COMMON QUARTERLY EXAMINATION - 2025

Standard IX Reg.No.

		MATHEMATICS		
Tin	ne : 3.00 hrs	Part - I	Marks : 10	(
l.	Choose the best answer:	rings art of laupe of alp laid	nic sip 10/15: 14×1=1	4
1.	If B⊆Athenn(A∩B) is	or and id	and property of the	
	a) n(A-B) b) n(B)	c) n(B-A)	d) n(A)	
2.	Which of the following is corre	ect?	A Deutse of the only our	
6=	a) $\phi \subseteq \{a, b\}$ b) $\phi \in \{a, b\}$	a, b} c) {a} ∈ {a, b}	d) a ⊆ {a, b}	
3.	Let $A = \{\phi\}$ and $B = \rho(A)$, then	nA∩Bis		
	a) {\phi, (\phi)} b) {\phi}	c) ф	d) {0}	
4.	For any three sets A, B and C	C, $(A-B) \cap (B-C)$ is equal	to	
MSY	a) A only b) B only	y hambo c) C only		
5.	If n is a natural number, then	\sqrt{n} is \sqrt{n} \sqrt{n} \sqrt{n} \sqrt{n}	1 bns (8,1,5 - E-) = A11 - 31	- 10
	a) always a natural number	b) always an irra	ational number	
	c) always a rational number	d) may be ration	al or irrational and gall 50	
6.	Which one of the following ha	s a terminating decimal exp	ansion? A 85 - (S) 11' St	
	a) $\frac{5}{64}$ b) $\frac{8}{9}$	c) 14/15	n (minita) (1.11 8 % ultra) (3)	
7.	If $\sqrt{80} = k\sqrt{5}$, then k =	The other	(I) Rationalise the denomin	
	a) 2 b) 4	c) 8 - _{mnot learn}	d) 16 m x AC 15	
8.	If $\sqrt{9^{x}} = \sqrt[3]{9^{2}}$, then $x = $	-2/2	Ever Flandiques is	
	a) $\frac{2}{3}$ b) $\frac{4}{3}$	c) $\frac{1}{3}$	d) $\frac{5}{3}$	
9.	If $x^3 + 6x^2 + kx + 6$ is exactly	divisible by $(x + 2)$ then $k = 6$	7	
	a) -6 b) -7		24, 1001 - Evil (6 0) usi	
10.	The zero of the polynomial 2x	(+5 is	25 fencies, $27x = 125$	

IX Maths 11. If x - 3 is a factor of p(x), then the remainder is b) -3 c) p(3) d) p(-3) 12. Degree of the constant polynomial is _____. b) 2 13. The exterior angle of a triangle is equal to the sum of two a) exterior angles b) interior opposite angles c) alternate angles d) interior angles 14. Degree of the polynomial $(y^3-2)(y^3+1)$ is

Part - II

II. Answer any 10 questions. (Q.No.28 is compulsory) 15. If A = {-3,-2,1,4} and B = {0,1,2,4}, find (i) A - B (ii) B - A 16. If n[p(A)] = 256, find n(A)17. Find the symmetric difference between X = {5,6,7} and Y = {5,7,9,10} 18. If n(A) = 25, n(B) = 40, $n(A \cup B) = 50$ and n(B') = 25, find $n(A \cap B)$ and n(U)19. Write 625 in the form of 5ⁿ

20. Rationalise the denominator $\frac{5}{3\sqrt{5}}$

a) 9

21. 6.34 x 10⁴ write in decimal form.

22. Simplify: $5\sqrt{3} + 18\sqrt{3} - 2\sqrt{3}$

23. $\frac{x^3 - x^4 + 6x^6}{x^2}$ find the degree.

24. 10013 - Evaluate by using identities.

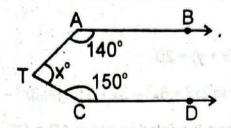
25. Factorise: 27x3+ 125y3

26. 9a2b2c3, 15a3b2c4 - Find he GCD

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27. In the figure, AB is parallel to CD, find x



28. Write in Roster form:

A = The set of all even natural numbers less than 20

Part - III

III. Answer any 10 questions. (Q.No.42 is compulsory)

10 x 5 = 50

- 29. If S = {square, rectangle, circle, rhombus, triangle} List the elements of the following subset of S.
 - i) The set of shapes which have 4 equal sides
 - ii) The set of shapes which have radius
 - iii) The setofshapes in which the sum of all interior angles is 1800
 - iv) The set of shapes which have 5 sides a base street must be a side of shapes which have 5 sides a base street must be a side of shapes which have 5 sides a base street must be a side of shapes which have 5 sides a base street must be a side of shapes which have 5 sides a base street must be a side of shapes which have 5 sides a base street must be a side of shapes which have 5 sides a base street must be a side of shapes which have 5 sides a base street must be a side of shapes which have 5 sides a base street must be a side of shapes which have 5 sides a base street must be a side of shapes which have 5 sides a base street must be a side of shapes which have 5 sides a base street must be a side of shapes which have 5 sides a side of sha
- 30. If $A = \{p,q,r,s\}$, $B = \{m,n,q,s,t\}$ and $C = \{m,n,p,q,s\}$, then verify the associative property of union of sets.
- 31. Verify $A (B \cup C) = (A B) \cap (A C)$ using Venn diagrams.
- 32. Out of 500 car owners investigated, 400 owned car A and 200 owned car B, 50 owned both A and B cars. Is this data correct?
- 33. Represent 4.863 on the number line.
- 34. Convert $0.4\overline{5}$ decimal numbers in the form of $\frac{p}{q}$
- 35. Arrange surds in descending order : $\sqrt[4]{35}$, $\sqrt[3]{47}$, $\sqrt{3}$
- 36. Rationalise the denominator of $\frac{5+\sqrt{3}}{5-\sqrt{3}}$
- 37. Check if (x + 2) and (x 4) are the sides of a rectangle whose area is $x^2 2x 8$ by using factor theorem.

- 4 both Go at the lead of the Aug a LIX Maths 38. Find the quotient and remainder when $(3x^3 - 4x^2 - 5)$ is divided by (3x + 1) using synthetic division.
- 39. Factorise: $(x + y)^2 + 9(x + y) + 20$
- 40. What should be added to $2x^3 + 6x^2 5x + 8$ to get $3x^3 2x^2 + 6x + 15$?
- 41. ΔABC and ΔDEF are two triangles in which AB = DF, ∠ACB = 70°; ∠ABC = 60°; \angle DEF = 70° and \angle EDF = 60°. Prove that the triangles are congruent.
- 42. Represent the number 3.45 on the number line upto 4 decimal places.

Answer any 10 questions. (C. No. 62 is conspulse

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35 Reformation the denomination of

IV. Answer all the questions.

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feguare, recrancle circle morrisus, transport 43. a) Construct the centroid of ΔPQR whose sides are PQ = 8 cm, QR = 6 cm, RP = 7 cmThe set of shapus which have 4 equal sides

(OR) par event risingly segaria to fee on To

- b) Construct the right triangle PQR whose perpendicular sides are 4.5 cm and 6 cm. Also locate its circumcentre and draw the circumcircle.
- 44. a) Draw an equilateral triangle of sides 6.5 cm and locate its orthocentre.

(OR) (D-A) (B-A) = (D-B) + A/him

b) Construct the in-centre of △ABC with AB = 6 cm, ∠B = 65° and AC = 7 cm. Also draw the in-circle and measure its radius noo slab and all and a bas Aslad

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