

Insight Education Centre**Model Exam**

Date : 27-Feb-20

10th Standard

Science

Reg.No. :

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Instructions: Use Blue or Black ink to write and underline and pencil to draw diagrams**Note: This question paper contains four parts**

Exam Time : 02:30:00 Hrs

Total Marks : 75

Part I

12 x 1 = 12

Note: 1. Answer all the questions.

2. Choose the suitable answer

- 1) In which of the following sport the turning of effect of force used
(a) swimming (b) tennis (c) cycling (d) hockey
- 2) Temperature is the average _____ of the molecules of a substance
(a) difference in K.E and P.E (b) sum of P.E and K.E (c) difference in T.E and P.E (d) difference in K.E and T.E
- 3) If a sound wave travels with a frequency of 1.25×10^4 Hz 344 ms^{-1} , the wavelength will be
(a) 27.52 m (b) 275.2 m (c) 0.02752 m (d) 2.752 m
- 4) The volume occupied by 1 mole of a diatomic gas at S.T.P is
(a) 11.2 litre (b) 5.6 litre (c) 22.4 litre (d) 44.8 litre
- 5) Which of the following is the universal solvent?
(a) Acetone (b) Benzene (c) Water (d) Alcohol
- 6) Deliquescence is due to _____
(a) Strong affinity to water (b) Less affinity to water (c) Strong hatred to water (d) Inertness to water
- 7) $\text{C}_2\text{H}_5\text{OH} + 3\text{O}_2 \rightarrow 2\text{CO}_2 + 3\text{H}_2\text{O}$ is a
(a) Reduction of ethanol (b) Combustion of ethanol (c) Oxidation of ethanoic acid (d) Oxidation of ethanal
- 8) Pharyngeal ganglion in leech is a part of
(a) Excretory system (b) Nervous system (c) Reproductive system (d) Respiratory system
- 9) A person who met with an accident lost control of body temperature, water balance, and hunger. Which of the following part of brain is supposed to be damaged?
(a) Medulla oblongata (b) cerebrum (c) pons (d) hypothalamus
- 10) Anemophilous flowers have _____
(a) Sessile stigma (b) Small smooth stigma (c) Colored flower (d) Large feathery stigma
- 11) The 'use and disuse theory' was proposed by _____.
(a) Charles Darwin (b) Ernst Haeckel (c) Jean Baptiste Lamarck (d) Gregor Mendel
- 12) Polyphagia is a condition seen in
(a) Obesity (b) Diabetes mellitus (c) Diabetes insipidus (d) AIDS

Part II

7 x 2 = 14

Note: Answer any 7 questions. Q.No: 19 is compulsory

- 13) Define dispersion of light
- 14) Write any two elements which are used for inducing radioactivity?
- 15) Define Volume percentage
- 16) Differentiate reversible and irreversible reactions
- 17) How do detergents cause water pollution? Suggest remedial measures to prevent this pollution?
- 18) Why is the teeth of rabbit called heterodont?
- 19) Why is the colour of the blood red ?
- 20) What is the need for contraception ?
- 21) What is the name given to the segments of DNA, which are responsible for the inheritance of a particular character?

22) Define genetic engineering.

Part III

7 x 4 = 28

Note: Answer any 7 questions. Q.No: 29 is compulsory

23) Distinguish between the resistivity and conductivity of a conductor.

24) Why does sound travel faster on a rainy day than on a dry day?

25) What is a chemical equilibrium? What are its characteristics?

26) What is called homologous series? Give any three of its characteristics?

27) What is photosynthesis and where in a cell does it occur?

28) Write the differences between endocrine and exocrine gland.

29) Identify the parts A, B, C and D



30) Differentiate between outbreeding and inbreeding.

31) How is a cancer cell different from a normal cell ?

32) What are the advantages of using biogas?

Part IV

2 x 7 = 14

Note: Answer any Two questions.

33) State Newton's laws of motion?

34) An object is placed at a distance 20cm from a convex lens of focal length 10cm. Find the image distance and nature of the image.

35) a) State Joule's law of heating.

b) An alloy of nickel and chromium is used as the heating element. Why?

c) How does a fuse wire protect electrical appliances?

36) Differentiate the following

a) Monocot root and Dicot root

b) Aerobic and Anaerobic respiration

Part IV

1 x 7 = 7

Note: Answer any One questions.

37) Calculate the current and the resistance of a 100 W, 200 V electric bulb in an electric circuit.

38) Calculation based on number of moles from mass and volume

1) Calculate the number of moles in 46 g of sodium?

2) 5.6 litre of oxygen at S.T.P

3) Calculate the number of moles of a sample that contains 12.046×10^{23} atoms of iron ?

All the Best
Insight Education Center
