UG Odd Semester (CBCS) Exam., December—2016

COMPUTER SCIENCE

(5th Semester)

Course No. : MCS–501 (C)

(Programming in Java)

Full Marks : 75
Pass Marks : 30

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer **five** questions, selecting **one** from each Unit

UNIT—I

1. *(a)* What do you mean by JVM? Explain. 4

(b) Write a program to sort unsorted array elements in descending order. 5

(c) Explain the following terms : 3×2=6

(i) Assigning object reference variables

(ii) Garbage collection

2. *(a)* Explain the type conversion and costing of data types with an example. 4

(b) What do you mean by automatic type promotion in expression? 3

(c) Write a program to create the following output : 5

(d) What do you mean by polymorphism? 3

UNIT—II

3. *(a)* Write a program to implement multilevel inheritance using SuperKey word and also explain the flow of execution of code. 7+3=10

(b) What do you mean by constructor? Explain the parameterized constructor with a suitable code. 2+3=5

4. *(a)* Write a code to explain method overloading in Java. 5

(b) Write a program to implement single-level inheritance. 7

(c) Does Java support 'recursion'? If yes, then write a code to explain this concept. 3

UNIT—III

5. *(a)* Give the ways by which threads can be created in Java. Also give your views which method is better than the other one. 2+3=5

(b) How do you create a thread? How can you determine whether the other threads are still running or terminated? Create multiple threads and apply your technique to determine threads status. 8

(c) What do you mean by thread priorities? 2

6. Explain the following keywords with an example : 5×3=15

(a) Try, Catch

(b) Throws

(c) Finally

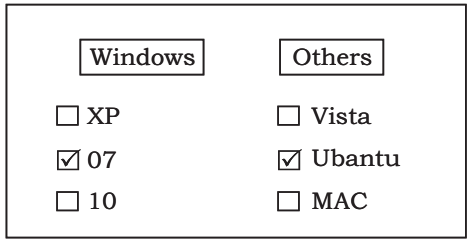
UNIT—IV

7. *(a)* What do you mean by event and handler? Explain with an example. 5

(b) Write a program to implement event handling on keyboard events. 5

(c) What are the benefits of applet? Can any code be executed without main( ) in Java? If yes, then explain with an example. 5

8. *(a)* What do you mean by card layout? Write a program to create the given graphical user interface using card layout and also implement event handling on the given AWT components : 10



(b) Write a program to implement event handling on text field and choice list. 5

UNIT—V

9. *(a)* Explain the following constructor : 2+2+2+3+2=11

(i) Flow Layout (int x, int y, int z)

(ii) Checkbox (string str, checkbox group cbg, boolean on)

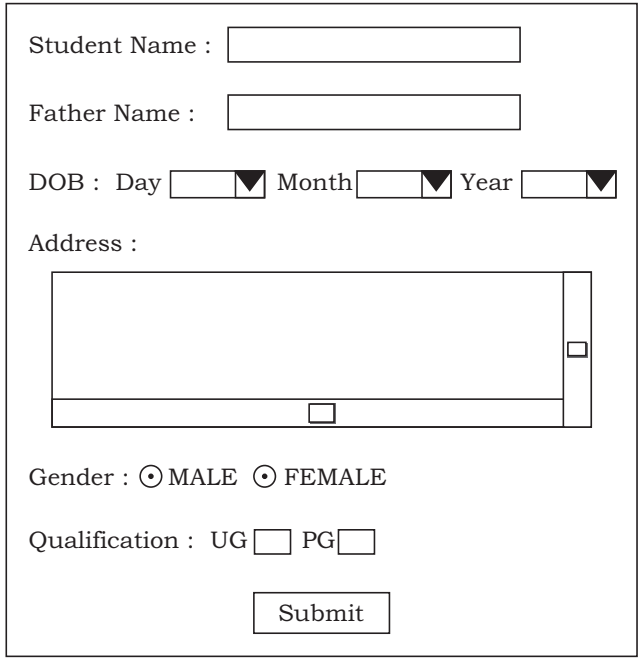
(iii) List (int x, boolean y) Throws Headless Exception

(iv) Text Area (string str, int x, int y, int z) Throws Headless Exception

(v) Flow Layout (int x, int y, int z)

(b) How many ways are there in Java to set the position of AWT component on an applet? Explain. 4

10. Write a program to create the following student registration form and also implement the required event handling on the given AWT component : 15



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