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Total No. of Printed Pages: 1

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**MCA (Semester – 2<sup>nd</sup>)**  
**PROGRAMMING IN JAVA**  
**Subject Code: MCAPD1221**  
**Paper ID: [20270112]**

**Time: 03 Hours**

**Maximum Marks: 60**

**Instruction for candidates:**

1. Section A is compulsory. It carries 16 marks. It consists of 4 questions of 4 marks each.
2. Section B consist of 4 questions of 8 marks each. The student has to attempt any 3 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

**Section – A**

**(4 marks each)**

- Q1. State four features of java.
- Q2. How to create a package? Explain with example
- Q3. Write an applet for each of following graphics method drawoval()
- Q4. What is a thread? Describe the complete life cycle of thread

**Section – B**

**(8 marks each)**

- Q5. Write down the features of OOPs. Explain each using a suitable example in brief.
- Q6. Write a program to implement the Fibonacci series using for loop control structure
- Q7. Write a short note on
  - a) Wrapper Class
  - b) Garbage Collection
- Q8. Explain the following terms with respect to exception handling.
  - i) try ii) catch iii) throw iv) finally

**Section – C**

**(10 marks each)**

- Q9. How do applets differ from application programs explain with example?
- Q10. Write a program to define class Employee with members as id and salary. Accept data for five employees and display details of employees getting highest salary.
- Q11. What is the main purpose of Java Servlets. Explain the life cycle of Java Servlets in details.