Total No. of Questions : 8]

SEAT No. : [ ]

PC2815

[Total No. of Pages : 3

[6352]-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) ***Answer four questions Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Assume suitable data if necessary.***

Q1) a) Explain following features of Java in detail. **[6]**

i) Platform Independence

ii) Object – Oriented

iii) Dynamic Programming

b) Explain one dimensional and multi - dimensional array used in Java with suitable examples. **[6]**

c) Define constructor. Explain different types of Constructors used in Java with example. **[6]**

OR

Q2) a) 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]**

b) Explain in brief below keywords with example in Java. **[6]**

i) final

ii) finalize()

iii) references

c) Explain Command line argument Concept for Java language. **[6]**

P.T.O.

Q3) a) Define Inheritance and list the advantages. Explain the types of Inheritance in Java with suitable Java code. **[9]**

b) Explain following concepts with example. **[8]**

i) abstract classes

ii) Method Overloading

iii) Package

iv) Interface

OR

Q4) a) Describe Exception. Write any two examples of exception. Explain keywords try, catch, throw, throws and finally related to exception handling. **[9]**

b) Elaborate the significance of keyword "Super" in Java. Demonstrate with suitable example. **[8]**

Q5) a) Differentiate Multiprocessing and Multi-threading. Explain life cycle of Thread model in Java. **[9]**

b) List the features of JavaScript. Write short note angular JS. List its advantages and disadvantages. **[9]**

OR

Q6) a) Explain methods in Java thread with example. **[9]**

i) getPriority()

ii) setPriority()

iii) notifyAll()

b) List and elaborate features of React JS, Angular JS, Vue JS. **[9]**

Q7) a) Describe Functional Programming. Enlist its features. Also list the commonly used functional programming languages. **[6]**

b) Write sequences of CAR's and CDR's that will pick the atom of the following s- **[6]**

expression:

i) (Monday Tuesday Wednesday Thursday)

ii) ((Monday Tuesday) (Wednesday Thursday))

iii) (((Monday) (Tuesday) (Wednesday) (Thursday)))

c) Explain the concept of "List" in Prolog. Explain basic operations on lists. **[5]**

OR

Q8) a) Explain the following functions with suitable examples. **[6]**

i) CAR ()

ii) CDR ()

iii) cons ()

b) Explain the following number predicates using suitable example. **[6]**

i) NUMBERP

ii) ZEROP

iii) PLUSP

iv) EVENP

v) ODDP

vi) MEMBERP

c) Describe Logical Programming. Explain the phrases "Facts", "Rules" with examples. **[5]**

❋ ❋ ❋