BHM101

GAUTAM BUDH UNIVERSITY

November 2024

INSTRUCTION

- Time : 3 hour
- Total marks : 60 M
- All Questions are compulsory
- Marks for each question are given alongside.

1 Question Paper

1. Slove the equation
$$2x + 3 = 7$$
(5M)

2. Prove:
$$\sin^2\theta + \cos^2\theta = 1$$
(5M)

3. Find the determinant of
$$A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$$
   . (5M)

4. Simplify the ratio $a : b$. Example: $2 : 3$ (5M)

5. In triangle, the angles are $40°, 50°, x$ .Find the value of x. (5M)

6. Slove $2x^2 + 3x - 2 = 0$. (5M)

7. Prove: $\tan\theta = \frac{\sin\theta}{\cos\theta}$. (5M)

8. Slove the equations $x + y = 10$ and $x - y = 2$. (5M)

9. Find the area of a triangle with base $b = 5$ and height $h = 10$. (10M)

10. Use the formula $\int x^n \, dx = \frac{x^{n+1}}{n+1} + c$