MATHEMATICS 2023

Max. Marks: 75 **Time: 3 Hour**

SECTION "A" MULTIPLE CHOICE QUESTIONS (MCQs)

Marks: 15

NOTE: (i) Attempt all the Questions of this Section.
(ii) Do not copy down the part questions. Write only the answer against the proper number of the Question and its part according to the question Paper.
(iii) Each question carries 1 Marks

1. Choose the correct Answer for each from the given question:

1. If $(x, 6) = (2, y-6)$ then $x + y =$:
* 8 * 10 * 12 * 14✓

2. If $A = \{1, 2, 3, 4\}$ and $B = \{2, 4, 6\}$ then $A \Delta B$:
* $\{1, 2\}$ * $\{6\}$ ✓ * $\{1, 3, 6\}$ * $\{1, 4\}$

3. If $1, 9, x$ and 45 are in proportion, then $x =$:
* 27 * $\frac{1}{5}$ * 5 ✓ * 9

4. If 'm' denotes the number of rows and 'n' denotes the number of columns such that $m = n$, then matrix is called:
* rectangular matrix * equal matrix
* square matrix ✓ * null matrix

5. $5\frac{\pi}{4}$ radians:
* 115° * 225°✓ * 135° * 45°

6. $1 + \omega =$:
* ω^2 * $-\omega^2$✓ * 0 * $-\omega$

7. The fraction $\frac{2x+5}{x^2+5x+6}$ is known as:
* proper✓ * improper
* both proper and improper * none of these

8. If $\frac{x}{y} = \frac{w}{z}$ then according to dividendo property is:
* $\frac{x-y}{y} = \frac{w-z}{z}$ ✓ * $\frac{x+y}{y} = \frac{w+z}{z}$
* $\frac{x}{x+y} = \frac{w}{w+z}$ * none of these

9. The A.M. of $(0, 90, k, 10, 100)$ is 40, then k = :
* 0 ✓ * 90 * 10 * 100

10. In a right angled triangle, the greatest angle is:
* 100° * 90° ✓ * 80° * 110°

11. If the ratio of two corresponding sides of similar triangles is 5: 7 then ratio of their areas is:
* 5: 7 * 7: 5 * 25: 7 * 25: 49 ✓

12. Cosecθ. sinθ:
* 1 ✓ * 0 * −1 * 2

13. A circle touches all the sides of a triangle is called:
* circum circle * in circle ✓
* escribed circle * none of these

14. An inscribed angle of a minor arc of a circle is:
* acute * obtuse✓ * right * reflex

15. Diameter divides the circle into parts:
* two✓ * three * four * five

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