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Paper Id: 110519 Roll No: | | | | | | | | | | | | | |

B. TECH.
(SEM -V) THEORY EXAMINATION 2019-20
PRINCIPLE OF PROGRAMMING

Time: 3 Hours *Total Marks: 100*

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 10= 20

a) Give the reason why we study programming language?
b) Explain the general Syntactic Criteria of any programming Language.
c) What is C-tokens?
d) Explain the concept of run time polymorphism.
e) What do you mean by translator?
f) What are elementary data types?
g) What do you mean by syntax and semantic of languages?
h) What is lambda calculus?
i) Explain routine calls?
j) Define recursive function.

SECTION B

2. Attempt any *three* of the following: 10 x 3 = 30

a) What do you mean by programming language? Explain different characteristics of a good programming language.
b) Is prolog a programming language used for A.I. Explain characteristics of prolog.
c) What do you mean by functional programming language? Explain advantage and disadvantage.
d) Explain the various evolution of various programming paradigm in detail with suitable example.
e) Explain different types of conversion in lambda calculus with suitable example.

SECTION C

3. Attempt any *one* part of the following: 10x 1 = 10

a) Explain encapsulation. What is inheritance and explain advantages of it?
b) Explain the different Commands of Imperative Language. Also explain the structured Programming.

4. Attempt any *one* part of the following: 10 x 1 = 10

a) What do you mean by logic programming? Explain with a suitable example.
b) What is abstraction and how many types of abstraction. Explain each in detail.

5. Attempt any *one* part of the following: 10 x 1 = 10

(a) What do you mean by primitive data types? What are different features of linear data structure?
(b) What is list processing? Explain some characteristics of lisp programming language.

6. Attempt any *one* part of the following: 10 x 1 = 10

(a) What is substitution in lambda calculus? Explain and state beta conversion with a suitable example.
(b) What do you mean by translators? How many types of translator do you know, brief it

7. Attempt any *one* part of the following: 10 x 1 = 10

(a) What do you mean by class object and methods? Explain abstract method in brief.
(b) Explain templates. How can it be implemented in programming.