

RAVI MATHS TUITION CENTER , CHENNAI- 82.**QUARTERLY MODEL PAPER 1**

10th Standard

Science

Reg.No. :

Exam Time : 03:00:00 Hrs

Total Marks : 75

12 x 1 = 12

- 1) The unit of 'g' is $m s^{-2}$. It can be also expressed as
(a) cms^{-1} (b) Nkg^{-1} (c) Nm^2kg^{-1} (d) cm^2s^{-2}
- 2) A small bulb is placed at the principal focus of a convex lens. When the bulb is switched on, the lens will produce
(a) a convergent beam of light (b) a divergent beam of light
(c) a parallel beam of light (d) a coloured beam of light
- 3) If a substance is heated or cooled, the change in mass of that substance is
(a) positive (b) negative (c) zero (d) none of the above
- 4) Which of the following is a triatomic molecule?
(a) Glucose (b) Helium (c) Carbon dioxide (d) Hydrogen
- 5) In the nucleus of ${}_{20}Ca^{40}$, there are
(a) 20 protons and 40 neutrons (b) 20 protons and 20 neutrons
(c) 20 protons and 40 electrons (d) 40 protons and 20 electrons
- 6) In the aluminothermic process the role of Al is _____.
(a) oxidizing agent (b) reducing agent (c) hydrogenating agent
(d) sulphurising agent
- 7) The number of components in a binary solution is _____.
(a) 2 (b) 3 (c) 4 (d) 5
- 8) The xylem and phloem arranged side by side on same radius is called _____.
(a) radial (b) amphivasal (c) conjoint (d) None of these
- 9) Mammals are _____ animals.
(a) Cold blooded (b) Warm blooded (c) Poikilothermic (d) All the above
- 10) Which one of the following shows correct composition of blood
(a) Plasma - Blood + Lymphocyte (b) Serum - Blood + Fibrinogen
(c) Lymph - Plasma + RBC + WBC (d) Blood - Plasma + RBC + WBC + Platelets
- 11) There are _____ pairs of cranial nerves and _____ pairs of spinal nerves.

(a) 12, 31 (b) 31, 12 (c) 12, 13 (d) 12, 21

12) LH is secreted by

(a) Adrenal gland (b) Thyroid gland (c) Anterior pituitary (d) Hypothalamus.

7 x 2 = 14

13) State the principle of moments.

14) State Rayleigh's law of scattering.

15) Define: Atomicity

16) What is rust? Give the equation for formation of rust.

17) The aquatic animals live more in cold region Why?

18) Where does the carbon that is used in photosynthesis come from?

19) How does leech suck blood from the host?

20) Define stimulus.

21) Name the endocrine glands associated with kidneys.

22) Name the bond which binds the nucleotides in a DNA.

7 x 4 = 28

23) The ratio of masses of two planets is 2:3 and the ratio of their radii is 4:7. Find the ratio of their accelerations due to gravity.

24) State Ohm's law.

25) Calculate the number of moles in

(i) 27g of Al

(ii) 1.51×10^{23} molecules of NH_4Cl

26) Explain smelting process.

27) 3.5 litres of ethanol is present in 15 litres of aqueous solution of ethanol. Calculate volume percent of ethanol solution.

28) Draw and label the structure of oxysomes.

29) Describe the structure and working of the human heart.

30) Voluntary and involuntary actions.

31) What is the role of parathormone?

32) How does developing embryo gets its nourishment inside the mother's body?

3 x 7 = 21

33) a) How is the circulatory system designed in leech to compensate the heart structure?

(OR)

b) With a neat labelled diagram explain the structure of a neuron.

34) a) What are the types of inertia? Give an example for each type.

(OR)

b) The eyes of the nocturnal birds like owl are having a large cornea and a large pupil. How does it help them?

35) a) Metal A belongs to period 3 and group 13. A in red hot condition reacts with steam to form B. A with strong alkali forms C. Find A,B and C with reactions

(OR)

b) Will the cool drinks give more fizz at top of the hills or at the foot? Explain.

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