



CAPF AC PYQ

(SUBJECT WISE)

(Institute for Defence exam)

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12. Which of the following combinations correctly represents the genetic materials in prokaryotes and eukaryotes respectively?

- (a) Nucleoid and Chromatin
- (b) Chromatin and Nucleoid
- (c) Nucleoid and Nucleolus
- (d) Nucleolus and Chromatin

13. Lysosomes are sacs of the cell filled with digestive enzymes. These digestive enzymes are synthesized by

- (a) Golgi bodies
- (b) smooth endoplasmic reticulum
- (c) rough endoplasmic reticulum
- (d) lysosome itself

14. Which of the following best represents the cells of a meristem of plant?

- (a) Dense cytoplasm, thin cell wall, large nuclei and absence of vacuoles
- (b) Dense cytoplasm, thin cell wall, large nuclei and large vacuoles
- (c) Dense cytoplasm, thin cell wall, small nuclei and absence of vacuoles
- (d) Dense cytoplasm, thick cell wall, small nuclei and large vacuoles

22. Which one of the following materials **cannot** be used to make a convex lens?

- (a) Aluminium
- (b) Glass
- (c) Sapphire
- (d) Water



15. Which one of the following animals has a four-chambered heart?

- (a) King cobra
- (b) Turtle
- (c) Chameleon
- (d) Crocodile



16. One way of incorporating desired characters into crop varieties is hybridization. In this process, there is crossing between genetically dissimilar plants. Which one of the following crossings will **not** refer to hybridization?

- (a) Intervarietal
- (b) Interspecific
- (c) Intergenic
- (d) Intragenic

17. Depending on the requirements, plant nutrients are classified as micronutrients and macronutrients. Which one of the following is an example of a macronutrient?

- (a) Manganese
- (b) Copper
- (c) Magnesium
- (d) Chlorine



18. Buds produced in the notches along the leaf margin of Bryophyllum fall on soil and develop into new plants. This is an example of which one of the following types of reproduction?

- (a) Vegetative propagation
- (b) Budding
- (c) Spore formation
- (d) Regeneration

19. Phloem tissues are mostly responsible for transport of

- (a) water
- (b) oxygen
- (c) minerals
- (d) food



20. Two objects, x and y , have equal mass and are moving with speeds u and $3u$ respectively. Their kinetic energies k_x and k_y are related as

- (a) $k_x = k_y$
- (b) $2k_x = k_y$
- (c) $9k_x = k_y$
- (d) $3k_x = k_y$

21. Which one of the following is **not** the unit of pressure?

- (a) pascal (Pa)
- (b) N/m^2
- (c) J/m^2
- (d) bar



23. The optical phenomenon responsible for the blue colour of sky is

- (a) dispersion
- (b) reflection
- (c) refraction
- (d) scattering

24. The electrical device used for converting mechanical energy into electrical energy is called

- (a) voltmeter
- (b) ammeter
- (c) motor
- (d) generator

25. The magnitude of focal length of a concave lens is 2 m. What is the power of the lens?

- (a) +0.5 dioptre
- (b) -0.5 dioptre
- (c) +2.0 dioptre
- (d) -1.0 dioptre

26. At the time of short circuit, the current in an electric circuit

- (a) becomes zero
- (b) remains same
- (c) increases sharply
- (d) decreases sharply

27. If the linear momentum of a moving object changes by two times, then its kinetic energy will change by a factor of

- (a) 2
- (b) 4
- (c) 6
- (d) 8

28. Which one of the following oxides reacts with both acid and base?

- (a) Aluminium oxide
- (b) Calcium oxide
- (c) Sodium oxide
- (d) Potassium oxide

29. Which of the following makes bread soft and spongy when baking soda is added?

- (a) Sodium salt of acid
- (b) NaHCO_3
- (c) CO_2
- (d) H_2O



35. Borax is prepared from

- (a) calcium carbonate
- (b) magnesium carbonate
- (c) potassium carbonate
- (d) sodium carbonate

36. Cinnabar is an ore of

- (a) mercury
- (b) zinc
- (c) copper
- (d) lead



37. White gold is an alloy of

- (a) gold, nickel and palladium
- (b) gold, cobalt and palladium
- (c) gold, titanium and platinum
- (d) gold, magnesium and palladium

38. Hydrogenation of alkenes can be carried out in the presence of

- (a) copper
- (b) zinc
- (c) aluminium
- (d) nickel

39. Calcium oxide reacts with water to produce slaked lime. It is an example of

- (a) combination reaction
- (b) decomposition reaction
- (c) oxidation reaction
- (d) addition reaction

40. The atomic radius of hydrogen atom is

- (a) 37 nanometer
- (b) 37 picometer
- (c) 17 picometer
- (d) 57 picometer

47. Consider the following statements :

1. Aluminium powder is used as a solid fuel for rocket engines.
2. Compared to liquid fuel propelled rocket engines, the thrust per amount of fuel burned is higher in solid fuel propelled rocket engines.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

