MCS-024

MCA (Revised) / BCA (Revised)

Term-End Examination

MCS-024 : OBJECT ORIENTED TECHNOLOGIES AND JAVA PROGRAMMING

Time : 3 Hours] *[Maximum Marks : 100*

(Weightage 75%)

Note: Question number 1 is compulsory. Answer <u>any</u> <u>three</u> questions from the rest of the questions.

1. (a) What do you understand by "method overloading"? How it is different from "method overriding"? Give suitable example for each.

   5

   (b) What is the purpose of setting class path? How it supports the execution of Java program? Write the steps, performed to set the class path. 5

   (c) What do you mean by "garbage collection" in Java? Give advantages and disadvantages of garbage collection. 5

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(d) What is interface in Java? Write a java program to exhibit, how to define and implement interface.   5

(e) What are the uses of "this" keyword in java? Explain with the help of an example.   5

(f) What is byte code? Explain the difference between compiled code of Java and compiled code of C.   5

(g) Write a program in Java to convert the string "IGNOU" in lower case i.e. "ignou". Give suitable comments in your code, to increase the readability.   5

(h) What is an abstract class? How it is used to impliment polymorphism in Java?   5

2. (a) Explain the life cycle of applet, with suitable diagram.   5

(b) Write a program in Java that reads text from the key board and writes it to a ".txt" file. Incorporate suitable comments in your program, to improve the readability of your logic.   7

(c) Explain "<<", ">>" and "&" bitwise operators in Java. Write a Java program to perform "<<" bitwise operator on a given number. 8

3. (a) What is certainer (in context of java)? Explain the significance of container in Java GUI program. 5

(b) What is stream tokenizer in Java? What is its significance ? Discuss the instance variables defined in streamtokenizer? Give an example to show the use of streamtokenizer. 7

(c) Write a client & server programs in Java to show the TCP connection establishment and data transfer. 8

4. (a) Write a JAVA program to draw a color filled line and a color filled rectangle. 5

(b) Explain the term RMI in Java. Briefly discuss the steps involved in creation of stub and skeleton. 7

(c) Discuss the concept of multithreading in Java. What are the advantages of multithreading? Explain the interthread communication with the help of an example.

8

5. (a) What do you understand by "exception", in context of Java? How it is handled, explain with the help of suitable example code in Java? 5

(b) What is a layout manager? Briefly discuss the role of layout manager in Java. Explain the flow layout and grid layout with the help of an example for each. 7

(c) Differentiate between <u>any two</u> of the following: 8

(i) String class and stringBuffer class

(ii) Throw statement and throws statement

(iii) Final and Finally

—x—