General Instructions:

1. This question paper consists of **15 multiple-choice questions (MCQs)**.

2. Each question carries **1 mark**. The maximum marks for this test are **15**.

3. The total time allowed to complete this test is **20 minutes**.

4. All questions are compulsory.

5. Each question has **four options (A), (B), (C), and (D)**. Only one option is correct.

6. Students must choose the **most appropriate option** for each question.

7. No marks will be deducted for incorrect answers.

8. Calculators and other electronic devices are **not permitted**.

9. Rough work should be done neatly in the space provided (if any).

10. Read each question carefully before answering.

General Instructions:

1. This paper contains 15 Multiple Choice Questions (MCQs).

2. Each question carries 1 mark.

3. Note the units (m, cm, mm) carefully before solving.

Q.1 A square and a rectangle have equal areas. If the side of the square is 24 cm and the length of the rectangle is 32 cm, find the perimeter of the rectangle.

(a) 100 cm

(b) 90 cm

(c) 110 cm

(d) 80 cm

Q.2 A path 1 m wide is built inside a square park of side 30 m along its sides. Find the cost of planting grass in the remaining part of the park at Rs.5 per sq. m.

(a) Rs.4,500

(b) Rs.3,920

(c) Rs.3,645

(d) Rs.4,000

Q.3 If the height of a triangle is decreased by 10% and its base is increased by 10%, what is the percentage change in its area?

(a) No change

(b) 1% increase

(c) 1% decrease

(d) 2% decrease

Q.4 The area of a parallelogram is 72 sq. cm. If its base is twice its height, find the height of the parallelogram.

(a) 6 cm

(b) 12 cm

(c) 8 cm

(d) 4 cm

Q.5 A circular track has an inner circumference of 440 m and an outer circumference of 528 m. Find the width of the track.

(a) 10 m

(b) 14 m

(c) 7 m

(d) 12 m

Q.6 How many times will a wheel of radius 35 cm rotate to cover a distance of 1.1 km?

(a) 500

(b) 400

(c) 600

(d) 1000

Q.7 The diagonals of a rhombus are 16 cm and 30 cm. Find its perimeter.

(a) 60 cm

(b) 64 cm

(c) 68 cm

(d) 72 cm

Q.8 Find the area of a circle whose circumference is equal to the perimeter of a rectangle of sides 15 cm and 7 cm.

(a) 154 sq. cm

(b) 616 sq. cm

(c) 308 sq. cm

(d) 77 sq. cm

Q.9 A metallic cuboid of dimensions 16 cm × 8 cm × 4 cm is melted and recast into a cube. Find the surface area of the new cube.

(a) 256 sq. cm

(b) 384 sq. cm

(c) 512 sq. cm

(d) 320 sq. cm

Q.10 A rectangular tank is 2 m long, 1.5 m wide and 1 m high. If it is $\frac{3}{4}$ full of water, find the volume of water in liters.

(a) 2250 liters

(b) 3000 liters

(c) 1500 liters

(d) 2000 liters

Q.11 The perimeter of a semi-circle is 108 cm. Find its radius.

(a) 14 cm

(b) 21 cm

(c) 28 cm

(d) 35 cm

Q.12 If the ratio of the volumes of two cubes is 1 : 64, find the ratio of their edges.

(a) 1 : 4

(b) 1 : 8

(c) 1 : 16

(d) 1 : 2

Q.13 A rectangle of length 12 cm and breadth 10 cm has a hole of radius 3.5 cm cut out of it. Find the area of the remaining sheet.

(a) 81.5 sq. cm

(b) 82.5 sq. cm

(c) 80.5 sq. cm

(d) 78.5 sq. cm

Q.14 The base of a triangle is increased by 20%. By what percentage should the height be reduced so that the area remains the same?

(a) 20%

(b) $16\frac{2}{3}\%$

(c) 25%

(d) 15%

Q.15 A box with an open top is made of wood 2 cm thick. Its external dimensions are 24 cm × 14 cm × 10 cm. Find the volume of wood used.

(a) 1760 cu. cm

(b) 1600 cu. cm

(c) 1520 cu. cm

(d) 1840 cu. cm

— End of Question Paper —