

## Mathematics General Science Test Medium Mode

| Sr | Questions  | Answers Choice   |
|----|--|--|
| 1  | What is the conjugate of $-6 - i$ ?  | A. $-6 + i$<br>B. $6 + i$<br>C. $-6 - i$<br>D. $6 - i$   |
| 2  | Question Image   |  |
| 3  | Question Image   | A. 0<br>B. 1<br>C. 2   |
| 4  | Question Image   | A. Reciprocal equation<br>B. Exponential equation<br>C. Radical equation<br>D. None of these   |
| 5  | If $f(\sqrt{x}) = \sin x$ , then $f'(x) =$ _____;  | A. $2x \cos x^2$<br>B. $\cos x^2$<br>C. $\cos \sqrt{x}$<br>D. None of these  |
| 6  | If $B \subseteq A$ , then complement of B in A is = _____  | A. $A - B$<br>B. $A \cap B$<br>C. $B - A$<br>D. $A \cup B$   |
| 7  | Which of the following statement is true?  | A. A set is a collection of non-empty object<br>B. A set is a collection of only numbers<br>C. a set is any collection of things<br>D. a set is well-defined collection of objects |
| 8  | Name the property used in $1000 \times 1 = 1000$   | A. additive inverse<br>B. multiplicative inverse<br>C. additive identity<br>D. multiplicative identity   |
| 9  | The length of perpendicular from $(3, 1)$ to $4x + 3y + 20 = 0$ is                               | A. 6<br>B. 7<br>C. 3<br>D. 8   |
| 10 | The general solution of the differential equation $x \, dy / dx = 1 + y$ is:                     | A. 2<br>B. 1<br>C. 3<br>D. None  |
| 11 | Question Image   | A. The law of sines<br>B. The law of tangents<br>C. The pythagorus theorem<br>D. None of these   |
| 12 | The line $2x + \sqrt{6}y = 2$ is a tangent to the curve $x^2 - 2y^2 = 4$ The point of contact is | A. $(\sqrt{6}, 1)$<br>B. $(2, 3)$<br>C. $(7, -2\sqrt{6})$<br>D. $(4, -\sqrt{6})$   |
| 13 | Question Image   |  |
| 14 | Question Image   | A. $(g, f)$<br>B. $(-g, f)$<br>C. $(g, -f)$<br>D. $(-g, -f)$   |
| 15 | The intercepts of the plane $2x - 3y + 4z = 12$ on the co-ordinate axes are given by             | A. 2, -3, 4<br>B. 6, -4, -3<br>C. 6, -4, 3<br>D. 3, -2, 1.5  |
| 16 | Question Image   |  |

17 For two vector a and b,  $a+b =$  \_\_\_\_\_

- B.  $b+a$
- C.  $b-a$
- D. None

18 Question Image

- A.  $l3$
- B.  $rl3$
- C.  $r$
- D. none

19 Question Image

- A. 0
- B.  $-1-w^{<sup>2</sup>}$

20 Question Image