

Total No. of Questions : 8]

SEAT No. :

PE-4267

[Total No. of Pages : 2

[6582]-39

S.E. (Computer Engineering)

PRINCIPLES OF PROGRAMMING LANGUAGES

(2019 Pattern) (Semester-IV) (210255)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Attempt Q1 or Q2, Q3 or Q4, Q5 or Q6 and Q7 or Q8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary

Q1) a) What is String in Java? Write the functions for following operations of class String in Java with example. [6]

- i) To find length of String
- ii) To Compare two String
- iii) Extraction of character from string

b) Define Constructor. List its different types. Demonstrate with suitable example the different types of constructors used in Java. [6]

c) Write a program in Java using switch-case statement to perform addition, subtraction, Multiplication and Division of given two numbers and print the result. [6]

OR

Q2) a) Describe primitive data types. List the primitive data types in Java and their respective storage capacity. [6]

b) Explain the uses of final Keyword in Java with example. [6]

c) Explain the following in brief: [6]

- i) this keyword
- ii) Garbage collection
- iii) finalize () method

P.T.O.

Q3) a) What are the different types of exceptions? Illustrate how exception are handled in Java with example. [8]

b) List and explain different types of inheritance. Demonstrate how Java supports Multiple Inheritance. [9]

OR

Q4) a) State the use of Abstract class in java. Explain with program. [8]

b) Compare the Package and Interface in java. Write the program for package and Interface. [9]

Q5) a) What is Java thread model? [6]

b) Explain in details creating multiple threads using isAlive () and join (). [6]

c) Write two ways to create thread using example. [6]

OR

Q6) a) Interpret the terms multitasking and multithreading in Java with example. [6]

b) List the advantages and features and limitations of ReactJS, AngularJs. [6]

c) State the term thread synchronization. Explain how to achieve thread synchronization in Java [6]

Q7) a) What are characteristics of functional programming? [6]

b) List and explain predicates in LISP. [5]

c) Explain the concept of “Structures” in Prolog with example. [6]

OR

Q8) a) List and explain LISP manipulation functions. [6]

b) Compare functional and Logic programming. [5]

c) Write short note on [6]

i) Local Variable

ii) Global variable

