

GravIITy Academy Talent Hut Award Scholarship cum Entrance Exam (GATHA) NEET 2024 - Sample Paper

Duration: 1.30 min

Total Marks: 200

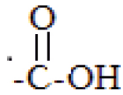
Instructions to Candidates:

- 1) This booklet is your question paper. Answer is to be marked on the OMR sheet provided.
- 2) Blank sheet is provided for rough work along with the question paper.
- 3) Log table, Slide rule, Calculator, Cellular phones and other electronic devices in any form are NOT allowed in the examination hall.
- 4) USE ONLY BLACK OR BLUE BALL PEN TO DARKEN YOUR ANSWERS.
- 5) This question booklet contain 50 objective type questions. 50 Questions (Q. No. 1 to 50) Mathematics.
- 6) Only one choice is correct.
- 7) Each question with correct response shall be awarded 4 Marks.
- 8) There is No Negative Marking.

PHYSICS SECTION

1. A car starting from rest accelerates uniformly to acquire speed of 20 km/hr. in 30 minute the distance travelled by car in this time.
(a) 60 km (b) 6 km (c) 5 km (d) 10 km
2. Action and reaction acts on the -----
(a) Same body on opposite direction (b) Different bodies but in opposite direction
(c) Different bodies but in same direction (d) Same body in same direction
3. SI unit of density is -----times C.G.S unit of density.
(a) 10^{-3} (b) 10^3 (c) 10^2 (d) 10^{-2}
4. The normal atmospheric pressure is-----.
(a) 76 m of Hg (b) 76 cm of Hg (c) 76 Pa (d) 76 Nm²
5. When ball is thrown upwards, its total energy.
(a) Increases (b) decreases (c) remains same (d) None of these
6. The frequency of sound waves in water is -----
(a) Same as that of frequency of source. (b) Less than frequency of source.
(c) More than frequency of the source (d) None of these
7. A ray is incident on plane mirror, its reflected ray perpendicular to the incident ray, then its angle of incidence is .
(a) 0° (b) 45° (c) 90° (d) None of these
8. The correct Len's formula is----- .
(a) $\frac{1}{V} - \frac{1}{u} = \frac{1}{f}$ (b) $\frac{1}{u} - \frac{1}{u} = \frac{1}{f}$ (c) $\frac{1}{u} + \frac{1}{v} = \frac{1}{f}$ (d) $f = \frac{u+v}{uv}$
9. Electromagnets are made up of -----
(a) Steel (b) Copper (c) Soft iron (d) Aluminum
10. When a current I flows uniformly through resistance R for time t, the electrical energy spent is given by-----
(a) IRt (b) I^2R/t (c) IR^2t (d) I^2Rt
11. A light ray is incident normally on a plane mirror. The angle of reflection will be _____.
(a) 135° (b) 90° (c) 45° (d) 0°
12. Kinetic energy of a body depends on
(a) Its mass only (b) Its speed only (c) Its mass and speed (d) Neither mass nor speed
13. 1 KWH is equal to...
(a) 3.6 J (b) 3.6 MJ (c) 3.6 MJ (d) 36 J
14. A fluid exerts pressure
(a) In all directions (b) In upward direction only
(c) In downward direction only (d) None of these
15. Newton's second law of motion gives as a measure of
(a) Force (b) inertia (c) mass (d) acceleration

CHEMISTRY SECTION

16. Octet rule is NOT violated in case of :
 a) methane b) boron trifluoride c) sulphur hexafluoride d) aluminium chloride
17. ----- showed that the atomic number is fundamental property of an element and not its atomic mass
 a) Doberiner b) Newlands c) Mendeleev d) Moseley
18. Calcium carbonate is heated. The reaction is an example of----- reaction.
 a) Decomposition b) Displacement c) Double displacement d) Combination
19. The formula of gypsum is -----
 a) $CaSO_4 \cdot H_2O$ b) $CaSO_4 \cdot 2H_2O$ c) $Ca \cdot SO_4 \cdot \frac{1}{2} H_2O$ d) $CaSO_4$
20. Volume of a gas at N.T.P. is 1.12×10^{-7} cc. Calculate the no, of molecules in it.
 a) 3.01×10^{20} b) 3.01×10^{12} c) 3.01×10^{23} d) 3.01×10^{24}
21. When ----- is passed through fresh lime water, it turns milky.
 a) H_2 b) CO c) CO_2 d) SO_2
22. A solution of-----in water is blue in colour.
 a) $CuSO_4$ b) $FeSO_4$ c) $ZnSO_4$ d) $Al_2(SO_4)_3$
23. A redox reaction is a reaction in which -----.
 a) Oxidation take place. b) Reduction take place
 c) Neither Oxidation nor reduction takes place. d) Oxidation and reduction both takes place simultaneously
24. Which of the following has more electrons than neutrons?
 a) Al^{3+} b) C c) O^{2-} d) F
25.  is called -----
 a) Carboxylic acid group b) aldehyde group c) Ketonic group d) alcohol group
26. ----- is an example of homogeneous mixture.
 a) Sand and Water b) Flour and water c) Salt dissolved in water d) Oil and water
27. What is the mass ratio by which Iron and Sulphur combine on heating to form Iron Sulphide, i.e., FeS ?
 (Atomic masses $\rightarrow Fe = 56, S = 32$)
 a) 4 : 7 b) 13 : 16 c) 1 : 1 d) 7 : 4
28. ----- is a combination reaction.
 a) $2HgO \xrightarrow{\text{heat}} 2Hg + O_2 \uparrow$ b) $H_2 + Cl_2 \longrightarrow 2HCl \uparrow$
 c) $Cu + H_2SO_4 \longrightarrow CuSO_4 + H_2 \uparrow$ d) $CaCO_3 \xrightarrow{\text{heat}} CaO + CO_2 \uparrow$
29. Density = -----
 a) mass \times volume b) mass / volume c) volume / mass d) weight / volume
30. ----- is not a sublimate
 a) Camphor b) Sugar c) Iodine d) Ammonium Chloride

BIOLOGY SECTION

31. Mahesh was absent in the class because of muscles pain which he claims to be due to excess physical exercise he had done yesterday
 (a) Formation of Lactic acid (b) Formation of Acetic acid
 (c) Formation of Pyruvic acid (d) Formation of Hydrochloric acid
32. An insect which transmits a disease is known as -----
 (a) Intermediate host (b) Parasite (c) Vector (d) Prey
33. The transport of soluble product of photo synthesis is called translocation and it occurs in the part of the vascular tissue called ---- --.
 (a) Sclerenchyma (b) Xylem (c) phloem (d) Chlorenchyma
34. Which is not a component of nutrition in Amoeba?
 (a) Phagocytosis (b) Intracellular digestion (c) Saprophytic (d) Exocytosis
35. In human each kidney has large number of filtration units called nephron, Here there is on, tube like structure present which can absorb highest number of solute and solvent called -----
 (a) Convolted tubule (b) Malpighian tubule (c) Loop of Hence (d) Proximal distal tubule
36. High concentration of which gas will not cause air-pollution?
 (a) Oxygen (b) Nitrogen dioxide (c) Carbon dioxide (d) Carbon Monoxide
37. Raju had fight with some other boy who had hit him on brain's part. After hitting he had suddenly went to comma, According to you which part is affected of brain -----
 (a) Hypothalamus (b) Forebrain (c) Mid brain (d) Medula oblongata
38. Petroleum is formed from -----
 (a) Domestic animal (b) Organism of sea (c) Wild animals (d) Forest trees
39. All type of plant life is known as-----.
 (a) Fauna (b) Flora (c) Forest (d) Wild life
40. In which type of reproduction gametes are formed?
 (a) Budding (b) Fission (c) Sexual (d) Regeneration
- 41.-----is energy giving nutrient.
 (a) Carbohydrate (b) Protein (c) Mineral (d) Vitamin
- 42.----- is movement of plant or parts in response to certain chemicals.
 (a) Chemotropism (b) Phototropism (c) Gravitropism (d) Photoperiodic
43. In frog----- secretion stimulates the metamorphosis from tadpole larva to adult frog.
 (a) Adrenal (b) Liver (c) Pancreas (d) Thyroid
- 44.-----is not a part of flower.
 (a) Anther (b) Stigma (c) Petiole (d) Ovary
45. Ovary secretes the hormone -----
 (a) Insulin (b) Testosterone (c) Glucagon (d) Estrogen
- 46.-----is connecting link between Annelida and Arthropods.
 (a) Peripatus (b) Platypus (c) Lung fish (d) Archeopteryx
- 47.-----is primary pollutant.
 (a) SO₃ (b) O₃ (c) Hydrogen Cyanide (d) Ash
48. The genotype of human female is -----
 (a) 44 + XX (b) 44 + XY (c) 22 + XX (d) 22 + XY
- 49.-----is dominant trait in pea plant.
 (a) Wrinkled seeds (b) Terminal flowers (c) Dwarf plant (d) Violet flower
50. Saliva contains -----enzyme.
 (a) Amylase (b) Lipase (c) Trypsin (d) Gastrin

ANSWER KEY

Q. No.	Ans	Q. No.	Ans	Q. No.	Ans	Q. No.	Ans
1	C	16	A	31	A	41	C
2	B	17	D	32	C	42	D
3	A	18	A	33	B	43	C
4	B	19	B	34	D	44	A
5	C	20	C	35	C	45	B
6	A	21	C	36	A	46	C
7	B	22	A	37	D	47	A
8	A	23	D	38	B	48	D
9	C	24	C	39	B	49	C
10	D	25	A	40	C	50	A
11	D	26	C				
12	C	27	D				
13	C	28	B				
14	A	29	B				
15	A	30	B				