Total No. of Questions : 8] **SEAT No. :**

P1535 **[Total No. of Pages : 3**

[6002]-164
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 Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.***
2) ***Figures to the right indicate full marks.***
3) ***Neat diagrams must be drawn whenever necessary.***
4) ***Make suitable assumptions whenever necessary.***

Q1) a) Explain following features of java in detail **[6]**
- i) Security
- ii) Platform Independence
- iii) Object - oriented

b) Write short note on **[6]**
- i) Garbage collector
- ii) this

c) Define constructor. Which are the types of Constructor used in Java? Explain with example. **[6]**

OR

Q2) a) Explain following features of java in detail **[6]**
- i) Portability
- ii) Architecture Neutral
- iii) Distributed

b) Write short note on **[6]**
- i) final
- ii) finalize ()

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

Q3) a) What is mean by inheritance? Explain the various types of inheritance used in Java with suitable example. **[6]**

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b) Explain following keywords of Java in detail **[6]**

i) try
ii) catch
iii) finally

c) Define package used in Java. Explain syntax, use, CLASSPATH, hierarchy of package with example. **[6]**

OR

Q4) a) Elaborate Method overriding and dynamic method dispatch in Java. **[6]**

b) Explain various Exception Handing mechanisms in Java **[6]**

c) What is the concept of stream, Explain byte stream and character stream in detail. **[6]**

Q5) a) Explain different ways to implement Threads in Java? With code example. **[6]**

b) Explain the below methods in detail. **[6]**

i) Isalive
ii) notify
iii) getpriority

c) List the Features, advantages, and limitations of Vue JS. **[5]**

OR

Q6) a) Explain the uses of is Alive () and join () methods in the java thread with examples. **[6]**

b) Explain the thread life cycle model in Java. **[6]**

c) Write a short note on React JS and Angular JS. **[5]**

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Q7) a) Explain the features of LISP programming. **[6]**

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

i) EQUAL
ii) EQ
iii) EQL
iv) =

c) Explain the following number predicates using a suitable example. **[5]**
i) NUMBERP
ii) ZEROP
iii) PLUSP
iv) EVENP
v) ODDP

OR

Q8) a) Explain the following functions with suitable examples. **[6]**
i) CAR()
ii) CDR()
iii) FIRST()

b) Describe Logical Programming. Enlist its features. Also, list the commonly used Logical programming languages. **[6]**

c) Evaluate the following forms of LISP. **[5]**

i) (car (cdr'(1 2 3 4 5)))
ii) (car (cdr' (a (b c) d e)))
iii) (car (cdr (cdr'(1 2 3 4 5 6 7 8))))

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