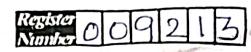
CLASS: 9



COMMON QUARTERLY EXAMINATION-2024-25

Time Allowed: 3.00 Hours]		MATHEMATICS				- Particular	[Max. Marks: 100	
		3	PA	RT – I	The said of the sa			14x1=14
Į.,	Choose the correct An	swer.	A STATE OF THE STA					1421-14
1.	The set $P = \{x x \in \mathbb{Z}, -1 < x \in \mathbb{Z}\}$	x<1} is			At all and	4)	Subset	
	a) Singleton set	b)	Power set	c)	Null set	d)	Subset	
2.	Which of the following is						(- 1-)	
	a) φ ⊆ {a,b}	b)	$\phi \in \{a,b\}$	c)	{a} ∈ {a,b}	d)	a <u>⊆</u> {a,b}	
3.	If B-A is B, then A B is							•
	a) A	b)	The state of the s	c)	U	d)	ф	
4.	For any three sets A, B				Alay d			
	a) A only		B only	c)	C only	d)	ф	3975
5.	In a City, 40% of people							all the three
	fruits. How many percen	tage of	people do not	like any	one of the above	ve three		
	a) 5	b)	8	c)	10	d)	15	
6.	Which one of the following	ng is ar	irrational numl	ber?	181			
and the	a) √25	b) 1	9	c)	7_	d)	π	
		- 7	4	3,4	11	•		
7.	If $1/7 = 0.142857$ then the	e value	e of 5/7 is					
-	a) _0.142857	b)	0.714285	c)	0.571428	d)	0.714285	
8.	If $\sqrt{80} = k\sqrt{5}$, then $k =$							
	a) 2	b) .	4	(c)	8	d)	16	rion.
9.	When $(2\sqrt{5} - \sqrt{2})^2$ is simp	- AS *-						5 . 1 .
	a) $4\sqrt{5} + 2\sqrt{2}$	b)	22 - 4110	c)	8 - 4√10	d)	2√10 - 2	
10.	The length and breadth	of a rec	tangle plot are	5 x 10 ⁵	and 4 x 104 met	res res	pectively. Its a	rea is
, · · ·	a) 9 x10 ¹ m ²	b)	9 x10° m²	c)	2 x10 ¹⁰ m ²	d)	20 x10 ²⁰ m ²	4 6.0
11.	The zero of the polynomi	al 2x+5	is				a parameter	
The same	a) $\frac{5}{2}$	b)	<u>-5</u>	c)	<u>2</u> 5	d)	<u>-2</u>	
	2		2		5		5	
12.	Degree of the polynomia	$1 (y^3 - 2$	$(y^3 + 1)$ is			The Later		
\$.	a) 9	b)	2	c)	3	d)	6	, 3.
13.	If x-3 is a factor of p(x), t	hen the	e remainder is	M .		de a		3 11 2
	a) 3	b)	-3	c)	p(3)	d)	p(-3)	
14.	Cubic polynomial may ha	ive ma	ximum of	linea	r factors.		The state of the s	
	a) 1	b)	2	c)	3	d)	4	
1.		-: .:>	PA	RT - II		1.127	A way by	7
A	Answer any 10 questio	ns. Qu	estion No. 28	is con	npulsory.		The same of the same	10x2=20
15.	Find the number of subs	ets and	d the number o	f prope	r subsets of a s	et X = {	(a, b, c, x, y, z)	
16.	Write down the power se	et of the	$e set A = \{a,b\}.$				tiffs floor.	
47.	Find the symmetric diffe	rence l	between the se	ts P = {	2, 3, 5, 7, 11} ai	nd Q =	{1, 3, 5, 11}	4.00
	If n(A) = 300, n(AUB) = 8	2 4 2 2			A game			
	Find any three rational n			*		•	55. AT 18	A The Live
م ر.	i inu any unee radonal n	uttinet:	11.	and -	11	, illus		CH/9/Mat/1
		4 6-15			7 - X	A		1 8 16

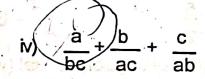
- 20. Express the decimal expression 2.327 into rational number.
- 21. Find any three irrational numbers between 0.12 and 0.13.
- 22. The mass of the Earth is 5.97 x 10²⁴ kg, and that of the Moon is 0.073 x 10²⁴ kg. What is their total mass?
- 23. Rewrite the polynomial $y^2 + \sqrt{5}y^3 11 \frac{7}{3}y + 9y^4$ into standard form.
- 24. What is the remainder when $x^{2018} + 2018$ is divisible by x-1.
- 25. Expand (a-b+c)2
- 26. Find the GCD of a^{m+1}, a^{m+2}, a^{m+3}.
- 27. Factorise $(a+b)^2 + 9(a+b) + 18$.
- 28. The angles of a triangle are in the ratio 1:2:3. Find the measure of each angle of the triangle.

PART - III

Answer the following any 10 questions.Q.No.42 is compulsory.

10x5=50

- 29. 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.
- 30. Verify A \cap (B \cup C) = (A \cap B) \cup (A \cap C) using Venn diagrams.
- 31. If U = {4, 7, 8, 10, 11, 12, 15, 16}, A = {7, 8, 11, 12} and B = {4, 8, 12, 15} then verify De-Morgan's Laws of complementation.
- In a college, 240 students play cricket, 180 students play football, 164 students play hockey ,42 play both cricket and football, 38 play both football and hockey,40 play both cricket and hockey and 16 play all the three games. If each student participate in atleast one game, then find
 - (i) the number of students in the college (ii) the number of students who play only one game.?
- 23. Represent 6.4 upto 3 decimal places on the number line.
- 34. Arrange in surds in descending orders. ³√5, ⁹√4, ⁶√3
- 35. Find the value of a and b, if $\frac{\sqrt{7}-2}{\sqrt{7}+2} = a\sqrt{7}+b$.
- 36. Simplify: $2\sqrt[3]{40} + 3\sqrt[3]{625} 4\sqrt[3]{320}$
- 37. The cost of a chocolate is Rs (x + y) and Amir bought (x + y) chocolates. Find the total amount paid by him in terms of x and y If x = 10, y = 5 find the amount paid by him.
- 38. If both (x-2) and (x- $\frac{1}{2}$) are the factors of ax²+5x+b, then show that a=b.
- 39. If $(x+a)(x+b)(x+c) = x^3+14x^2+59x+70$, then find the value of
 - i) a+b+c
- ii) $\frac{1}{a} + \frac{1}{b} + \frac{1}{c}$
- iii) $a^2 + b^2 + c^2$



- 40. Factorise $x^3 3x^2 10x + 24$.
- 41. If the quotient obtained on dividing $(8x^4 2x^2 + 6x 7)$ by (2x + 1) is $(4x^3 + px^2 qx + 3)$, then find p, q and also the remainder.
- 42. If A = {-2, 0, 1, 3, 5}, B = {-1, 0, 2, 5, 6} and C = {-1, 2, 5, 6, 7}, then show that A-(B \cup C)=(A-B) \cap (A-C).

Answer all the questions.

2x8=16

- 43. a) Draw the ΔABC, where AB = 6 cm, ∠B = 110° and BC = 9 cm and construct its Centroid.

 (OR)
 - b) Draw an equilateral triangle of sides 6.5 cm and locate its Orthocentre.
- 44. a) Draw the graph of y = 3x 1.

(OR)

b) Draw the graph of y = 2x.

CH/9/Mat/2