

"There is no element of genius,

Without some form of madness"

# <u>10<sup>th</sup> ICSE Mathematics Mock Test-1 (Term-I)</u>

Max. Marks: 40

**Time Allowed : 90 Minutes** 

Q1 to 16 carry 1 Mark each

1.	If matrix P is of ord	er 3 × a and matrix (	Q is of order b $\times$ 3,	then order of QP is
	(a) a × b	(b) b × a	(c) 3 $\times$ 3	(d) not defined
2.	If transaction is intr (a) 25%	astate then share of (b) 100%	CGST of total GST (c) 75%	is: (d) 50%
3.	Third proportion of	12 and 18 is x , then	number of disting	ct factors of x are
	(a) 1	(b) 2	(c) 3	(d) None of these
4.	Tara opened a Recu	urring Deposit Account	Int with a national	ized bank for a period
	of 2 years. If the bar	of pays interest at th	e rate of 6% p.a. ar	nd the monthly
	installment is Rs 10	00. How much intere	est is earned in 2 y	ears?
	(a) Rs 780	(b) Rs 1500	(c) Rs 1440	(d) Rs 2000
_				(4) 15 2000
5.	If $x \in \mathbb{N}$ and $-100 <$	x < 1, then solution s	set is:	(d) containing 99
	(a) $\{0, 1\}$	(b) {1}	(c) empty	elements
6.	If 3x <sup>3</sup> – 18x <sup>2</sup> + 9x + 2	2 is divided by (x + 2	) then half of the r	emainder is:
	(a) –56	(b) 56 (c) -13	12 (d)	None of these
7.	The first term of an is 120, then the num (a) – 4 and 10 (c) 6 and 10	AP is -5 and the last ober of terms and the	term is 45. If sum common differer (b) 4 and 8 (d) None of the a	of the terms of the AP ace (respectively) are: bove
8.	In $\triangle ABC$ and $\triangle DEF$	$\frac{AB}{DF} = \frac{BC}{FE} = \frac{CA}{ED}$ , the	en	

(a)  $\triangle ABC \sim \triangle DEF$  (b)  $\triangle ABC \sim \triangle EFD$  (c)  $\triangle ABC \sim \triangle EDF$  (d)  $\triangle ABC \sim \triangle DFE$ 

9. If the roots of  $px^2 + qx + 2 = 0$  are reciprocal of each other, then \_\_\_\_\_.

(a) p = 0 (b)  $p = \pm 2$  (c) p = -2 (d) p = 2

10. Mrs. Goswami deposits Rs 1,000 per month in a recurring deposit account for 3 years at 8% interest p.a. Find the matured value.
(a) Rs 44, 400
(b) Rs 31, 560
(c) Rs 36, 000
(d) none of these

11.If  $x \in I$ , then the solution set of the inequation  $1 < 3x \le 11$  is \_\_\_\_\_\_.(a) { 0, 1, 2,3 }(b) { 1,2,3 }(c) {-2, -1, 0, 1,2 }(d) { $x : x \in \mathbb{R}, \frac{-3}{4} < x \le 2$  }

Rs 480 is divided equally among x children. If the number of children was 20 more, then each would have got Rs 12 less. Then the value of (x+10) is:
(a) 40
(b) 30
(c) 20
(d) None

- 13. Number of possible integral pairs having mean proportion as 6 is : (a) 4 (b) 3 (c) 2 (d) None
- 14. The 30<sup>th</sup> term of the sequence 1/2, 1, 3/2, ..... (a) 31/2 (b) 15 (c) 29 (d) 0

15. Find the value of x if 
$$\begin{bmatrix} 3x + y & -y \\ 2y - x & 3 \end{bmatrix} = \begin{bmatrix} 1 & 2 \\ -5 & 3 \end{bmatrix}$$
.  
(a) x = 6, y = 17  
(c) x = 1, y = -2  
(b) x = -1/3, y = -2/9  
(c) x = -2, y = 1

 16. Which term of the A.P. 3, 8, 13, 18, ... is 78?

 (a) 16<sup>th</sup>
 (b) 12<sup>th</sup>
 (c) 14<sup>th</sup>
 (d) 13<sup>th</sup>

Q17 to 22 carry 2 Marks each

17. In figure below; PA, QB, RC and SD are all perpendiculars to a line '1', AB = 6cm, BC = 9 cm, CD = 12 cm and SP = 36 cm. Then L.C.M. of PQ, QR and RS is:



18. You are buying a pair of shoes online and the price shown on Amazon is Rs 2400.

The GST paid by you for this purchase is Rs 288. How much is the rate of ( (Assume delivery is free)						
	(a) 12%	(b) 24%	(c) 18%	(d) 5%		
19.	The equation $2x^2 + 2$ equal to :	kx + 3 = 0 has two ec	qual roots, then the v	alue of k <sup>3</sup> is not		
	(a) 48√6	(b) -48√6	(c) - 2√6	(d) None of these		
20.	If the polynomials a divided by $x - 2$ , fir	$ax^3 + 4x + 5$ and $x^3 - 4$ and the value of a.	$4x^3 + a$ leave the same	ne remainder when		
	(a) 3/2	(b) – 3	(c) 4	(d) None of these		
21.	In an A.P., ten times its 40 <sup>th</sup> term.	s of its tenth term is o	equal to thirty times	of its 30 <sup>th</sup> term. Find		
	(a) 0	(b) 39	(c) 78 (d) No	one of the above		
22.	A two-digit number to this number; the (a) 16	r is such that the pro digits interchange th (b) 196	duct of its digits is 12 heir places. Then squ (c) 36	2. When 36 is added are of greater digit is: (d) None of these		

# Q23 to 25 carry 4 Marks each

23. Junk food is unhealthful food that is high in calories from sugar or fat, with little dietary fiber, protein, vitamins, minerals, or other important forms of nutritional value. A sample of few students have taken. If  $\alpha$  be the number of students who take junk food,  $\beta$  be the number of students who take healthy food such that  $\alpha > \beta$  and  $\alpha$  and  $\beta$  are the zeroes of the quadratic polynomial  $f(x) = x^2 - 7x + 10$ , then answer the following questions:



(i)	Name the type of expression of the polynomial in the above statement?						
	(a) quadratic	(b) cubic	(c) linear	(d) bi-quadratic			
(ii)	Find the number of	students who ta	ke junk food.				
	(a) 5	(b) 2	(c) 7	(iv) None of these			
(iii)	Find the number of	students who ta	ke healthy food.				
	(a) 5	(b) 2	(c) 7	(d) None of these			
(iv)	Find the quadratic (a) $x^2 + 4x + 2$ (c) $x^2 - 7x + 12$	polynomial whos	se zeros are -3 an (b) x <sup>2</sup> - x - (d) None or	nd -4. 12 f these			
In tria	angle ABC , AD is m	edian of BC ( D li	es on BC) .				
(i) If a (a)	rea of triangle ABC i 6 (b) 8	s 12 square units (c) √12	then area of tria (d) c	angle ADC is: cannot say			
(ii) If a (a)	angle ADC = angle B $\sqrt{DC.AD}$ (b) $\sqrt{L}$	AC , then AC <sup>2</sup> is : $\overline{OC.BC}$ (a) $\sqrt{B}$	<i>C.AB</i> (d)	None of these			
(iii) If (a) (c)	angle ADC = angle I a natural number a prime number	3AC and BC = 10 (b (c	cm then AC is : ) a rational num l) an irrational r	ıber number			
(iv) Two congruent triangles are :(a) never similar(b) similar in some cases(c) always similar(d) none of these							
Let A	be a 2x2 diagonal n	natrix with real er	ntries.				
(i) If A <sup>3</sup> all en	has $3\sqrt{3}$ and $-125$ as a tries of A is :	entries in 1 <sup>st</sup> and	2 <sup>nd</sup> row respect	ively then the sum of			

24.

25.

(a)  $-\sqrt{3} + 5$  (b)  $\sqrt{3} + 5$  (c)  $\sqrt{3} - 5$  (d) None of these

(ii) If AB has order 2x7 then number of elements in B are :

(a) 18 (b) 14 (c) 16

(d) None of these

- (iii) If AC matrix has one entry as 3 (where C is diagonal matrix having integral entries), then :
  - (a) Two such matrices C are possible
  - (b) Three such matrices C are possible
  - (c) Many such matrices C are possible
  - (d) No such matrix C is possible

#### (iv) A+I ( where I is 2x2 identity matrix ) is :

- (a) diagonal
- (c) Both diagonal and scalar
- (b) scalar
- (d) not always diagonal



#### 10th ICSE Mathematics Mock Test-2 (Term-I)

Max. Marks: 40

#### **Time Allowed : 90 Minutes**

#### (Q1-16, each question is of 1 Mark)

- If  $2x^3 2x^2 5x + 5$  has (x a) as factor (where a > 1) then  $2a^2$  is: 1. (a)  $\sqrt{5}$ (b) 4(c) 5 (d) None of these If  $-x + 2 \le 2x + 1 \le 5 - x$ ,  $x \in \mathbb{R}$  and solution set is  $\{x : \frac{p}{q} \le x \le \frac{r}{q}, x \in \mathbb{R}\}$ , then 2. 'r - p' is (c) 3 (a) 5 (b) 4(d) None of these In order to save your pocket money, your guardian asks you to deposit Rs 500 3. each month into a RD account. There is a special HDFC Bank program for school children that offers 12% interest instead of the usual 10% offered to adults. How much money will you get at maturity if you deposited the money for 9 months? (b) Rs 4500 (c) Rs 4728 (d) Rs 4725 (a) Rs 228 If  $x \in R$ , the solution set of  $6 \le -3(2x - 4) \le 12$  is \_\_\_\_\_ 4. (a)  $\{x : x \in \mathbb{R}, 0 \le x \le 1\}$ (b) {0, 1} (c) { $x : x \in \mathbb{R}, 0 \le x \le 1$ } (d) None of these 5. The equation  $2x^2 + kx + 3 = 0$  has two equal roots, then the value of k is \_\_\_\_\_ (c)  $\pm 3\sqrt{2}$ (d)  $\pm 2\sqrt{6}$ (b)  $\pm 4$ (a) 6. Mean proportion of 9 and 4 is: (c)  $\sqrt{6}$ (a) – 6 (b) 6(d) 36 Find the 50<sup>th</sup> term of the sequence 1/n, (n+1)/n, (2n + 1)/n, ..... 7. (b) (-49n + 1) (c) (49 + n)/n (d) (49n + 1)/n(a) (49n - 1)/n
- 8. Which pairs of triangles in the given figure are similar?



	(a) (i) and (iii)	(b) (ii) and (iii)	(c) (i) and (ii)	(d)None of these
9.	Using the remainder where $f(x) = 2x^2 - 5x^2$	er theorem, find the 1 x + 1	remainder on dividir	ng f(x) by $(x + 3)$
	(a) 33	(b) 4	(c) 34	(d) 3
10.	If a is a root of the e	equation $x^2 - (a + b)x$	+ k = 0, find the value (	ue of k.
	(a) 2a	(b) ab	(c) –ab	(d) 2ab
11.	Kiran purchases an price and 18% tax ( the article.	article for Rs 5310 w under GST) on the re	which includes 10% re emaining price. Find	ebate on the marked the marked price of
	(a) 3000	(b) 4000	(c) 5000	(d) 6000
12.	Number of terms ir	n series 4, 7, 10, 13,	, 148 are	
	(a) 50	(b) 48	(c) 94	(d) 49
13.	If AX = C, where A	$= \begin{bmatrix} 1 & 2 \\ -5 & 3 \end{bmatrix} \& \mathbf{C} = \begin{bmatrix} 16 \\ 11 \end{bmatrix}$	, then X =	
	(a) $\begin{bmatrix} 7\\2 \end{bmatrix}$	(b) $\begin{bmatrix} 2\\7 \end{bmatrix}$	$(c)\begin{bmatrix}2&7\\7&2\end{bmatrix}$	(d) None of these
14.	In $\triangle$ ABC, if PQ is particular AB = 5, AC = 10, the	arallel to BC, (P lies o en QC is :	on AB and Q lies on .	AC) and AP = 2,
	(a) 4	(b) 6	(c) 3	(d) None of these
15.	The sum of first 14 term.	terms of an AP is 10	50 and its 14 <sup>th</sup> term is	s 140. Find the 20 <sup>th</sup>
	(a) 50 (b) 94	(c) 48	(d) None of the abo	ve
	$\begin{bmatrix} 4 & 0 & 0 \end{bmatrix}$			
16.	$\begin{bmatrix} 0 & 2 & 0 \\ 0 & 0 & 1 \end{bmatrix}$ represen	ts a		
	(a) Diagonal matrix	of order $3 \times 3$	(b) Diagonal matrix	$\frac{1}{2} \text{ of order } 4 \times 2$
	(c) Rectangular mat	TIX OF Order 3 × 2	(u) Scalar matrix of	order 5 × 4
	10	Q17-22, each Questi	on is of 2 Marks)	

17. A registered dealer of Maharashtra purchased goods form registered dealer of Delhi for Rs 5,70,000 inclusive of IGST @ 20% and sold the same to registered

	dealer in Karnataka for Rs 6,80,000 plus IGST @20%. How much IGST is payable by dealer in Maharashtra/while purchasing.						
	(a) IN	R 41,000	(b) INR 95,000	(c) INR 1,36,000	(d) INR 19,000		
18.	Aksha the ra (a) Rs	ata deposits R te of 8% p.a. I 4382	s 350 per month in a Find the amount she (b) Rs 4238	recurring deposit ac receive at the time o (c) Rs 4283	ccount for one year at f maturity. (d) Rs 4832		
19.	A trai it wou km/h	n travels 180 11d have taker 11 is:	km at a uniform spe n 1 hr. less for the sa	ed. If the speed had l me journey. Then spe	oeen 9 km/hr more, eed of train (in		
	(a) 63		(b) 9	(c) 45	(d) 36		
20.	If $\frac{p^2}{q^2}$ +	$\frac{q^2}{p^2} = \frac{29}{20}$ , then	n p = 3kq, k is:				
	(a) 7		(b) $\frac{1}{7}$	(c) 9	(d) $\frac{1}{49}$		
21.	Find ' remai	a' if the polyr nder R1 and F 26	nomials $2x^3 + ax^2 - 2$ $R_2$ such that $R_1 + 3R_2$ (b) 22.5	and $2x + 5a$ when di + $2a = 0$ (c) $\frac{-2}{2}$	vided by $x - 2$ leave		
	( <sup>u)</sup> 2	.1	(0) 22.0	(0) 45	(u) 0		
22.	Find $x = 1$ $\begin{bmatrix} x + 10 \\ 3 - z \end{bmatrix}$	x, y, z in the for $ \begin{bmatrix} 0 & y^2 - 4y \\ z & 1 \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \end{bmatrix} $	bllowing. 3x+4 -3 z-5 1.				
	(a) x =	= 3, y = 3, 1 an	dz = 4	(b) $x = 12, y = \frac{3}{4}$ ar	dz = 4		
	(c) x =	= -3, y = 3, 1 ai	z = -4	(d) $x = 3, y = 3, 1$ ar	z = -4		
		Ĺ	Q23-25, each Questi	<u>on is of 4 Marks)</u>			
23.	(i)	If a, b, c, d a true:	re in continued prop	ortion, then which o	f the following is		
	(ii)	(a) a, b, c are (c) b, c, d are If a, b, c, d ar (a) a, b, c, d a (b) a, b, c are (c) both (a) 8	e in proportion e in proportion re in proportion, the are in continued pro- e in proportion & (b)	(b) a, b, c, d are in p (d) all of the above n which of the follow portion.	proportion ving is true :		

(c) both (a) & (b)(d) None of these

	(iii)	If $\frac{2a+3b}{2a-3b} = \frac{2b+3c}{2b-3c}$ , then which is always true :								
		(a) a, b, c are	all equal	(b) a =	= b but b≠c					
		(c) a, b, c are	in proportion	(d) a ≠	éb≠c					
	(iv)	First proport	ion of 4 and 8	is:						
		(a) 2	(b) 1	(c) $\frac{1}{2}$	(d) None of	these				
24.	If $\Delta AE$	$BC \sim \Delta DEF$ and	d the perimet	ers of $\triangle ABC$ a	and $\Delta DEF$ are	30 cm and 18 cm.				
	respec	tively.								
		(i) If BC =	= 9 cm, then E	EF (in cm) is:						
		(a) 6·3	(b) 5·4	(c) 7·2	(d) 4·5					
	(ii)	If area of $\Delta A$	$BC = 25 \text{ cm}^2$ ,	then area of $\Delta$	DEF (in cm <sup>2</sup> )	is:				
		(a) 15	(b) 22	(c) 20	(d) None of	these				
	(iii)	If CX (X lies of	on AB) & FY (	Y lies on DE)	, are altitudes	of the triangles, then				
		$\frac{FY}{CX}$ is not eq	ual to			Ũ				
		(a) $\frac{18}{30}$	(b) $\frac{5 \cdot 4}{9}$	(c) $\frac{7\cdot 5}{12\cdot 5}$	(d) $\frac{\sqrt{125}}{\sqrt{45}}$					
	(iv)	If $\angle A = 50^{\circ}$ ,	$\angle B = 60^\circ$ , the	en $\angle F$ is:						
		(a) cannot be	determined	(b) 60°	(c) 70°	(d) 50°				
25.	Sum o	of three numb	ers in A.P. is	24 and their p	product is 440,	then:				
	(i)	Middle num	ber is:	1						
	()	(a) 6	(b) 8	(c) 11	(d) 4					
	(ii)	Common dif	ference can be	e:						
		(a) – 3	(b) 4	(c) 8	(d) None of	these				
	(iii)	If numbers a	re written in a	ascending ord	er, then their	4th proportional is:				
		. 83	. 81	. 88	86					
		(a) $\frac{-}{5}$	(b) ${5}$	(c) ${5}$	(d) ${5}$					
	(iv)	If five times t	the fourth pro	portional in a	bove question	n (iii) is an element of				
		2 × 2 scalar n	natrix A, then	$A = \begin{bmatrix} 77 & 0 \\ 0 & 77 \end{bmatrix}$	is:					
		(a) 10 I <sub>2×2</sub>	(b) 7 I <sub>2×2</sub>	(c) 12 I <sub>2×2</sub>	(d) 11 I <sub>2×2</sub>					

### 10th ICSE Mathematics Mock Test-3 (Term-I)

Max. Marks: 40

#### Time Allowed : 90 Minutes

#### (Q1-16, each question is of 1 Mark)

1.	ABCD is a trapeziu:	C and BD intersect at	O. Then $\triangle AOB$ is	
	(a) ΔDOC	(b) ΔCOD	(c) $\Delta BOC$	(d) ∆ODC
2.	Third proportion to (a) 27	9 and 12 is: (b) 18	(c) 12	(d) 16
3.	In $\triangle$ ABC; DE    BC If AD = 2 cm, AB = (a) $\frac{15}{2}$	C (D & E lies on AB a 6 cm, CE = 5 cm, the (b) $\frac{225}{4}$	nd AC resp.). in AC <sup>2</sup> is: (c) $\frac{215}{2}$	(d) None of these
4.	A man deposited R maturity value. The (a) Rs 400	s 250 per month for 3 e interest received by (b) Rs 800	3 months and receive him is: (c) Rs 900	ed Rs 1650 as (d) None of these
5.	First three terms of (a) 39, 48	an A.P. are 3, 12, 21, (b) 30, 39	then 5 <sup>th</sup> & 6 <sup>th</sup> terms (c) 39, 47	are: (d) 30, 40
6.	If $\triangle ABC \sim \triangle QRP$ , the (a) $\frac{AB}{QR} = \frac{BC}{RP}$	then: (b) $\frac{AC}{QR} = \frac{BC}{RP}$	(c) $\frac{AB}{QR} = \frac{BC}{QP}$	(d) $\frac{AB}{PQ} = \frac{BC}{RP}$
7.	The first term of an is 120, then the num (a) – 4 and 10 (c) 6 and 10	AP is -5 and the last ber of terms and the	term is 45. If sum of common difference (b) 4 and 8 (d) None of the abo	the terms of the AP (respectively) are: ve
8.	If $x \in W$ , then the so (a) {, 1, 2, 3, 4}	lution set of the ineq (b) {0, 1, 2, 3, 4, 5}	uation -2x > - 10 is: (c) {0, 1, 2, 3, 4}	(d) {6, 7, 8, 9,}
9.	The roots of the qua correct to 3 significa (a) 1 390, 0 359	adratic equation $4x^2$ - ant figures are: (b) 1 39, 0 36	-7x + 2 = 0  are  1.390	, 0.359. The roots
10.	If $2x^2 - 7x - 1$ is divised in (a) - 4	(c) 1007 000 ided by x – 3, then re (b) 38	emainder is: (c) 4	(d) 2

11.	If 78 is the 'n <sup>th</sup> term (a) 14	n' of 3, 8, 13, 1 (b) 15	8, then n (c) 1	is: 16	(d) 17
12.	Roots of quadratic (a) real & distinct	$x^{2} - x + 1 = 0$ (b) non real	are: (c) 1	1 & - 1	(d) real & equal
13.	The following bill The total amount of (a) 2300	shows the GSArticlesABof bill (in Rs) is(b) 2624	<u>F rates and t</u> M.P. <u>Rs 500</u> <u>Rs 1800</u> s: (c) 2	he marked pri Rate 12% 18% 2684	ce of articles A and B: (d) None of these
14.	Solve the following 2 decimal places : (a) 9.36, 0.64	g equations fo x <sup>2</sup> - 1 (b) 1.09, -2.7	r x and give .0x + 6 = 0 76 (c) 8	, in each case, <u>-</u> 3.36, 1.64	your answer correct to (d) None of these
15.	Find the value of x (a) $x = 6$ (c) $x = 1$	$if \begin{bmatrix} 3x + y & -y \\ 2y - x & 3 \end{bmatrix}$	$ \begin{bmatrix} 1 & 2 \\ -5 & 3 \end{bmatrix} $ (b) x = -1/ (d) x = -2	73	
16.	Which of the follow (a) All scalar matri (b) All diagonal ma (c) Zero matrix is s (d) Identity matrix	ving is not tru ces are diagor atrices are of t calar as well a is not scalar r	the for $2 \times 2$ m thal . the form $\begin{bmatrix} a \\ 0 \end{bmatrix}$ as diagonal m that is.	natrix. 0 b] natrix.	
	<u>(C</u>	<u>17 – 22, each</u>	question ca	rries 2 marks)	
17.	Using properties o (a) 3:2	f proportion, (b) 2:3	what is x : y (c) 1	, if $\frac{x^2 + 2x}{2x + 4} = \frac{y}{3}$ 1:3	$\frac{y^2 + 3y}{3y + 9}$ (d) 3:1
18.	The number of interval $-\frac{x}{3} \le \frac{x}{2} - 1\frac{1}{3}$ (a) 0	eger solution of $x < \frac{1}{6}, x \in R$ . (b) 2	of the follow (c)	ing inequatior 1	are: (d) 3

19. What number must be added to each of the numbers 5, 11, 19 and 37 so that they are in proportion?(a) 2 (b) 3 (c) 1 (d) 4

20. Let 
$$A = \begin{bmatrix} 2 & 1 \\ 0 & -2 \end{bmatrix}$$
,  $B = \begin{bmatrix} 4 & 1 \\ -3 & -2 \end{bmatrix}$  and  $C = \begin{bmatrix} -3 & 2 \\ -1 & 4 \end{bmatrix}$ , then  $A^2 + AC - 5B$  is:  
(a)  $\begin{bmatrix} -23 & 3 \\ 17 & 6 \end{bmatrix}$  (b)  $\begin{bmatrix} 23 & 3 \\ 17 & 6 \end{bmatrix}$  (c)  $\begin{bmatrix} -23 & 17 \\ 3 & 6 \end{bmatrix}$ (d)  $\begin{bmatrix} 23 & -3 \\ 17 & 6 \end{bmatrix}$ 

21. In the adjoining Fig., if DE | |BC, AD = 4x - 3, DB = 3x - 1, AE = 8x - 7 and BC = 5x - 3, then the values of x are



22. Katrina opened a recurring deposit account with a Nationalised Bank for a period of 2 years. If the bank pays interest at the rate of 6% per annum and the monthly instalment is Rs 1000, then interest earned in 2 years is (Rs) :
(a) 2000 (b) 1500 (c) 3000 (d) 2500

(Q23 – 25, each question carries 4 marks)

23. If 
$$(x - 2)$$
 is a factor of  $f(x) = 2x^3 - x^2 - px - 2$ , then  
(i) value of p is :  
(a) 3 (b) 4 (c) 6 (d) 5  
(ii) One factor of  $f(x)$  maybe :  
(a)  $(x+2)$  (b)  $(x-1)$  (c)  $(x+1)$  (d)  $(3x+1)$   
(iii) Another factor of  $f(x)$  maybe :

(a) 
$$(x+3)$$
 (b)  $(2x-1)$  (c)  $(3x-1)$  (d)  $(2x+1)$ 

(iv) If f(x) is divided by (x-1), remainder is : (a) 0 (b) -6 (c) -5 (d) None of these 24. Manufacturer A sells a washing machine to a dealer B for Rs 12500. The dealer B sells it to a consumer at a profit of Rs 1500. If the sales are intra-state and the rate of GST is 12%, then :

(i)	the amount Government	of tax (under (	GST) paid by t	the dealer B to the Central
	(a) Rs 90	(b) Rs 180	(c) Rs 80	(d) Rs 100
(ii)	the amount (a) Rs 940	of tax (under ( (b) Rs 180	GST) received (c) Rs 840	by the State Government. (d) Rs 1080
(iii)	the amount (a) Rs 17680	that the consu (b) Rs 14680	mer pays for (c) Rs 166 80	the machine. (d) Rs 15680
(iv)	Tax paid by (a) 2500	B to A is (Rs.) (b) 1500	: (c) 3500	(d) None of these
A par incre (i)	ssenger train t ased by 5 km/ If the usual s (a) 300/(x+5 (c) 300/(x)	akes 2 hours le hr from its us speed is x, the )	ess for a journ ual speed. n time taken ( (b) 300/(x-5) (d) none of t	ey of 300km, if its speed is in hrs) at increased speed is : hese
(ii)	Usual speed (a) 30	is (in km/hr) (b) 25	: (c) 20	(d) 40
(iii)	decreased ti (a) 2	me taken is ( i (b) 5	n hrs. ): (c) 8	(d) 10
(iv)	Increased sp (a) 25	eed is (in km/ (b) 35	('hr): (c) 30	(d) 45
		the state of the		

25.

## MAHEMATICS MOCK ANSWER KEYS

### MOCK 1

1. B	2. D	3. D	4. B	5. C	6. A	7. C	8. D	9. D	10. D
11. B	12. B	13. D	14. B	15. C	16. A	17. D	18. A	19. C	20. D
21. A	22. C			-	States of States				
23. 1.A,	23. 1.A, 2.A, 3. B, 4, D								
24. 1.A,	24. 1.A, 2. D, 3. D, 4. C								
25. 1.C, 2. B, 3. D, 4. A									

## MOCK 2

1. C	2. C	3. D	4. A	5. D	6. B	7. D	8. C	9. C	10. B
11. C	12. D	13. B	14. B	15. D	16. A	17. B	18. A	19. D	20. B
21. A	22. A	23. i.D, i	ii.D, iii.C,	iv.A	24. i.B, ii.	A, iii.D,	iv.C	25. i.B, ii.A	, iii.C, iv.D

## MOCK 3

1. B	2. D	3. B	4. C	5. A	6. A	7. C	8. C	9. D	10. A
11. C	12. B	13. C	14. A	15. C	16. D	17. B	18. C	19. A	20. A
21. C 22. B 23. (i) D, (ii) C, (iii) D, (iv) B 24. (i) A, (ii) C, (iii) D, (iv) B						В			
25. (i) A	25. (i) A, (ii) B, (iii) D, (iv) C								