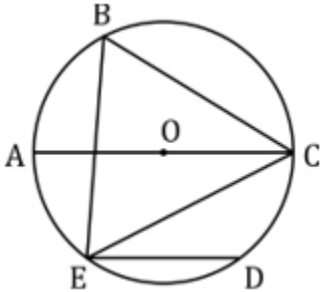


Quant Mega Quiz for SSC CGL Tier - 2

Q1. In the adjoining figure, chord ED is parallel to the diameter AC of the circle. If  $\angle CBE = 65^\circ$ , then what is the value of  $\angle DEC$  ?



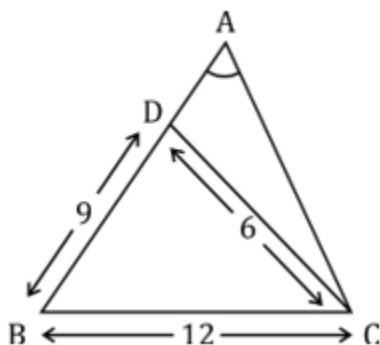
- (a)  $35^\circ$
- (b)  $55^\circ$
- (c)  $45^\circ$
- (d)  $25^\circ$

Q2. Two identical circles intersect so that their centres, and the points at which they intersect, form a square of side 1 cm. The area in sq. cm of the portion that is common to the two circles is:

- (a)  $\frac{\pi}{4}$
- (b)  $\frac{\pi}{2} - 1$
- (c)  $\frac{\pi}{5}$
- (d)  $\sqrt{2} - 1$

Q3. Consider the triangle ABC shown in the following figure where  $BC = 12$  cm,  $DB = 9$  cm,  $CD = 6$  cm and  $\angle BCD = \angle BAC$ .

What is the ratio of the area of triangle ADC to that of the triangle BDC ?



6 Months Subscription

**SSC CGL**  
**TIER-II MAHA PACK**

Test Series, Live Classes,  
Video Course, Ebooks

**Bilingual** (With e-Books)

- (a)  $7/9$
- (b)  $8/9$
- (c)  $6/9$
- (d)  $5/9$

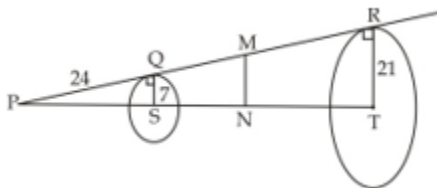
**Q4.** P, Q, S, R are points on the circumference of a circle of radius  $r$ , such that PQR is an equilateral triangle and PS is a diameter of the circle. What is the perimeter of the quadrilateral PQSR ?

- (a)  $2r(1 + \sqrt{3})$
- (b)  $2r(2 + \sqrt{3})$
- (c)  $r(1 + \sqrt{5})$
- (d)  $2r + \sqrt{3}$

**Q5.** A semi-circle is drawn with AB as its diameter. From C, a point on AB, a line perpendicular to AB is drawn meeting the circumference of the semi-circle at D. Given that AC = 2 cm and CD = 6 cm, the area of the semi-circle (in sq cm) will be :

- (a)  $32 \pi$
- (b)  $50 \pi$
- (c)  $40.5 \pi$
- (d)  $81 \pi$

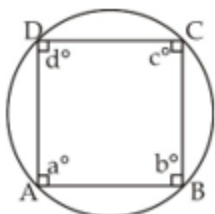
**Q6.** In the given figure, PQ = 24 cm. M is the mid-point of QR.



Also,  $MN \perp PR$ ,  $QS = 7$  cm and  $TR = 21$  cm, then  $SN = ?$

- (a) 50 cm
- (b) 12.5 cm
- (c) 31 cm
- (d) 25 cm

**Q7.** In the given figure,  $AB \parallel CD$  if  $a, b, c$  and  $d$  are integers, what is the number of possible value of  $(a+b-c-d)$ ?



- (a) 179
- (b) 89
- (c) 357
- (d) 358

Q8. Three equal circle of unit radius touch each other. Then, the area of the circle circumscribing the three circle is :-

- (a)  $6\pi(2 + \sqrt{3})^2$
- (b)  $\frac{\pi}{6}(2 + \sqrt{3})^2$
- (c)  $\frac{\pi}{3}(2 + \sqrt{3})^2$
- (d)  $3\pi(2 + \sqrt{3})^2$

Q9. The three medians AD, BE and CF of  $\Delta ABC$  intersect at G. If the area of  $\Delta ABC$  is 60 sq. cm then the area of the quadrilateral BDGF is :

- (a) 10 sq. cm
- (b) 15 sq. cm
- (c) 20 sq. cm
- (d) 30 sq. cm

Q10. ABC is an equilateral triangle. P and Q are two points on  $\overline{AB}$  and  $\overline{AC}$  respectively such that  $\overline{PQ} \parallel \overline{BC}$ . If  $\overline{PQ} = 5$  cm the area of  $\Delta APQ$  is :

- (a)  $\frac{25}{4}$  sq. cm
- (b)  $\frac{25}{\sqrt{3}}$  sq. cm
- (c)  $\frac{25\sqrt{3}}{4}$  sq. cm
- (d)  $25\sqrt{3}$  sq. cm

Q11.

$(\sqrt[3]{1000}) + \sqrt[3]{0.008} - \sqrt[3]{0.125}$  is equal to

- (a) 9.7
- (b) 9.97
- (c) 9.997
- (d) 9.9997

Q12.

If  $\sqrt{18225} = 135$ , then the value of  $\sqrt{18225} + \sqrt{182.25} + \sqrt{1.8225} + \sqrt{0.018225}$  is

- (a) 149985
- (b) 149.985
- (c) 1499.85
- (d) 1.49985

LIVE BILINGUAL

ENGLISH BY NEETU SINGH

12<sup>th</sup> May

Tue, Thr, Sat 5 pm - 7 pm

**Q13.**

The value of  $\frac{(0.013)^3 + 0.000000343}{(0.013)^2 - 0.000091 + 0.000049}$  is

- (a) 0.03
- (b) 0.01
- (c) 0.04
- (d) 0.02

**Q14.**

The value of following is  $\frac{0.2 \times 0.02 \times 0.002 \times 32}{0.4 \times 0.04 \times 0.004 \times 16}$

- (a) 0.40
- (b) 0.50
- (c) 0.20
- (d) 0.25

**Q15.**

Simplify  $\sqrt[3]{-2197} \times \sqrt[3]{-125} \div \sqrt[3]{\frac{27}{512}}$

- (a) 492/7
- (b) 520/3
- (c) 554/7
- (d) 571/5

**Q16.**

If  $2^{2x+4} - 17 \times 2^{x+1} = -4$ , then which of the following is true

- (a) x is a positive value
- (b) x is negative
- (c) x can be either positive or negative
- (d) None of these

**Q17.**

If  $\sqrt{1 + \sqrt{1 - \frac{2176}{2401}}} = 1 + \frac{x}{7}$ , value of x is:

- (a) 3
- (b) 1
- (c) 5
- (d) 7

Q18.

If  $a = 2 + \sqrt{3}$ , then the value of  $\frac{a^6 + a^4 + a^2 + 1}{a^3}$  is

- (a) 65
- (b) 42
- (c) 56
- (d) 45

Q19.

Find the value of  $x$  is

$$\sqrt{x + 2\sqrt{x + 2\sqrt{x + 2\sqrt{3x}}}} = x$$

- (a) 1
- (b) 3
- (c) 6
- (d) 12

Q20.

If  $\sqrt{9\sqrt{9\sqrt{9\sqrt{9}}}} = (729)^{n-1}$  the value of  $n$  is:

- (a) 1
- (b) 21/9
- (c) 21/16
- (d) 3/4

Q21.

If  $a = \frac{2+\sqrt{3}}{2-\sqrt{3}}$  and  $b = \frac{2-\sqrt{3}}{2+\sqrt{3}}$  then value of  $(a^2 + b^2 + ab)$  is:

- (a) 185
- (b) 195
- (c) 200
- (d) 175

Q22.

If  $x = \left(1 + \frac{3\sqrt{7}}{8}\right)$  find  $\left(\frac{4\sqrt{x}-3}{7} + \frac{4\sqrt{x}-\sqrt{7}}{\sqrt{7}}\right)$

- (a)  $\frac{1}{\sqrt{7}}$
- (b) 0
- (c)  $\frac{4}{\sqrt{7}}$
- (d)  $-\frac{1}{\sqrt{7}}$

Complete Preparation for  
SSC Exams

**SSC**  
**EXTREME**

Video Courses, Test Series,  
eBooks

Q23.

$$\frac{\sqrt[6]{2} \left[ (625)^{\frac{3}{5}} \times (1024)^{-6/5} \div (25)^{\frac{3}{5}} \right]^{\frac{1}{2}}}{\left( \sqrt[3]{128} \right)^{-5/2} \times (125)^{\frac{1}{5}}} + \frac{(10^3)^2 \div (10^3)^2}{(10^2)^3 \div (10^{2^3})}$$

- (a) 110
- (b) 101
- (c) 100
- (d) 117

Q24.

$$\sqrt{-\sqrt{3} + \sqrt{3 + 8\sqrt{7} + 4\sqrt{3}}} \text{ is}$$

- (a) 0
- (b) 2
- (c) 3
- (d) -2

Q25.

$$\left[ \frac{1.2.4 + 2.4.8 + 3.6.12 + \dots}{1.3.9 + 2.6.18 + 3.9.27 + \dots} \right]^{\frac{1}{3}} = ?$$

- (a) 1/3
- (b) 2/3
- (c) 3/4
- (d) 3/5

Q26.

$$\sqrt{110.25} \times \sqrt{0.01} \div \sqrt{0.0025} - \sqrt{420.25} \text{ equals to;}$$

- (a) 0.75
- (b) 0.50
- (c) 0.64
- (d) 0.73

Q27.

$$\text{If } \sqrt{1 + \sqrt{1 - \frac{2176}{2401}}} = 1 + \frac{x}{7}, \text{ value of } x \text{ is:}$$

- (a) 3
- (b) 1
- (c) 5
- (d) 7

Q28.

The value of  $\frac{(243)^{\frac{n}{5}} \times 3^{2n+1}}{9^n \times 3^{n-1}}$  is

- (a) 3
- (b) 9
- (c) 6
- (d) 12

Q29.

If  $x = \sqrt{5} + 2$ , then the value of  $\frac{2x^2 - 3x - 2}{3x^2 - 4x - 3}$  is equal to?

- (a) 0.185
- (b) 0.525
- (c) 0.625
- (d) 0.785

Q30.

Simplify  $\left[ \sqrt[3]{\sqrt[6]{a^9}} \right]^4 \left[ \sqrt[6]{\sqrt[3]{a^9}} \right]^4$

- (a)  $a^{16}$
- (b)  $a^{12}$
- (c)  $a^8$
- (d)  $a^4$

TEST SERIES  
Bilingual



# SSC CGL TIER-II

**PRIME**

59 Total Tests | eBooks