

Seat No. _____ Enrollment No. _____

C. U. SHAH UNIVERSITY

M. Sc. Semester-IV May-2015 (Summer) Examination

Subject Name: Embedded FORTRAN Programming

Code: 5SC04EFP1

Date: 26/05/2015

Time: 10:30 to 01:30 Maximum Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumption wherever necessary.
3. Figures to the right indicate full marks.
4. Draw figure / Diagram wherever necessary.

Section – I

Marks

- Q-1
- | | | |
|----|--|------|
| a) | What is Algorithms? | (01) |
| b) | What is flowchart? | (01) |
| c) | Which characters are known as integer values in FORTRAN? | (01) |
| d) | Write full name of FORTRAN. | (01) |
| e) | What is Arithmetic expression in FORTRAN? | (01) |
| f) | Draw symbol of input/output statements. | (01) |
| g) | What is logical expressions? | (01) |

- Q-2
- | | | |
|----|---------------------------------------|------|
| a) | Explain features of FORTRAN language. | (05) |
| b) | Explain FORTRAN constants. | (05) |
| c) | Explain control statements. | (04) |

OR

- Q-2
- | | | |
|----|--|------|
| a) | Explain FORTRAN variables. | (05) |
| b) | Explain input/output statements. | (05) |
| c) | Explain looping and arrays of FORTRAN. | (04) |

OR

- Q-3
- | | | |
|----|---|------|
| a) | What is simple program in FOTRAN? Explain with its suitable example in flowchart. | (07) |
| b) | What is subroutines in FOTRAN? Explain with its suitable example in flowchart. | (07) |

OR

- Q-3
- | | | |
|----|--|------|
| a) | Write short notes on (1) logical IF statement and (2) go to statement. | (07) |
| b) | Explain in detail the DO statement with example. | (07) |

Section – II

Marks

- Q-4
- | | | |
|----|---|------|
| a) | Write equation of linear system. | (01) |
| b) | Explain matrices addition with example. | (01) |
| c) | Explain matrices multiplication with example. | (01) |

- d) Which technique is used for solving large system? (01)
- e) What is pivot element? (01)
- f) What is harmonic analysis? (01)
- g) Write different types of integration methods. (01)
- Q-5 a) Explain in detail eigen values and eigen vector of matrix. (05)
- b) Explain in detail inverse of matrix. (05)
- c) Write short note on determinant. (04)
- OR
- Q-5 a) Explain in detail Trapezoidal rule. (05)
- b) Explain in detail Simpson's (1/3) rule. (05)
- c) Explain pivotal condensation method. (04)
- Q-6 a) Explain Gauss elimination method with example. (07)
- b) Explain Runge-Kutta method with example. (07)
- OR
- Q-6 a) Explain differential equations with examples. (07)
- b) Explain Euler method with example. (07)
