

Code: CS4T4

**II B.Tech - II Semester – Supplementary Examinations
October 2018**

**PRINCIPLES OF PROGRAMMING LANGUAGES
(COMPUTER SCIENCE & ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11 x 2 = 22 M

1. a) Discuss about Program design Methodologies.
- b) What is Orthogonality?
- c) Define Syntax and Semantics.
- d) Define context free grammar. Give example.
- e) Discuss primitive data types.
- f) Discuss about named constants.
- g) Explain about Unconditional branching.
- h) Discuss about Multi way selection.
- i) Write short notes on generic functions in JAVA.
- j) What are the reasons against providing both static and dynamic local variables in subprograms?
- k) Write a note on the application of functional programming languages.

PART – B

Answer any **THREE** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Explain the reasons for studying programming language concept. 8 M
- b) Briefly discuss Programming domains. 8 M
3. a) Write BNF notation for following : 9 M
i) For loop ii) If-else condition iii) Structure definition.
- b) Explain about ambiguous grammar with an example. 7 M
4. a) Explain in detail arrays, indices, subscript bindings and array categories. 8 M
- b) What is binding? Discuss various types of binding. 8 M
5. a) Discuss various issues of arithmetic, relational and boolean expressions. 8 M
- b) Write about counter controlled FOR loops in 8 M
(i) Ada (ii) C (iii) Python
6. a) Explain about various parameter passing methods? 10 M
- b) Explain in detail about the functional programming language ML. 6 M