GREENLAWNS SCHOOL, WORLI

TERMINAL EXAMINATION: 2024-25

MATHEMATICS

Std: VIII | Marks: 80

Date: 03/10/2024 | Time: 2½ hrs

Answers to this paper must be written on the paper provided separately. You will **not** be allowed to write during the first **10** minutes. This time is to be spent in reading the Question paper.

Question 1

Choose the correct answers to the questions from the given options. **[10]**

(Do not copy the question, write the correct answers only.)

(i) $\sqrt{2\frac{1}{4}}$ **= ?**

(a) $2\frac{1}{2}$ (c) $1\frac{1}{4}$

(b) $1\frac{1}{2}$ (d) None of these

(ii) $\sqrt[3]{\frac{-512}{729}}$ **= ?**

(a) $\frac{-7}{9}$ (c) $\frac{-8}{9}$

(b) $\frac{7}{9}$ (d) $\frac{8}{9}$

(iii) If A and B are two sets, then A – B is defined as:

(a) $\{x : x \in A \text{ or } x \in B\}$ (c) $\{x : x \in A \text{ and } x \in B\}$

(b) $\{x : x \in A \text{ and } x \notin B\}$ (d) $\{x : x \in B \text{ and } x \notin A\}$

(iv) What % of 150 is 30?

(a) 50% (c) 15%

(b) 10% (d) 20%

(v) Oranges are bought at 5 for ₹ 10 and sold at 6 for ₹ 15. The gain % is:

(a) 40% (c) 50%

(b) 35% (d) 25%

(vi) The compound interest on ₹ 10,000 at 10% p.a. for 3 years, compounded annually is:

(a) ₹ 1331 (c) ₹ 3130

(b) ₹ 3310 (d) ₹ 13310

(vii) A car takes 2 hours to reach a destination by travelling at 60 km/hr. How long will it take while travelling at 80 km/hr?

(a) 1 hr 30 min (c) 2 hrs 40 min

(b) 1 hr 40 min (d) 2 hrs 30 min

(viii) Each interior angle of a polygon is 108^0. How many sides does it have?

(a) 8 (c) 5

(b) 6 (d) 7

(ix) In a square ABCD, AB = (2x + 3) cm and BC = (3x - 5) cm. Then, the value of x is:

(a) 2 (c) 8

(b) 4 (d) 6

(x) From a well-shuffled deck of 52 cards, one card is drawn at random. What is the probability that the drawn card is a queen?

(a) $\frac{1}{4}$ (c) $\frac{1}{26}$

(b) $\frac{1}{52}$ (d) $\frac{1}{13}$

Question 2 [10]

(i) Using the division method find the square root of 12.0404.

(ii) Evaluate: $\sqrt[3]{\frac{256}{54\ x\ 686}}$

(iii) Find a single discount equivalent to two successive discounts of 25% and 8%.

(iv) Find the number of sides in a polygon if the sum of its interior angles is 900^0.

(v) A machine in a soft drink factory fills 1120 bottles in 7 hours. How many bottles will it fill in 6 hours?

Question 3

(i) Let the universal set be U = {x : x ∈ N and x ≤ 18}, A = {factors of 12} and B = {factors of 18}. Find the following: **[3]**

(a) A' (b) A' U B' (c) A' ∩ B'

(ii) On selling a bag for ₹ 704, a shopkeeper suffers a loss of 12%. At what price should he sell it to gain 7.5%. **[3]**

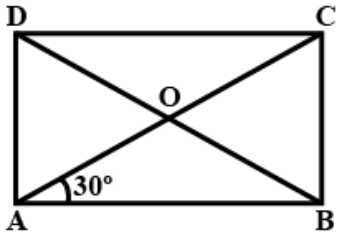
(iii) In the rectangle ABCD given below, the diagonals intersect at O. If ∠OAB = 30^0, find: **[4]**

(a) ∠ACB

(b) ∠ABO

(c) ∠COD

(d) ∠BOC



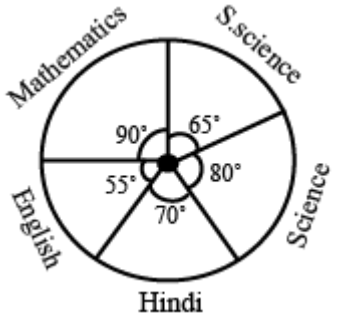
Question 4

(i) The simple interest on a sum of money for 3 years at 12% per annum is ₹ 6750. What will be the compound interest on the same sum at the same rate for the same period, compounded annually? **[3]**

(ii) A can do a job in 25 days and B can do it in 20 days. They work together for 5 days and then A falls ill. In how many days will B finish the remaining part of the job? **[3]**

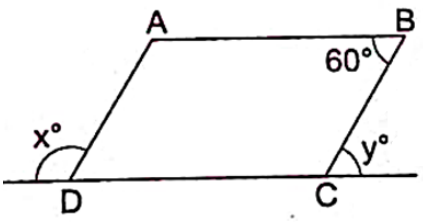
(iii) The pie chart below gives the marks scored in an examination by a student. If the total marks obtained by the student were 540, answer the following questions: **[4]**

(a) In which subject did the student score 105 marks?
(b) How much did the student score in English?
(c) How many more marks were obtained by the student in Mathematics than in Hindi?
(d) Examine whether the sum of the marks obtained in Social Science and Mathematics is more than that in Science and Hindi.



Question 5

(i) ABCD is a parallelogram. Find x and y. **[3]**



(ii) Find the least number that must be subtracted from 7950 to get a perfect square. Also, find the square root of this perfect square. **[3]**

(iii) If A = {letters of SECUNDRABAD} and B = {letters of BENGALURU}, then find: **[4]**
(a) A U B (b) A ∩ B (c) A – B (d) B – A

Question 6

(i) If the price of wheat is increased by 20% today, at what percent should it be decreased tomorrow, so as to bring down the price back to the original? **[3]**

(ii) A hostel had rations for 150 students for 60 days. After 12 days, 30 more students join the hostel. How long will the remaining ration last? **[3]**

(iii) The ratio of the number of side of two regular polygons is 1:2 and the ratio of the sum of their interior angles is 3:8. Find the number of sides in each polygon. **[4]**

Question 7

(i) Harish sold a bicycle at 8% gain. Had it been sold for ₹ 375 more, the gain would have been 14%. Find the cost price of the bicycle. **[3]**

(ii) A die is thrown once. What is the probability of getting: **[3]**
(a) A prime number?
(b) A number greater than 4?
(c) A number not greater than 5?

(iii) The difference between the compound interest, compounded annually and the simple interest on a certain sum for 2 years at 15% p.a. is ₹ 180. Find the sum. **[4]**

Question 8

(i) Find the cube roots of the following decimal numbers: **[3]**
(a) $\sqrt[3]{0.216}$ (b) $\sqrt[3]{9.261}$

(ii) The monthly income of a family is ₹ 28,800. The monthly expenditure of the family on various items is given below: **[3]**

Item	Rent	Food	Clothing	Education	Savings
Expenditure (in ₹)	8000	10800	5600	3600	800

Represent the above data by a Pie Chart.

(iii) Mr. Khurana has two kitchen appliance stores. He compares the sales of two stores during a month and recovered as given below: **[4]**

Item	**Number of items sold**	
	Store A	**Store B**
Grill	40	20
Toaster	35	15
Oven	30	30
Blender	40	30
Coffee maker	35	40

Represent the above data by a double bar graph.

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