Mensuration Questions for SSC CPO Set-2 PDF

Instructions
For the following questions answer them individually

Question 1

The circumference of a circle is 88 cm. Find its radius (in cm).

A 28

B 15

C 14

D 30

Answer: C

Explanation:
Let radius of circle = r cm

=> Circumference = $2\pi r = 88$

=> $2 \times \frac{22}{7} \times r = 88$

=> $r = 88 \times \frac{7}{44}$

=> $r = 2 \times 7 = 14$ cm

=> Ans - (C)

Question 2

The volume of a hemisphere is 19404 cm3. Find its diameter (in cm).

A 42

B 21

C 84

D 63

Answer: A

Explanation:
Let radius of hemisphere = r cm

Volume of hemisphere = $\frac{2}{3} \times \pi r^3$

=> $\frac{2}{3} \times \frac{22}{7} \times (r)^3 = 19404$

=> $(r)^3 = 19404 \times \frac{21}{44}$

=> $(r)^3 = 441 \times 21$

=> $r = \sqrt[3]{21 \times 21 \times 21} = 21$ cm

$\therefore$ Diameter = $2 \times 21 = 42$ cm

=> Ans - (A)

Question 3

If the perimeter of a semicircle is 36 cm, then find its area (in cm^2)

A 154

B 35

C 77

D 70

Answer: C

Explanation:

Let radius of semi circle = r cm

=> Perimeter of semi circle = $\pi r + 2r = 36$

=> $r(\frac{22}{7} + 2) = 36$

=> $r(\frac{22+14}{7}) = 36$

=> $r = 36 \times \frac{7}{36} = 7$ cm

$\therefore$ Area of semi-circle = $\frac{1}{2}\pi r^2$

$= \frac{1}{2} \times \frac{22}{7} \times (7)^2$

$= 11 \times 7 = 77\ cm^2$

=> Ans - (C)

SSC CPO Free Mock Test

Question 4

The lengths of the two diagonals of a rhombus are 7 cm and 24 cm. Find the length of its perimeter (in cm).

A 25

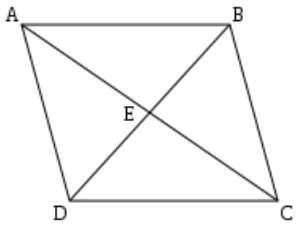
B 100

C 75

D 50

Answer: D

Explanation:



Given : ABCD is a rhombus and AC = 24 cm and BD = 7 cm

To find : Perimeter of ABCD

Solution : Diagonals of a rhombus bisect each other at right angle.

=> BE = $\frac{7}{2} = 3.5$ cm and AE = $\frac{24}{2} = 12$ cm

Thus, in right $\triangle$ AEB,

=> $(AB)^2 = (AE)^2 + (BE)^2$

=> $(AB)^2 = (12)^2 + (3.5)^2$

=> $(AB)^2 = 144 + 12.25 = 156.25$

=> $AB = \sqrt{156.25} = 12.5$ cm

∴ Perimeter of rhombus ABCD = $4 \times 12.5 = 50$ cm

=> Ans - (D)

Question 5

Find the total surface area (in cm^2) of a right circular cone of diameter 21 cm and slant height 11 cm.

A 467.5

B 384

C 724

D 709.5

Answer: D

Explanation:

Radius of cone, $r = \frac{21}{2} = 10.5$ cm and slant height, $l = 11$ cm

Total surface area of cone = $\pi r(l + r)$

= $\frac{22}{7} \times 10.5 \times (10.5 + 11)$

= $33 \times 21.5 = 709.5\ cm^2$

=> Ans - (D)

Question 6

Calculate the area (in cm^2) of a circle of radius 17.5 cm.

A 1925

B 962.5

C 809.5

D 1619

Answer: B

Explanation:

Radius of circle = $r = 17.5$ cm

=> Area = πr^2

= $\frac{22}{7} \times 17.5 \times 17.5$

= $22 \times 2.5 \times 17.5 = 962.5\ cm^2$

=> Ans - (B)

Question 7

The area of an equilateral triangle is 25√3 cm^2. Find its side (in cm).

A 10

B 5

C 20

D 30

Answer: A

Explanation:

Let side of equilateral triangle = s cm

=> Area = $\frac{\sqrt{3}}{4} s^2 = 25\sqrt{3}$

=> $\frac{s^2}{4} = 25$

=> $s^2 = 25 \times 4 = 100$

=> $s = \sqrt{100} = 10$ cm

=> Ans - (A)

Question 8

Find the total surface area $(incm^2)$ of a cuboid of length, breadth and height of 10.5 cm, 8 cm and 9 cm respectively.

A 607

B 767

C 769

D 501

Answer: D

Explanation:

Length, $l = 10.5$ cm, breadth, $b = 8$ cm and height, $h = 9$ cm

Total surface area of cuboid = $2(lb + bh + hl)$

= $2[(10.5 \times 8) + (8 \times 9) + (9 \times 10.5)]$

= $2 \times (84 + 72 + 94.5)$

= $2 \times 250.5 = 501\ cm^2$

=> Ans - (D)

Question 9

The length of the diagonal and the breadth of a rectangle is 26 cm and 10 cm respectively. Calculate its area $(incm^2)$

A 480

B 96

C 240

D 192

Answer: C

Explanation:

Let the length of rectangle = l cm and breadth, $b = 10$ cm

=> Diagonal, $d^2 = l^2 + b^2$

=> $l^2 = (26)^2 - (10)^2$

=> $l^2 = 676 - 100 = 576$

=> $l = \sqrt{576} = 24$ cm

$\therefore$ Area = $24 \times 10 = 240\ cm^2$

=> Ans - (C)

Question 10

Find the total surface area (in cm²) of a right circular cylinder of diameter 42 cm and height 14 cm.

A 4488

B 4250

C 4010

D 4620

Answer: D

Explanation:

Height of cylinder, $h = 14$ cm and radius, $r = \frac{42}{2} = 21$ cm

Total surface area of cylinder = $2\pi r(r + h)$

= $2 \times \frac{22}{7} \times 21 \times (21 + 14)$

= $132 \times 35 = 4620\ cm^2$

=> Ans - (D)

Daily Current Affairs PDF for SSC

SSC CHSL Previous Question papers (download pdf)

SSC CHSL Free Mock Test

SSC CGL Free Mock Test (Latest Pattern)

SSC CGL Previous Papers (DOWNLOAD PDF)

SSC CGL Tier-2 Previous Papers PDF

SSC Stenographer Previous Question papers (download pdf)

SSC Stenographer Free Mock Test

SSC Exam Free Videos (Youtube)