Total No. of Questions : 8]

SEAT No. :

P651

[Total No. of Pages : 2

[5869]-280

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, Q7 or Q8.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Assume suitable data if necessary.*

Q1) a) Describe primitive data types. List the primitive data types in Java and their respective storage capacity. [6]

b) Write short notes on Java Virtual Machine(JVM) with diagram. [6]

c) State the uses of the final keyword in Java? [6]

OR

Q2) a) Define String in Java. Explain following operations of class strings in Java with example. [6]

i) To find length of the string
ii) To compare two strings
iii) To extract a character from a string
iv) To concatenate two strings

b) Explain Java's role in Internet. Justify the following features of Java. [6]

i) Secure
ii) Architectural Neutral
iii) Distributed.

c) Summarize different access controls in Java. Explain the situation if you remove static modifier from the main method. [6]

Q3) a) State the difference between character and byte stream in Java. Give any two input and any two output classes for character streams. [6]

b) Describe Exception. Explain keywords try, catch, throw, throws and finally related to exception handling. [6]

c) Define package and interfaces in Java? Explain it with suitable example. [5]

OR

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Q4) a) Define is inheritance. List the advantages of Inheritance. Explain Simple inheritance in java with example. [6]

b) Elaborate the significance of key word "Super" in Java. Demonstrate with example for Super keyword in Java constructor. [6]

c) State the importance of finally blocks. Illustrate the ways finally block differ from finalize() method. [5]

Q5) a) Interpret the terms multitasking and multiprocessing and multithreading in Java with example. [6]

b) List the Features, advantages and limitations of Angular JS. [6]

c) Write the JavaScript code to create Login page Form. [6]

OR

Q6) a) Compare React JS and Angular JS and Vue JS. [6]

b) Elaborate the terms getPriority() and setPriority() methods with example. [6]

c) Explain the uses of isAlive() and Join() methods in Java thread with example. [6]

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 pear out of the following s-expression : [6]

i) (apple orange pear grapes)

ii) ((apple orange) (pear grapes))

iii) (((apple)(orange)(pear)(grapes)))

c) Explain the concept of "Structures" in Prolog with example. [5]

OR

Q8) a) Describe Logical Programming. Enlist its features. Also list the commonly used Logical programming languages. [6]

b) Write a LISP program to find the factorial of n numbers using recursion concept. [6]

c) Explain the following number predicates using suitable example. [5]

i) NUMBERP

ii) ZEROP

iii) PLUSP

iv) EVENP

v) ODDP