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GREENLAWNS HIGH SCHOOL
FINAL EXAMINATION YEAR 2016-2017

SUBJECT : MATHEMATICS   CLASS : VII

TIME : 2 HOURS   MARKS : 80

The paper consists of two sections, A & B. Section A is compulsory. Attempt all questions from this section.

Section B has 5 questions, attempt any 4. Write all answers on the answer booklet provided to you. Show calculation and working wherever required. Be neat in your work.

SECTION A

(Attempt all questions from this section)

I   Fill in the blanks: (10)

1. $0.006 \times 0.6 =$ _____

2. Area of a square of side 4 m is _____

3. The complement of $68°$ is _____

4. The perimeter of a rectangle having length 8 cm and breadth 6 cm is _____

5. $(-8)^0 =$ _____

6. $\dfrac{7}{9}$ _____ $\dfrac{11}{14}$ (Put $>$, $<$ or $=$)

7. $0.019 =$ _____ (convert to fraction)

8. State whether each of the following are true or false:

    (i)   20% of 40 = 8 _____

    (ii)   5, 3, 15 and 9 are in proportion. _____

    (iii)   If $3x + 5 = 14$, then $x = 5$ _____
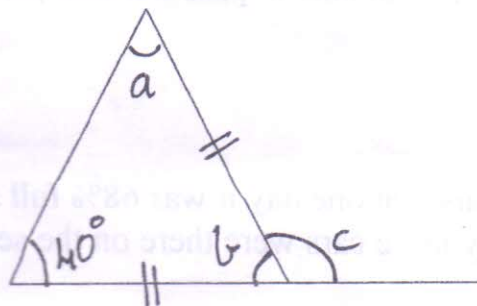
II

1. Evaluate using laws of indices   (3)

$$\frac{2^6 \times 3^5 \times 7^6}{7^4 \times 2^8 \times 3^7}$$

2. Find the mean proportional between 9 and 49.   (3)

3.   Find the measures of a, b and c.   (4)

                                   Give reasons for your answers.

III

1. Simplify $1\frac{4}{7} \div [\{ 2\frac{1}{3} - (5 + \overline{2 - 3})\} + 3\frac{1}{2}]$ (4)
2. A bus covers a distance of 486 km in 9 hours. Find its speed in m/s. (3)
3. Find the number which when increased by 25% becomes 500. (3)

IV

1. The area of a rectangle is 456 sq.cm. Its breadth is 19cm. What is its perimeter? (3)
2. The selling price of an article is Rs. 4200 and the cost price of the same is $\frac{7}{6}$ times it's selling price. Find the cost price and the gain or loss percent.
3. Construct a right angled triangle PQR such that $\lfloor Q = 90°$, QR = 5 cm and (4) PR = 6 cm. Measure PQ.

SECTION B
(Attempt any 4 out of 5)

V

1. A mother is six times the age of her daughter. After 4 years, the mother's age will (3) be four times the age of her daughter. Find their present ages.
2. Divide 130 apples among A, B and C in the ratio 6: 4: 3. (3)
3. Using identities evaluate the following: (4)
   (i) $(104)^2$ (ii) 10.2 x 9.8

VI

1. Solve $\dfrac{x-4}{7} - \dfrac{x+4}{5} = \dfrac{x+3}{7}$ (3)

2. How long will it take for Rs. 1600 invested at 14% per annum simple interest to (3) amount to Rs. 2832.
3. A photo frame 24 cm long and 18 cm wide is edged with a piece of wood 2 cm (4) wide around it. Find the cost of edging at the rate of Rs. 2.25 per sq.cm.

VII

1. Divide $2x^3 + 11x^2 + 17x + 5$ by $2x + 5$ (3)
2. Simplify using laws of exponents, giving answers with positive index. (3)
   i) $3x^2y^4 \div 9x^4y^2$
   ii) $[(3a^2b4c^3)^3 \times (4abc)^2] \div 36a^6b^6c^6$
3. A train 140 m long crosses a railway platform 180 m long in 16 seconds. Find (4) it's speed in km/h. How long does the train take to pass the next platform which is 160 m long?

VIII

1. If a:b = 4:5 and b:c = 6:7, find a:b:c (3)
2. A car park can accommodate 650 cars. On one day it was 68% full and on the (3) next day it was 73% full. How many more cars were there on the second day than on the first day.

3. Find the area of shaded region. (4)
   (ABCD is a rectangle)
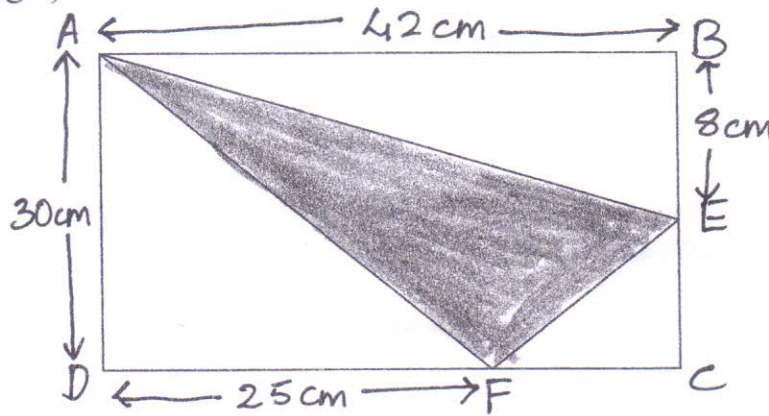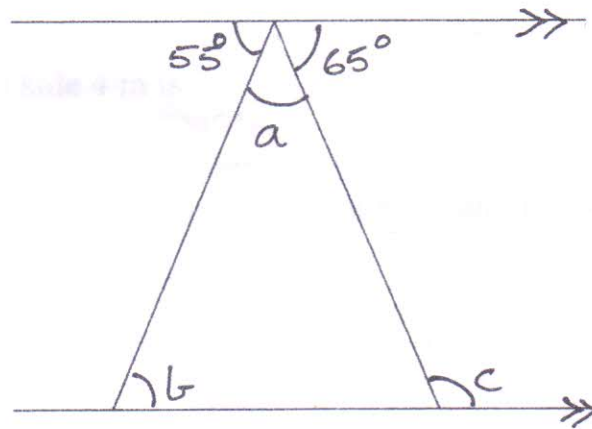

IX

1. Find the measures of a, b and c in the given figure. (3)

2. The perimeter of a rectangle is 68 cm ad its length is 24 cm. Find its area. (3)
3. If a car dealer sold a car for Rs. 67,680, he would lose 6%. What will be his profit (4)
   or loss percent if he sold it for Rs.76,320?