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- $\cot(\alpha+\beta)$

8) $\sin\left(\frac{\pi}{2}-\theta\right)=$ ____ a- $\cos\theta$ b- $\sin\theta$ c- $-\sin\theta$ d- $-\cos\theta$

9) $\sin\left(\frac{3\pi}{2}+\theta\right)=$ ____ a- $\cos\theta$ b- $\sin\theta$ c- $-\cos\theta$ d- $-\sin\theta$

10) $\sin\left(\frac{3\pi}{2}-\theta\right)=$ ____ a- $\cos\theta$ b- $\sin\theta$ c- $-\cos\theta$ d- $-\sin\theta$

11) $\sin\theta\cos\theta\sec\theta\operatorname{cosec}\theta=$ ____ a- 1 b- $\tan\theta$ c- $\cot\theta$ d- $\sec\theta$

12) $\cos\left(\frac{\pi}{2}+\theta\right)=$ ____ a- $\cos\theta$ b- $\sin\theta$ c- $-\sin\theta$ d- $-\cos\theta$

13) $\sin(\pi-\theta)=$ ____ a- $\cos\theta$ b- $\sin\theta$ c- $-\cos\theta$ d- $-\sin\theta$

14) $\tan(\pi+\theta)=$ ____ a- $\tan\theta$ b- $\cot\theta$ c- $-\tan\theta$ d- $-\cot\theta$

15) $\cot(\pi+\theta)=$ ____ a- $\cot\theta$ b- $\tan\theta$ c- $-\tan\theta$ d- $-\cot\theta$

16) $\operatorname{cosec}(\pi-\theta)=$ ____ a- $\sec\theta$ b- $\operatorname{cosec}\theta$ c- $-\sec\theta$ d- $-\operatorname{cosec}\theta$

17) $\sec\left(\frac{\pi}{2}-\theta\right)=$ ____ a- $\sec\theta$ b- $\operatorname{cosec}\theta$ c- $-\sec\theta$ d- $-\operatorname{cosec}\theta$

18) $\cot\left(\frac{3\pi}{2}-\theta\right)=$ ____ a- $\tan\theta$ b- $-\tan\theta$ c- $\cot\theta$ d- $-\cot\theta$

19) $\operatorname{cosec}\left(\frac{3\pi}{2}+\theta\right)=$ ____ a- $\operatorname{cosec}\theta$ b- $\sec\theta$ c- $-\sec\theta$ d- $-\operatorname{cosec}\theta$

20) $\sec(2\pi-\theta)=$ ____ a- $\operatorname{cosec}\theta$ b- $-\operatorname{cosec}\theta$ c- $-\sec\theta$ d- $\sec\theta$

21) $\sin(4\pi+\theta)=$ ____ a- $\cos\theta$ b- $\sin\theta$ c- $-\cos\theta$ d- $-\sin\theta$

22) $\cos(6\pi-\theta)=$ ____ a- $\cos\theta$ b- $\sin\theta$ c- $-\sin\theta$ d- $-\cos\theta$

23) $\sin 17^\circ\cos 13^\circ+\cos 17^\circ\sin 13^\circ=$ ____ a- 1 b- 0 c- $\frac{1}{2}$ d- $\frac{\sqrt{3}}{2}$

24) $\frac{\pi}{2}\pm\theta,\ \pi\pm\theta,\ \frac{3\pi}{2}\pm\theta,\ 2\pi\pm\theta$ are called ____ angles.
a- Coterminal b- General c- Allied d- Straight.

25) Co-ratio of Sin is ____ a- Cos b- tan c- Cot d- Sec

26) Co-ratio of Cos is ____ a- Cosec b- Sec c- Cos d- Sin

27) Co-ratio of tan is ____ a- Cos b- Sin c- Cot d- tan

28) Co-ratio of Cot is ____ a- Cot b- tan c- Sin d- Cos

29) Co-ratio of Sec is ____ a- Cosec b- Sin c- Cos d- Sec

30) Co-ratio of Cosec is ____ a- Cosec b- Sec c- Cos d- Sin

31) In any $\triangle ABC$ $\tan(\alpha+\beta)=$ ____
a- $\cot\alpha$ b- $\tan\gamma$ c- $-\tan\gamma$ d- $\cot\frac{\gamma}{2}$

32) ____ $=\frac{\cos 11^\circ+\sin 11^\circ}{\cos 11^\circ-\sin 11^\circ}$ a- $\tan 56^\circ$ b- $\tan 24^\circ$ c- $\tan 34^\circ$ d- $\cot 56^\circ$

33) $\tan(45^\circ+A).\tan(45^\circ-A)=$ ____
a- 1 b- 0 c- $\tan\left(\frac{1-A}{1+A}\right)$ d- $\tan(1+A).\tan(1-A)$

34) ____ $=2\sin\alpha\cos\alpha$ a- $\cos 2\alpha$ b- $\cos\alpha$ c- $\sin 2\alpha$ d- $\sin\alpha$

35) ____ $=\cos^2\alpha-\sin^2\alpha$ a- $\cos 2\alpha$ b- $\sin\alpha$ c- $\sin 2\alpha$ d- $\tan 2\alpha$

36) ____ $=2\cos^2\alpha-1$ a- $\sin 2\alpha$ b- $\cos 2\alpha$ c- $\tan 2\alpha$ d- $\cos\alpha$

37) ____ $=1-2\sin^2\alpha$ a- $\cos\alpha$ b- $\cos 2\alpha$ c- $\tan 2\alpha$ d- $\sin 2\alpha$

38) ____ $=\frac{2\tan\alpha}{1-\tan^2\alpha}$ a- $\sin 2\alpha$ b- $\cos 2\alpha$ c- $\tan 2\alpha$ d- $\tan\alpha$

TAHIR MEHMOOD
M.Sc. Math
0345-6510779

TAHIR MEHMOOD
M.Sc. Math
0345-6510779

39) ____ $= \pm\sqrt{\frac{1+\cos\alpha}{2}}$ a- $\cos\alpha$ ✓b- $\cos\frac{\alpha}{2}$ c- $\sin\frac{\alpha}{2}$ d- $\tan\frac{\alpha}{2}$

40) ____ $= \pm\sqrt{\frac{1-\cos\alpha}{2}}$ a- $\cos\alpha$ b- $\cos\frac{\alpha}{2}$ c✓ $\sin\frac{\alpha}{2}$ d- $\tan\frac{\alpha}{2}$

41) ____ $= 2\sin\frac{\alpha}{2}\cos\frac{\alpha}{2}$ a- $\cos\alpha$ ✓b- $\sin\alpha$ c- $\tan\alpha$ d- $\cos 2\alpha$

42) ____ $= \pm\sqrt{\frac{1-\cos\alpha}{1+\cos\alpha}}$ a- $\tan\alpha$ ✓b- $\tan\frac{\alpha}{2}$ c- $\tan 2\alpha$ d- $\tan 3\alpha$

43) ____ $= 3\sin\alpha - 4\sin^3\alpha$ a- $\sin\alpha$ b- $\sin 2\alpha$ ✓c- $\sin 3\alpha$ d- $\sin 4\alpha$

44) ____ $= 4\cos^3\alpha - 3\cos\alpha$ a- $\sin\alpha$ b- $\cos\alpha$ c- $\cos 2\alpha$ ✓d- $\cos 3\alpha$

45) ____ $= \frac{3\tan\alpha - \tan^3\alpha}{\quad}$ a- $\tan\alpha$ b- $\tan 2\alpha$ c- $\tan\frac{\alpha}{2}$ ✓d- $\tan 3\alpha$

46) $\frac{2\tan\alpha}{1+\tan^2\alpha} = \frac{1-3\tan^2\alpha}{\quad}$ a✓ $\sin 2\alpha$ b- $\cos 2\alpha$ c- $\tan 2\alpha$ d- $\tan 3\alpha$.

47) ____ $= \frac{1-\tan^2\alpha}{1+\tan^2\alpha}$ a- $\sin 2\alpha$ ✓b- $\cos 2\alpha$ c- $\tan 2\alpha$ d- $\tan 3\alpha$

48) $\sin(\alpha+\beta) + \sin(\alpha-\beta) =$ _____.

✓a- $2\sin\alpha\cos\beta$ b- $2\cos\alpha\sin\beta$ c- $2\sin\alpha\cos\alpha$ d- $2\cos\alpha\cos\beta$

49) $\sin(\alpha+\beta) - \sin(\alpha-\beta) =$ _____

a- $2\sin\alpha\cos\beta$ b✓ $2\cos\alpha\sin\beta$ c- $2\cos\alpha\cos\beta$ d- $-2\sin\alpha\cos\beta$

50) $\cos(\alpha+\beta) + \cos(\alpha-\beta) =$ _____

a- $2\sin\alpha\cos\beta$ b- $2\cos\alpha\sin\beta$ ✓c- $2\cos\alpha\cos\beta$ d- $-2\sin\alpha\sin\beta$

51) $\cos(\alpha+\beta) - \cos(\alpha-\beta) =$ _____.

a- $2\sin\alpha\cos\beta$ b- $2\cos\alpha\sin\beta$ c- $2\cos\alpha\cos\beta$ ✓d- $-2\sin\alpha\sin\beta$

52) $\sin P + \sin Q =$ _____.

✓a- $2\sin\left(\frac{P+Q}{2}\right)\cos\left(\frac{P-Q}{2}\right)$ b- $2\cos\left(\frac{P+Q}{2}\right)\sin\left(\frac{P-Q}{2}\right)$ c- $2\cos\left(\frac{P+Q}{2}\right)\cos\left(\frac{P-Q}{2}\right)$ d- $2\sin\left(\frac{P+Q}{2}\right)\sin\left(\frac{P-Q}{2}\right)$

53) $\sin P - \sin Q =$ _____

a- $2\sin\left(\frac{P+Q}{2}\right)\cos\left(\frac{P-Q}{2}\right)$ b✓ $2\cos\left(\frac{P+Q}{2}\right)\sin\left(\frac{P-Q}{2}\right)$ c- $2\cos\left(\frac{P+Q}{2}\right)\cos\left(\frac{P-Q}{2}\right)$ d- $-2\sin\left(\frac{P+Q}{2}\right)\sin\left(\frac{P-Q}{2}\right)$

54) $\cos P - \cos Q =$ _____

a- $2\sin\left(\frac{P+Q}{2}\right)\cos\left(\frac{P-Q}{2}\right)$ b- $2\cos\left(\frac{P+Q}{2}\right)\sin\left(\frac{P-Q}{2}\right)$ c✓ $2\cos\left(\frac{P+Q}{2}\right)\cos\left(\frac{P-Q}{2}\right)$ d- $-2\sin\left(\frac{P+Q}{2}\right)\sin\left(\frac{P-Q}{2}\right)$

55) $\cos P - \cos Q =$ _____

a- $2\sin\left(\frac{P+Q}{2}\right)\cos\left(\frac{P-Q}{2}\right)$ b- $2\cos\left(\frac{P+Q}{2}\right)\sin\left(\frac{P-Q}{2}\right)$ c- $2\cos\left(\frac{P+Q}{2}\right)\cos\left(\frac{P-Q}{2}\right)$ d- ✓$-2\sin\left(\frac{P+Q}{2}\right)\sin\left(\frac{P-Q}{2}\right)$

CHAPTER: 11

(i) Domain of $y = \sin x$ is _____ a- $[0,1]$ b✓ $\mathbb{R}$ c- $[-1,1]$ d- $[-1,0]$

(ii) Range of $y = \sin x$ is _____ a- $[-1,0]$ b- $[0,1]$ ✓c- $[-1,1]$ d- $(-1,1)$

(iii) Domain of $y = \cos x$ is _____. ✓a- $\mathbb{R}$ b- $(0,\infty)$ c- $(-\infty,0)$ d- $[-1,1]$

(iv) Range of $y = \cos x$ is _____. a- $[-1,0)$ b- $(0,1]$ c- $(-1,1)$ ✓d- $[-1,1]$

(v) Period of $y = \sin x$ is _____. ✓a- 2π b- π c- $\pi/2$ d- 4π