

- Q-3**
- a. What is subroutine in FOTRAN? Explain it with suitable examples in flowchart. **07**
 - b. What is DO statement in FORTRAN? Discuss in brief with its suitable examples. **07**

SECTION – II

- Q-4** **Attempt the Following questions** **(07)**
- a. What is linear equation? **01**
 - b. What is multiplication of matrices? **01**
 - c. Define: Pivot element. **01**
 - d. What is addition of matrices? **01**
 - e. What is harmonic analysis? **01**
 - f. Write different types of integration methods. **01**
 - g. Which technique is used for solving large system? **01**

- Q-5** **Attempt all questions** **(14)**
- a. Discuss Trapezoidal rule with example. **05**
 - b. Explain inverse of matrix with example. **05**
 - c. Write short note on determinant with example **04**

OR

- Q-5** **Attempt all questions** **(14)**
- a. Describe Eigen values and Eigen vector of matrix. **05**
 - b. Explain in detail Simpson's (1/3) rule with example. **05**
 - c. Elucidate pivotal condensation method. **04**

- Q-6** **Attempt all questions** **(14)**
- a. Explain in brief Runge-Kutta method with example. **07**
 - b. Explain in brief Euler method with example. **07**

OR

- Q-6** **Attempt all Questions** **(14)**
- a. Discuss in brief Gauss elimination method with example. **07**
 - b. Explain in brief differential equations with examples. **07**

