1. All questions are compulsory.
2. The question paper consists of 8 questions divided into four sections A, B,C,D.
3. Section A contains 2 questions of 1 marks each, which are multiple choice questions. Section B contains 2 questions of 2 marks each, section C contains 2 questions of 3 marks each and section D contains 2 questions of 4 marks each.
4. Use of calculators is not permitted.

SECTION – A

Question numbers 1 to 2 carry 1 mark each. In each question, four options are provided out of which one is correct. Select and write the correct option.

1) $\dfrac{6!}{3!}$ = --------.

   (a) 100   (b) 120   (c) 20   (d) 30

2) The slope of the line through the points (3 ,-2) and (7,-2) is ----------------.

   (a) 1   (b) -1   (c) 2   (d) 0

SECTION – B

Question numbers 3 to 4 , carry 2 marks each.

3) Find the equation of the circle with centre $(1, 2)$ and radius 4.

4) Find the distance between the points $(-3, 7,2)$ and $(-2 , 1,3)$.

SECTION - C

Question numbers 5 to 6, carry 3 marks each.

5) Find the co-ordinates of the point which divides the line segment joining the points $(1, -2, 3)$ and $(3, 4, -5)$ in the ratio of $2:3$, internally and externally.

6) Find the co-ordinates of the foci, the vertices and length of latus rectum of the ellipse $\frac{x^2}{9} + \frac{y^2}{4} = 1$

SECTION -D

Question numbers 7 to 8 carry 4 marks each.

7) The vertices of triangle PQR are $P(2, 1)$, $Q(-2, 3)$ and $R(4, 5)$. Find the equation of
(i) median through the vertex P.
(ii) altitude through the vertex R.

8) A group consists of 4 girls and 7 boys. In how many ways can a team of 5 members be selected, if the team has (i) Atleast 3 girls (ii) exactly 2girls and 3 boys.

******** THE END ********