QB365 Question Bank Software Study Materials

Trigonometry & Mensuration 50 Important 1 Marks Questions With Answers (Book Back and Creative)

9th Standard

Maths

Total Marks : 50

Multiple Choice Question

50 x 1 = 50

1) if $\sin 30^0 = x$ and $\cos 60^0 = y$, then $x^2 + y^2$ is_____.

(a) $\frac{1}{2}$ (b) 0 (c) sin90° (d) cos90°

2) If $\tan\theta \cot 37^0$, then the value of θ is _____.

(a) 37^0 **(b) 53^0** (c) 90^0 (d) 1^0

3) The value of tan72° tan18° is _____.

(a) 0 **(b) 1** (c) 18^0 (d) 72^0

4) The value of $\frac{2tan\ 30^\circ}{1-tan^2 30^\circ}$ is equal to _____.

(a) $\cos 60^0$ (b) $\sin 60^0$ **(c) $\tan 60^0$** (d) $\sin 30^0$

5) If $2\sin 2\theta = \sqrt{3}$, them the value of θ is _____.

(a) 90^0 **(b) 30^0** (c) 45^0 (d) 60^0

6) The value of $3\sin 70^0 \sec 20^0 + 2\sin 49^0 \sec 51^0$ is _____.

(a) 2 (b) 3 **(c) 5** (d) 6

7) The value of $\frac{1-tan^2 45^0}{1+tan^2 45^0}$ is _____.

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

8) The value of $\text{cosec}(70^0 + \theta) - \sec(20^0 - \theta) + \tan(65^0 + \theta) - \cot(25^0 - \theta)$ is _____.

(a) 0 (b) 1 (c) 2 (d) 3

9) The value of tan 1° tan 2° tan 3°...tan 89° is _____.

(a) 0 **(b) 1** (c) 2 (d) $\frac{\sqrt{3}}{2}$

10) Given that $\sin\alpha = \frac{1}{2}$ and $\cos\beta = \frac{1}{2}$, then the value of $\alpha + \beta$ is _____.

(a) 0^0 **(b) 90^0** (c) 30^0 (d) 60^0

11) The semi-perimeter of a triangle having sides 15 cm, 20 cm and 25 cm is _____.

(a) 60 cm (b) 45 cm **(c) 30 cm** (d) 15 cm

12) If the sides of a triangle are 3 cm, 4 cm and 5 cm, then the area is _____.

(a) $3\ cm^2$ **(b) $6\ cm^2$** (c) $9\ cm^2$ (d) $12\ cm^2$

13) The perimeter of an equilateral triangle is 30 cm. The area is _____.

(a) $10\sqrt{3}\ cm^2$ (b) $12\sqrt{3}\ cm^2$ (c) $15\sqrt{3}\ cm^2$ **(d) $25\sqrt{3}\ cm^2$**

14) The lateral surface area of a cube of side 12 cm is _____.

(a) $144\ cm^2$ (b) $196\ cm^2$ **(c) $576\ cm^2$** (d) $664\ cm^2$

If the lateral surface area of a cube is $600\ cm^2$, then the total surface area is

15) If the lateral surface area of a cube is 600 cm^2, then the total surface area is _____.

(a) 150 cm^2 (b) 400 cm^2 **(c) 900 cm^2** (d) 1350 cm^2

16) The total surface area of a cuboid with dimension 10 cm × 6 cm × 5 cm is _____.

(a) 280 cm^2 (b) 300 cm^2 (c) 360 cm^2 (d) 600 cm^2

17) If the ratio of the sides of two cubes are 2:3, then ratio of their surface areas will be _____.

(a) 4 : 6 **(b) 4 : 9** (c) 6 : 9 (d) 16 : 36

18) The volume of a cuboid is 660 cm^3 and the area of the base is 33 cm^2. Its height is _____.

(a) 10 cm (b) 12 cm **(c) 20 cm** (d) 22 cm

19) The capacity of a water tank of dimensions 10 m × 5 m × 1.5 m is _____.

(a) 75 litres (b) 750 litres (c) 7500 litres **(d) 75000 litres**

20) The number of bricks each measuring 50 cm × 30 cm × 20 cm that will be required to build a wall whose dimensions are 5 m × 3 m × 2 m is _____.

(a) 1000 (b) 2000 (c) 3000 (d) 5000

21) The value of $\frac{tan15^\circ}{cot75^\circ}$ is

(a) cos 90^0 (b) sin 30^0 **(c) tan 45^0** (d) cos 30^0

22) if sin α = $\frac{1}{2}$ and α is a cute, then (3 cosα - 4cos^3 α) is equal to

(a) 0 (b) $\frac{1}{2}$ (c) $\frac{1}{6}$ (d) -1

23) The value of 2tan30° tan60° is

(a) 1 **(b) 2** (c) $2\sqrt{3}$ (d) 6

24) If cos A = $\frac{3}{5}$, them the value of tan A is

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

25) The value of $\frac{sin29^0 31'}{cos60^0 29'}$ is

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

26) The value of cos 90° sin 90° + cos90° sin 90° is _____

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

27) If sin 65° = cos x then the value of x is _____

(a) 65° (b) 35° **(c) 25°** (d) 90°

28) If cosec x = $\frac{17}{8}$ then cos x _____

(a) $\frac{17}{8}$ **(b)** $\frac{15}{17}$ (c) $\frac{8}{17}$ (d) 1

29) If sin $\theta = \frac{4}{5}$ then the value of θ is _____

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

30) The value of $\frac{2\tan 30^\circ}{1+\tan^2 30^\circ}$ is _____

(a) $\frac{1}{2}$ (b) $\frac{1}{\sqrt{2}}$ (c) $\frac{\sqrt{3}}{2}$ (d) 1

31) If sin θ = cosθ then the value of is θ= _____

(a) 0° (b) 30° (c) 45° (d) 60°

32) If A = 30° then the value of $1 - 2\sin^2 A$ _____

(a) $\frac{\sqrt{3}}{2}$ **(b)** $\frac{1}{2}$ (c) $\frac{1}{4}$ (d) 1

33) If cos 2A = sin 48° then the possible value of A is _____

(a) 24° (b) 42° **(c) 21°** (d) 12°

34) Given $\sin x^{\circ} = \cos 50^{\circ}, \cos x^{0}$ is equal to _____

(a) $\sin 50^{\circ}$ (b) $\sin 40^{\circ}$ (c) $\cos 40^{\circ}$ (d) $\cos 50^{\circ}$

35) The value of $\sin 30^{\circ} \cos 60^{\circ} + \cos 30^{\circ} \sin 60^{\circ}$ is _____

(a) $\frac{1}{2}$ (b) $\frac{\sqrt{3}}{2}$ (c) $\frac{\sqrt{3}}{4}$ **(d) 1**

36) If x is an acute angle and $\cos x = \sin 39^{\circ}$ then x _____

(a) 39° **(b) 51°** (c) 141° (d) 78°

37) If sin x = cos 48° then x is _____

(a) 42° (b) 24° (c) 48° (d) 84°

38) The value of $\frac{\operatorname{cosec}_f A}{\sec A}$ is equal to _____

(a) tan A **(b) cot a** (c) cos A (d) sin A

39) A kite flying at a height of 100 m from the ground is attached to a string inclined at 60° to the horizontal, then length of the string is _____

(a) $\frac{100}{\sqrt{3}}$ m (b) $100\sqrt{3}$ (c) $200\sqrt{3}$ m **(d)** $\frac{200}{\sqrt{3}}$ m

40) The value of $\cos \frac{\pi}{2} \sin \frac{\pi}{2}$ _____

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

41) The value of $(1 + \sin 45^{\circ})(1 - \sin 45^{\circ}) =$ _____

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

42) The value of $\frac{\sin 60^{\circ}}{\sin 30^{\circ}}(1 + \cos 60^{\circ})$ is _____

(a) $\sqrt{3} + \frac{\sqrt{3}}{2}$ (b) $\frac{1}{\sqrt{3}} + \frac{1}{2}$ (c) $\frac{5}{\sqrt{2}} + \frac{1}{2}$ (d) $1 + \frac{1}{\sqrt{2}}$

43) The value of $(\tan 7^{\circ})(\tan 23^{\circ})(\tan 60^{\circ})(\tan 67^{\circ})$(tan 83°) is _____

(a) 0 (b) 7 (c) 1 **(d)** $\sqrt{3}$

44) Using trigonometric tables the value of sin 72°32' is _____

(a) 0.9537 **(b) 0.9539** (c) 1.9539 (d) -1.9539

45) Using trigonometric tables tan $\tan(51^{\circ}15') + \cot(25^{\circ}18')$ is _____

(a) 1.2460 (b) 0.1246 (c) 2.1155 **(d) 3.3615**

46) The area of a triangle whose sides are a, b and c is _____

(a) $\sqrt{(s-a)(s-b)(s-c)}$sq. units (b) $\sqrt{s(s-a)(s-b)(s-c)}$sq. units (c) $\sqrt{s(s \times a)(s \times b)(s \times c)}$sq. units

(d) $\sqrt{s(s-a)(s-b)(s-c)}$ **sq. units**

47) A solid having six equal square faces is called a _____

(a) cube (b) cuboid (c) square (d) rectangle

48) 1 litre = _____

(a) $10\ \text{cm}^3$ (b) $100\ \text{cm}^3$ **(c)** $1000\ \text{cm}^3$ (d) 1000 litres

49) Find the cost for filling a pit of dimensions 5m × 2m × 1 m with soil if the rate of filling is Rs. 270 per cu.m _____

(a) Rs. 10 (b) Rs. 270 **(c) Rs. 2700** (d) Rs. 27000

50) The product of the perimeter of the base and the height is _____

(a) LSA of cuboid (b) TSA of cuboid (c) volume of cuboid (d) None of these