

M.Sc.- I (Computer Science) (NEP Pattern) Semester-I  
**NEP-23 / 01MSCCS03 - Paper-III : Advanced Java**

P. Pages : 2

Time : Three Hours



**GUG/W/23/15080**

Max. Marks : 80

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- Notes :
1. All questions are compulsory and carry equal marks.
  2. Draw neat and labelled diagram and use supporting data wherever necessary.
  3. Avoid vague answers and write specific answers related to questions.

**Either:**

1. a) Explain history and features of Java in detail. 8
- b) Write a java program to print: 8

A				
A	B			
A	B	C		
A	B	C	D	
A	B	C	D	E

**OR**

- c) Explain various decision- making statements available in Java. 8
- d) Write a java program to find no. of evens and no. of odd in an array of size 10. Also. Calculate the sum of evens and sum of odds. 8

**Either:**

2. a) What is package? Explain types of package in detail. 8
- b) Write a java program to demonstrate threads using thread class and also with Runnable interface. 8

**OR**

- c) What is collection? Explain collection framework in detail. 8
- d) Write a java program to show the use of throw, throws and finally keywords. 8

**Either:**

3. a) What is AWT? Explain about frame and panel in detail. 8
- b) Write an AWT application for arithmetic operations like addition, subtraction, multiplication & division of two numbers. 8

**OR**

- c) Write an application to demonstrate event handling in Java. 8

- d) Explain SWING and it's various components. Also explaining why it is named as light weight. **8**

**Either:**

4. a) What is mean by cookies? Write down the steps to create a cookies. **8**  
b) Write configuration step of tomcat server. Also write a program for generic-servlet class. **8**

**OR**

- c) What is JSP? Explain the difference in servlet and JSP in detail. **8**  
d) Create a JSP code to demonstrate a writer class. Also explain it. **8**
5. Attempt all the questions.
- a) Write a note on constructor overloading. **4**  
b) Write short note on interfaces. **4**  
c) Give short note on applet. **4**  
d) Explain in short about JSP directives. **4**

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