SUBJECT :MATHEMATICS   CLASS: VII
TIME   : 2 Hours   MARKS:80

INSTRUCTIONS

The time given at the head of the paper is the time allotted for writing the paper.

Attempt all questions in Section A and Section B.

Calculation to be shown on the same page as Numerical neatly

For constructions show all constructions clearly 00

Section A (40 Marks)
Attempt all the questions

Q1 .Choose the correct answers to the questions from the given options   [10]
     (Do not copy the questions , write the correct answers only.)
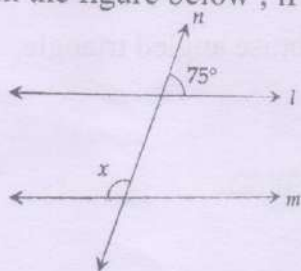
i. $(1.1)^3 =$ _____

(a) 1.331   (b)13.31

(c) 133.1   (d) 1331

ii. In the figure below , if line l is parallel to line m , then the value of x is

(a) 75°   (b) 105°

(c) 120°   (d) 135°

iii. The complement of $(20 - a)°$ is _____

(a) $(70 - a)°$ (b) $(110 - a)°$

(c) $(70 + a)°$ (d) $(160 + a)°$

iv. Rajesh bought a T.V. set for ₹ 8000 and sold it for ₹ 8560. His profit or loss
     Percent is _____

(a) 8% profit   (b) 7% profit

(c) 7% Loss   (d) 8% Loss

v.   Subtract $-4xy$ from $8xy$ we get

(a) $4xy$ (b) $-12xy$

(c) $-4xy$ (d) $12xy$

vi. The degree of $2a^2b^2 + 7a^3bc - 4a^2c + 4$ is

(a) 4   (b) 3

(c) 5   (d) 1
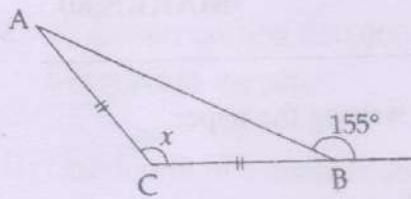
vii. $5\frac{1}{6} \div 4\frac{1}{2}$ gives

(a) $\frac{31}{6}$ (b) $\frac{1}{27}$

(c) $5\frac{1}{27}$ (d) $1\frac{4}{27}$

p.t.o

viii. In the figure below , BC is a straight line BC = line AC. Find the value of x

        (a) 50^0 (b) 120^0
        (c)130^0 (d) 25^0

ix.   If 30% of x is 72, then x = _____
    (a) 120   (b) 240
    (c) 480   (d) 360

x.   A number added to 4 gives 10. The number is
    (a) 6   (b) 14
   (c) 5   (d) 8

Q2.

A) State whether the following statements are True or False. If False correct the   (5)
underlined word

i.   An <u>isosceles</u> triangle can also be an acute angled triangle, obtuse angled triangle, or right-angled triangle

ii. $\frac{4}{10}$ of a right angle and $\frac{3}{10}$ of two right angles are <u>supplementary</u>.

iii. The coefficient of xy^2 in $-6xy^2z^3$ is <u>$-6z^3$</u>

iv. In the figure drawn below <u>$\angle AOB$</u> and $\angle AOC$ are adjacent angles
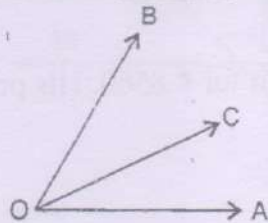
v. The algebraic expression for 40 subtracted from the sum of $2m$ and $3y$ is
<u>$2m + 3y - 40$</u> .

B) Construct an isosceles $\triangle$ ABC such that side BC = side AB = 6cm and $\angle B = 30^0$ (3)

Measure $\angle A$ and $\angle C$. (Use a compass and ruler only.)

C) Priya paid ₹630 for a blanket with a marked price of ₹900 . Find   (2)
    i) The discount   ii) the discount percent

Q3.

A) The perimeter of a rectangle is 70cm.If its length exceeds its breadth by 5cm,   (4)
Find the length and breadth of the rectangle.

                                                        p.t.o

B) Anil obtained 375 marks out of 500 in an examination while Sunil obtained (3)
420 marks out of 600 . Whose performance is better and by how much?

C) Simplify: (3)
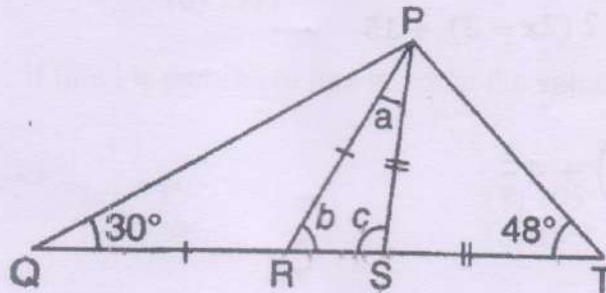$(2m - 4)(2m^2 + 8m - 5)$

Q4.

A) The monthly income of Rajesh is ₹ 1,20,000. He spends $\frac{1}{6}$ of his income on (4)
The education of his children, and $\frac{1}{3}$ on the repayment of the housing loan
Instalment. Of the remaining he spends $\frac{1}{4}$ on food . Find the amount of money
He spent on each.

B) If $2x + 5$ and $3x + 25$ are supplementary. Find x and hence find the angles. (3)

C) In the Figure drawn below find the values of a , b , c . (3)

SECTION B(40MARKS)
(Attempt all questions)

Q5.
A) Construct a △ PQR such that base QR = 7.5cm (4)
$\angle PQR = 45°$ and $\angle PRQ = 60°$, Measure $\angle QPR$
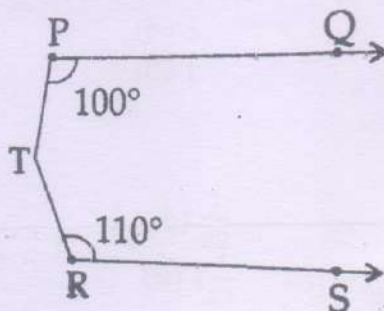
B) Divide: $6x^3 + 7x^2 - x - 2$ by $3x + 2$ (3)

C) 3900 bulbs were used to decorate a building. Of these 25% were green,15% (3)
Were red and the rest were yellow. Find the number of yellow bulbs used.

Q6.

A) In the Given figure, PQ ∥ RS , $\angle QPT = 100°$, $\angle TRS = 110°$. (3)
Find $\angle$ PTR

B) Simplify : (3)

$6.96 \div (3.2 \text{ of } 2.05 + 0.4)$

C) A scooter costing ₹50,000 one year ago now costs ₹ 40,000 . Find the percentage (2)
Decrease in the price.

D) One-fourth of a number decreased by 7 gives 5. Find the number. (2)

Q7)

A) Rita sold two printers for ₹2100 each. On one of the printers she made a profit (4)
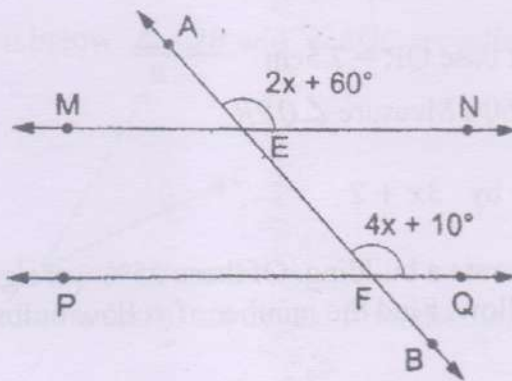of 20% and on the other she incurred a loss of 20%.Find
   i)   C.P of each printer
   ii)   Total loss or gain
   iii) Profit or loss percent on the whole

B) Solve: (3)

$20 - 4 (3 - 2x) = 2 (2x - 3) + 15$

C) Simplify: (3)

$1\frac{1}{5} \times \left(6\frac{1}{3} - 3\frac{2}{5} \right) \div 4\frac{2}{5}$

Q8)

In the figure drawn below MN // PQ . Find x, Hence find $\angle AEN$, $\angle EFP$ (4)

B) The base angles of an isosceles triangle is 30⁰ more than its vertical angle. Find (3)
Its each angle.

C) Simplify : (3)

$\dfrac{3x - 4}{2} - \dfrac{2x-1}{3} = \dfrac{2x-2}{4}$