## Objective Type Questions

**Q.1** Each questions has four possible answers. Choose the correct answer and encircle it.

__1. One degree is equal to:

(a) $\pi$ rad (b) $\frac{\pi}{180}$ rad

(c) $\frac{180}{\pi}$ rad (d) $\frac{\pi}{360}$ rad

__2. $15^{\circ}$ is equal to:

(a) $\frac{\pi}{6}$ rad (b) $\frac{\pi}{3}$ rad

(c) $\frac{\pi}{12}$ rad (d) $\frac{\pi}{15}$ rad

__3. $75^{\circ}$ is equal to

(a) $\frac{\pi}{12}$ rad (b) $\frac{2\pi}{3}$ rad

(c) $\frac{4\pi}{3}$ rad (d) $\frac{5\pi}{12}$ rad

__4. One radian is equal to:

(a) $90^{\circ}$ (b) $\left(\frac{90}{\pi}\right)^{\circ}$

(c) $180^{\circ}$ (d) $\left(\frac{180}{\pi}\right)^{\circ}$

__5. The degree measure of one radian is approximately equal to:

(a) 57.3 (b) 57.2

(c) 57.1 (d) 57.0

__6. $\frac{2\pi}{3}$ radians are equal to:

(a) $60^{\circ}$ (b) $90^{\circ}$

(c) $120^{\circ}$ (d) $150^{\circ}$

__7. The terminal side of $\theta$ lies in $4^{th}$ quadrant, sign of the $\sin\theta$ will be:

(a) Positive (b) Negative

(c) Both +ve and – ve (d) None of these

__8. The terminal side of $\theta$ lies in $4^{th}$ quadrant, both $\sin\theta$ and $\tan\theta$ are:

(a) $\sin\theta > 0, \tan\theta > 0$ (b) $\sin\theta > 0, \tan\theta < 0$

(c) $\sin\theta < 0, \tan\theta < 0$ (d) $\sin\theta < 0, \tan\theta > 0$

__9. A circle is equal to $2\pi$ rad and also to $360^\circ$, then:

(a) $360^\circ = 2\pi$ rad (b) $360^\circ = \frac{3}{4}\pi$ rad

(c) $360^\circ = \frac{\pi}{6}$ rad (d) None of a, b & c

__10. $\pi$ rad is equal to:

(a) $360^\circ$ (b) $270^\circ$

(c) $180^\circ$ (d) $90^\circ$

__11. The relation between are $l$, radius r and central angle $\theta$ rad is:

(a) $l = \frac{\theta}{r}$ (b) $l = \frac{r}{\theta}$

(c) $l = r\theta$ (d) $l = r^2\theta$

__12. If $l$ = 12cm and r = 3 cm, then $\theta$ is equal to:

(a) 36 rad (b) 4 rad

(c) $\frac{1}{4}$ rad (d) 18 rad

__13. An angle subtended at the centre of a circle by an arc equal to the radius of the circle is called:

(a) Right angle (b) Degree

(c) Radian (d) Acute angle

__14. The radian measure of the angle described by a wheel in 5 revolution is:

(a) $5\pi$ (b) $10\pi$

(c) $15\pi$ (d) $20\pi$

__15. If an are of a circle has length $l$ and subtends an angle $\theta$, then radius ´r´ will be:

(a) $\frac{\theta}{l}$ (b) $\frac{l}{\theta}$

(c) $l\theta$ (d) $l + \theta$

__16. If $\sin x = \frac{\sqrt{3}}{2}$ and the terminal ray of x lies in 1st quadrant, then cosx is equal to:

(a) $\frac{1}{\sqrt{2}}$ (b) $-\frac{1}{2}$

(c) $\frac{1}{2}$ (d) $-\frac{1}{\sqrt{2}}$

__17. If $\sin\theta = \frac{3}{5}$ and the terminal side of the angle lies in 2nd quadrant, then $\tan\theta$ is equal to:

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

__18. If $\sin\theta$ is +ve and $\cos\theta$ is –ve, then the terminal side of the angle lies in:

(a) 1st quad (b) 2nd quad (c) 3rd quad (d) 4th quad

__19. If $\sin\theta$ is +ve and $\tan\theta$ is-ve, then the terminal side of the angle lies in

(a) 1st quad (b) 2nd quad
(c) 3rd quad (4) 4th quad

__20. If $\sin\theta = \frac{2}{\sqrt{7}}$ and $\cos\theta = -\frac{1}{\sqrt{7}}$, then $\cot\theta$ is equal to:

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

21. $\sec^2\theta + \operatorname{cosec}^2\theta$ is equal to:

(a) $\sec^2\theta \operatorname{cosec}^2\theta$ (b) $\sin\theta\cos\theta$
(c) $2\sec^2\theta$ (d) $2\operatorname{cosec}^2\theta$

## Answers

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|---|---|---|---|---|---|---|---|---|---|
| 1. | b | 2. | c | 3. | d | 4. | d | 5. | a |
| 6. | c | 7. | b | 8. | c | 9. | a | 10. | c |
| 11. | c | 12. | b | 13. | c | 14. | b | 15. | b |
| 16. | c | 17. | b | 18. | b | 19. | d | 20. | c |
| 21. | a | | | | | | | | |