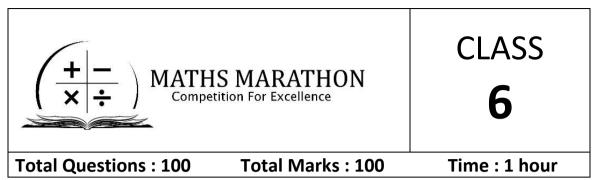
STATE LEVEL EXAM (2024 – 2025)



INSTRUCTIONS TO THE STUDENT'S

- 1. Please do not open this question paper unless you are instructed to do so.
- 2. Additional 5 minutes will be given to the candidates for filling up the student's details before the start of the competition.
- 3. The paper consists of 5 different chapters of the textbook.
- 4. All questions are compulsory and consist of equal marks.
- 5. Each question is carrying 1 mark, there is no negative marking.
- 6. There is only one correct answer, hence mark one answer only.
- 7. Darken the circle with dark pencil or blue/black ball pen only.
- 8. Return the answer sheet along with the question paper to the supervisor at the end of the exam.
- 9. Extra Blank pages can be used for rough calculations

Name	
SCHOOL	
ROLL NO	 CLASS

1. Solve 2x + 5 = 3x - A) 12	7 B) -12	C) -2
2. Solve x -12 = 4 A) 16	B) 14	C) 18
3. Solve 3x + 2 = 2x + A) 6	+ 10 B) 10	C) 8
4. Solve 5(y - 2) + 3 = A) -1	2(2y - 5) + 7 B) 4	C) 0
5. Solve 3z - 2(2z - 4) A) 1	= 2(z + 1) - 3 B) 2	C) 3
6. Solve 3(y + 2) - 4(y A) 1	y - 1) = y + 8 B) 4	C) 2
7. Solve $\frac{5x+1}{2} = \frac{3x-3}{3}$ A) 5	³ and find <i>x</i> B) 9	C) -1
8. Solve 4(x - 2) - 3(x A) -3/5	+ 1) = 2(2x - 3) B) -5/3	C) -1
9. Solve 5x - 3(2x - 1) A) 3	= 7 B) 5	C) -4
10. Solve $\frac{4x+5}{3} = 2x$ A) 2	+1 В) 3	C) 1
11 A norcon huns A	analos and 2 honores f	or = 20 1

11. A person buys 4 apples and 3 bananas for ₹28. If apples cost ₹4 each, what is the cost of one banana?

12. A car travels 60 km/hr faster than a bike. If the car covers 240 km in the same time the bike covers 120 km, find the bike's speed.

A) 30 km/hr B) 60 km/hr C) 50 km/hr

13. The cost of 5 pens and 3 pencils is ₹19. The cost of each pen is ₹2. What is the cost of each pencil?

14. A number is su A) 7	btracted from 10, an B) 8	d the result is 3. What is the number? C) 9
	ne marbles. After givi ny marbles did Emma	ing 20 marbles to her friend, she was left with 80 have originally?
A) 90	B) 100	C) 110
	mixes two varieties o h ₹60/kg. Find the va	of rice costing ₹50/kg and ₹70/kg in the ratio <i>x</i> :1 to alue of <i>x</i> .
A) 1	B) 2	C) 3
17. Maya has 3 tim oranges does Maya		as Anna. Together, they have 48 oranges. How many
A) 24	B) 30	C) 36
per hour, how mar	ny hours will it take t	-
A) 10	B) 12	C) 15
	imes as old as her da the daughter's curre	nughter. In 8 years, the mother will be twice as old as ent age.
A) 8 years	B) 4 years	C) 10 years
20. Lisa buys 3 not spend in total?	ebooks for ₹5 each. I	If she also buys 2 pens for ₹2 each, how much did Lisa
A) ₹15	B) ₹17	C) ₹19
	SECTIO	IN 2 - RATIO-PROPORTION
	_	
	rtion of 63 cm to 84	
A) 5:4	B) 3:4	C) 3:2
22. Find the propo	rtion of 27 to 45.	
A) 3:4	B) 4:5	C) 3:5
23. Find the propo	rtion of 18 to 24.	
A) 2:3	B) 4:5	C) 3:4
24. Find the propo	rtion of 75 to 100.	
A) 3:5	B) 3:4	C) 4:5
25. A car travels 12	20 km using 8 liters o	f fuel. What's the ratio of distance to the fuel used?

A) 15:1 B) 20:1 C) 25:1

26. The time taken by two workers to complete a task is in the ratio 3:4. If the first worker finishes in 12 days, how many days does the second worker take?				
A) 14 days	B) 16 days	C) 18 days		
	27. A mixture contains milk and water in the ratio 4:1. If the total quantity of the mixture is 25 liters, how much milk does it contain?			
A) 20 liters	B) 15 liters	C) 10 liters		
28. A rope is cut into piece to the longer p		45 m and 60 m. What is the ratio of the shorter		
A) 4:5	B) 5:6	C) 3:4		
length of the shorter	rope?	o 4:5. If the longer rope is 45 meters, what is the		
A) 30 meters	B) 36 meters	C) 40 meters		
	vo buildings are 60 me r building to the taller o	ters and 90 meters. What is the ratio of the one?		
A) 2:3	B) 3:5	C) 4:5		
31. A machine can produce 250 items in 5 hours. How many items can it produce in 8 hours?A) 400B) 450C) 500				
32. A machine can print 500 pages in 2 hours. How many pages will it print in 6 hours?				
A) 1700 pages	B) 1600 pages	C) 1500 pages		
33. A gardener plants 60 trees in 5 days. How many trees will he plant in 8 days?				
A) 96	B) 94	C) 98		
34. A recipe calls for sugar and flour in the ratio 3:5. If 15 cups of flour are used, how much sugar is needed?				
A) 6 cups	B) 9 cups	C) 10 cups		
35. A vehicle uses 18 liters of fuel to cover 240 km. How much fuel will it use to cover 600 km?				
A) 36 liters	B) 45 liters	C) 50 liters		
36. A mixture contains sugar and flour in the ratio 2:3. If there are 36 kg of flour, how much sugar is in the mixture?				
A) 20 kg	B) 30 kg	C) 24 kg		
37. The present age of a woman is 4 years less than twice the age of her daughter. The sum				

of their ages is 56 years. What is the present age of the woman?

A) 30 years B) 32 years C) 36 years

38. The present age of a father is four times that of his son. After 10 years, the father's age will be twice the son's age. What is the present age of the son?

A) 10 years B) 5 years C) 7 years

39. A father is 4 times as old as his son. In 8 years, the father's age will be twice the son's age. What is the present age of the son?

A) 6 years B) 4 years C) 7 years

40. The present age of a father is 10 years more than three times the age of his son. After 12 years, the father's age will be twice the son's age. What is the present age of the son?

A) 2 years B) 1 years C) 4) 4 years
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	SECTION 3 -	PERCENTAGE & PROFIT - LOSS
41. What is 15% a	s a fraction?	
A) 3/10	B) 1/5	C) 3/20
42. What is 55% a	s a fraction?	
A) 11/20	B) 5/9	C) 1/2
43. What is 9/20 a	s a percentage?	
A) 50%	B) 45%	C) 40%
44. What is 5/8 as	a percentage?	
A) 55%	B) 65%	C) 62.5%
45. A shopkeeper what is the new p		a product by 15%. If the original price was ₹500,
A) ₹600	B) ₹575	C) ₹550
46. A man invests after one year?	₹10,000 in a bank tha	t offers 6% annual interest. What will be his interest
A) ₹700	B) ₹500	C) ₹600
17 A student is all		to complete a test. If the original time was 2 hours,
how much extra ti	0.1011	
	B) 30 minutes	C) 24 minutes
how much extra ti A) 20 minutes	B) 30 minutes	C) 24 minutes d at a 20% discount, what is the selling price?

49. A shopkeeper gives a 25% discount on a product. If the product is sold for ₹1,500, what was its original price?

A) ₹1,600 B) ₹1,700 C) ₹2,000

50. The population of a town increases by 10% every year. If the current population is
50,000, what will it be next year?

A) 52,000 B) 55,000 C) 60,000

51. A person buys a mobile phone for ₹15,000 and sells it for ₹12,000. What is the loss percentage?

A) 20% B) 15% C) 10%

52. A cloth merchant bought 100 meters of cloth for ₹4,000. He sells it at a profit of 25%. What is the selling price of 1 meter of cloth?

A) ₹50	B) ₹55	C) ₹60

53. A trader buys 10 pens for ₹150 and sells them for ₹180. What is the profit percentage? A) 15% B) 20% C) 25%

54. A person buys 10 items at ₹800 each and sells 5 items at a profit of 15% and the remaining 5 items at a loss of 10%. What is his overall profit or loss percentage?

A) Profit of 2.5% B) Loss of 2.5% C) No profit, no loss

55. A merchant sells a book for ₹800, making a profit of 25%. What is the cost price of the book?

A) ₹600	B) ₹650	C) ₹640
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56. A shopkeeper bought an article for ₹1,500 and sold it for ₹1,200. What is the loss percentage?

A) 15% B) 20% C) 25%

57. A man bought a camera for ₹6,000 and sold it for ₹7,200. What is the profit percentage?
A) 15%
B) 18%
C) 20%

58. A shopkeeper buys 5 shirts for ₹600 each and sells them at ₹700 each. What is his overall profit percentage?

A) 8.14% B) 16.67% C) 12.44%

59. A trader buys 40 units of a product at ₹200 each and sells them for ₹220 each. What is the profit percentage?

A) 15% B) 10% C) 8%

60. A person bought a laptop for ₹40,000 and sold it at a profit of 10%. What is the selling price?

A) ₹46,000 B) ₹45,000 C) ₹44,000

SECTION 4 - TRIANGLES & QUADRILATERALS

_	ll angles less than 90° i B) Obtuse triangle		ngle	
62. The point of inte A) Centroid	rsection of the angle b B) Incenter	isectors of a tri C) Orthocent	-	
63. If an equilateral A) 8 cm	triangle has one side o B) 6 cm	f 8 cm, what is C) Cannot be	the length of the other two sides? determined	
64. In an isosceles tr A) Equal	iangle, the angles oppo B) Different	osite the equal C) Right angle		
65. In a scalene triar A) Shortest side	igle, the largest angle i B) Largest side	s always oppos C) Equal side	ite to the:	
66. In a right-angled triangle, the sum of the other two angles (besides the right angle) is: A) 90° B) 60° C) 180°				
67. In an obtuse-angled triangle, the largest angle is always: A) Equal to 90° B) Greater than 90° C) Less than 90°				
68. Which of the following can be an angle of an acute-angled triangle? A) 95° B) 120° C) 60°				
69. What triangle is formed with sides 6 cm, 8 cm, and 10 cm A) Right-angled triangle B) Acute-angled triangle C) Obtuse-angled triangle				
70. What triangle is formed with sides 8 cm, 8 cm, and 8 cm: A) Scalene triangle B) Equilateral triangle C) Right-angled triangle				
71. What triangle is formed with sides 15 cm, 15 cm, and 20 cm: A) Scalene triangle B) Equilateral triangle C) Isosceles triangle				
72. Can a triangle be formed with sides 8 cm, 15 cm, and 20 cm? A) Yes B) No C) Only if it is an obtuse-angled triangle				
73. Can a triangle be formed with sides 7 cm, 10 cm, and 12 cm?A) YesB) NoC) Only if it is an isosceles triangle				
74. Which quadrilateral has all sides of equal length and all angles equal to 90°? A) Rectangle B) Square C) Rhombus				

75. Which quadrilateral has diagonals that are equal in length and bisect each other?								
A) Parallelogram	B) Ki	te	C) Re	ectangle				
76. If two sides of a	a quadrilateral s	hare a comm	on verte	, they are called:				
A) Opposite side	s B) Pa	arallel sides	C) Ac	ljacent sides				
77. In which quadrilateral are opposite sides both equal and parallel?								
A) Rhombus and rectangle B) Trapezium and kite C) Kite and parallelogram								
78. The sum of two adjacent angles of a parallelogram is always:								
A) 90°	B) 180°	C)	360°					
79. The sum of the	exterior angles	of any polyg	on is alwa	ys:				
A) 180°	B) 90°	C)	360°					
80. How many diagonals are in a polygon with 6 sides (hexagon)?								
A) 9	B) 6	C)	15					
	SE	CTION 5 - SIN	IPLE INTE	REST				
81. In the context of Simple Interest, what does 'P' represent?								

A) The rate of interest B) The principal amount C) The total amount after interest

82. Which of the following best defines Simple Interest?

- A) Interest calculated on the initial principal amount only, for each time period
- B Interest calculated on the total amount including interest earned
- C) Interest calculated only for the first year
- 83. What is the total amount after 5 years if ₹4000 is invested at 6% Simple Interest p.a.?
 A) ₹5000
 B) ₹4800
 C) ₹5200

 84. The ROI is 8% p.a., and the time is 2 years. The Simple Interest is ₹960. Find principal.

 A) ₹8000
 B) ₹7200
 C) ₹6000

85. A principal of ₹7500 earns ₹1500 as Simple Interest in 5 years. What is the rate of interest per annum(p.a.)?

A) 4% B) 6% C) 5%

86. A principal of ₹8000, Simple Interest of ₹1920 in 3 years. Find the rate of interest p.a.
A) 6%
B) 8%
C) 10%

87. Find the total amount if ₹6000 is invested for 6 years at 10% per annum Simple Interest?
A) ₹8400
B) ₹7200
C) ₹9600

88. What is the prine	cipal if the Simple Inter	rest is ₹1350, rate is 9% p.a. , and time is 5 years?					
A) ₹2500	B) ₹3000	C) ₹4000					
	l some money at 6% pe hat was the borrowed	er annum Simple Interest for 4 years. If he paid amount?					
A) ₹5000	B) ₹4500	C) ₹6000					
90. A sum of ₹9000 years?	is invested at 10% per a	annum. What will be the interest earned after 3.5					
A) ₹2700	B) ₹3000	C) ₹3150					
91. If ₹5000 become	es ₹6500 in 5 years, find	d the rate of interest per annum.					
A) 5%	B) 6%	C) 7%					
-	-	₹3200 as Simple Interest at 8% per annum?					
A) 3 years	B) 4 years	C) 5 years					
93. Ramesh borrowe	ed ₹8000 at a rate of 5	% p.a. for 3 years. What is interest to pay?					
A) ₹1000	B) ₹1200	C) ₹1500					
94. A sum of ₹5000 is invested at a rate of 9% per annum for 4 years. What will be the total amount at the end of the investment period?							
A) ₹6800	B) ₹6200	C) ₹7200					
95. If Sita invests ₹2 interest earned ?	0,000 for 4 years at 8%	per annum simple interest, what will be the total					
A) ₹6400	B) ₹6450	C) ₹7200					
96. What amount w per annum?	ill Harry receive after 4	years if she invests ₹20,000 at 8% simple interest					
A) 26,200	B) 26,400	C) 24,200					
97. If ₹50,000 is inve earned in 5 years?	ested at 8% Simple Inte	erest per annum, what will be the total interest					
A) ₹25,000	B) ₹22,500	C) ₹20,000					
98. A person invests investment to doubl	-	um Simple Interest. How long will it take for the					
A) 10 years	B) 6 years	C) 7 years					
99. Find the principa annum.	I if the Simple Interest	is ₹600, time is 3 years, and rate is 4% per					
A) ₹4500	B) ₹5000	C) ₹4000					
-		n ₹1000 as Simple Interest at 10% per annum?					
A) 1 year	B) 3 years	C) 2 years					

ANSWER KEY

QUE	ANS								
1	Α	21	В	41	С	61	С	81	В
2	А	22	С	42	А	62	В	82	A
3	С	23	С	43	В	63	А	83	С
4	В	24	В	44	С	64	А	84	С
5	С	25	А	45	В	65	В	85	А
6	А	26	В	46	С	66	А	86	В
7	С	27	А	47	С	67	В	87	С
8	В	28	С	48	А	68	С	88	В
9	С	29	В	49	С	69	А	89	А
10	С	30	А	50	В	70	В	90	С
11	А	31	А	51	А	71	С	91	В
12	В	32	С	52	А	72	А	92	C
13	А	33	А	53	В	73	А	93	В
14	А	34	В	54	А	74	В	94	А
15	В	35	В	55	С	75	С	95	А
16	Α	36	С	56	В	76	С	96	В
17	C	37	С	57	С	77	А	97	С
18	В	38	В	58	В	78	В	98	Α
19	В	39	В	59	В	79	С	99	В
20	С	40	А	60	С	80	А	100	С