FIRST TERM TEST

Μ	ASATHIYAR CORPORATION	GIRLS H S S		
CLASS - IX	MATHS		TOTAL MARKS : 60	
	Section A			
Multiple Choice Que	10×1=10			
1) Let $A = \{\emptyset\}$ and B (a) $\{\emptyset, \{\emptyset\}\}$	$= P(A)$, then $A \cap B$ is (b) $\{\emptyset\}$	(c) Ø	(<i>d</i>) {0}	
2) If U ={ $x x \in \mathbb{N}, x < 1$	10} and $A = \{x \mid x \in \mathbb{N}, 2\}$	$2 \le x < 6$ then	(A')' is	
(a) {1, 6, 7, 8, 9}	(<i>b</i>) {1, 2, 3, 4}	(c) {2, 3, 4, 5} (d) { }		
3) Which one of the fo	bllowing is an irrational i	number		
(a) $\sqrt{25}$	(b) $\sqrt{\frac{9}{4}}$	(c) $\frac{7}{11}$	(d)	π
$0.\overline{34} + 0.3\overline{4} =$ 4) (a) 0.687 5) If $x_3 + 6x_2 + kx + 6\overline{1}$	s exactly divisible by (x	(c) 0.68 (c) 1.68	1 a.1 ?	

(a) -6 (b) -7 (c) -8 d) 11

6) The Auto fare is found as minimum `25 for 3 kilo meter and thereafter `12 for per kilo meter. Which of the following equations represents the relationship between the total cost 'c' in rupees and the number of kilometers n?

(a)
$$c = 25 + n$$
 (b) $c = 25 + 12n$ (c) $c = 25 + (n-3)12$ (d) $c = (n-3)12$

7)

angles of the triangle are 3x-40, x+20 and 2x-10 then the value of x is

(a) 40 (b) 35 (c) 50 (d) 45

8)The distance between the two points (2, 3) and (1, 4) is _____

(a) 2 (b) $\sqrt{56}$ (c) $\sqrt{10}$ (d) $\sqrt{2}$

 $5 \times 2 = 10$

9)



Answer 5 questions. Question No 20 is compulsory. Select any 4 questions from the first 9 questions

Section B

11) If $\overline{A} = \{6, 7, 8, 9\}$ and $B = \{8, 10, 12\}$, find $A \Delta B$

12) If n(A) = 25, n(B) = 40, $n(A \cup B) = 50$ and n(B') = 25, find $n(A \cap B)$ and n(U).

13. Express the following decimal expression into rational numbers

2.327

14) Find any 4 irrational numbers between $\frac{1}{4}$ and $\frac{1}{3}$. 15) Find the product (4x - 5) and $(2x_2 + 3x - 6)$.

16) By remainder theorem, find the remainder when, p(x) is divided by g(x) where, $p(x) = x^3 - 2x^2 - 4x - 1; \quad g(x) = x + 1$ 17)



Find the value of x

18) In a quadrilateral *ABCD*, $\angle A = 72^{\circ}$ and $\angle C$ is the supplementary of $\angle A$. The other two angles are 2x-10 and x + 4. Find the value of *x* and the measure of all the angles.

19) Find the distance between the points (-4, 3), (2,-3).

20. 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.

(or)

Show that the following points A(3,1), B(6,4) and C(8,6) lies on a straight line Section C $6 \times 5=30$

Answer 6 questions. Question No 27 is compulsory. Select any 5questions from the first 6 questions

21)In a class, all students take part in either music or drama or both. 25 students take part in music, 30 students take part in drama and 8 students take part in both music and drama. Find

(i) The number of students who take part in only music.

(ii) The number of students who take part in only drama.

(iii) The total number of students in the class.

22) Represent 4.863 on the number line.

23) The base of a parallelogram is (5x+4). Find its height, if the area is $25x^2-16$. 24)

Without actual division, prove that $f(x) = 2x^4 - 6x^3 + 3x^2 + 3x - 2$ is exactly divisible by $x^2 - 3x + 2$ 25) In a parallelogram, opposite sides are equal-Prove

26) Show that the points A(-4,-3), B(3,1), C(3,6), D(-4,2) taken in that order form the vertices of a parallelogram.

27)Let *A* and *B* be two overlapping sets and the universal set be U. Draw appropriate Venn diagram for each of the following,

(i) $A \cup B$ (ii) $A \cap B$ (iii) $(A \cap B)'$ (iv) (B - A)' (v) $A' \cup B'$ (or)

Prove that the points A(3, 5), B(6, 2), C(3,-1), and D(0, 2) taken in order are the vertices of a square

Section D
$$1 \times 10 = 10$$

28) Construct the circum centre of the $\triangle ABC$ with AB = 5 cm, $A = \angle 60^{\circ}$ and $B = \angle 80^{\circ}$. Also draw the circum circle and find the circum radius of the $\triangle ABC$.

Draw $\triangle ABC$, where AB = 6 cm, $B = \angle 110^{\circ}$ and BC = 5 cm and construct its Ortho centre

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