Roll No…… Total Pages: 3

10503

MCA/M-18

PRINCIPLES OF PROGRAMMING LANGUAGE

Paper: MCA-14-23

Time: Three Hours Maximum Marks: 80

Note: Attempt five questions including No. 1 which is compulsory. All questions carry equal marks.

Compulsory Question

1.(a) Differentiate between compile-time and run-time binding.

(b) What do you mean by scope and lifetime of variables?

(c) What is regular grammar?

(d) Discuss the need of object-oriented programmi.

(e) Name the various stage in translation.

(f) What do you mean explicit sequence control?

(g) Comment on the need of scripting languages.

(h) What are various storage management?

UNIT-I

2. (a) Each programmer has its own preference for using a programming language.What are the reason for this?

(b)What do you mean by syntax?Explain BNF and Context-free grammar In brief.

3. What do you mean by parsing?Expalin various types of parsing using suitable examples for each type of parsing.

UNIT-II

4.(a) Describe concept of type checing and type conversion in various languages with suitable examples.

(b) What is Chomsky hierarchy?Explain in detail.

5. (a) What is finite-state automation?Explain deterministic and non-deterministic FSA using suitable examples.

(b) Write a short note on program verification and validation.

UNIT-III

6. Differentiate between following:

(a) Inheritance and polymorphism.

(b) Object oriented programming and procedural programming.

(c) Data abstraction and information abstraction.

7. (a) How the sequence control can be done within an expression? Explain using suitable examples.

(b) What is a recursive subprogram? How it is handled using stacks? Expalin.

UNIT-IV

8. (a) What are different parameter passing methods? Discuss with examples.

(b) How exceptions are handled in programming languages? Explain in brief.

9. Write short notes on the following :

(a) Coroutines.

(b) Distributed processing.

(c) XML.