



Group :	<u>Pre-Medical & DAE</u>	Duration :	3 Hrs
Total Questions :	<u>200</u>		

Section: General Arithmetic

- For what value of ____ will the equation have the sum of roots equal to the product of roots?
(a) 3
(b) -2
(c) -4
(d) 4
- A set having only one element is called:
(a) An empty set
(b) Universal set
(c) A singleton set
(d) A power set
- The ordered pairs (a, b) and (a, d) are equal if and only if:
(a) $b = d$
(b) $b = c$
(c) $b = a$
(d) $a = d$
- The symbol used to denote the negation of a proposition is:
(a) $\sim$
(b) $\rightarrow$
(c) $\wedge$
(d) $\vee$
- A square matrix $A = \{a_{ij}\}$ is a lower triangular matrix when:
(a) $a_{ij} = 0$ for all $i < j$
(b) $a_{ij} = 0$ for all $i > j$
(c) $a_{ij} \neq 0$ for all $i < j$
(d) $a_{ij} \neq 0$ for all $j < i$

6. The power set of a set containing 4 elements has:
- (a) 4 elements
 - (b) 8 elements
 - (c) 12 elements
 - (d) 16 elements
7. The sum of the first 10 natural numbers is:
- (a) 45
 - (b) 50
 - (c) 55
 - (d) 60
8. If $A = \{2, 4, 6\}$ and $B = \{4, 6, 8\}$, then $A \cap B =$
- (a) $\{2, 4, 6, 8\}$
 - (b) $\{4, 6\}$
 - (c) $\{2, 8\}$
 - (d) $\{2, 4\}$
9. The value of $(3^2 + 4^2)^{\frac{1}{2}}$ is:
- (a) 5
 - (b) 7
 - (c) 6
 - (d) 25
10. The simple interest on Rs. 8000 at 10% per annum for 2 years is:
- (a) Rs. 1000
 - (b) Rs. 1200
 - (c) Rs. 1600
 - (d) Rs. 2000

Section: Physics

11. Hadrons are particles that experience:
- (a) The strong nuclear force
 - (b) The weak nuclear force
 - (c) Only the gravitational force
 - (d) Only the electromagnetic force
12. Mass differs from weight in that:
- (a) All objects have weight, but some lack mass
 - (b) Weight is a force and mass is not

- (c) The mass of an object is always more than its weight
- (d) Mass can be expressed only in the metric system
13. If an 800 N man hangs motionless from four vertical strands of rope, then the tension in each strand of rope is:
- (a) 0 N
- (b) 200 N
- (c) 400 N
- (d) 800 N
14. The work done by a non-conservative force around a closed path is:
- (a) Not zero
- (b) Zero
- (c) Maximum
- (d) Minimum
15. The force **F** applied to two bodies yields work **W** and **2W** respectively. The distance covered by the two bodies is:
- (a) d, d
- (b) d, 2d
- (c) 2d, d
- (d) d, d/2

Section: English

16. The antonym of *myopic* is:
- (a) Short-Sighted
- (b) Feeble-Minded
- (c) Foresighted
- (d) Long-Sighted
17. A person who constantly calls attention to his trials and sufferings is in danger of developing a martyr complex and impressing others that he is _____ seeking sympathy.
- (a) Consciously
- (b) Willingly
- (c) Purposefully
- (d) Emphatically
18. Although her report on the effects of electromagnetic radiation was lengthy, the presentation she _____ was rather succinct.

- (a) Held was
- (b) Held
- (c) Is held
- (d) Was held

19. The synonym of *benevolent* is:

- (a) Kind
- (b) Cruel
- (c) Harsh
- (d) Greedy

20. Choose the correct indirect form:

He said, "I am reading a book."

- (a) He said that he was reading a book.
- (b) He said that he is reading a book.
- (c) He said he reads a book.
- (d) He said he was reading the books.