



Mensuration Questions for SSC CPO Set-2 PDF

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in any retrieval system of any nature without the permission of cracku.in, application for which shall be made to support@cracku.in

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

$$\Rightarrow \text{Circumference} = 2\pi r = 88$$

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

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

$$\Rightarrow r = 2 \times 7 = 14 \text{ cm}$$

\Rightarrow 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

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

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

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

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

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

$$\therefore \text{Diameter} = 2 \times 21 = 42 \text{ cm}$$

\Rightarrow Ans - (A)

Question 3

If the perimeter of a semicircle is 36 cm, then find its area (in cm²)

- A 154
- B 35

C 77

D 70

Answer: C

Explanation:

Let radius of semi circle = r cm

$$\Rightarrow \text{Perimeter of semi circle} = \pi r + 2r = 36$$

$$\Rightarrow r\left(\frac{22}{7} + 2\right) = 36$$

$$\Rightarrow r\left(\frac{22+14}{7}\right) = 36$$

$$\Rightarrow r = 36 \times \frac{7}{36} = 7 \text{ cm}$$

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

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

$$= 11 \times 7 = 77 \text{ cm}^2$$

\Rightarrow 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

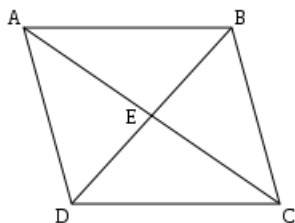
B 100

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.

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

Thus, in right $\triangle AEB$,

$$\Rightarrow (AB)^2 = (AE)^2 + (BE)^2$$

$$\Rightarrow (AB)^2 = (12)^2 + (3.5)^2$$

$$\Rightarrow (AB)^2 = 144 + 12.25 = 156.25$$

$$\Rightarrow AB = \sqrt{156.25} = 12.5 \text{ cm}$$

∴ 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 = $\pi r(l + r)$

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

$$= 33 \times 21.5 = 709.5 \text{ cm}^2$$

⇒ 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

$$\Rightarrow \text{Area} = \pi r^2$$

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

$$= 22 \times 2.5 \times 17.5 = 962.5 \text{ cm}^2$$

⇒ Ans - (B)

SSC CPO Previous Question papers (download pdf)

Question 7

The area of an equilateral triangle is $25\sqrt{3} \text{ cm}^2$. Find its side (in cm).

A 10

B 5

C 20

D 30

Answer: A

Explanation:

Let side of equilateral triangle = s cm

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

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

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

$$\Rightarrow s = \sqrt{100} = 10 \text{ cm}$$

\Rightarrow Ans - (A)

Question 8

Find the total surface area (in cm^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 = $2(lb + bh + hl)$

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

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

$$= 2 \times 250.5 = 501 \text{ cm}^2$$

\Rightarrow 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 (in cm^2)

A 480

B 96

C 240

D 192

Answer: C

Explanation:

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

$$\Rightarrow \text{Diagonal, } d^2 = l^2 + b^2$$

$$\Rightarrow l^2 = (26)^2 - (10)^2$$

$$\Rightarrow l^2 = 676 - 100 = 576$$

$$\Rightarrow l = \sqrt{576} = 24 \text{ cm}$$

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

\Rightarrow Ans - (C)

Free SSC Study Material (18,000 Solved Questions)

Question 10

Find the total surface area (in cm^2) 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 = $2\pi r(r + h)$

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

$$= 132 \times 35 = 4620 \text{ cm}^2$$

\Rightarrow Ans - (D)

SSC CPO Free Mock Test

SSC CPO Previous Question papers (download pdf)

Free SSC Study Material (18,000 Solved Questions)

SSC Free Preparation App

Download SSC General Knowledge PDF

Daily Free SSC Practice Set

18,000 SSC Free Solved Questions (Study Material)

1500 + Free Must Solved SSC Questions (With Solutions)

Latest Job Updates on Telegram - Join here

Daily Free Online GK tests

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)