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28) Binomial theorem is proved by using _____.
a- A.P. b- G.P. c- H.P. ✓d- Induction

29) 2nd term in the expansion of $(1-2x)^{1/3}$ is _____.
a- $\frac{2x}{3}$ ✓b- $\frac{-2x}{3}$ c- $-2x$ d- $\frac{-3x}{2}$

30) $1+nx+\frac{n(n-1)}{12}x^2+\cdots$ is called _____ Series.
✓a- Binomial b- Geometric c- Asithematic d- Harmonic

31) $(1+x)^n$ Converges (valids) if $|x|$ _____
a- ✓<1 b- >1 c- $<1/2$ d- $>1/2$

32) _____ $= 1+2x+3x^2+4x^3+\cdots$ for $|x|<1$
a- $(1+x)^{-2}$ b- $(1-x)^2$ c- ✓$(1-x)^{-2}$ d- $(1+x)^2$

33) $(1-2x)^{1/3}$ valids if _____
a- $|x|<1$ b- $|x|<2$ ✓c- $|x|<1/2$ d- $|x|<3/2$

34) $(8-5x)^{-2/3}$ valids if _____.
a- $|x|<8$ b- $|x|<1/5$ c- $|x|<5/8$ ✓d- $|x|<8/5$

35) $(4-3x)^{1/2}$ valids if _____.
a- $|x|<$ b- $|x|<4/3$ c- $|x|<3$ ✓d- $|x|<3/4$

36) $\binom{n}{1}+2\binom{n}{2}+3\binom{n}{3}+\cdots+n\binom{n}{n}=$ _____
a- 2^{n-1} b- 2^n c- $n2^n$ ✓d- $n2^{n-1}$

37) $(8-2x)^{-1}$ valid for _____.
a- $|x|<2$ b- $|x|<1$ ✓c- $|x|<4$ d- $|x|<1/4$

CHAPTER: 9

1) Vertex of an angle in Standard position is at _____.
a- $(1,0)$ b- $(0,1)$ c- $(1,1)$ ✓d- $(0,0)$

2) The System in which angle is measured in radian is called ___ System
a- English b- Sexagesimal ✓c- Circular d- Gradient.

3) $\frac{1}{4}$ rotation (Anti Clockwise) = _____
a- $45°$ ✓b- $90°$ c- $180°$ d- $360°$

4) Straight Angle = _____ a- $90°$ ✓b- $180°$ c- $270°$ d- $360°$

5) $\frac{1}{2}$ rotation (Anticlockwise) = _____ a- $45°$ b- $90°$ ✓c- $180°$ d- $360°$

6) $\ell = r\theta$ in a Sector where θ is in _____ measure:
a- English b- Sexagesimal c- ✓Circular (Radian) d- Gradient

7) $180^\circ =$ ____ radian a- 2π ✓b- π c- $\pi/2$ d- $3\pi/2$

8) $\sin(-\theta) =$ ____ a- $\cos\theta$ b- $\sin\theta$ ✓c- $-\sin\theta$ d- $-\cos\theta$

9) $\cos(-\theta) =$ ____ ✓a- $\cos\theta$ b- $-\cos\theta$ c- $\sin\theta$ d- $-\sin\theta$

10) For positive rotation of revolving line is ____.
✓a- 360° b- 90° c- 180° d- 270°

11) $\operatorname{Cosec}(-15^\circ) =$ ____ a- $\operatorname{Cosec}\theta$ ✓b- $-\operatorname{Cosec}\theta$ c- $\operatorname{Sec}\theta$ d- $-\operatorname{Sec}\theta$

12) $22^\circ 30' =$ ____ radian. a- $\pi/2$ b- $\pi/4$ ✓c- $\pi/8$ d $3\pi/2$

12) Trigonometric functions are ____ in nature.
a- Numbers b- Sides c- Angles ✓d- Ratios

13) $\sec^2\theta - 1 =$ ____ a- $\tan\theta$ b- $\cot\theta$ c- $\cot^2\theta$ ✓d- $\tan^2\theta$

14) $\sin\theta \cdot \operatorname{Cosec}\theta =$ ____. a- $\sec\theta$ b- $\tan\theta$ ✓c- 1 d- $\cot\theta$

15) $\tan\theta \cdot \cot\theta =$ ____. a✓- 1 b- $\tan\theta$ c- $\sec\theta$ d- $\cot\theta$

16) $\sec\theta \cdot \cos\theta =$ ____: a- $\tan\theta$ b✓- 1 c- $\cot\theta$ d- $\operatorname{Cosec}\theta$

17) $\sin\theta = \frac{1}{\sqrt{2}}$ then $\theta =$ ____ a- 30° b- 60° ✓c- 45° d- 135°

18) $\tan\theta = 1$ then $\theta =$ ____ ✓a- 30° b- 45° c- 60° d- 90°

19) $2\sin 45^\circ + \frac{\sqrt{3}}{2}\operatorname{Cosec} 45^\circ =$ ____ a- $\frac{3}{2}$ ✓b- $\frac{3}{\sqrt{2}}$ c- $\frac{\sqrt{3}}{2}$ d- $\sqrt{3}/2$

20) If $\tan\theta < 0$, $\cos\theta < 0$ then θ lies in ____ Quad. a- I b✓- II c- III d- IV

21) ____ Angle in right triangle is 90° ✓a- One b- Two c- Three d- None

22) $\sec^2\theta - \tan^2\theta =$ ____ a- $\cot^2\theta$ b- $\cos^2\theta$ c- $\sin^2\theta$ ✓d- 1

23) $\sec(-\alpha) =$ ____ a- $\operatorname{Cosec}\alpha$ b- $-\cos\alpha$ ✓c- $\sec\alpha$ d- $-\sec\alpha$

24) $150^\circ =$ ____ radians. a- $\pi/6$ b- $\frac{3\pi}{2}$ ✓c- $\frac{5\pi}{6}$ d- $\frac{2\pi}{3}$

25) $1 + \cot^2\theta =$ ____ ✓a- $\operatorname{Cosec}^2\theta$ b- $\sec^2\theta$ c- $-\sec^2\theta$ d- $-\operatorname{Cosec}^2\theta$

26) $\frac{\pi}{12}$ radian = ____ a- 30° b- 20° c✓- 15° d- 60°

27) There are ____ in Circle. a- 90° b- 180° c- 270° ✓d- 360°

28) Common end point of two rays is called ____ ✓a- Vertex b- Radian c- Degree

29) $\frac{\pi}{3}$ radian = ____ a- 30 b- 45° c✓- 60° d- 75°

30) $\cos^2\theta - \sin^2\theta =$ ____. a- 1 b- $\sec^2\theta$ c- $\operatorname{Cosec}^2\theta$ ✓d- $2\cos^2\theta - 1$

31) $\frac{\sec\theta}{\operatorname{Cosec}\theta} =$ ____ a- $\cos\theta$ b- $\sin\theta$ ✓c- $\tan\theta$ d- $\cot\theta$.

32) $\sin 60^\circ =$ ____ a- $1/2$ b- $1/\sqrt{2}$ ✓c- $\sqrt{3}/2$ d- $\frac{2}{\sqrt{3}}$

33) If $l = 8$ cm and $\theta = 1$ radian then $r =$ ____ cm a- $1/8$ b✓- 8 c- 4 d- $1/4$

34) $1^\circ =$ ____ radian a- π b- 2π ✓c- $\frac{\pi}{180^\circ}$ d- $\frac{\pi}{360}$

35) $1^\circ =$ ____ radian. ✓a- 0.01745 b- 0.01475 c- 0.001745 d- 0.1745

36) 1 radian = ____ a- 45° b- 60° c- 75° ✓d- 57.296°

37) If $\operatorname{Cosec}\theta < 0$ and $\cot\theta > 0$ then θ lies in ____ Quadrent.
a- Ist b- 2nd ✓c- 3rd d- 4th

28) Sum of the angles of a triangle ___ a- 90° b✓- 180° c- 270° d- 360°

29) 1° is divided into ___ minutes. a- 100 ✓b- 60 c- 3600 d- 45

30) 30′ = ___ a- 30° b- $\frac{1}{30^\circ}$ ✓c- $(\frac{1}{2})^\circ$ d- 2°

31) θ = ___ radian if $l = r$ ✓a- 1 b- π c- 2π d- $\pi/2$

32) θ and $\theta \pm 2k\pi$ are ___ angles for $k \in Z$.
a- Complementary b- Supplimentary c✓- Coterminal d- Allied

33) The angles 90°, 180°, 270°, 360° are called ___ angles.
a- General b- Allied c- Coterminal d✓- Quadrental.

34) These are ___ trigonometric functions (ratios).
a- 2 b- 3 c- 4 ✓d- 6 0312-7146828

35) $\sin^2\theta + \cos^2\theta$ = ___ ✓a- 1 b- $\cos^2\theta$ c- $\cot^2\theta$ d- $\tan^2\theta$

36) $\tan(-30^\circ)$ = ___ a- 30° ✓b- $-\tan 30^\circ$ c- $\tan 30^\circ$ d- $-\tan(-30^\circ)$

37) $\sin 0^\circ$ = ___ ✓a- 0 b- 1 c- $1/2$ d- $1/\sqrt{2}$

38) $\cos 0^\circ$ = ___ a- 0 ✓b- 1 c- $1/2$ d- $\frac{1}{\sqrt{2}}$

39) General angle for 420° is ___ a- 30° b✓- 60° c- 40° d- 90°

40) $\sin(450^\circ)$ = ___ a- -1 b- 0 c✓- 1 d- ∞

CHAPTER: 10

1) Distance formula between $P(x_1, y_1)$ and $Q(x_2, y_2)$ is d = ___
a- $\sqrt{(x_1-y_1)^2+(x_2-y_2)^2}$, b- $\sqrt{(x_1+x_2)^2-(y_1+y_2)^2}$, c✓- $\sqrt{(x_1-x_2)^2+(y_1-y_2)^2}$, d- $\sqrt{(x_1-x_2)^2-(y_1-y_2)^2}$

2) ___ = $\cos\alpha\cos\beta + \sin\alpha\sin\beta$ for $\alpha > \beta$.
a- $\sin(\alpha+\beta)$ b- $\cos(\alpha+\beta)$ c- $\sin(\alpha-\beta)$ d✓- $\cos(\alpha-\beta)$

3) ___ = $\sin\alpha\cos\beta - \cos\alpha\sin\beta$ for $\alpha > \beta$.
a- $\cos(\alpha-\beta)$ b- $\sin(\alpha+\beta)$ c✓- $\sin(\alpha-\beta)$ d- $\cos(\alpha+\beta)$

4) ___ = $\sin\alpha\cos\beta + \cos\alpha\sin\beta$
a- $\cos(\alpha+\beta)$ ✓b- $\sin(\alpha+\beta)$ c- $\cos(\alpha-\beta)$ d- $\sin(\alpha-\beta)$

5) ___ = $\cos\alpha\cos\beta - \sin\alpha\sin\beta$.
a✓- $\cos(\alpha+\beta)$ b- $\sin(\alpha+\beta)$ c- $\cos(\alpha-\beta)$ d- $\sin(\alpha-\beta)$

6) ___ = $\frac{\tan\alpha - \tan\beta}{1+\tan\alpha\tan\beta}$ for $\alpha > \beta$.
a✓- $\tan(\alpha-\beta)$ b- $\cot(\alpha-\beta)$ c- $\tan(\alpha+\beta)$ d- $\cot(\alpha+\beta)$

7) ___ = $\frac{\tan(\alpha)+\tan\beta}{1-\tan\alpha\tan\beta}$.
a- $\tan(\alpha-\beta)$ b- $\cot(\alpha-\beta)$ c✓- $\tan(\alpha+\beta)$ d- $\cot(\alpha+\beta)$