

NORTHEAST PSC

(Trigonometry)

(By Amarjeet Sir)

(9 Years Teaching Experience |

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Q1. Value of $\tan \theta \times \cot \theta \times \sin \theta \times \operatorname{cosec} \theta$ is

[APSSB stenograpger 2024]

- (a) -1 (b) 2
(c) 0 (d) 1

Q2. The value of $\sin^2 30^\circ + 1$ is

[APSSB stenograpger 2024]

- (a) $\frac{5}{2}$ (b) $\frac{5}{3}$
(c) $\frac{5}{4}$ (d) None of these

Q3. The Value of $\sin^2 80^\circ + \cos^2 80^\circ$ is

[APSSB CSL 2023]

- (a) 1 (b) 0
(c) 2 (d) $\frac{1}{2}$

Q4. Cot 63° is same as

[APSSB CSL 2023]

- (a) $\sin 63^\circ$ (b) $\cos 27^\circ$
(c) $\tan 27^\circ$ (d) None of these

Q5. From the top of light house, 120 feet above the level, the angle of depression of the boat is 60° . How far the boat from the light house?

[APSSB CSL 2023]

- (a) 40 feet (b) $40\sqrt{3}$ feet
(c) $30\sqrt{3}$ feet (d) None of these

Q6. The degree measure $\frac{\pi^c}{5}$ is

[APSSB CSL 2023]

- (a) 18° (b) 12°
(c) 36° (d) 72°

Q7. If $\sin \theta = \frac{3}{5}$, θ lies in I quadrant, then $\cot \theta =$

[APSSB CSL 2023]

- (a) $\frac{3}{4}$ (b) $\frac{4}{3}$

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(c) $\frac{5}{4}$

(d) $\frac{4}{5}$

Q8. The Value of $\sin 25^\circ \cos 65^\circ + \cos 25^\circ \sin 65^\circ$ is

[APSSB CSL 2023]

(a) 0

(b) -1

(c) 2

(d) 1

Q9. If $\tan \theta + \cot \theta = 2$, then the value of $\tan^2 \theta + \cot^2 \theta =$

[APSSB CSL 2023]

(a) 4

(b) 6

(c) 2

(d) None of these

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Q10. The Value of $\tan^2 45^\circ$ is

[APSSB CHSL 2021]

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(a) $\frac{1}{4}$

(b) 3

(c) 2

(d) 1

Q11. The Value of $\sec \theta \cdot \sin(90^\circ - \theta)$ is

[APSSB CHSL 2021]

(a) 1

(b) $90^\circ - \theta$

(c) $\frac{1}{2}$

(d) None of these

Q12. If $\cot B = \tan A$ then $A+B =$

[APSSB CHSL 2021]

(a) 45°

(b) 90°

(c) 60°

(d) None of these

Q13. The Value of $9 \sec^2 A - 9 \tan^2 A$ is

[APSSB CHSL 2023]

(a) 1

(b) 9

(c) -1

(d) -9

Q14. The Value of $\operatorname{Cosec} 30^\circ - \sec 60^\circ$ is

[APSSB CHSL 2023]

(a) 0

(b) 1

(c) 2

(d) 4

Q15. 12° in radian measure is

[APSSB CHSL 2023]

(a) $\frac{\pi}{15}$

(b) $\frac{\pi}{12}$

- (c) $\frac{\pi}{14}$ (d) None of these

Q16. The Value of $\sin\theta \times \operatorname{cosec}\theta \times \tan\theta \times \cot\theta$ is

[APSSB CHSL 2023]

- (a) 0 (b) 1
(c) -1 (d) $\operatorname{Sec}^2\theta$

Q17. If $\cos\theta + \sec\theta = 2$, then $\cos^2\theta + \sec^2\theta =$

[APSSB CHSL 2023]

- (a) 2^2 (b) $\frac{1}{2}$
(c) $\frac{1}{4}$ (d) 2

Q18. The minimum value of $3\cos x + 4\sin x + 8$ is

[APSSB CHSL 2023]

- (a) 8 (b) 3
(c) 13 (d) None of these

Q19. The angle of elevation of the top of a tower from 2 points at a distance of 4 m and 9 m from the base of the tower and in the same line with it are complementary. The height of the tower is

[APSSB CHSL 2021]

- (a) 6m (b) 8m
(c) 10m (d) None of these

Q20. A ladder of length 25 feet long reaches a window 7 feet above the ground the distance between the of the ladder and base of the wall is

[APSSB CHSL 2021]

- (a) 18 ft (b) 24 ft
(c) 10 ft (d) 12 ft

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Q21. Find the angle of elevation of the sun when the length of the shadow of a pole is $\sqrt{3}$ times the height of the pole

[APSSB CGL 2021]

- (a) 45° (b) 30°
(c) 60° (d) 15°

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Q22. A tower casts shadow of length 300 ft when the sun's altitude (angle of elevation) is 45° . The height of the tower must be

[APSSB CGL 2023]

- (a) $300\sqrt{3}$ ft (b) $\sqrt{3}$ ft
(c) 100 ft (d) 300 ft

Q23. If $\sin \theta = \frac{4}{5}$ Where $0 < \theta < 90^\circ$, then $\cos \theta =$

[APSSB CGL 2023]

- (a) $\frac{3}{5}$ (b) $\frac{5}{4}$
(c) $\frac{5}{4}$ (d) $\frac{-3}{5}$

Q24. The Value of $\sin 45^\circ \cos 45^\circ + \tan 45^\circ \cot 45^\circ$

[APSSB CGL 2023]

- (a) 2 (b) 0
(c) 1 (d) $1\frac{1}{2}$

Q25. π° in degrees is

[APSSB CGL 2023]

- (a) 180° (b) 90°
(c) 3.14° (d) $\frac{22}{7}$

Q26. Simplified form of $\frac{1+\tan^2\theta}{1+\cot^2\theta}$ is

[APSSB CGL 2023]

- (a) $\tan^2 \theta$ (b) $\cot^2 \theta$
(c) $\sec^2 \theta$ (d) $\operatorname{Cosec}^2 \theta$

Q27. The Value of $\frac{\sin 70^\circ}{\cos 20^\circ}$ is

[APSSB CGL 2023]

- (a) -1 (b) 0
(c) 1 (d) 2

Q28. An observer 1.6m tall is $20\sqrt{3}$ m away from a tower. The angle of elevation from his eye to the top of the tower is 30° . The height of the tower is

[APSSB Forest Guard 2022]

- (a) 21.6m (b) 24.72m
(c) 23.2m (d) None of these

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