneous and heterogeneous mixtures by giving one example of each.

17 A student adds sugar to water and observes that after some time, the sugar stops dissolving.

A. What type of solution is formed?

B. Why does the sugar stop dissolving?

18. A solution contains 30% (v/v) alcohol. If the total volume of the solution is 250 mL, calculate the volume of water (solvent) present in the solution.

19. A solution contains 20% (w/w) salt. If the total mass of the solution is 150 g, calculate the mass of solvent present in the solution.

20. A student dissolves 8 g of sugar in 40 mL of water. After complete dissolution, the total volume of the solution becomes 50 mL. Calculate the concentration of the solution in terms of mass by volume percentage.

21. What is a solubility curve? Mention one example of a substance that shows anomalous solubility.

22. What is centrifugation? Explain its principle and give one example of its use in daily life or industry.

23. Differentiate between a true solution, a suspension, and a colloid on the basis of any three properties.

24. How can a mixture be separated using an appropriate solvent? Explain the process with the help of one suitable example.

25. In a household kitchen, while preparing food, a mixture of oil and water is formed accidentally. Since both liquids do not mix, they form two separate layers—oil floats on water because it is lighter. To separate them, the family uses a separating funnel. The mixture is poured into the funnel and allowed to stand undisturbed. After some time, two distinct layers are visible. The lower layer (water) is allowed to flow out first by opening the tap, while the upper layer (oil) remains in the funnel. This method is commonly used in laboratories and industries to separate immiscible liquids.

A. What type of mixture is formed by oil and water?

B. Name the apparatus used to separate two immiscible liquids.

C. Describe the complete process of separating oil and water using a separating funnel.

26. Why can't a magnetic separator be used to separate sand and sulphur powder?

27. Name the method used to separate:

A. Butter from curd

B. Camphor from sand

28. Why is fractional distillation preferred over simple distillation for separating petroleum products?

29. Why are crystals formed during crystallisation considered pure substances?

30. A mixture of oil and water is accidentally formed in a kitchen.

A. What type of mixture is formed?

B. Name the apparatus used to separate the two liquids.

31. Explain why colloidal particles do not settle down on standing.

32. State two conditions necessary for using a separating funnel successfully.

33. Why is filtration not suitable for separating salt dissolved in water?

34. Why is air considered a homogeneous mixture while soil is considered a heterogeneous mixture?

35. A solution contains 15 g sugar dissolved in 85 g water. Calculate the mass percentage of sugar in the solution.

36. Riya prepared lemonade by mixing sugar, lemon juice, and water. After stirring for some time, she noticed that no sugar particles were visible.

A. What type of mixture is formed?

B. Why are the sugar particles not visible?

C. Mention one characteristic of this type of mixture.

37. A factory separates cream from milk using a spinning machine.

A. Name the method used for separation.

B. What principle does this method work on?

C. Mention one more application of this method in daily life or laboratories.

38. A student heated a mixture of ammonium chloride and sand in a china dish covered with an inverted funnel. After some time, white vapours changed directly into solid crystals on the funnel wall.

A. Name the process used in this separation.

B. Which substance undergoes this change?

C. Why is sand left behind in the dish?

39. Rohit prepared a solution containing 25% (w/w) sugar. If the total mass of the solution is 200 g, calculate:

A. Mass of sugar present in the solution

B. Mass of water used as solvent

40. A group of students observed that muddy water becomes clear after passing through filter paper, but salt dissolved in water cannot be separated by the same method.

A. Why can muddy water be separated by filtration?

B. Why does dissolved salt pass through the filter paper?

C. Suggest one suitable method to separate salt from water.

BIOLOGY:

Chapter-2 CELL: THE BUILDING BLOCK OF LIFE

INSTRUCTIONS:

(i) Homework is to be done neatly in Biology Homework Notebook.

(ii) There are 40 Questions. Students have to write all 40 Questions and their Answers in the Notebook.

MULTIPLE CHOICE QUESTIONS

1. Cell theory was proposed by

(a) Robert Brown (b) Robert Hook (c) Schleiden and Schwann (d) Anton von Leeuwenhoek

2. Plasma membrane is composed of

(a) Cellulose and Lipids (b) Lipids and Proteins (c) Peptidoglycan and Lipids (d) Cellulose and Proteins

3. Which structure in plant cell is responsible for providing the energy required to drive cellular processes?

(a) Chloroplast (b) Mitochondrion (c) Nucleus (d) Golgi apparatus

4. Cell wall of plants is mainly composed of

(a) Chitin (b) Cellulose (c) Lipids (d) Lignin

5. The transportation of materials in the cell is done by

(a) Golgi complex (b) Lysosomes (c) Mitochondria (d) Endoplasmic reticulum

6. Select the correct match.

(a) Cell was first discovered – 1839 (b) The term 'protoplasm' was coined - 1665

(c) The nucleus was discovered – 1831 (d) Cell theory was proposed – 1674

7. Identify the organelle that exists only in plant cell but NOT in an animal cell?

(a) Centriole (b) Chloroplast (c) Golgi apparatus (d) Ribosome

8. Amoeba acquires its food by the process of

(a) Exocytosis (b) Endocytosis (c) Osmosis (d) Diffusion

9. Which cell organelle are called suicide bags?

(a) Plastids (b) Mitochondria (c) Lysosomes (d) Ribosomes

10. ER remains associated with:

(a) Golgi Apparatus (b) Mitochondria (c) Nuclear membrane (d) Chloroplast

11. Chromosomes are composed of

(a) DNA and protein (b) DNA and Sugar (c) Sugar and protein (d) Chromatin

12. Besides nucleus, DNA is also present in

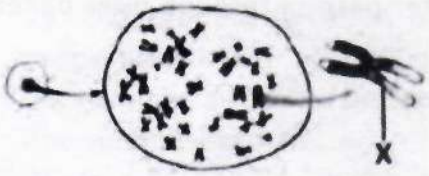
(a) Ribosomes and Golgi apparatus (b) Mitochondria and Chloroplasts

(c) Lysosomes and Endoplasmic reticulum (d) Golgi complex and Mitochondria

13. Lysosomes arise from

(a) Endoplasmic Reticulum (b) Golgi Apparatus (c) Nucleus (d) Mitochondria

14. The diagram below shows a magnified view of a particular part of a human cell. Name the part labelled 'X'.



(a) Ribosome (b) Chromosome (c) Nucleoplasm (d) Mitochondrion

15. An organism has poorly defined nuclear membrane in its cells. This organism could be a/an

(a) Bacteria (b) Animal (c) Fungi (d) Bird

ASSERTION- REASON QUESTIONS

In Q 16 to Q20, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

A. **Both A and R are true, and R is the correct explanation of A.**
B. **Both A and R are true, and R is not the correct explanation of A.**
C. **A is true but R is false.**
D. **A is false but R is true.**

16. **Assertion**: A cell swells up when present in a hypotonic solution.
Reason: More water molecules enter the cell than they leave.
17. **Assertion**: The endoplasmic reticulum which lacks ribosomes is called smooth endoplasmic reticulum (SER).
Reason: SER is mainly involved in protein synthesis.
18. **Assertion**: Plasma membrane is selectively permeable.
Reason: Plasma membrane allows some molecules to pass through it more easily than others.
19. **Assertion**: Mitochondria are called 'powerhouses' of the cell.
Reason: Mitochondria produce cellular energy in the form of ATP.
20. **Assertion**: A plant cell bursts if placed in water.
Reason: High turgor pressure causes bursting of plant cells.

SHORT/ LONG ANSWER TYPE QUESTIONS

21. What would happen if the plasma membrane ruptures or breaks down?
22. Name two structures which are found in plant cell, but not in animal cell.
23. Give reasons for the following:
    (i) Mitochondria are known as 'Power house of the cell'.
    (ii) Plastids are able to make their own proteins.
24. Why does plant cell possess large-sized vacuoles?
25. Mention the significance of Mitosis and Meiosis.
26. What are chromosomes? What are they made of?
27. Where do lipids and proteins get synthesized?
28. State the difference between Smooth Endoplasmic Reticulum and Rough Endoplasmic Reticulum.
29. What is the difference in Chromatin, Chromosomes and Gene?

30. What would happen to the life of a cell if there was no Golgi Apparatus?
31. What is membrane biogenesis?
32. Expand the term ATP. What is use of ATP?
33. Name the scientists who proposed 'Cell theory'? What are its postulates?
34. State in brief, what happens when
    (i) Dry apricots are left for some time in pure water and later transferred to sugar solution.
    (ii) Rheo leaves are boiled in water first and then drop of sugar syrup is pour on it.
35. What do you mean by the following terms?
    (i) Protoplasm (ii) Cytoplasm (iii) Nucleoplasm
36. What is contact inhibition? How is it related to the growth of tumour?
37. How is prokaryotic cell different from eukaryotic cell? Give an example of each.
38. Draw a neat labelled diagram of an Animal cell.
39. Draw a neat labelled diagram of a Plant cell.
40. Name and draw a cell which does not have a well defined nuclear region. Label any four parts in it.

Social Science :

A. Prepare a Project on Disaster Management.
B. (Choose any one of the following topic: **EARTHQUAKE / LANDSLIDE / AVALANCHE)**
C. Prepare a project file with the following details:

1. The project report should be presented in a neatly bound simple file.
2. Preferably , different forms of art must be integrated in the project work.
3. The Project should be handwritten ,Pictures and Diagrams should be added related to the topic.
4. Number of pages : 10-12 pages .
5. The project report should be developed and presented in this order
    a) Cover page showing project title, student's name, class, section, school and year.
    b) Acknowledgement.
    c) List of contents with page numbers.
    d) Introduction
    e) Introduce your chosen topic
    f) Presentation of topic (prevention , mitigation , preparedness)
    g) Conclusion
    h) Bibliography:

Computer:

1. What is LibreOffice Writer?
2. Write any four features of LibreOffice Writer.
3. Differentiate between Save and Save As.
4. What is formatting in LibreOffice Writer?
5. Define:
    - Header
    - Footer
6. What is page orientation? Name its types.

7. Write shortcut keys for:
    - Copy
    - Paste
    - Undo
    - Save
8. What is the use of Spell Check in LibreOffice Writer?
9. Explain portrait and landscape orientation.
10. What are bullets and numbering?
11. What is alignment? Name its types.
12. What is the use of tables in a document?
13. Define margin.
14. What is the importance of digital documentation?
15. Write any five advantages of using LibreOffice Writer.

French :

Chapitres 1 & 2 : La famille et Au lycée

Section A – Vocabulaire

1. La Famille

a) Draw your family tree and write 10 sentences in French describing your family members.

Example: Voici ma mère. Elle est gentille et travaille dans une banque.

b) Learn and write meanings of the following words:

* le père * la mère * le frère * la sœur * les grands-parents * le cousin
* la tante * l'oncle * les parents * la famille

2. Au Lycée

Paste or draw a picture of your school and write 12 sentences about it in French.

Include:

* the name of your school
* your favourite subject
* school timings
* number of classrooms
* your teachers
* your best friend

Example: Mon école est grande et belle.

Section B – Grammaire

3. Les adjectifs possessifs

Fill in the blanks:

1. C'est __ livre. (my – masculine singular)
2. Voici __ amie. (your – feminine singular)
3. Nous aimons __ école. (our)
4. Ils cherchent __ sacs. (their)
5. Tu parles à __ professeur. (your)

4. Les adjectifs démonstratifs

Complete with ce / cet / cette / ces:

1. __ garçon est intelligent.
2. __ école est grande.
3. __ amis sont gentils.
4. __ hôtel est magnifique.
5. __ fille chante bien.

5. Les verbes

Conjugate the verbs in present tense:

1. Nous __ (être) heureux.
2. Tu __ (avoir) un frère.
3. Ils __ (aller) au lycée.
4. Je __ (aimer) le français.
5. Vous __ (parler) anglais.

6. Présente-toi

Write a paragraph of 80–100 words introducing yourself.

Include:

* name * age * family * hobbies * school * favourite subject

7. Mon école

Write 10 lines on "Mon école".

Section D – Activité Créative

8. Poster Making

Make a colourful poster on any ONE topic:

* Ma Famille
* Mon École
* La Salle de Classe

Label all items in French.

9. French Dictionary Activity

Prepare a mini French dictionary with:

* 20 classroom objects
* 20 family-related words
* 10 action verbs

Write:

* French word
* English meaning
* one sentence

Section E – Culture Française

10. Recherche

Collect information (with pictures) on:

* France and its flag
* Paris
* Eiffel Tower
* French food
* Famous French monuments

Write 5 facts about each.

Instructions

* Do all written work neatly in a separate notebook/file.
* Use blue/black pen only.
* Decorate the project creatively.
* Revise Chapters 1 & 2 regularly.

HEAD SENIOR SCHOOL

PRINCIPAL