GREENLAWNS SCHOOL, WORLI
Mathematics
Final Examination – 2025-26

STD: VII
Date:13/02/2026

Marks: 80
Time: 2½hrs

Attempt **all** questions from **Section A** and **any four** questions from **Section B** All *working, including rough work, must be clearly shown, and must be done on the same sheet as the rest of the answer.* **Omission of essential working will result in loss of marks.** The intended marks for questions or parts of questions are given in brackets [ ]

SECTION A
(Attempt **all** questions from this Section)

Question 1. Choose the correct answers to the questions from the given options.　　　　**[15]**
(Do not copy the questions, write the correct answer only)

i.　　128 = _____.
　　a) 2^3 　　　　**b)** 2^4 　　　　**c)** 2^6 　　　　**d)** 2^7

ii.　　$(5^2)^5 \times (5^4)^6 = $ _____
　　a) 5^{24} 　　　　**b)** 5^{34} 　　　　**c)** 5^{14} 　　　　**d)** None of these

iii.　　Convert 7:16 into percentage.
　　a) 43% 　　**b)** 10.98% 　　**c)** 34% 　　**d)** 43 ¾%

iv.　　If a number is increased from 20 to 30, then the increase percentage is _____.
　　a) 43% 　　**b)** 10.98% 　　**c)** 50% 　　**d)** 43 ¾%

v.　　We should not _____ both sides of an inequality by a negative number unless it is desired to reverse the inequality.
　　a) multiply 　　**b)** divide 　　**c)** multiply or divide **d)** none of these

vi.　　Which inequality is true
　　a) 4 (6) >26 　　**b)** 6 + 11 < 14 　　**c)** 10 - 6 < 5 　　**d)** 6 + (-1) > 5

vii.　　A mathematical statement that two expressions are equal called
　　a) Statement 　　**b)** equation 　　**c)** expression 　　**d)** none of these

viii.　　Which of the following is a binomial?
　　a) $8 \times x \div x$ 　　**b)** $12a^2 + 7b + 5c$ 　　**c)** $5a \times 7b \times 8c$ 　　**d)** $12(a^3+a)$

ix.　　The sum of two consecutive even numbers is 86. The larger of the two is
　　a) 46 　　**b)** 36 　　**c)** 38 　　**d)** 44

x.　　A toy car is bought for Rs. 150 and sold for Rs. 120. Find the loss percentage.
　　a) 10% 　　**b)** 15% 　　**c)** 25% 　　**d)** 20%

xi. If △ABC≅△PQR, then which of the following is not true?
a) BC = PQ   **b)** AC = PR   **c)** QR = BC   **d)** AB = PQ

xii. If the area of a parallelogram is 16 cm2 and the base is 8 cm, find the height.
a) 1 cm   **b)** 2 cm   **c)** 3 cm   **d)** 4 cm

xiii. Convert a speed of 72 km/h into m/s
a) 20 m/s **b)** 25 m/s **c)** 15 m/s **d)** 10 m/s

xiv. The simple interest on a certain sum is $^{16}\!/_{25}$ of the sum. If the rate percent per annum and the time are numerically equal, then what is the rate percent?
a) 10%   **b)** 4%   **c)** 12%   **d)** 8%

xv. A value of the variable which makes the equation a true statement is called
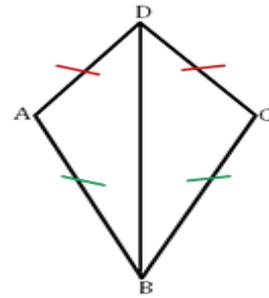**a)** expression   **b)** solution   **c)** variable   **d)** None

Question 2

a. A wire in the form of a rectangle 18.7 cm long and 14.3 cm wide is reshaped and bent into the form of a circle. Find the radius of the circle so formed. **[3]**

b. Solve the in equation: −14 − 5x ≥ 3x + 2, x ∈ integers and represent solution set on a number line **[3]**

c. In the figure, AD bisects ∠A and AD ⊥ BC. Show that △ADB ≅ △ADC. **[3]**
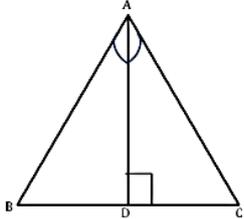
d. Subtract the sum of $(8a^3 + 4a + 5c^2)$ and $(4a^2 + 8b − 4c^2)$ from $(−2a^3 + 9a − 5c^2 + 8a^2 + 6)$ **[3]**

e. Construct an isosceles triangle in which the length of each of its equal sides is 6.5 cm and the angle between them is 75°. Measure base angles. **[3]**

Question 3

a. A bus covers 100 km in first 2 hours, 64 km in the next 1 hour and 72 km in the next 2 hours. Find the average speed of the bus during the whole journey. **[2]**

b. At, what rate Rs 800 gives Rs 208 as simple interest in 2 years? **[2]**

c. Solve: 2 (x − 5) + 3 (x − 2) = 8 + 7 (x − 4) **[2]**

d. Using brackets, write a mathematical expression for each of the following:
    i.   Nine multiplied by the sum of two and five.
    ii.   Twelve divided by the sum of one and three.   **[2]**

e. In the figure, AD = DC and AB = BC.
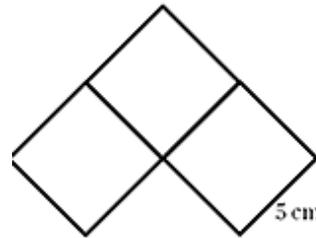Prove that ΔABD ≅ ΔCBD.   **[2]**

SECTION B

(Attempt **any four** questions from this section)

Question 4

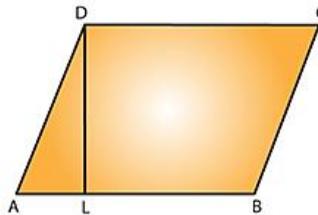**a.** The figure below is made of 3 squares with sides 5 cm. What is the perimeter of the figure?   **[2]**

b. Construct ΔXYZ in which XZ = 5 cm, YZ = 3.6 cm and XY = 5.4 cm.   **[2]**

c. if AB = 35 cm, AD= 20 cm and area of the parallelogram is 560 cm^2, find LD.   **[2]**

d. Find the area of a right-angled triangle whose sides containing the right angle are of lengths 20.8 m and 14.7 m.   **[2]**

e. A train 120 m long is running at 54 km per hour. In how much time will it pass a bridge 180 m long?   **[2]**

Question 5

a. The population of a town increase by 6% annually. If the present population is 17490, what was it a year ago?   **[2]**

b. A train 270 m long is running at 40.5 km/hr. How much time will it take to cross the tree?   **[2]**

c. Selling a bag for RS 465, a man loses 7%. What price must it be sold at to gain 7%,   **[3]**

d. A rectangular grassy lawn measuring 40 m by 25 m is to be surrounded externally by a path which is 2 m wide. Calculate the cost of levelling the path at the rate of Rs 8.25 per square meter.   **[3]**

Question 6

a. A car, running at 45 km/hr takes 6 hours to cover a journey. At what speed must it travel to complete the journey in 5 hours. **[2]**

b. The diameter of a wheel of a car is 63 cm. Find the distance travelled by car during the period, the wheel makes 1000 revolutions. **[2]**

c. Simplify: $85 - [12x - 7(8x - 3) - 2\{10x - 5(2 - 4x)\}]$ **[3]**

d. Riddhi has only ₹ 2 and ₹ 5 coins in her purse. If in all she has 80 coins in her purse amounting to ₹ 232, find the number of ₹ 5 coins. **[3]**

Question 7

a. Nalini borrowed Rs 550 from her friend at 8% per annum. She returned the amount after 6 months. How much did she pay? **[2]**

b. Find the area of a triangle whose sides are 12 cm, 6 cm and 15 cm. **[2]**

c. If a sum of rupees $(32a^3 - 76a^2 + 72a - 18)$ is divided equally among $(8a - 3)$ persons. Find the amount received by each person. **[3]**

d. Simplify: $\dfrac{3a}{8} + \dfrac{4a}{5} - \left(\dfrac{a}{2} + \dfrac{2a}{5}\right)$ **[3]**

Question 8

a. Using laws of exponents, simplify and write the answer in exponential form
(i) $2^3 \times 2^4 \times 2^5$
(ii) $(5^{21} \div 5^{13}) \times 5^7$ **[2]**

b. Calculate the area of a rhombus having diagonals equal to 6 cm and 8 cm. **[2]**

c. Arrange the multiplicand in right order of power of given expressions and multiply.
$(3x^4 - 5x^2 + 2 - 3x^3)$ by $(x^2 - 3)$ **[3]**

d. A rectangular field is measured 290 m by 310 m. How long will it take for a girl to go two times round the field, if she walks at the rate of 1.5 m/sec? **[3]**

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