PRAGYAN

Class – VIII (Going to IX)
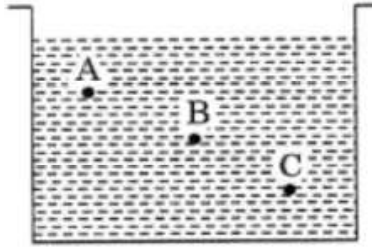### Duration : 2 hrs. | Maximum Marks : 180

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 10 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

1. The force responsible for the wearing out of the car tyres is –
   (A) Frictional force   (B) Gravitational force   (C) Magnetic force   (D) Muscular force

2. With the depth of a liquid, exerted pressure......
   (A) decreases   (B) ceases   (C) increases   (D) no change

3. The pressure applied on a body depends on
   (A) Force   (B) Mass
   (C) Both force and mass   (D) Both force and area

4. The instrument used to measure the pressure is
   (A) Hydrometer   (B) Manometer   (C) Galvanometer   (D) Anemometer

5. Which of the following is not a unit of pressure?
   (A) bar   (B) Newton   (C) atm   (D) Pascal

6. Force changes the
   (A) motion of body   (B) speed of body   (C) shape of body   (D) all of these

7. A spring balance is used for measuring
   (A) mass   (B) weight   (C) pressure   (D) speed

8. During dry weather, while combing hair, sometimes we experience hair flying apart. The force responsible for this is
   (A) force of gravity   (B) force of friction   (C) electrostatic force   (D) magnetic force

9. A container is filled with water as shown in the given figure. Which of the following statements is correct about pressure of water?

(A) Pressure at A > Pressure at B > Pressure at C
(B) Pressure at A = Pressure at B = Pressure at C
(C) Pressure at A < Pressure at B > Pressure at C
(D) Pressure at A < Pressure at B < Pressure at C

10. Which one of the following forces is a contact force?
(A) Force of gravity (B) Magnetic force (C) Force of friction (D) Electrostatic force

11. Pressure =
(A) Area / force on which it acts
(B) force / area on which it acts
(C) Volume / force on which it acts
(D) Force / volume on which it acts

12. A batsman hits the ball for a boundary past the bowler i.e. four runs. The batsman thus
(A) Changes the direction & speed of the ball
(B) Does not change the direction but speed only
(C) Does not change either direction or speed
(D) Does not change the speed but direction only

13. A force of 500N acts on a square piece of plywood, each of whose sides is 5m long. Calculate the pressure acting on the piece of plywood.
(A) 500 Nm^{-2}
(B) 100 Nm^{-2}
(C) 2500 Nm^{-2}
(D) 20 Nm^{-2}

14. A force of 400N exerts a pressure of 20N/cm². What is the area on which the force acts?
(A) 20 m²
(B) 20 cm²
(C) 1 cm²
(D) 10 cm²

15. To move a roller, a force of 300N is required. You alone can produce a force of 30N. How many of your friends who are equally strong as you should join you to move the roller?
(A) 9
(B) 10
(C) 5
(D) None of these

CHEMISTRY

16. Which of the following gases remains liquid at – 88°C?
    (A) Ethane and methane   (B) Ethane and propane
    (C) Propane and butane   (D) Butane and ethane

17. If 20 ml of Petroleum is heated upto 250°C and gases formed were allowed to pass through a column to cool down upto 130°C. The liquid collected should mainly be a mixture of
    (A) Petrol and fuel oil   (B) Petrol and ethanol
    (C) Kerosene and fuel oil   (D) Kerosene and naphtha

18. Hydrocarbons contain:
    (A) Carbon and hydrogen   (B) Carbon and oxygen
    (C) Carbon and nitrogen   (D) Carbon and carbon dioxide

19. Natural gas mainly contains :
    (A) Propane   (B) Butane   (C) Methane   (D) Ethane

20. In the laboratory, methane is prepared by heating a mixture of :
    (A) Sodium acetate and sodium carbonate
    (B) Sodium acetate and soda lime
    (C) Soda lime and sodium hydroxide
    (D) Soda lime and calcium oxide

21. Which of the following is known as 'Fire damp' in coal mines?
    (A) Ethanol   (B) Carbon monoxide
    (C) Carbon dioxide   (D) Methane

22. Which of the following gases can be liquefied under pressure?
    (A) Propane and Methane   (B) Methane and Ethane
    (C) Butane and Propane   (D) Butane and Methane

23. Which of the following gases is supplied in LPG (Liquefied Petroleum Gas) cylinders for domestic use?
(A) Methane and Propane
(B) Methane and Ethane
(C) Ethane and Butane
(D) Propane and Butane

24. 55000 kilo joule/kg heat value is present in :
(A) Methane
(B) Ethane
(C) Propane
(D) Butane

25. How many carbon atoms are present in one molecule of liquid hydrocarbon?
(A) 5
(B) 4
(C) 3
(D) 6 or more

26. Petroleum is refined by :
(A) Simple distillation
(B) Fractional distillation
(C) Destructive distillation
(D) None of the these

27. Power alcohol is :
(A) Alcohol mixed with petrol
(B) Alcohol mixed with kerosene
(C) Alcohol mixed with sulphur
(D) Alcohol mixed with ethane

28. Water gas contains :
(A) Hydrogen and carbon dioxide
(B) Hydrogen and nitrogen
(C) Hydrogen and carbon monoxide
(D) None of these

29. Producer gas contains
(A) Nitrogen and carbon monoxide
(B) Hydrogen and nitrogen
(C) Nitrogen and carbon dioxide
(D) Hydrogen and carbon dioxide

30. Coal gas mainly contains :
(A) Hydrogen, methane and carbon dioxide
(B) Hydrogen, methane and nitrogen
(C) Methane and nitrogen
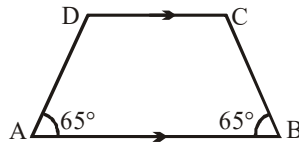(D) Hydrogen, methane and carbon monoxide

MATHEMATICS

31. The number $-\dfrac{15}{7}$ on the number line will be represented between

    (A) 0 and 1   (B) –2 and –3   (C) 2 and 3   (D) –2 and –1

32. Evaluate: $\left| \dfrac{5}{3} + \dfrac{-7}{6} \right|$

    (A) 2   (B) –2   (C) $\dfrac{1}{2}$ (D) $-\dfrac{1}{2}$

33. By what rational number should $\dfrac{-5}{48}$ be multiplies to get 20?

    (A) –36   (B) 36   (C) $\dfrac{-1}{192}$ (D) –192

34. Find the multiplicative inverse $-1 \times \dfrac{-3}{10}$.

    (A) $\dfrac{3}{10}$ (B) $\dfrac{10}{3}$ (C) $\dfrac{-3}{10}$ (D) –1

35. If n is a natural number, then $\sqrt{n}$ is
    (A) always a natural number
    (B) always an irrational number
    (C) always an rational number
    (D) sometimes a natural number and sometimes an irrational number

36. $\left(\dfrac{3}{-5}+\dfrac{2}{-8}\right)+$ .... $=\dfrac{3}{-5}+\left(\dfrac{4}{-7}+\dfrac{2}{-8}\right)$

   (A) $\dfrac{2}{-7}$ (B) $\dfrac{2}{7}$ (C) $\dfrac{4}{-7}$ (D) $\dfrac{4}{7}$

37. The multiplicative inverse of $\dfrac{1}{6}$ is _____.

   (A) –6   (B) 6   (C) $-\dfrac{1}{6}$ (D) 1

38. The smallest number by which 136 must be multiplied so that it becomes a perfect square is
   (A) 2   (B) 17   (C) 34   (D) None of these

39. DWhich of the following can be a perfect square?
   (A) A number ending in 3 or 7   (B) A number ending with odd number of zeros
   (C) A number ending with even number of zeros   (D) A number ending in 2.

40. Which of the following is a pythagorean-triplet?
   (A) n, $(n^2 - 1)$ and $(n^2 + 1)$ (B) $(n - 1)$, $(n^2 - 1)$ and $(n^2 + 1)$
   (C) $(n + 1)$, $(n^2 - 1)$ and $(n^2 + 1)$ (D) $2n$, $(n^2 - 1)$ and $(n^2 + 1)$

41. If $\dfrac{1872}{\sqrt{x}} = 234$, then x is equal to

   (A) 8   (B) 64   (C) 256   (D) 4

42. The sum of two number is 45 and their ratio is 7 : 8. The numbers are
   (A) 28 : 32   (B) 35 : 40   (C) 21 : 24   (D) none of these

43. The number of sides of a regular polygon whose each exterior angle has a measure of 45°, is
(A) 5   (B) 6   (C) 7   (D) 8

44. In the figure, the measure of ∠C is

(A) 65°   (B) 115°   (C) 135°   (D) 125°

45. In a square PQRS, the diagnonals bisect at T. Then ΔPTQ is.
(A) An equilateral triangle   (B) An isosceles but not right angled
(C) A right angled but not isoscels   (D) An isosceles right angled

BIOLOGY

46. The process of loosening of the soil is called
(A) tilling   (B) harvesting   (C) spraying   (D) weeding

47. The chemical substances rich in nutrients are called
(A) fertilizer   (B) weedicide   (C) pesticides   (D) herbicides

48. Which of the following drug is an antipyretic?
(A) Insulin   (B) Alcohol   (C) Streptomycin   (D) Paracetamol

49. What helps in the rise of bread or dosa dough?
(A) Heat   (B) Grinding
(C) Growth of yeast cells   (D) Low pressure

50. The disease caused by fungi is
(A) measles   (B) chicken pox   (C) polio   (D) ringworm

51. Binary fission is observed in
(A) Hydra   (B) yeast   (C) Amoeba   (D) human being

52. Asexual reproduction is observed in
(A) cow   (B) buffalo   (C) sponge   (D) hen

53. In Hydra, the mode of reproduction is
(A) asexual   (B) sexual   (C) both (A) and (B)   (D) none of these

54. The male gamete or sperm consists of
(A) three parts   (B) two parts   (C) four parts   (D) none of these

55. The liquid material in the nucleus is
(A) chromosomes   (B) bacteria   (C) nucleoplasm   (D) nucleolus

56. Tissues combine to form
(A) nucleus   (B) cells   (C) organism   (D) organs

57. Cells present in living organism differ in
(A) numbers   (B) shape   (C) size   (D) all of these

58. Cells which lack nuclear membrane are
(A) eukaryotic cells   (B) prokaryotic cells   (C) single cells   (D) multicells

59. The control centre of all the activities of a cell is
(A) nucleus   (B) nucleoplasm   (C) cytoplasm   (D) organelles

60. Seed drill is used for
(A) harvesting   (B) cleaning the seed   (C) sowing   (D) weeding

□□□