

Multan Board 2017 (First 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) If $A = \begin{bmatrix} 3 & 0 \\ -1 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 6 \\ 5 \end{bmatrix}$ then find AB. (ii) Define Singular Matrix.

(iii) Simplify. $\left(\frac{8}{125}\right)^{\frac{4}{3}}$ (iv) Find the value of x and y if $x + iy + 1 = 4 - 3i$

(v) Write in Scientific Notation. 416.9 (vi) Evaluate. $\log_2 \frac{1}{128}$

(vii) Evaluate $\frac{x^3y - 2z}{xz}$ if $x = 3, y = -1, z = -2$ (viii) Define Surd.

(ix) Factorize. $128am^2 - 242an^2$

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

(i) Find H.C.F. of $39x^7y^3z, 91x^5y^6z^7$ (ii) Solve the equation $\sqrt{3x+4} = 2$

(iii) Solve $|3x+10| = 5x+6$ (iv) Define collinear points.

(v) Find value of m and c by expressing $3x + y - 1 = 0$ in the form of $y = mx + c$

(vi) Find the distance between the pair of points. A(-8, 1), B(6,1)

(vii) Find the mid point between the points A(7, 2) and B(9, 2) (viii) What is meant by S.A.S postulate?

(ix) In the given parallelogram ABCD. Find the value of x and m.

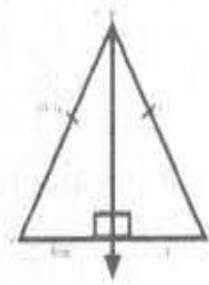


Q4. Write short answers to any SIX (6) questions: (2×6=12)

(i) What is meant by Converse of Theorem?

(ii) Can a triangle of lengths 3cm, 4cm and 5cm be formed? Give reason.

(iii) Define Congruent Triangles. (iv) In isosceles ΔPQR , find the value of x and y.



(v) Define Pythagoras Theorem. (vi) Find the value of x.

(vii) What is meant by Triangular Region?

(viii) Construct a ΔABC , in which $m\overline{AB} = 4.2\text{cm}, m\overline{BC} = 3.9\text{cm}, m\overline{CA} = 3.6\text{cm}$ (ix) Define Centroid.

PART - II

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

Q5. (a) Solve by Cramer's Rule. $4x + y = 9, -3x - y = -5$ 4

(b) Simplify. $\sqrt[3]{\frac{a^l}{a^m}} \times \sqrt[3]{\frac{a^m}{a^n}} \times \sqrt[3]{\frac{a^n}{a^l}}$ 4

Q6. (a) Use log table to find the value of $\sqrt[3]{\frac{0.7214 \times 20.37}{60.8}}$ 4

(b) If $x + \frac{1}{x} = 3$ then find the value of $x^4 + \frac{1}{x^4}$ 4

Q7. (a) Factorize. $x^3 + 48x - 12x^2 - 64$ 4

(b) Use Division Method to find the Square Root of $4x^2 + 12xy + 9y^2 + 16x + 24y + 16$ 4

Q8. (a) Solve $\frac{1}{2}\left(x - \frac{1}{6}\right) + \frac{2}{3} = \frac{5}{6} + \frac{1}{3}\left(\frac{1}{2} - 3x\right)$ 4

(b) Construct the ΔABC and draw the bisectors of its angles. $m\overline{AB} = 4.5\text{cm}, m\overline{BC} = 3.1\text{cm}, m\overline{CA} = 5.2\text{cm}$ 4

Q9. Prove that the right bisectors of the sides of a triangle are concurrent. 8

(OR) Prove that the triangles on equal bases and of equal altitudes are equal in Area.