Code: 13A05405

R13

B.Tech II Year II Semester (R13) Regular Examinations May/June 2015

PRINCIPLES OF PROGRAMMING LANGUAGES

(Computer Science and Engineering)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) Differentiate between general purpose and special purpose programming languages. Give examples for each one.
(b) Write the EBNF and BNF grammar for “expression”.
(c) Write the design issues of character string types.
(d) With the help of suitable example describe the conditional expression.
(e) Mention the characteristics of subprograms.
(f) Describe the terms static scope pointer and static chain.
(g) List the areas where symbolic logic is be used.
(h) What is meant by synchronization? List the types present in it.
(i) Write PYTHON code to compute the greatest common divisor of two integers.
(j) Distinguish between simple list and nested list.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 (a) List and explain the reasons for studying the programming languages.
(b) Give brief description about the denotational semantics.

OR

3 (a) What is meant by binding? Explain in detail about the different types of binding.
(b) Explain the role of type coercion in programming languages.

UNIT – II

4 What is guarded command? Write and explain the flowchart for Dijkstra’s selector statement and loop statement.

OR

5 (a) With the help of a suitable example explain the various problems that are associated with pointers.
(b) What is short circuit evaluation? Explain it with an example.

UNIT – III

6 (a) Write and explain the generic procedure for Ada and java.
(b) Give brief description about the design issues of subprograms.

OR

7 Discuss in detail about the various parameter passing techniques.

UNIT – IV

8 Describe how we can achieve the concurrency control by using monitors and message passing.

OR

9 What is an exception? What are design issues that are related to it? Explain the various keywords related to exception handling in java.

UNIT – V

10 (a) With respect of PYTHON explain the various constructs present for data abstraction.
(b) With the help of a suitable example explain the internal representation of two LISP lists.

OR

11 With the help of a suitable example explain the various list functions available in LISP programming.

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