

Code: CS4T4

**II B.Tech - II Semester – Regular/Supplementary Examinations –
April 2017**

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

Duration: 3 hours

Max. Marks: 70

PART – A

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

$$11 \times 2 = 22$$

1.

- a) Discuss about Program design Methodologies.
- b) What is Programming language? Write different Programming languages.
- c) Define ambiguous grammars give an example.
- d) Write short notes on dynamic semantics.
- e) Define pointer and explain its reference types.
- f) Discuss about named constants.
- g) Explain about Counter Controlled Loops.
- h) Discuss about Multiway selection.
- i) Write short notes on
 - I) overloaded subprograms
 - II) co routines
- j) What are the reasons against providing both static and dynamic local variables in subprograms?
- k) Write a note on the functional programming language ML.

PART – B

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

3 x 16 = 48 M

2. a) List the potential benefits of studying programming language concept. 8 M
- b) Briefly discuss a few of the areas of computer applications and their associated languages. 8 M
3. a) Write BNF notation for following : 8 M
- i) For loop
 - ii) If-else condition
 - iii) Structure definition.
- b) What is the fundamental difference between operational semantics and de-notational semantics? 8 M
4. a) Explain in detail arrays, indices, subscript bindings and array categories. 8 M
- b) What is strong typing? Explain with an example list the languages that support strong typing. 8 M
5. a) What is control structure? Explain unconditional statements and iteration with syntaxes? 8 M
- b) Briefly explain about Guarded commands. 8 M

6. a) What are the three features of Haskell that makes very different from schema? 8 M

b) Explain in detail about the different forms of parameters. 8 M