Q. 1. What should be added to $-\frac{6}{11}$ to get $-\frac{9}{16}$

(1) $\frac{3}{16}$ (2) $\frac{-3}{176}$ (3) $\frac{9}{176}$ (4) $\frac{6}{176}$

Q. 2. Solve : $\sqrt{\frac{0.081 \times 0.324 \times 4.624}{1.5625 \times 0.0289 \times 72.9 \times 64}}$

(1) 0.024 (2) 0.24
(3) 2.4 (4) 24

Q. 3. Which of the following is the expanded form of $(6x - 7y - 4z)^2$:

(1) $36x^2 + 49y^2 + 16z^2 - 84xy - 48xz + 56yz$
(2) $36x^2 + 49y^2 - 16z^2 + 84xy + 48xz - 56yz$
(3) $36x^2 - 49y^2 + 16z^2 - 84xy + 48xz - 56yz$
(4) None of these

Q. 4. Which of the following is/are correct?

(1) $x^3 + 1 = (x+1)(x^2 + x + 1)$ (2) $x^3 + 1 = (x+1)(x^2 - x + 1)$
(3) $x^3 - 1 = (x-1)(x^2 - x + 1)$ (4) $x^3 - 1 = (x-1)(x^2 + x + 1)$

(1) 1 & 3 (2) 1 & 4 (3) 2 & 4 (4) 2, 3 & 4

Q. 5. Write the given equation in the standard form of quadratic equation:

$\frac{1}{x+1} + \frac{1}{x-2} = \frac{1}{x-3}$

(1) $2x^2 - 7x + 8 = 0$ (2) $x^2 + 6x + 8 = 0$
(3) $x^2 - 6x + 5 = 0$ (4) $x^2 - 7x + 5 = 0$

Q. 6. Find the value of 'm' if $m = \frac{n}{2} + 3\frac{1}{2}$, $n = \frac{x}{2} - 4$ and x = 2

(1) 2 (2) 3 (3) –3 (4) –2

Q. 7. Each entry in a data is divided by a non-zero number 'a', the arithmetic mean of the new data is _____

(1) multiplied by 'a' (2) divided by 'a'
(3) not changed (4) reduced by 'a'

Q. 8. The difference between the simple interest and compound interest on Rs.1200 for one year at 10% per annum compounded half yearly is:

(1) Rs. 2.50 (2) Rs.4 (3) Rs.3 (4) None of these

Q. 9. The length of a minute hand of a clock is 10 cm. Find the area swept by it in 10 minutes

(1) 52.38 sq.cm (2) 62.5 sq.cm (3) 60 sq.cm (4) 43.8 sq.cm

Q. 10. If P = Set of all factors of 48 and Q = Set of all factors of 12 then $P \cap Q$ = ?

(1) $P \cap Q = \{8, 12\}$ (2) $P \cap Q = \{1, 2, 4, 8\}$
(3) $P \cap Q = \{1, 2, 3, 4, 6, 12\}$ (4) $P \cap Q = \{1, 2, 3, 4, 6, 8, 12\}$

Q. 11. The cost of $11\frac{2}{3}$ meters of rope is Rs. $29\frac{2}{7}$ Find the cost of 1 meter of rope.

(1) Rs. 2 . 450 (2) Rs. 2 . 510 (3) Rs. 3 . 20 (4) Rs. 4 . 10

Q. 12. Which of the following sets of solution will satisfy the equations : $2^x \times 4^y = 32$ and $3^x \div 9^y = 3$

(1) x = y = 3 (2) x = y = 2 (3) x = 1, y =3 (4) x = 3, y =1

Q. 13. Simplify: $\left[\frac{(x+1)^2 (x^2-x+1)^2}{(x^3+1)^2}\right]^2 \times \left[\frac{(x-1)^2 (x^2+x+1)^2}{(x^3-1)^2}\right]^2$

(1) $(x+1)^4$ (2) $\left[(x^3-1)^2\right]^2$ (3) 1 (4) $(x^3+1)^4$

Q. 14. The ratio of the products of the roots and the sum of the roots is $4\frac{4}{5}$ of an equation $ax^2 + bx + c = 0$. If one of the root is 8, the other root is:

(1) 6 (2) 14 (3) 16 (4) 12

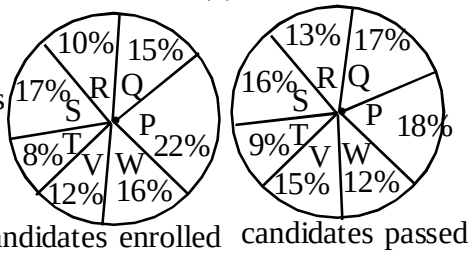
Q. 15. The L.C.M. of the polynomial $x^3 + x^2 + x + 1$ and $x^3 - x^2 + x - 1$ is:

(1) $x^2 + 1$ (2) $(x^2 - 1)(x + 1)$ (3) $(x^2 + 1)(x^2 - 1)$ (4) $(x^2 + 1)(x - 1)$

Q. 16. The number between 10 and 100 is five times the sum of its digits. If 9 be added to it the digits are reversed. Find the number.

(1) 38 (2) 65 (3) 55 (4) 45

Study the following graph carefully and answer the Q.17 and 18 given below. Distribution of candidates who were enrolled for MBA Entrance Exam and the candidates who passed the exam (out of the enrolled) from different Institutes P, Q, R, S, T, V & W (Graph not to scale)



candidates enrolled 8550 candidates passed 5700

Q. 17. Which Institute has the highest percentage of candidates passed to the candidates enrolled

(1) Q (2) R (3) P (4) T

Q. 18. What is the ratio of the candidates passed to the candidates enrolled from Institute P

(1) 9 : 11 (2) 14 : 17 (3) 6 : 11 (4) 9 : 17

Q. 19. The compound interest on a sum for 2 years at 10% p.a. is Rs. 525. The simple interest on the same amount for double the period and half the rate percent per annum is:

(1) Rs.400 (2) Rs.450 (3) Rs.600 (4) Rs.500

Q. 20. A box whose length is 10 cm and breadth 8 cm has a volume 400 cu.cm. Its height is

(1) 0.5 cm (2) 5 cm (3) 4 cm (4) 6 cm

Q. 21. Find the value of : $-\frac{2}{3} \times \frac{3}{5} + \frac{5}{2} - \frac{3}{5} \times \frac{1}{4}$

(1) $-\frac{31}{20}$ (2) $\frac{29}{4}$ (3) $-\frac{6}{5}$ (4) $\frac{39}{20}$

Q. 22. What is the value of : $\sqrt[3]{\sqrt{0.000064}}$

(1) 0.2 (2) 0.02 (3) 0.002 (4) 2

Q. 23. Find the value of 'm' in the following : $\frac{9^m \times 3^5 \times 27^3}{3 \times 81^4} = 27$

(1) 0 (2) 2 (3) 3 (4) 4

Q. 24. Expand : $\left[\frac{2x}{3} - 7\right]\left[\frac{x}{2} - \frac{3}{4}\right]$ (1) $\frac{2x^2}{3} - 8x - \frac{21}{4}$ (2) $x^2 - \frac{4x}{3} + \frac{21}{4}$

(3) $4x^2 - 3x + \frac{21}{4}$ (4) $\frac{x^2}{3} - 4x + \frac{21}{4}$

Q. 25. Divide 13 into two parts such that the sum of their squares is 89. Form the equation for this :

(1) $x^2 + (13 - x)^2 = 89$ (2) $x^2 + x^2 + 13 = 89$

(3) $x^2 + (x + 13)^2 = 89$ (4) $x^2 - (13 - x)^2 = 89$

Q. 26. Rs. 12500 amounts to Rs.13520 in six months, interest compounded quarterly. What is the rate of interest per annum?

(1) 12% (2) 16% (3) 18% (4) 20%

Q. 27. A man has some hens and cows. The number of heads is 48 and the number of feet is 140, then the number of cows he has is:

(1) 23 (2) 24 (3) 22 (4) 26

Q. 28. The length of a chord of a circle is 16 cm and it is at a distance of 15 cm from the centre of the circle. What is the perimeter of the triangle formed by this chord and the two radii from the centre of the circle?

(1) 50 cm (2) 25 cm (3) 31 cm (4) 48 cm

Q. 29. The surface area of a sphere is 154 sq.cm. Find its radius.

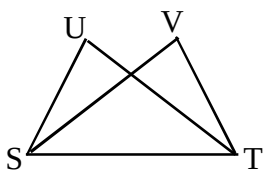
(1) 4.5 cm (2) 12.25 cm (3) $\frac{49}{4}$ cm (4) 3.5 cm

Q. 30. Ten years ago the age of the father was four times the age of his son. Ten years hence the age of the father will be twice that of his son. What is the sum of the ages of the father and son at present?

(1) 50 (2) 70 (3) 80 (4) 60

Q. 31. In the given figure SV ≅ TU and SU ≅ TV
Then the triangles SUT and TVS are congruent by which test?

(1) SSS (2) SAS
(3) ASA (4) Not Congruent



Q. 32. Given that $\left(\frac{1}{2}\right)^{k} = \sqrt{3}$ and $\left(\frac{1}{3}\right)^{m} = \sqrt{2}$ Find $\frac{mk}{2}$

(1) $\frac{1}{4}$ (2) $\frac{1}{2}$ (3) $\frac{1}{16}$ (4) $\frac{1}{8}$

Q. 33. If $3^{x} = 9\sqrt{3}$ and $3^{y} = \frac{1}{\sqrt{3}}$ Find the value of 3^{x-y}

(1) 3 (2) 9 (3) 27 (4) 81

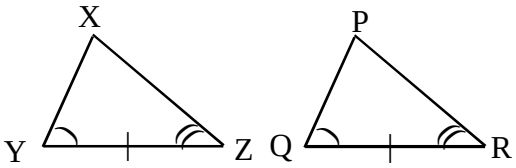
Q. 34. The degree of the product of the polynomials (x^2 + 6x +7) and (–2x) is :

(1) 3 (2) –2 (3) 1 (4) 2

Q. 35. The sphere and a cube have the same surface area. The ratio of the volume of the sphere to that of the cube is :

(1) $\sqrt{\pi} : \sqrt{5}$ (2) $\sqrt{6} : \sqrt{\pi}$ (3) $\sqrt{\pi} : \sqrt{6}$ (4) $\sqrt{8} : \sqrt{\pi}$

Q. 36. By which test is $\Delta XYZ \cong \Delta PQR$



(1) SSS (2) SAS
(3) ASA (4) HS Test

Q. 37. Find the value of 'x' when $\frac{x-8}{3} = \frac{x-3}{2}$ (1) 7 (2) –7 (3) 3 (4) 6

Q. 38. The length of the tangent segment drawn from a point 17 cm away from the centre of the circle of diameter 16 cm is:

(1) 16 cm (2) 17 cm (3) 14 cm (4) 15 cm

Q. 39. The factors of $x^2 - 7x + 12$ are :

(1) (x – 4) (x –3) (2) (x + 4) (x –3) (3) (x + 4) (x +3) (4) (x + 7) (x –12)

Q. 40. How would you write the set D = {x | x ∈ N and 2x –1 < 7}in the listing method?

(1) D = { 1, 2, 3, 4 } (2) D = { 0, 1, 2, 3 }
(3) D = { 1, 2, 3 } (4) D = { 5, 6, 7 }