SAKSHAM
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Junoon
SAKSHAM TALENT SEARCH EXAM

JEE | NEET| GUJCET| BOARDS (11TH-12TH) | FOUNDATION (8TH-10TH)

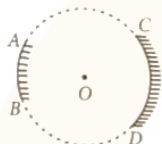| MAX TIME: 40 MIN | TEST PAPER | M.M-80 | CODE- |

Instructions: Each question carries 4 marks and are only one correct answer type questions.

PHYSICS

1. AB and CD, two spherical mirrors, form parts of a hollow spherical ball with its centre at O as shown in the given figure. If arc AB$= \frac{1}{2}$ arc CD, what is the ratio of their focal lengths?
   (a) 2:1
   (b) 1:1
   (c) 1:2
   (d) 4:1

2. Why is no vision possible at blind spot?
   (a) Due to change in thickness of eye lens while focusing.
   (b) Due to its shape.
   (c) Due to absence of light sensitive cells.
   (d) None of these.

3. Magnetic field lines can be used to determine
   (a) the shape of the magnetic field
   (b) only the direction of the magnetic field
   (c) only the relative strength of the magnetic field
   (d) both the direction and the relative strength of the magnetic field.

4. The major component of LPG is
   (a) mercaptan
   (b) methane
   (c) ethane
   (d) butane.

5. At the time of short circuit, the current in the circuit
   (a) Vary continuously
   (b) Reduces considerably
   (c) Increase heavily
   (d) Does not change

CHEMISTRY

6. The reaction that differs from the rest of the reaction given is-

   (a) formation of calcium oxide from limestone
   (b) formation of aluminium from aluminium oxide
   (c) formation of sodium carbonate from sodium hydrogen carbonate
   (d) formation of mercury from mercuric oxide

7. Consider the following table :

Substance	pH
Lemon	2.3
Battery acid	x
Sea water	8.5
Apple	3.1

   The value of x in above table is:
   (a) 0
   (b) 1.3
   (c) 2.5
   (d) 1.9

8. Ethane (C_2H_6) on complete combustion gave CO_2 and water. It shows that the results are in accordance with the law of conservation of mass. Then, the coefficient of oxygen is equal to
   (a) 7/2
   (b) 3/2
   (c) 5/2
   (d) 9/2

9. Mineral acids are stronger acids than carboxylic acids because
   (i) mineral acids are completely ionized.
   (ii) carboxylic acids are completely ionized
   (iii) mineral acids are partially ionized
   (iv) carboxylic acids are partially ionized
   (a) (i) and (iv)
   (b) (ii) and (iii)
   (c) (i) and (ii)
   (d) (iii) and (iv)

10. $N_2 + 3H_2 \rightarrow 2NH_3$ With the reference of above reaction which one of the options in the table is correct?

	Reactants	Products
(a)	N_2 , H_2	NH_3
(b)	NH_3	N_2 , H_2
(c)	N_2	H_2 , NH_3
(d)	N_2NH_3	H_2

MATHEMATICS

11. If A = {1, 2, 4}, B = {2, 4, 5}, C = {2, 5} then
(A – B) × (B – C)
   (a) {(1, 2), (1, 5), (2, 5)}
   (b) {1, 4}
   (c) {1, 4}
   (d) None of these.

12. If R is a relation on set A = {1, 2, 3, 4, 5, 6, 7, 8} given by xRy $\Leftrightarrow$ y = 3x, then R = ?
   (a) {(3, 1), (6, 2), (8, 2), (9, 3)}
   (b) {(3, 1), (6, 2), (9, 3)}
   (c) {(3, 1), (2, 6), (3, 9)}
   (d) None of these.

13. Let A = {1, 2, 3}, B = {4, 6, 9} if relation R from A to B defined by x is greater then y. the range of R is -
   (a) {1, 4, 6, 9}
   (b) {4, 6, 9}
   (c) {1}
   (d) None of these.

14. The minimum value of 3cosx + 4sinx + 8 is
   (a) 5
   (b) 9
   (c) 7
   (d) 3

15. What will be the nature of the graph lines of the equations 5x - 2y = 9 and 15x - 6y = 1?
   (a) Parallel
   (b) Coincident
   (c) Intersecting
   (d) Perpendicular to each other

MENTAL ABILITY

16. Which number comes next in the sequence: 2, 4, 6, 8, ?
   (a) 10
   (b) 12
   (c) 14
   (d) 16

17. If A + B = 10 and A – B = 4, what is the value of A?
   (a) 7
   (b) 6
   (c) 5
   (d) 4

18. Which of the following shapes is not a polygon?
   (a) Square
   (b) Circle
   (c) Triangle
   (d) Pentagon

19. If today is Monday, what day will it be 15 days from now?
   (a) Tuesday
   (b) Wednesday
   (c) Thursday
   (d) Friday

20. Which number is largest: 0.5, 0.75, 0.6, 0.8?
   (a) 0.5
   (b) 0.75
   (c) 0.6
   (d) 0.8