



Class – 7th (Going to 8th) – Sample Paper
Duration : 2 hrs. | Maximum Marks : 180

IMPORTANT INSTRUCTIONS

1. This Booklet is your Question Paper. **DO NOT** break seal of Booklet until the invigilator instructs to do so.
2. Fill your APRE Roll No. & Answer Sheet No. in the space provided on the cover page.
3. Please make sure that paper you received is of your class only.
4. The Answer Sheet is provided to you separately which is a machine readable Optical Response Sheet (ORS).
You have to mark your answers in the ORS by darkening bubble, as per your answer choice, by using black or blue ball point pen.
5. After breaking the Question Paper seal, check there are 8 pages in the booklet. This Question Paper contains 60 MCQs with 4 choices (Subjects: Physics: 15, Chemistry: 15, Maths: 15, Biology: 15)
6. Think wisely before darkening bubble as there is negative marking for wrong answer. Answer once marked by pen cannot be cancelled.
7. Marking Scheme:
 - a. If darkened bubble is **RIGHT** answer: 3 Marks.
 - b. If darkened bubble is **WRONG** answer: 1 Mark (Minus One Mark).
 - c. If no bubble is darkened in any question: No Mark.
8. If you are found involved in cheating or disturbing others, then your ORS will be cancelled.
9. Do not put any stain on ORS and hand. It over back properly to the invigilator.

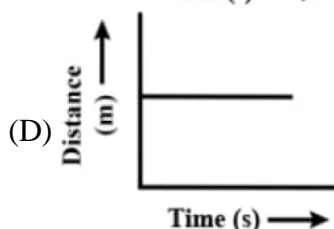
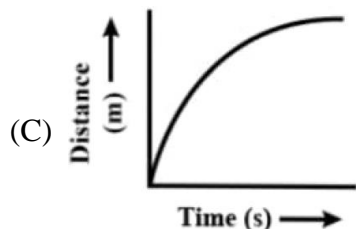
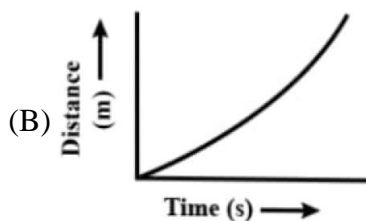
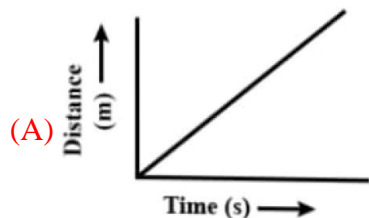
Name of the Candidate: _____

Registration Number: _____

PHYSICS

- The thermometer that measures our body temperature is called a _____ thermometer.
(A) Laboratory (B) Clinical
(C) Maximum - minimum (D) Pyrometer
- Heat from the sun is received by the earth through
(A) Radiation (B) Convection (C) Conduction (D) None of the above
- How is a clinical thermometer held?
(A) From the bulb (B) From the tip
(C) From the glass tube (D) None of these
- A thunderstorm is accompanied by
(A) Lightning (B) Cyclone (C) Hurricane (D) Tornado
- The distance – time graph of the non – uniform motion is a _____ line.
(A) Curved (B) Straight
(C) Straight then curved (D) None of these
- Choose the correct alternative: In the process of convection, heat travels
(A) Sideways (B) Downwards (C) Upwards (D) In all direction
- Thermal insulation is used to
(A) Stop the flow of heat (B) Reduce the flow of heat
(C) Absorb heat (D) Reverse the heat flow direction
- When warm air rises at a place, what happens to the air pressure there?
(A) Air pressure remains unaffected (B) Air pressure increases
(C) Air pressure decreases (D) Cannot be determined
- Which of the following is an example of non – uniform motion?
(A) Movement of an asteroid (B) A car coming to a halt
(C) A bouncing ball (D) All of these
- Which of the following represents uniform motion?
(A) A car travelling at a constant speed (B) A ball falling from the top of a building
(C) A runner at their top speed (D) All of these
- A beggar wrapped himself with a few layers of newspaper on a cold winter night. This helped him to keep himself warm because
(A) Friction between the layers of newspaper
(B) Air trapped between the layers of newspaper is a bad conductor of heat
(C) Newspaper is a conductor of heat
(D) Newspaper is at a higher temperature than the temperature of the surrounding
- Why do two balloons come closer when we blow in the space between them?
(A) Greater pressure inside the balloons than the reduced pressure in between them drives the balloons towards one another
(B) Blowing air in between increases the pressure in between the balloons pulls them closer
(C) The gravitational force pulls the two balloons closer
(D) None of the above

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



14. A boy cycles a distance of 640 m in 2 minutes and 40 seconds. What is the speed of the cycle?

- (A) 4 m/s (B) 8 m/s (C) 12 m/s (D) 16 m/s

15. A car is moving at a speed of 70 km/hr and covers a distance of 70 km and then, the car moves at a speed of 50 km/hr and covers 50 km. How much time did the car take to cover 120 km?

- (A) 60 minutes (B) 1 hour (C) 120 minutes (D) 3 hours

CHEMISTRY

16. What type of substance do ants inject when they bite?

- (A) Alkaline liquid (B) **Formic acid** (C) Sodium chloride (D) Ammonia

17. Why is baking soda effective in relieving the pain from an ant bite?

- (A) It is acidic and increases the pain of the bite area.
(B) **It reacts with the acid to form water, salt and carbon dioxide, neutralizing the acid.**
(C) It cools down the bite area.
(D) It acts as a disinfectant.

18. Which of the following pairs correctly matches a base with its everyday use?

- (A) Calcium hydroxide – Used in soaps
(B) **Ammonium hydroxide – Used as a window cleaner**
(C) Sodium hydroxide – Found in milk of magnesia
(D) Magnesium hydroxide – Used in lime water

19. Which of the following statements is TRUE regarding the acids and bases mentioned?

- (A) Ascorbic acid is found in tamarind and grapes.
(B) Potassium hydroxide is commonly found in vinegar.
(C) Calcium hydroxide is found in milk of magnesia.
(D) **Formic acid is naturally present in ant's sting.**

20. Which of the following pairs contain substances that are basic in nature when dissolved in distilled water?

- (A) **Detergent solution, Baking soda solution**
(B) Vinegar, Aerated drink
(C) Common salt solution, Sugar solution
(D) Lime water, Aerated drink

21. What is the expected color change when a base is added to phenolphthalein?
 (A) It turns red (B) It turns pink
 (C) It remains colorless (D) It turns blue.
22. An acid is mixed slowly with a base in the presence of phenolphthalein, what happens if the solution becomes neutral?
 (A) The solution turns blue (B) The solution turns pink and remains pink
 (C) The solution becomes colorless (D) The solution turns red and stays red.
23. Which of the following statements about a neutralization reaction is TRUE?
 (A) Only the acidic nature of the acid is destroyed in the neutralization process, while the basic nature of the base remains.
 (B) The temperature of the reaction mixture decreases after a neutralization reaction because heat is absorbed.
 (C) The temperature of the reaction mixture increases after a neutralization reaction because heat is released.
 (D) Neutralization reactions occur without the production of heat.
24. What is the characteristic property of a neutral solution when tested with litmus paper?
 (A) It turns red litmus blue and blue litmus red.
 (B) It turns red litmus blue but does not change blue litmus.
 (C) It does not change the color of either red or blue litmus paper.
 (D) It turns blue litmus red but does not affect red litmus.
25. Which of the following statements about acid rain is TRUE?
 (1) Carbon dioxide in the air dissolves in rainwater to form sulphuric acid.
 (2) Acid rain is formed when pollutants like nitrogen dioxide and sulphur dioxide react with raindrops, forming strong acids.
 (3) Acid rain causes damage to only buildings and historical monuments but has no effect on plants and animals.
 (4) Nitrogen dioxide in the atmosphere reacts with raindrops to form carbonic acid.
 Options
 (A) 1 and 4 (B) 2 (C) 3 and 4 (D) 2 and 4

26. Match the following acids with their natural sources:

| Acid | | Source | |
|------|---------------|--------|---------------|
| A. | Acetic acid | 1. | Spinach |
| B. | Citric acid | 2. | Tamarind |
| C. | Oxalic acid | 3. | Ant's sting |
| D. | Formic acid | 4. | Vinegar |
| E. | Tartaric acid | 5. | Citrus fruits |

Choose the correct option:

- (A) A-4, B-5, C-1, D-3, E-2 (B) A-3, B-1, C-5, D-4, E-2
 (C) A-5, B-4, C-2, D-1, E-3 (D) A-2, B-3, C-4, D-5, E-1

27. Match the following properties of litmus with their correct descriptions:

| Property | | Description | |
|----------|---|-------------|---------------------|
| A. | No change in color of red and blue litmus | 1. | In acidic solutions |
| B. | Red color | 2. | In distilled water |
| C. | Blue color | 3. | In basic solutions |
| D. | Extracted from | 4. | Lichens |

Choose the correct option:

- (A) A-2, B-1, C-3, D-4 (B) A-1, B-2, C-3, D-4
 (C) A-4, B-3, C-2, D-1 (D) A-2, B-3, C-1, D-4

28. What is the purpose of neutralizing acidic factory wastes before they enter water bodies?
 (A) To reduce the pH of the water.
 (B) To make the water more turbid.
 (C) To protect aquatic life by preventing harm from excess acidity.
 (D) To increase the water's salinity.
29. What is the effect of adding organic matter (compost) to basic soil?
 (A) Increases soil acidity
 (B) Makes the soil more alkaline
 (C) Neutralizes the basic nature of the soil
 (D) Decreases soil fertility
30. What is a common remedy for relieving indigestion?
 (A) Lemon juice
 (B) Baking soda
 (C) Antacids such as milk of magnesia
 (D) Vinegar

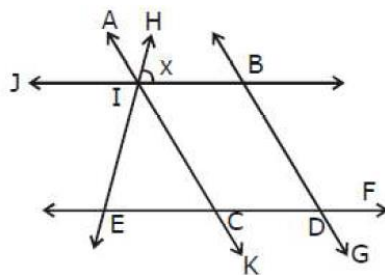
MATHEMATICS

31. Solve for x : $0.5x + \frac{x}{3} = 0.25x + 7$.
 (A) 12 (B) 14 (C) 21 (D) 82
32. If twice a certain number is diminished by five, the result is equal to twelve added to the number. Find the number:
 (A) 18 (B) 16 (C) 15 (D) 17
33. If $\frac{x}{4} - \frac{x-3}{6} = 1$, then x is equal to
 (A) 12 (B) 6 (C) 3 (D) 4
34. Find the average of first 5 prime numbers:
 (A) 5 (B) 6 (C) 7.6 (D) 5.6
35. The arithmetic mean of the numbers 12, 19, 13 and 16 is:
 (A) 12 (B) 13 (C) 14 (D) 15
36. The reciprocal of $\frac{3}{7}$ is
 (A) $\frac{7}{3}$ (B) $2\frac{1}{3}$ (C) (A) and (B) both (D) None of these
37. Which of the following is the smallest:
 $\frac{14}{25}, \frac{57}{100}, \frac{49}{86}, \frac{3}{5}$
 (A) $\frac{14}{25}$ (B) $\frac{57}{100}$ (C) $\frac{49}{86}$ (D) $\frac{3}{5}$

38. If one angle of triangle is equal to the sum of the other two then triangle is:

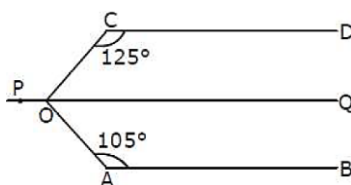
- (A) Acute a triangle (B) Obtuse triangle
 (C) Right triangle (D) None of these

39. In the given figure, $IB \parallel CD$ and $AC \parallel BD$. If $\angle EIC = 40^\circ$, $\angle FDG = 55^\circ$, $\angle HIB = x^\circ$, then the value of x° is:



- (A) 95° (B) 85° (C) 165° (D) 50°

40. $AB \parallel CD \parallel PQ$ and O is a point between AB and CD such that $\angle BAO = 105^\circ$ and $\angle OCD = 125^\circ$, find the measure of $\angle AOC$.



- (A) 50° (B) 105° (C) 125° (D) 130°

41. By how much does -3 exceed -5 ?

- (A) -2 (B) 2 (C) 8 (D) -8

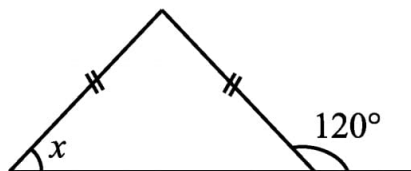
42. For integers:

- (A) Addition is associative (B) Addition is commutative
 (C) Integer "0" is the identity under addition (D) All of the above

43. If $\frac{2x-3/4}{9x+4/7} = \frac{1}{4}$ then $x = ?$

- (A) $\frac{25}{7}$ (B) $-\frac{25}{7}$ (C) $\frac{23}{7}$ (D) $-\frac{23}{7}$

44. Find angle x in below figure:



- (A) 90° (B) 60° (C) 80° (D) 40°

45. Total numbers of animals in five villages are shown in the following table.

| | | | | | |
|----------|----|-----|----|----|----|
| Villages | A | B | C | D | E |
| Animals | 80 | 120 | 90 | 40 | 60 |

If one symbol \oplus represents 10 animals, the total number of symbols required to represent animals for village C will be:

- (A) 5 (B) 7 (C) 8 (D) 9

BIOLOGY

46. What is the primary mode of nutrition in plants?
(A) Heterotrophic (B) Autotrophic (C) Saprotrophic (D) Parasitic
47. The nucleus is surrounded by a jelly – like substance called _____.
(A) Cell membrane (B) Cell wall (C) Cytoplasm (D) Nucleus
48. What is not a role of nutrients in plants?
(A) To build body structure (B) To facilitate growth
(C) To synthesize (D) To fix nitrogen
49. Plants absorb nutrients through their _____.
(A) Leaves (B) Flowers (C) Roots (D) Stem
50. In the absence of which of the following will photosynthesis not occur in leaves?
(A) Guard cells (B) Chlorophyll
(C) Vacuole (D) Space between cells
51. Pitcher plant traps insects because it
(A) Is a heterotroph (B) Grows in soils which lack in nitrogen
(C) Does not have chlorophyll (D) Has a digestive system like human beings
52. When we observe the lower surface of a leaf through a magnifying lens we see numerous small openings. Which of the following is the term given to such openings?
(A) Stomata (B) Lamina (C) Midrib (D) Veins
53. The acid present in the stomach
(A) Kills the harmful bacteria that may enter along with the food
(B) Protects the stomach lining from harmful substances
(C) Digests starch into simpler sugars
(D) Makes the medium alkaline
54. Which of the following pair of teeth differ in structure but are similar in function?
(A) Canines and incisors (B) Molars and premolars
(C) Incisors and molars (D) Premolars and canines
55. The enzymes present in the saliva convert
(A) Fats into fatty acids and glycerol (B) Starch into simple sugars
(C) Proteins into amino acids (D) Complex sugars into simple sugars
56. Cud is the name given to the food of ruminants which is
(A) Swallowed and undigested
(B) Swallowed and partially digested
(C) Properly chewed and partially digested
(D) Properly chewed and completely digested
57. Choose the correct order of terms that describes the process of nutrition in ruminants.
(A) swallowing → partial digestion → chewing of cud → complete digestion
(B) chewing of cud → swallowing → partial digestion → complete digestion
(C) chewing of cud → swallowing → mixing with digestive juices → digestion
(D) swallowing → chewing and mixing → partial digestion → complete digestion

58. Cellulose – rich food substances are good source of roughage in human beings because
(A) Human beings do not have cellulose – digesting enzymes
(B) Cellulose gets absorbed in the human blood and converts into fibres
(C) The cellulose – digesting bacteria convert cellulose into fibres
(D) Cellulose breaks down into smaller components which are egested as roughage
59. The false feet of Amoeba are used for
(A) Movement only (B) Capture of food only
(C) Capture of food and movement (D) Exchange of gases only
60. Read the following statements with reference to the villi of small intestine.
(i) They have very thin walls
(ii) They have a network of thin and small blood vessels close to the surface
(iii) They have small pores through which food can easily pass
(iv) They are finger – like projections
Identify those statements which enable the villi to absorb digested food
(A) (i), (ii) and (iv) (B) (ii), (iii) and (iv) (C) (iii) and (iv) (D) (i) and (iv)

