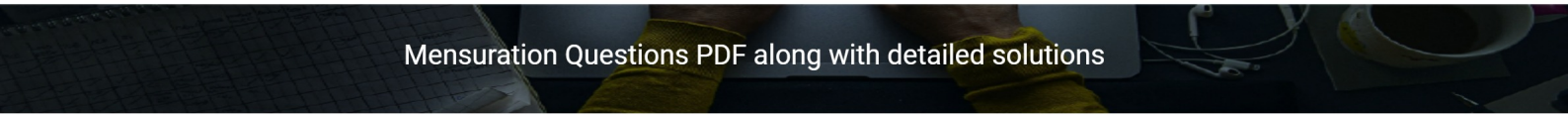

Mensuration questions are a common type of questions regularly asked in competitive exams. These questions carry a weightage of 1-2 questions(2-4 marks) in SSC exams and 1-2 questions(1-2 marks) bank exams. To perform well in competitive exams, your mensuration concepts should be clear.

Here are some tips for solving Mensuration questions: Familiarize yourself with formulas for various 2D and 3D shapes, Visualize shapes to better understand relationships between dimensions and Work on a range of problems involving different shapes to enhance skills.

So, we have attached 10 questions of Mensuration for you to practice with. You should aim to solve these questions in less than half a minute for each.

Practice Questions on Mensuration

You can also download the Mensuration questions and answers pdf. Just click on the **Download PDF** button. So let's start with the very first question.

Q:1 A rectangular carpet has area 162.5 m^2 and the perimeter is 70 m. Then find the length of diagonal of the carpet.

1. 35 m

2. 33 m

3. 30 m

4. 25.5 m

(**Difficulty:** 2, **Estimated Time:** 15 Seconds) This was an easy one. Did get it right?

Q:2 A cuboid of dimension 19 × 19 × 10 cm^3 and two spheres of diameter 21 cm are melted together to form 26 small cubes. Find the surface area of cube (in cm^2).

1. 384

2. 453

3. 460

4. 342

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) This was a simple one, don't get stuck in unnecessary calculations!

Q:3 Area of the circle of diameter 28 cm is equal to the perimeter of the rectangle in magnitude whose length is 8 cm more than its breadth. Find the area of the rectangle.

1. 27300 cm^2

2. 234500 cm^2

3. 23700 cm^2

4. 21500 cm^2

(**Difficulty:** 2, **Estimated Time:** 15 Seconds) A question of seconds.....

Q:4 A copper wire is bent to form a rectangle of length 12 cm and breadth 10 cm. If the copper wire is rebent to form a semicircle, then its radius will be?

1. 8.56 cm

2. 9.24 cm

3. 7.89 cm

4. 6.33 cm

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) It is not an easy one but I think now you're prepared for it.

Q:5 The area of the square is 4/5th of the area of a rectangle. If the sides of the rectangle are 18 cm and 24 cm, then what is the area of the square?

1. 317.4 cm^2

2. 345.6 cm^2

3. 365.8 cm^2

4. 377.0 cm^2

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) We're halfway through. Have you got all your questions correct so far?

Q:6 If the perimeter of a rhombus and the length of one of its diagonals are 100 cm and 48 cm respectively, what is the area of the rhombus? (in cm^2)

1. 336

2. 432

3. 528

4. 672

(**Difficulty:** 2, **Estimated Time:** 15 Seconds) Should we raise the level of questions?

Q:7 What is the area in cm^2 of the equilateral triangle whose side is equal to the diagonal of the rectangle of sides 9cm and 12cm?

1. 109.1

2. 97.3

3. 97.42

4. 89.25

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) Try using short tricks to save time..

Q:8 The length and breadth of a rectangle are in a ratio 2 : 1 and the perimeter of the rectangle is 48 cm. Find the area of the rectangle.

1. 128 cm^2

2. 256 cm^2

3. 64 cm^2

4. 144 cm^2

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) This was a question of seconds.....

Q:9 The dimension of the floor of a room is 6 m × 4 m and the height of the room is 3 m. What is the cost of painting the walls of the room at Rs 320/m^2?

1. Rs 14800

2. Rs 16400

3. Rs 18400

4. Rs 19200

(**Difficulty:** 3, **Estimated Time:** 20 Seconds) Try decreasing time in your calculations

Q:10 The breadth and length of a rectangle are in the ratio 2 : 3. Also, if numerical values of the breadth, length, and area of the rectangle are in a continued proportion, then find the area of the rectangle.

1. 3.375

2. 5.4

3. 33.75

4. Data Insufficient

(**Difficulty:** 2, **Estimated Time:** 15 Seconds) Did you guess them all correctly?

Answer Key

Let's check out your score in this test.

1. (3)	**2.** (1)	**3.** (3)	**4.** (1)	**5.** (2)
6. (1)	**7.** (3)	**8.** (1)	**9.** (4)	**10.** (1)

Comment below your score, considering each question has 1 mark only. If you scored 8 to 10, congratulations! You are one step closer to selection. If you have scored 5 to 8 marks, then you are doing well, keep it up. If you have scored less than 5 marks then you need to work a little harder on this subject. But don't worry, we are here to help you master the subject.

Let's check the answers and solutions and try to find out what went wrong.

Answers and Solutions

Q:1 The correct answer is **option 3** i.e. **30 m.**

Formula:

Perimeter of rectangle = 2(l + b)

Area of rectangle = (l × b)

Diagonal length of rectangle = $\sqrt{(l^2 + b^2)}$

Given,

⇒ 2 (l + b) = 70 m

So, (l + b) = 35 m

⇒ (l × b) = 162.5 m

Diagonal length of rectangle = $\sqrt{(l^2 + b^2)}$

⇒ $\sqrt{[(l + b)^2 - 2lb]}$

⇒ $\sqrt{[(35)^2 - 2(162.5)]}$

⇒ $\sqrt{[1225 - 325]}$

⇒ √900

⇒ 30 m

Hence, the length of the diagonal of the rectangular carpet is 30 m

Q:2 The correct answer is **option 1** i.e. **384.**

Volume of cuboid = 19 × 19 × 10 = 3610

Volume of 2 spheres = (2 × (4/3) × (22/7) × 21 × 21 × 21) ÷ 8 = 9702

Let the side of small cube = a cm

Hence, 26 a^3 = 9702 + 3610 = 13312

⇒ a = 8

So, Curved surface area of cube = 6 × a^2 = 6 × 64 = 384 cm^2

Q:3 The correct answer is **option 3** i.e. **23700 cm^2.**

Area of Circle = π × r^2, Where r = Radius of the circle = 14 cm

Area = π × 14 × 14 = 22/7 × 14 × 14 = 616 cm^2

But this is equal to the perimeter of the rectangle in magnitude

Hence, Perimeter of the rectangle = 2 × (L + B) = 616 cm , Where L = Length, B = Breadth

And L = (B + 8)

So, 2 × (L + B) = 616

⇒ B + 8 + B = 308

⇒ 2B = 300 = B = 150 and L = 158

Hence,

Area = L × B = 150 × 158 = 23,700 cm^2

Q:4 The correct answer is **Option 1** i.e. **8.56 cm**

Let us assume the radius of the semicircle be r

Perimeter of the rectangle = 2(12 + 10) = 44 cm

Circumference of the semicircle = (π × r) + 2r

44 = ((3.14 + 2) × r

r = 44/5.14 = 8.56 cm

Q:5 The correct answer is **Option 2** i.e. **345.6 cm^2**.

Given:

Area of square = 4/5(Area of Rectangle) and,

Sides of rectangle = 18 cm and 24 cm

We know that,

Area of rectangle = length × breadth

Area of square = $Side^2$

So, Area of square = 4/5(Area of Rectangle)

⇒ $Side^2$ = 4/5 × 18 × 24

⇒ $Side^2$ = 345.6

Area of the square = 345.6cm^2

Q:6 The correct answer is **option 1** i.e. **336**

If perimeter of rhombus = 100 cm

Side = 100/4 = 25 cm

Let the other diagonal be 2x cm

$Side^2$ = Sum of squares of lengths of semi-diagonals

$25^2 = (48/2)^2 + (2x/2)^2$

⇒ $25^2 = 24^2 + x^2$

⇒ x = 7 cm

Length of other diagonal = 14 cm

Area of rhombus = 1/2 × Product of lengths of diagonals

⇒ 1/2 × 48 × 14

⇒ 336 cm^2

Q:7 The correct answer is **option 3** i.e. **97.42cm^2**

Diagonal of a rectangle = $\sqrt{(l^2 + b^2)}$

⇒ $\sqrt{(9^2 + 12^2)}$

⇒ 15 cm

Area of the equilateral triangle = $(\sqrt{3}/4)a^2$

Where 'a' is the length of the side of the triangle,

⇒ $(\sqrt{3}/4)(15)^2$

⇒ $225\sqrt{3}/4 = 56.25\sqrt{3}$ $[\sqrt{3} = 1.732]$

⇒ 56.25 × 1.732 = 97.42 cm^2

Q:8 The correct answer is **Option 1** i.e. **128 cm^2**

Area of rectangle = Length × Breadth

Perimeter of rectangle = 2(Length + Breadth)

Let, the length is 2x and the breadth is x (since the ratio is 2 : 1).

Now given,

⇒ 48 = 2(2x + x)

⇒ 48 = 6x

⇒ x = 8

So, Length = 16 cm and Breadth = 8 cm

Area = 16 × 8 = 128 cm^2

Q:9 The correct answer is **Option 2** i.e. **Rs 19200.**

Lateral surface = 2h (l + b)

⇒ 2 × 3 × (6 + 4) = 60 m^2

Cost of painting = 60 × 320

⇒ Rs 19200

Q:10 The correct answer is **option 1** i.e. **3.375**

Let the breadth, length of the rectangle be 2x and 3x units, then the area be $6x^2$.

From the other condition, we get,

⇒ $2x/3x = 3x/6x^2$

⇒ $x = 3/4$

Therefore, area of rectangle = $6x^2 = 6\ (9/16) = 3.375$ sq. units