

Multan Board 2017 (Second Group)

Roll No.(in Figures): (in Words):

Maximum Marks: 60 (SUBJECTIVE TYPE) Time Allowed :2.10 Hours

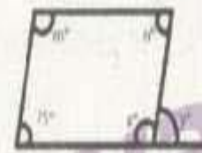
PART - I

Q2. Write short answers to any SIX (6) questions: (2×6=12)

- (i) Define Symmetric Matrix. (ii) Find the product of $\begin{bmatrix} 1 & 2 \\ 4 & 0 \end{bmatrix}$
- (iii) Simplify $\sqrt{(5-3i)^2}$ and write in the form of $a+bi$ (iv) Evaluate. i^{27}
- (v) Express in Scientific Notation. 5700 (vi) Find the value of x when $\log_{64} 8 = \frac{x}{2}$
- (vii) Simplify. $\frac{8a(x+1)}{2(x^2-1)}$ (viii) Simplify. $\sqrt{21} \times \sqrt{7} \times \sqrt{3}$ (ix) Factorize. $128am^2 - 242an^2$

Q3. Write short answers to any SIX (6) questions: (2×6=12)

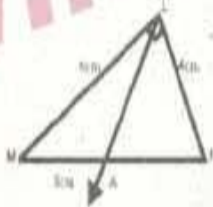
- (i) Use factorization to find the square root. $4x^2 - 12x + 9$ (ii) Define Linear Equation.
- (iii) Find the solution set of $|3x + 10| = 5x + 6$
- (iv) What is meant by an Ordered Pair?
- (v) Find the values of 'm' and 'c' by expressing the given equation $x - 2y = -2$ in the form of $y = mx + c$
- (vi) Find the distance between the given pairs of points. A(-8, 1), B(6, 1)
- (vii) Find the mid-point of the line segment of the given pairs of points A(2, -6), B(3, -6)
- (viii) What is meant by (S.S.S. \cong S.S.S)?



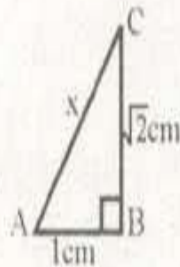
(ix) Find the unknown values in the given figure.

Q4. Write short answers to any SIX (6) questions: (2×6=12)

- (i) What is meant by Converse of Theorem?
- (ii) 3cm, 4cm and 7cm are not the lengths of a triangle. Give the reason in detail.
- (iii) Define Proportion.
- (iv) In the given figure $\triangle LMN$, \overline{LA} bisects $\angle L$ if $m\overline{LM} = 6\text{cm}$, $m\overline{LN} = 4\text{cm}$ and $m\overline{MN} = 8\text{cm}$ then find $m\overline{MA}$ and $m\overline{AN}$
- (v) State Converse of Pythagoras Theorem.



(vi) Find the value of unknown x in $\triangle ABC$.



(vii) Define Triangular Region.

(viii) Construct $\triangle ABC$ in which $m\overline{AB} = 4.8\text{cm}$, $m\overline{BC} = 3.7\text{cm}$, $m\angle B = 60^\circ$

(ix) Define Circumcentre of a Triangle.

PART - II

Note: Attempt any three questions. Question number 9 is compulsory. (8×3=24)

Q5. (a) Solve by Cramer's Rule. $2x - 2y = 4$, $3x + 2y = 6$ 4

(b) Simplify. $\frac{2^{1/3} \times (27)^{1/3} \times (60)^{1/2}}{(180)^{1/2} \times (4)^{-1/3} \times (9)^{1/4}}$ 4

Q6. (a) Use Log table to find the value of $\frac{(438)^3 \sqrt{0.056}}{(388)^4}$ 4

(b) If $p = 2 + \sqrt{3}$ then find $p^2 + \frac{1}{p^2}$ 4

Q7. (a) If $x - 1$ is a factor of $x^3 - kx^2 + 11x - 6$, then find the value of k 4

(b) Find square root by Division Method. $9x^4 - 6x^3 + 7x^2 - 2x + 1$ 4

Q8. (a) Find the solution set of $\frac{1}{2}\left(x - \frac{1}{6}\right) + \frac{2}{3} = \frac{5}{6} + \frac{1}{3}\left(\frac{1}{2} - 3x\right)$ 4

(b) Construct $\triangle XYZ$ and draw its medians. $m\overline{XY} = 4.5\text{cm}$, $m\overline{YZ} = 3.4\text{cm}$, $m\overline{ZX} = 5.6\text{cm}$ 4

Q9. Prove that any point on the right bisector of a line segment is equidistant from its end points. 8

(OR) Prove that Parallelograms on the same base and between the same parallel lines (or of the same altitude) will be equal in area.