

## **SSC CGL (Tier - 1) Online Exam Paper - 2016 "held on 31 August 2016" Morning Shift (Quantitative Aptitude)**

**Question 51.**A and B together can do a piece of work in 9 days. If A does thrice the work of B in a given time, the time A alone will take to finish the work is

Options:

- 1) 4 days
- 2) 6 days
- 3) 8 days
- 4) 12 days

Correct Answer: 12 days

**Question 52.**The diameters of two cylinders are in the ratio 3:2 and their volumes are equal. The ratio of their heights is

Options:

- 1) 2:3
- 2) 3:2
- 3) 9:4
- 4) 4:9

Correct Answer: 4:9

**Question 53.**A trader sold a cycle at a loss of 10%. If the selling price had been increased by Rs. 200, there would have been a gain of 6%. The cost price of the cycle is

Options:

- 1) Rs.1200
- 2) Rs.1205
- 3) Rs.1250
- 4) Rs.1275

Correct Answer: Rs.1250

**Question 54.**In a city, 40% of the people are illiterate and 60% are poor. Among the rich, 10% are illiterate. The percentage of the illiterate poor population is

Options:

- 1) 36
- 2) 60
- 3) 40
- 4) 50

Correct Answer: 60

**Question 55.** In what time will a 100 metre long train running with a speed of 50 km/hr cross a pillar

Options:

- 1) 7.0 sec
- 2) 72 sec
- 3) 7.2 sec
- 4) 70 sec

Correct Answer: 7.2 sec

**Question 56.**

If  $\frac{2p}{p^2 - 2p + 1} = \frac{1}{4}$ , then the value of  $p + \frac{1}{p}$  will be

Options:

- 1) 8
- 2) 10
- 3) 12
- 4) None of these

Correct Answer: 10

**Question 57.** If  $l + m + n = 9$  and  $l^2 + m^2 + n^2 = 31$ , then the value of  $lm + mn + nl$  will be

Options:

- 1) 22
- 2) 50
- 3) 25
- 4) -25

Correct Answer: 25

**Question 58.** The centroid of a triangle is the point where

Options:

- 1) the medians meet
- 2) the altitudes meet
- 3) the right bisectors of the sides of the triangle meet
- 4) the bisectors of the angles of the triangle meet

Correct Answer: the medians meet

**Question 59.**In a triangle PQR, the side QR is extended to S.  $\angle QPR = 72^\circ$  and  $\angle PRS = 110^\circ$ , then the value of  $\angle PQR$  is:

Options:

- 1)  $38^\circ$
- 2)  $32^\circ$
- 3)  $25^\circ$
- 4)  $29^\circ$

Correct Answer:  $38^\circ$

**Question 60.**In a trapezium ABCD,  $AB \parallel CD$ ,  $AB < CD$ ,  $CD = 6$  cm and distance between the parallel sides is 4 cm. If the area of ABCD is  $16 \text{ cm}^2$ , then AB is

Options:

- 1) 1 cm
- 2) 2 cm
- 3) 3 cm
- 4) 8 cm

Correct Answer: 2 cm

**Question 61.**If  $\tan\theta + \cot\theta = 5$ , then the value of  $\tan^2\theta + \cot^2\theta$  is

Options:

- 1) 22
- 2) 25
- 3) 23
- 4) 27

Correct Answer: 23

**Question 62.**When a number is divided by 56, the remainder will be 29. If the same number is divided by 8, then the remainder will be

Options:

- 1) 6
- 2) 7
- 3) 5
- 4) 3

Correct Answer: 5

**Question 63.**If a shop keeper marks his goods for a certain amount so as to get 25% gain after allowing a discount of 20%, then his marked price is

Options:

- 1) Rs.156.25
- 2) Rs.146.25
- 3) Rs.166.25
- 4) Rs.150.25

Correct Answer: Rs.156.25

**Question 64.**The average of marks of 17 students in an examination was calculated as 71. But it was later found that the mark of one student had been wrongly entered as 65 instead of 56 and another as 24 instead of 50. The correct average is

Options:

- 1) 70
- 2) 71
- 3) 72
- 4) 73

Correct Answer: 72

**Question 65.**The simple interest on a sum for 5 years is two-fifth of the sum. The rate of interest per annum is

Options:

- 1) 0.1
- 2) 0.08
- 3) 0.06
- 4) 0.04

Correct Answer: 0.08

**Question 66.**

If  $(x + \frac{1}{x})^2 = 3$ , then the value of  $x^3 + \frac{1}{x^3}$  is

Options:

- 1) 0
- 2) 1
- 3) 2
- 4) -1

Correct Answer: 0

**Question 67.**If  $a - b = 3$  and  $a^2 + b^2 = 25$ , then the value of  $ab$  is

Options:

- 1) 16
- 2) 8
- 3) 10
- 4) 15

Correct Answer: 8

**Question 68.**In  $\Delta ABC$ ,  $\angle B = 70^\circ$  and  $\angle C = 60^\circ$ . The internal bisectors of the two smallest angles of  $\Delta ABC$  meet at O. The angle so formed at O is

Options:

- 1)  $125^\circ$
- 2)  $120^\circ$
- 3)  $115^\circ$
- 4)  $110^\circ$

Correct Answer:  $125^\circ$

**Question 69.**If  $\theta$  be positive acute angle and  $5\cos\theta + 12\sin\theta = 13$ , then the value of  $\cos\theta$  is

Options:

- 1)  $12/13$
- 2)  $5/13$
- 3)  $5/12$
- 4)  $1/5$

Correct Answer:  $5/13$

**Question 70.**A cylindrical container of 32 cm height and 18 cm radius is filled with sand. Now all this sand is used to form a conical heap of sand. If the height of the conical heap is 24 cm, what is the radius of its base?

Options:

- 1) 12 cm
- 2) 24 cm
- 3) 36 cm
- 4) 48 cm

Correct Answer: 36 cm

**Question 71.**The angle of elevation of the top of a pillar from the foot and the top of a building 20 m high, are  $60^\circ$  and  $30^\circ$  respectively. The height of the pillar is

Options:

- 1) 10 m

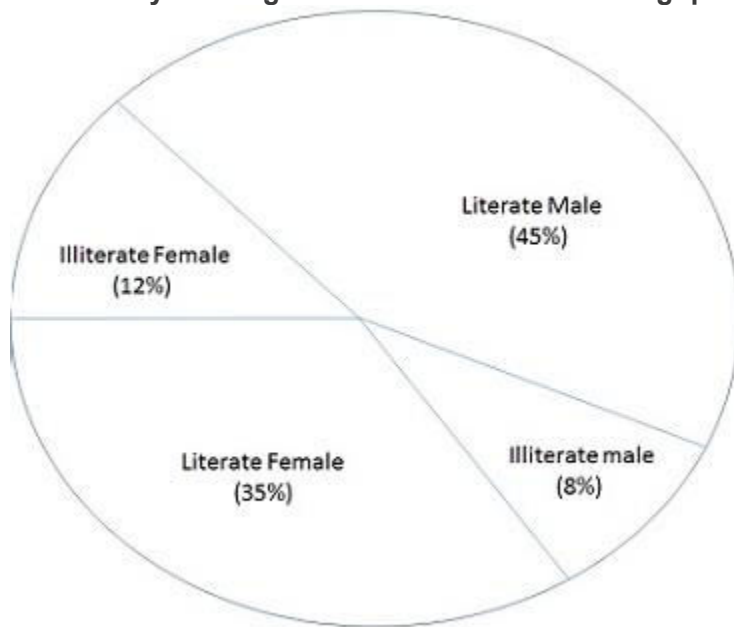
2)  $10\sqrt{3}m$

3) 60 m

4) 30 m

Correct Answer: 30 m

**Question 72.** The pie-chart shows the percentage of literate and illiterate male and female in a state. Study the diagram and answer the following questions.



If the total number is 35000, then the difference between the numbers of literate male and literate female is

Options:

1) 3500

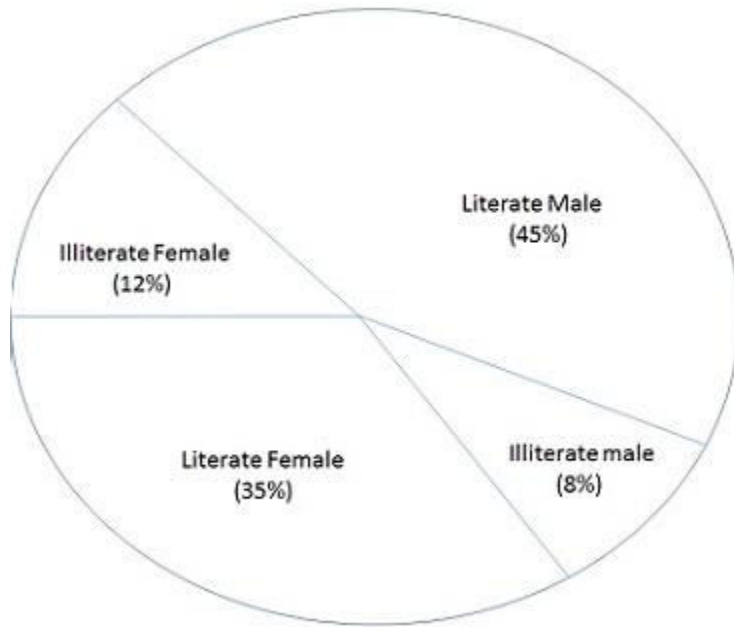
2) 3700

3) 400

4) 4500

Correct Answer: 3500

**Question 73.** The pie-chart shows the percentage of literate and illiterate male and female in a state. Study the diagram and answer the following questions.



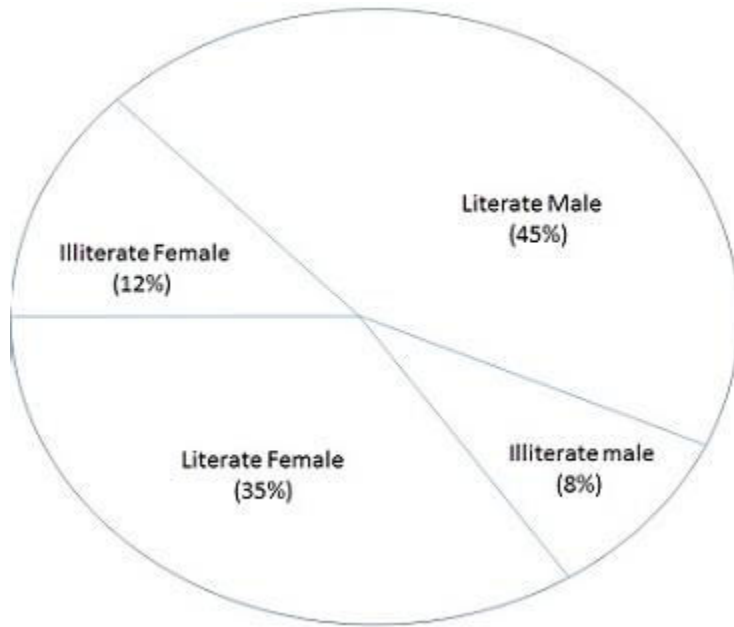
The difference of central angles corresponding to illiterate male and illiterate female is

Options:

- 1)  $12.2^\circ$
- 2)  $13.4^\circ$
- 3)  $11.2^\circ$
- 4)  $14.4^\circ$

Correct Answer:  $14.4^\circ$

**Question 74.** The pie-chart shows the percentage of literate and illiterate male and female in a state. Study the diagram and answer the following questions.



If the difference between the two categories of people are represented by  $36^\circ$  in the diagram then these categories are

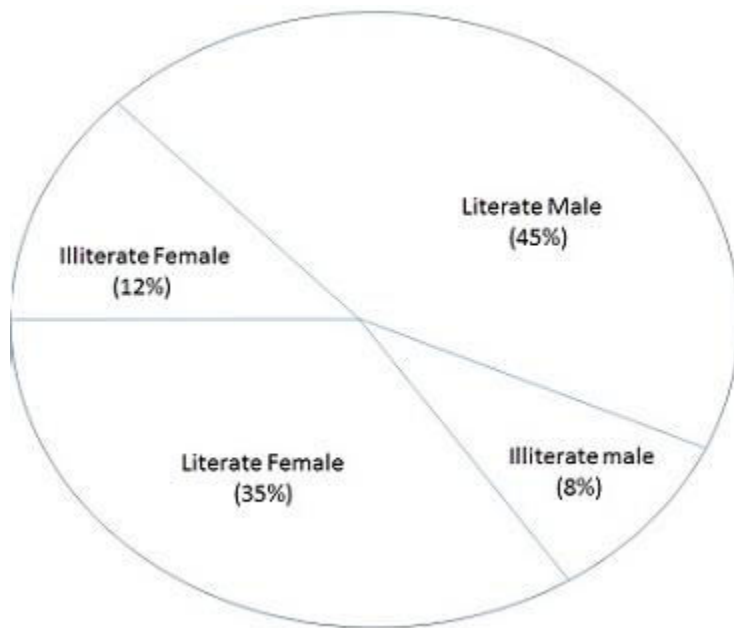
Options:

- 1) literate male and literate female
- 2) literate male and illiterate male
- 3) illiterate male and literate female
- 4) illiterate male and illiterate female

Correct Answer: literate male and literate female

**Question 75.** The pie-chart shows the percentage of literate and illiterate male and female in a state. Study the diagram and answer the following questions.





If two categories together have a central angle of  $169.2^\circ$ , then these categories are

Options:

- 1) literate female and illiterate female
- 2) literate male and illiterate female
- 3) illiterate male and illiterate female
- 4) illiterate male and literate female

Correct Answer: literate female and illiterate female