

Total No. of Questions : 12]

SEAT No. :

P1433

[Total No. of Pages : 3

[4858] - 207

T.E. (Information Technology)
PROGRAMMING PARADIGMS
(2008 Pattern)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates :

- 1) Answers Question 1 or 2, 3 or 4 and 5 or 6 from Section I and Question 7 or 8, 9 or 10 and 11 or 12 from Section II.*
- 2) Answers to the two sections should be written in separate answer-books.*
- 3) Neat diagrams must be drawn whenever necessary.*
- 4) Figures to the right indicate full marks.*
- 5) Assume suitable data, if necessary.*

SECTION - I

Q1) a) Why there is a need to study programming languages explain in detail. [8]

b) Explain different aspects of cost of programming Languages. [8]

OR

Q2) a) Explain in detail procedural and functional programming paradigms? [8]

b) Define the term “Binding”. With suitable example in particular language Explain which bindings are done at [8]

i) Language implementation time

ii) Translation time

iii) Execution time

Q3) a) What is mean by activation record and explain in detail with an example. [8]

b) Explain in detail [8]

i) Static scope rule

ii) Dynamic scope rule

OR

P.T.O.

- Q4)** a) Explain following terms with suitable examples. [8]
i) Exception and Exception Handler
ii) Build in exception
b) State and explain referencing environment with suitable example. [8]

- Q5)** a) i) Explain life cycle of applet with proper example. [4]
ii) Differentiate Applet and Application. [4]
iii) Differentiate AWT and SWING. [4]
b) Explain concept of inheritance with respect to C++ and JAVA. [6]

OR

- Q6)** a) Why java doesn't support for multiple inheritances? Explain how interfaces plays role for it with suitable example. [9]
b) What do you mean by multithreading? Explain the life cycle of threading? How it is achieved in JAVA. [9]

SECTION - II

- Q7)** a) Explain approaches for garbage collection in LISP. [8]
b) What are declarative programming paradigms? Explain how they are different from imperative programming paradigms. [10]

OR

- Q8)** a) i) Enlist Application of Logic programming. [5]
ii) What are cuts in Prolog? How it is used in program. [4]
b) Define following terms with respect to declarative and functional programming. [9]
i) Facts, Rules and Queries
ii) Lambda Calculus
iii) Reduction

- Q9)** a) Explain the Flynn's classification of computer architectures. [8]
b) Explain different synchronization mechanisms of parallel programming language. [8]

OR

- Q10)** a) Explain message passing and shared address space. [8]
b) Draw data flow diagram for computation for $X = B^2 - 4 * A * C$ and control flow methods. [8]

- Q11)** a) Write short notes on : [8]
i) Links in HTML.
ii) Design principles of Database programming.
b) Explain Design principles of Network System. [8]

OR

- Q12)** a) Write short notes on : [8]
i) Windows Programming.
ii) Components of URL.
b) Explain design principles of Parallel programming [8]

