Question Bank

1]Evaluate

2] Value of tan[+cot[ is....

3] If tan A = 1/2 then the value of SinA if angle A lies in the 3rd quadrant is....

4]Tangential form of COS 2θ is.....

5] If tan]= then value of cosec A becomes..

6] Evaluate =..

7]Evaluate =....

8]Principal value of cos{ }

9] Evaluate + ) =....

10]Find x if =

11] Find x if

12] If 2 sin.cos= sin A +sin B then value of A and B is...

13]If sinA = 1/2 find the value of sin3A.

14]Evaluate

15] as well as θ and are called......[ans. allied angles]

16] Find mean deviation of the data. 1,2,3,4,5

17]Standard deviation is given by the formula.....

18] Coefficient of variation of distribution is 75% and standard deviation

is 24,what is its mean.

19] Calculate the range and coefficient of range of the following

given data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| class intervals | 40 -59 | 60-79 | 80-99 | 100- 119 | 120-139 |
| Friquency | 50 | 300 | 500 | 200 | 60 |

20] The two sets of observations are given below

|  |  |  |
| --- | --- | --- |
| set 1 | mean=82.5 | S.D.= 7.3 |
| set 2 | mean=48.75 | S.D.= 8.35 |

which of two is more consistent?

21]coefficient of variance is given by the formula..

23] Find std. deviation of the data 1, 2, 3

24] If the volume of a room is 792 cubic meter and the area of the floor is 132 cubic meter. Find the height of the room.

25] The side of a cube is 60 cm. Find the total surface area of the cube.

26] Volume of the cylinder is 462 cubic cm. and its diameter is 7 cm. Find the height of the cylinder.

27] Find volume of a hemisphere having radius 2meter.

28] Evaluate sin[sin[θ =..... ans[cosθ]

29]Evaluate sin sin=......

30 Evaluate ans=tan5θ

31]Evaluate + = ..... ans=

32]complete the formula

+ =..... for x˃ 0,y˃0 and xy< 1

33]find principle value of cos[] ans cos[] = cos60 =1/2

34]find principle value of 1] =

2]sin[

3]cos [ ]

35]. ans..

36]If sin A = 1/2 find sin3A

37]If cosA = 0.4 find cos[3A] ans -0.944

38]Find value of tan[]+ sin[+sin[ =

39]If A and B both obtuse angle [means lie in 2nd quadrant]and sinA=5/13

cos B = -4/5. find cosA and sinB.

40]If tan A = 2/3 and tanB = 1/2 find tan[A + B]

41]Find range and coefficient of range

a]40,72,83,57,94,49,65,79,87,64

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| xi | 1 | 3 | 5 | 7 | 9 |
| fi | 14 | 23 | 27 | 21 | 15 |

b]

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| c.i | 11-20 | 21-30 | 31-40 | 41-50 |
| fi |  |  |  |  |

c]

42]Find mean deviation about mean

a] 3,6,7,5,10,12,15,18 ans..4.25

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| marks | 3 | 4 | 5 | 6 | 7 | 8 |
| no. of students | 1 | 3 | 7 | 5 | 2 | 2 |

b]

ans=1.05

43]Find std.deviation , variance, coefficient of std.deviation,coefficient of variance.

a] 1,2,3,4,5

|  |  |  |  |
| --- | --- | --- | --- |
| xi | 5 | 10 | 15 |
| fi | 1 | 2 | 3 |

b]

44] which one set is more consistent..

|  |  |  |
| --- | --- | --- |
| sets | average | std.deviation |
| set 1 | 35 | 40 |
| set 2 | 58 | 16 |

a]

|  |  |  |
| --- | --- | --- |
| sets | average | std.deviation |
| set 1 | 82.5 | 48.75 |
| set 2 | 7.3 | 8.35 |

b]

45] 1) Find the area of the ring between two concentric circles

whose circumferences are 77cm. and 55cm. ans....231 sq.cm

46] 2) Find the area of a triangular plot whose base is 17.2cm

& height 19.60 cm ans..168.36

47] Find the area of a triangle whose sides are 4 cm, 6 cm

and 8 cm. ans sq cm

48] Area of rhombus is 336 cmsq & one diagonal is 14 cm. Find the length of the side........ans 25

49] A square grassy plot is of side 100 metre. It has a gravel path 10 metres wide all round it on the inside. Find the area of the path.

Ans:

Given that side of square grassy plot is 100 metres.

The gravel path is of 10 metres wide on the inside

Area of path =Area of square grassy plot −Area of inner square grassy plot

⇒ Area of path = [100] sq. − [80]sq

⇒ Area of path = 3600 m.sq.

50]solve the following

1) The two parallel sides of a trapezium measures 50 m & 20 m respectively. Its altitude is 50m. Find its area

2) The adjacent sides of a parallelogram are 12 cm and 10 cm. One diagonal is 8 cm. Find the area of the parallelogram.

3) Diagonals of a kite are 12cm and 13 cm in length. Find the area of the kite.

51] The length, breadth and height of a cuboid are 8 cm, 11 cm and 15 cm respectively. Find the total surface area.

Ans: We know S.A. of cuboid = 2(lb + bh + hl)

2) A cone has a circular base of radius 10 cm and a slant height of 30 cm. Calculate the surface area.

Ans: Given: r = 10 cm l = 30 cm

We know, total surface area of cone = πrl + πr2 = πr(l + r)

⇒ T.S.A. =[22/7][× 10× (30+ 10)]

⇒ T.S.A. = 1257.14 cm2

52] The radius of cone is 7 cm and slant height is 25 cm. Find volume of the cone ans 12.3

53] ) Find the volume of a sphere whose surface area is 616 sq.cm. ans...1437.33

54] A solid metallic sphere of radius 30 cm is melted to make solid cylinders of radius 10 cm and height 6 cm each. How many such cylinders can be

made?

ans key....radius of sphere=30 cm and volume of sphere=4/3.π.=....

radius of cylinder r=10 and height =6 cm

volume of cylinder= π.h=....

no. of cylinders=volume of sphere/ volume of cylinder =.....ans 60.

55] 1) The volume of a cylinder is 38016 cm3 and height is 21 cm. Find the curved surface area.

ans.3168

56] In exchange for a square plot of land, one of whose side is 25 metres, a man want to buy a rectangular plot 50 metres wide and of the same area as

the square plot. Determine the length of the rectangular plot. [ans..12.5 m]

57]A tent is in the form of right circular cylinder surmounted by a cone .The diameter of the cylinder is 24 ft. The height of cylindrical portion is 11ft. .While the vertex of the cone is 16 ft.above the ground.Find area of the canvas required for the test. ans1320 sq.ft

58]A right pyramid of height 12cm, stands on square base whose side is 10cm find slant height and volume of pyramid.

ans 13 and 400