

Roll No:			Answer Sheet No:	
Sig of Candidate			Sig. of Invigilator:	

# Federal Board SSC-I Examination General Mathematics Model Question Paper

			<b>SECTIO</b>	N - A						
Time	allowe	ed: 20	minutes		Marks: 15					
Note:	paper	itself. I		irst 20	n are to be answered on the question minutes and handed over to the Centre d. Do not use lead pencil.					
Q.1	Encircle the correct option i.e. A / B / C / D. All parts carry equal marks.									
	i.	i. How many students are in the class if 75% of them is 60?								
		Α.	85	В.	75					
		C.	80	D.	100					
	ii.	i. A deceased having no children, left a property of worth Rs.100,000. What is the share of his widow?								
		A.	Rs.2,500	B.	Rs.25,000					
		C.	Rs.50,000	D.	Rs.12,500					
	iii.	Zakat	on silver amounting Rs.1,500	,000 is						
		A.	Rs.37,500	B.	Rs.45,000					
		C.	Rs.15,000	D.	Rs.3,750					
	iv.	Loss i	s there when							
		A.	S.P > C.P	B.	S.P = C.P					
		C.	S.P < C.P	D.	S.P = M.P					
	v.	The periodic instalment to be paid by the insurer is called								
		A.	bonus	B.	Maturity					
		C.	premium	D.	mark up					
	vi. The annual income of a flat is Rs.600,000. At what rate a tax amoun Rs.72,000 is being paid?									
		A.	10%	B.	12%					
		C.	17%	D.	24%					
	vii. What is the simplified form of $3^{\frac{1}{2}} \div 3^{\frac{1}{8}}$ ?									
		A.	36	B.	1					
		C.	9 <sup>1</sup> / <sub>6</sub>	D.	3 -					
	viii.	What	is the scientific notation of an	express	sion = 0.084×10 <sup>10</sup> / 2					

B.

 $2.1 \times 10^5$  $0.021 \times 10^7$ A. C. D.

### DO NOT WRITE ANYTHING HERE

	ix.	A.M b	between 3 and $x$ is 15. What is 10	the value. B.	ue of <i>x</i> ?					
		C.	75	D.	-10					
	х.		$= \{(4, 5), (5, 4), (5, 6), (6, 4)\}$							
		A. C.	{4, 10} {6}	B. D.	{5, 6} {4, 5, 6}					
xi.		If $L \subseteq M$ then which of the following sets represents $L \cap M$ ?								
		A. C.	M Φ	B. D.	L L U M					
	xii.	What	is the x- intercept of the graph	of ** +	-4y = 3?					
		A.	1/2	В.	4					
		C.	3	D.	6					
xiii.	xiii.	What is the 7th term of a G.P 2, 8, 32,								
		A. C.	4096 65536	B. D.	8192 2048					
	xiv.	For a s	set of data 9, 8, 5, 6, 8, 3 med	lian is:						
		A. C.	8 7	B. D.	6 6, 8					
	XV.	For a s	set of data 6, 2, 4, 3, 4, 5, 4, 5	mode i	s:					
		A. C.	3 5	B. D.	4					
		C.	3	D.	2					
For Ex	amine	r's use	only:							
					Total Marks: 1	5				
					Marks Obtained:					
					_					



## Federal Board SSC-I Examination General Mathematics Model Question Paper

Time allowed: 2.40 hours Total Marks: 60

Note: Attempt any nine parts from Section 'B' and any three questions from Section 'C' on the separately provided answer book. Use supplementary answer sheet i.e. Sheet–B if required. Write your answers neatly and legibly. Log book and graph paper will be provided on demand.

### **SECTION – B** (Marks 36)

- Q.2 Attempt any NINE parts from the following. All parts carry equal marks.  $(9 \times 4 = 36)$ 
  - i. Out of his total income, Hamza spends 20% on house rent and 70% of the rest on household expenditure. If he saves Rs.1800, what is his total income?
  - ii. If 4200 soldiers have food for 32 days sufficient at a rate of 12 hectograms per soldier. How many soldiers may leave so that the same food may be sufficient for 42 days at a rate of 16 hectograms per soldier?
  - iii. An amount of Rs.4,00,000 left as an inheritance is to be distributed among a widow and four daughters. Workout the share of each.
  - iv. If 15% discount on Marked Price of a heater is allowed and still makes a profit of 2%. If it is sold on Marked Price, what is profit percentage?
  - v. Rs.3720 are to be divided into three shares in such a way that 1<sup>st</sup> share would be double, triple to the 2<sup>nd</sup> and 5 times to the 3<sup>rd</sup> are equal.
  - vi. Mr. Akram got a truck on lease for 5 years through a bank. The price of truck is Rs.2,000,000. He paid 20% of price as down payment. Find mark up on the balanced amount at the rate of 17%.
  - vii. Find compound profit on Rs.600 for 4 years at 6% per annum.
  - viii. The total taxable income of a person is Rs.4,30,000. If he is given rebate Rs.3,000 on the tax chargeable, then workout the amount he has to pay as an income tax @ 4.5%.
  - ix. Simply  $\frac{(2ab^{5})^{4} \times (6a^{2}b)^{2}}{4ab \times 16a^{5}b^{5}}$
  - x. Prove that  $log\left(\frac{a^{2}}{bc}\right) + log\left(\frac{b^{2}}{ca}\right) + log\left(\frac{c^{2}}{ab}\right) = 0$
  - xi. Insert three A.Ms between 3 and 31.
  - xii. If  $A = \{1, 7, 11, 15, 17, 21\}$ ,  $B = \{11, 17, 19, 23\}$  and  $C = \{2, 3, 5\}$ , verify that (A  $\cap$  B)  $\cap$  C = A  $\cap$  (B  $\cap$  C)
  - xiii. If  $S = \{1, 2, 4, 8\}$  and  $T = \{1, 3, 9\}$ 
    - (a) Find S x T
    - (b) Write the binary relation  $R = \{(x,y) | x \in S, y \in T \land y > 2x\}$  in tabular form.
    - (c) Find the domain of R.
    - (d) Find the range of R.

xiv. For x + 2y = -2

- (a) find x when y = 2
- (b) find y when x = 4
- (c) find x-intercept
- (d) use results of (a), (b), (c) to plot the graph.

### **SECTION – C** (Marks 24)

**Note:** Attempt any **THREE** questions. Each question carries six marks.  $(3 \times 8 = 24)$ 

- Q.3 A person insured his bus worth Rs.2,500,000 @ 4.5% for 6 years. After two years, he claimed for Rs.400,000. How much loss had he recovered if rate of depreciation is 10%?
- Q.4 What sum of money would produce Rs.630.50 in 3 years at 5% compound profit?
- Q.5 Evaluate by using the logarithm  $\frac{\sqrt[8.59 \times (55.6)^2}{2.51 \times \sqrt{2.12}}$
- Q.6 If  $U = \{7, 8, 9, 10, 11, 12, 13, 14\}$ ,  $A = \{7, 10, 13, 14\}$  and  $B = \{7, 8, 11, 12\}$ , then
  - (a) find  $A \cap B$
  - (b) find A<sup>c</sup>
  - (c) find B<sup>c</sup>
  - (d) find A<sup>c</sup> U B<sup>c</sup>
  - (e) find  $(A \cap B)^c$
  - (f) check if  $(A \cap B)^c = A^c \cup B^c$
- Q.7 For the given values 1, 2, 3, 4, 6, 8, 11
  - (a) find  $\sum x$
  - (b) calculate mean  $\bar{x}$
  - (c) for every x, find  $x \overline{x}$
  - (d) find  $(x \bar{x})^2$  for every x
  - (e) find the standard deviation