



CAPF AC PYQ

(SUBJECT WISE)

(Institute for Defence exam)

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5. Which one of the following statements is correct ?

- (a) Bacteria contain cytoplasm but viruses do not
- (b) Bacteria contain mitochondria but viruses do not
- (c) Viruses contain mitochondria but bacteria do not
- (d) Viruses have a cell membrane but bacteria do not

6. Which one of the following will happen if the medium surrounding the cell has a higher concentration than the cell ?

- (a) The cell will gain water
- (b) The cell will die
- (c) There will be no change
- (d) The cell will lose water

7. Rough endoplasmic reticulum (RER) looks rough under the microscope because of the attachment of which one of following cell organelles to its surface ?

- (a) Centrioles
- (b) Plastids
- (c) Lysosomes
- (d) Ribosomes



8. The increase in length of stems and roots in plants is due to

- (a) lateral meristem
- (b) intercalary meristem
- (c) apical meristem
- (d) secondary growth

9. In plant cells, the turgidity and rigidity is provided by

- (a) ribosomes
- (b) mitochondria
- (c) golgi apparatus
- (d) vacuoles full of cell sap



10. Pollens are produced in

- (a) Corolla
- (b) Style
- (c) Stigma
- (d) Anther

16. Which one of the following is known as Wood Spirit ?

- (a) Methanol
- (b) Ethanol
- (c) Formaldehyde
- (d) Acetaldehyde



17. Which one of the following will NOT show Tyndall effect ?

- (a) Chalk powder freshly mixed with water
- (b) Lime juice
- (c) Few drops of milk mixed with water
- (d) Starch solution

18. Which of the following are the most favourable conditions for liquefying a gas ?

- (a) Low pressure and high temperature
- (b) Low pressure and low temperature
- (c) High pressure and high temperature
- (d) High pressure and low temperature

19. Aluminium, Iron, Copper and Zinc are extracted from

- (a) Bauxite, Magnetite, Malachite and Calamine respectively
- (b) Magnetite, Bauxite, Malachite and Calamine respectively
- (c) Calamine, Malachite, Magnetite and Bauxite respectively
- (d) Malachite, Magnetite, Bauxite and Calamine respectively

20. Which one of the following does NOT contain COOH group ?

- (a) Citric acid
- (b) Lactic acid
- (c) Tartaric acid
- (d) Ascorbic acid



21. The Soda-acid fire extinguisher contains

- (a) sulphuric acid and solution of sodium hydrogencarbonate
- (b) nitric acid and solution of sodium hydrogencarbonate
- (c) sulphuric acid and solution of sodium carbonate
- (d) sulphuric acid and solution of potassium carbonate

31. When a longitudinal wave moves through a certain medium, the quantity which is transmitted through the medium is

- (a) material of the medium only
- (b) energy only
- (c) both material of the medium and energy
- (d) none of the above

32. The number of neutrons inside the nucleus of the element Uranium-235 is

- (a) 235
- (b) 92
- (c) 143
- (d) 51



33. A snowboard pulled up by a tow rope travels at the rate of 5 m/s up a mountain. If 3000 watt of power is used, what force was applied to it ?

- (a) 50 N
- (b) 100 N
- (c) 600 N
- (d) 15000 N



34. Which one of the following is NOT true for an electromagnetic wave ?

- (a) Electromagnetic wave transports energy and momentum
- (b) Electromagnetic wave can be polarized and reflected
- (c) Electromagnetic wave is longitudinal
- (d) Electromagnetic wave propagation is described by the varying electric and magnetic fields

35. Which one of the following is NOT an electromagnetic wave ?

- (a) Light wave
- (b) Radio wave
- (c) Sound wave
- (d) Micro wave



36. Brilliance of diamond is due to

- (a) interference of light
- (b) diffraction of light
- (c) polarization of light
- (d) total internal reflection of light

51. Which of the following organisms belongs to Coelenterata (Cnidaria) ?

- (a) Planaria and liverfluke
- (b) Sea urchin and sea cucumber
- (c) Hydra and sea anemone
- (d) Euplectella and sycon

52. Bending of shoot of a plant towards light can be referred to as

- (a) photonasty
- (b) positive phototropism
- (c) negative phototropism
- (d) photoperiodism

53. Epidermal cells of plant roots increase their absorption surface by having

- (a) Scales
- (b) Root hairs
- (c) Endodermis
- (d) Stomata



54. Quartz is extensively used as a piezoelectric material. It contains

- (a) Hg
- (b) Si
- (c) Ti
- (d) Sn



55. Which one of the following is used for water softening ?

- (a) $\text{Mg}(\text{HCO}_3)_2$
- (b) Na_3PO_4
- (c) $\text{Na}_6\text{P}_6\text{O}_{18}$
- (d) Na_2HPO_4



56. If formula of sodium salt of an anion X is Na_2X , then the formula of its aluminium salt would be

- (a) AlX
- (b) AlX_3
- (c) Al_2X_3
- (d) Al_3X_2



67. Which one of the following is NOT a luminous object ?

- (a) Sun
- (b) Electric lamp
- (c) Candle
- (d) Moon

68. When a beam of white light is allowed to fall on a prism, the maximum deviation of the emerging light occurs for

- (a) red light
- (b) violet light
- (c) yellow light
- (d) blue light

69. Which one of the following phenomena CANNOT be exhibited by sound waves ?

- (a) Reflection
- (b) Refraction
- (c) Interference
- (d) Polarisation

70. The principle involved in paper chromatography is

- (a) Absorption
- (b) Partition
- (c) Solubility
- (d) Volatility

