

LRDAV PUBLIC SCHOOL, CUTTACK

SAMPLE QUESTIONS FOR ENTRANCE TEST TO CLASS-XI (SCIENCE)

To be held on-**02.04.2019 (Tuesday)**

1. A young infant may be feeding entirely on mother's milk which is white in colour but the stools which the infant passes out are quite yellowish. What is this yellow colour due to?
 - a) Pancreatic juice poured into duodenum
 - b) Intestinal juice
 - c) Bile pigments passed through bile juice
 - d) Undigested milk protein casein
2. Which is the example of conditioned reflex?
 - a) Picking a stone and dog runs away
 - b) Eye closed when anything enter into it.
 - c) Hand took up when piercing with needle
 - d) Digestive food goes forward in alimentary canal
3. Grafting is not possible in monocots as they
 - a) Are herbaceous
 - b) Lack cambium
 - c) Have scattered vascular bundles
 - d) Have parallel venation
4. In which condition gene ratio remains constant in a species?
 - a) Gene flow
 - b) Mutation
 - c) Random mating
 - d) Sexual selection
5. Biotic potential is counteracted by
 - a) Competition with other organisms
 - b) Producer is the largest
 - c) Limitation of food supply
 - d) None of the above
6. The characteristic feature of an oxidising agent is that it always
 - a) gains electrons
 - b) gets oxidised in a redox reaction
 - c) contains oxygen
 - d) is a non metal

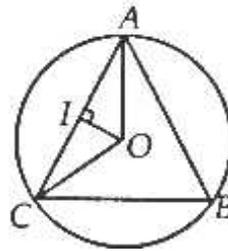
7. Propan-1-ol and Propan-2-ol are
- chain isomer
 - position isomer
 - functional isomer
 - metamers
8. Which of the following has smallest size
- Li^+
 - Be^{2+}
 - Mg^{2+}
 - Na
9. Which of the following possesses covalent, ionic as well as coordinate bonds?
- HCl
 - NH_4Cl
 - Cl_2
 - CH_4
10. Which of the following has the greatest concentration of H^+ ions?
- 1 mol L^{-1} HCl solution
 - 1 mol L^{-1} H_3PO_4 solution
 - 1 mol L^{-1} H_2SO_4 solution
 - 1 mol L^{-1} H_2CO_3 solution
11. If the centroid and circumcentre of a triangle are (3, 3) and (6, 2) respectively, then its orthocenter is :
- (-3,-5)
 - (-3,5)
 - (5,3)
 - (3,5)
12. The area of equilateral triangle whose two vertices are (1,0) and (3,0) and third vertex lying in the first quadrant is:
- $\frac{\sqrt{3}}{4}$
 - $\frac{\sqrt{3}}{2}$
 - $\sqrt{3}$
 - None of these
13. Six years hence a man's age will be three times the age of his son and three years ago, he was nine times as old as his son. The present age of the man is
- 28 years
 - 30 years
 - 32 years
 - 34 years

14. x and y are two non-negative numbers such that $2x+y=10$. The sum of the maximum and the minimum values of $(x + y)$ is

- a) 6
- b) 9
- c) 10
- d) 15

15. If the given circle has a radius of 4 cm, what is the perimeter of the inscribed equilateral triangle ABC?

- (a) $6\sqrt{2}$ cm
- (b) $6\sqrt{3}$ cm
- (c) $12\sqrt{2}$ cm
- (d) $12\sqrt{3}$ cm



16. The size of an image formed in a pinhole camera may be increased by

- a) Placing the object nearer to the camera
- b) Making the pinhole bigger
- c) Reducing the size of the object
- d) Decreasing the distance between pinhole and the screen

17. Two thin lenses of power $+5D$ and $-2D$ are placed in contact with each other. Focal length of the combination is:

- a) $+3$ m
- b) -3 m
- c) $+0.33$ m
- d) -0.33 m

18. The length of a given cylindrical wire is increased by 100%. Due to the consequent decrease in diameter, the change in the resistance of the wire will be

- a) 200%
- b) 50%
- c) 100%
- d) 300%

19. Commercial electric motors do not use

- a) an electromagnet to rotate the armature
- b) effectively large number of turns of conducting wire in the current carrying coil
- c) a permanent magnet to rotate the armature
- d) a soft iron core on which the coil is wound

20. The resistance of hot tungsten filament is about 10 times the cold resistance. What will be the resistance of 100W-200V lamp when not in use?

- a) 40 Ω
- b) 400 Ω
- c) 20 Ω
- d) 2 Ω

ANSWER KEY

- 1. c. bile pigments passed through bile juice.**
- 2. a. picking a stone and dog runs away**
- 3. b. lack cambium**
- 4. c. random mating**
- 5. d. none of the above**
- 6. a. gains electron**
- 7. b. position isomer**
- 8. b. Be^{2+}**
- 9. b. NH_4Cl**
- 10.c. $1 \text{ mol l}^{-1} \text{ H}_2\text{SO}_4$ solution**
- 11. a. (-3,-5)**
- 12.c. $\sqrt{3}$**
- 13.b. 30 years**
- 14.d. 15**
- 15.d. $12\sqrt{3} \text{ cm}$**
- 16.a. Placing the object nearer to the camera**
- 17.c. +0.33 m**
- 18.d. 300%**
- 19.a. Oersted**
- 20.b. 400Ω**