



10TH SSC MCQ - CH - TRIGONOMETRY

DATE: _____

TIME: 11 Min

MARKS: 11

SEAT NO:

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Note:-

1. All Questions are compulsory.
2. Numbers on the right indicate full marks.

- Q.1 A pole 6 m high casts a shadow of $2\sqrt{3}$ m long on the ground. The sun's elevation is _____. (1)
- A) 60° B) 45°
C) 30° D) 90°

$$\left[\tan \theta = \frac{BC}{AB} = \frac{2\sqrt{3}}{6} = \frac{1}{\sqrt{3}} = \theta = 30^\circ \right]$$

Ans : C

- Q.2 If $\cos A = \frac{4}{5}$ then $\tan A = ?$ (1)
- A) $\frac{3}{5}$ B) $\frac{3}{4}$
C) $\frac{4}{3}$ D) $\frac{5}{3}$

Ans : B

- Q.3 If $\cos \theta = \frac{1}{\sqrt{2}}$ then θ is $\tan A = ?$ (1)
- A) 30° B) 45°
C) 60° D) 90°

Ans : B

- Q.4 $\frac{1}{1 + \sin \theta} + \frac{1}{1 - \sin \theta} = ?$ (1)
- A) $\sec^2 \theta$ B) $2\sec^2 \theta$
C) $\operatorname{cosec}^2 \theta$ D) $2\operatorname{cosec}^2 \theta$

$$\frac{1}{1 + \sin \theta} + \frac{1}{1 - \sin \theta} = \frac{1 - \sin \theta + 1 + \sin \theta}{1 - \sin^2 \theta} = \frac{2}{\cos^2 \theta} = 2\sec^2 \theta$$

Ans : B

- Q.5 If $\sin x = \frac{3}{4}$, then $\cos x = ?$ (1)
- A) $\frac{2}{3}$ B) $\frac{\sqrt{3}}{2}$
C) $\frac{\sqrt{7}}{4}$ D) $\frac{1}{2}$

Ans : C

- Q.6 If $\sqrt{3} \tan \theta = 3 \sin \theta$, the value of $\sec \theta$ is _____. (1)
- A) $\frac{\sqrt{3}}{3}$ B) $\frac{3}{\sqrt{3}}$
C) $\frac{3\sqrt{3}}{\sqrt{3}}$ D) $\frac{3}{3\sqrt{3}}$

Ans : B

Q.7 The value of $\cos 90^\circ$ is _____. (1)

- A) -1 B) 1
C) 0 D) not defined.

Ans : B

Q.8 When we see at a height level, from the horizontal line, angle formed is _____. (1)

- A) angle of elevation B) angle of depression
C) 0 D) straight angle

Ans : A

Q.9 $1 + \tan^2 \theta = ?$ (1)

- A) $\cot^2 \theta$ B) $\operatorname{cosec}^2 \theta$
C) $\sec^2 \theta$ D) $\tan^2 \theta$

$$\sec^2 \theta [1 + \tan^2 \theta = \sec^2 \theta]$$

Ans : C

Q.10 $\operatorname{cosec} 45^\circ = ?$ (1)

- A) $\frac{1}{\sqrt{2}}$ B) $\sqrt{2}$
C) $\frac{\sqrt{3}}{2}$ D) $\frac{2}{\sqrt{3}}$

Ans : B

Q.11 $\sin \theta \operatorname{cosec} \theta = ?$ (1)

- A) 1 B) 0
C) $\frac{1}{2}$ D) $\sqrt{2}$

$$\sin \theta \operatorname{cosec} \theta = \sin \theta \times \frac{1}{\sin \theta} = 1$$

Ans : A