6E3204

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B. Tech. VI Sem. (Main & Back) Exam., May/June-2014
Computer Engineering
6CS4 Programming in Java
Common to SC & IT

Time: 3 Hours

Maximum Marks: 80
Min. Passing Marks: 24

Instructions to Candidates:-

*Attempt any **five questions,** selecting **one question** from **each unit**. All Questions carry **equal** marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly.*
Units of quantities used/ calculated must be stated clearly.
Use of following supporting material is permitted during examination.

1._____ 2._____

UNIT-I

Q.1 (a) Distinguish between the following terms:-

(i) Object and class

(ii) Data abstraction and data encapsulation

(iii) Inheritance and polymorphism

(iv) Dynamic binding and message passing [4 x4 = 16]

OR

Q.1 (a) What is multithreading? How does it improve the performance of JAVA. [8]

(b) What are command line arguments? How they are useful? [4]

(c) What is type casting? Why is it required in programming? [4]

UNIT-II

Q.2 (a) Find errors, if any, in each of following looping segments

(i)
```
While (Count ! = 10);
{
Count = 1;
Sum = sum + 1;
Count = Count + 1;
}
```

(ii)
```
For (x =1, x > 10; x = x+1)
{
. . . . . .
. . . . . .
}
```
[4 x 2 =8]

(b) Write a program to compute the sum of the digits of a given integer number [8]

OR

Q.2 (a) What are the applications of wrapper classes? [4]

(b) How does Java handle strings? [4]

(c) Compare and contrast overloading and overriding methods. [8]

UNIT-III

Q.3 (a) Describe the various forms of implementing interfaces. Give example of java code for each use. [10]

(b) What is string buffer? Give the three ways of creating a string object. [6]

OR

Q.3 (a) What is static import? How is it useful? [3]

(b) How do we add a class or an interface to a package? [5]

(c) Describe the various level of access protection available in packages. [8]

UNIT-IV

Q.4 (a) What is a finally block? When and how is it used? Give a suitable example. [8]

(b) Explain how exception handling mechanism can be used for debugging a program? [8]

OR

Q.4 Define an exception called "No Match Exception" that is thrown when a string is not equal to "India". Write a program that uses the exception. [16]

UNIT-V

Q.5 (a) Describe the complete life cycle of a thread. [8]

(b) Why do applet classes need to be declared as public? [8]

OR

Q.5 (a) Develop a simple real – life application program to illustrate the use of multithreads. [10]

(b) How do applets differ from application programs? [6]
