Total No. of Questions : 12]

SEAT No. :

P2966

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[4958]-207

T.E.(Information Technology)

PROGRAMMING PARADIGMS

(2008Course) (Semester-II) (314450)

Time :3Hours] *[Max. Marks : 100*

Instructions to the candidates:

1) ***Answer question Q1 or 2,Q3or 4 and Q5 or 6 form section I and question Q 7 or 8, Q 9 or 10 and Q11 or 12 from section II.***
2) ***Answer 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.***

SECTION-I

Q1) a) Why there is a need to study programming language explain with **[8]**

i) Choice of Programming Languages.

ii) Design a new language.

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

OR

Q2) a) Explain properties of structured and derived data types. **[8]**

b) Define the term "Binding". With suitable example explain: **[8]**

i) Language implementation time

ii) Translation time

Q3) a) Explain with example the content of code segment and activation record at run time. **[8]**

b) Define the following: **[8]**

i) Static scope rule

ii) Lifetime of a variable

iii) Scope of a variable

OR

P.T.O.

Q4) a) Explain the concept of sequence control in recursive subprograms. **[8]**

b) Discuss various parameter passing methods with suitable examples. **[8]**

Q5) a) What do you mean by applet and further explain life cycle of applet with proper example. Write difference between. **[12]**

i) Applet and Application

ii) AWT and SWING

b) Explain difference between C++ and JAVA **[6]**

OR

Q6) a) Explain concept of abstract class and interface with respect to Java. **[9]**

b) Explain the concept of Multithreading? Explain the same with respect to JAVA with suitable example. **[9]**

SECTION-II

Q7) a) Explain approaches for garbage collection in LISP. **[8]**

b) Explain Unification and Backtracking with example in prolog. **[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 langauge. **[8]**

OR

Q10) a) Explain message passing and shared address space. **[8]**

b) Explain Data flow diagram in detail with example. **[8]**

Q11) Write short notes on following:- **[16]**

a) Internet Programming.

b) Design principles of Database programming.

OR

Q12) Write short notes on following: **[16]**

a) Mapping and Granularity

b) Windows Programming