

## CDS Exam 2016 Mathematics Sample Paper Part – 5

47. 66 cubic centimetres of silver is drawn into a wire 1 mm in diameter. The length of the wire in metres will be:

- (A) 84
- (B) 90
- (C) 168
- (D) 336

48. A boat having a length 3m and breadth 2 m is floating on a lake. The boat sinks by 1cm when a man gets on it. The mass of the man is:

- (A) 12 KG
- (B) 60 KG
- (C) 72 KG
- (D) 96 KG

49. A metallic sheet is of rectangular shape with dimensions 48 m x 36m. From each of its corners, a square is cut off so as to make an open box. If the length of the square is 8 m, the volume of the box (in  $m^3$ ) is

- (A) 4830
- (B) 5120
- (C) 6420
- (D) 8960

50. What is the total surface area of a right circular cone of height 14cm and base radius 7 cm?

- (A) 344.35  $cm^2$
- (B) 462  $cm^2$
- (C) 49835  $cm^2$
- (D) None of these

51. The legs of a right triangle measure 8 and 15. If a leg and hypotenuse of another right triangle are 8 and 17 respectively, these two right triangles are congruent.

(A) True

(B) False

52. At a certain time of the day, the shadow of a 5' boy is 8' long. The shadow of a nearby flagpole at this same time is 28' long. How tall is the flagpole?

(A) 8.5'

(B) 16'

(C) 17.5'

(D) 20'

53. A frisbee lands on the top of a 15' concrete wall. To retrieve the frisbee, a ladder must be placed such that the foot of the ladder is 6 feet from the base of the wall and the top of the ladder rests on the top of the wall. Which choice is the shortest length ladder that can be used?

(A) 15

(B) 16

(C) 17

(D) 1

54. The ratio between the length and the breadth of a rectangular park is 3: 2. If a man cycling the boundary of the park at the speed of 12 km/hr completes one round in 8 minutes, then the area of the park (n sq. m) is:

(A) 15360

(B) 153600

(C) 30720

(D) 307200

55. A rectangular park 60 m long and 40 m wide has two concrete crossroads running in the middle of the park and rest of the park has been used as a lawn. If the area of the lawn is 2109 sq. m, then what is the width of the road?

(A) 2.91m

(B) 3m

(C) 5.82m

(D) None of these

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56. The diagonal of the floor of a rectangular closet is  $7\frac{1}{2}$  feet. The shorter side of the closet is  $4\frac{1}{2}$  feet. What is the area of the closet in square feet.

(A) 5 1 4

(B)  $13\frac{1}{2}$

(C) 27

(D) 37

57. What is the area of the hall?

I. Material cost of flooring per square metre is Rs. 2.50

II. Labour cost of flooring the hall is Rs. 3500

III. Total cost of flooring the hall is Rs. 14,500

(A) I and II only

(B) II and III only

(C) All I, II and III

(D) Any two of the three

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