

**3rd Sem. Examination 2019**  
**IMCA**  
**JAVA**  
**Paper 3.1**  
**(Answer All Questions)**

1. [7+7=14]
- a. Explain command line arguments .Give a suitable example to show the behavior of command line arguments.

b. Differentiate between C++ and JAVA .

OR

c. Briefly explain all important features of java

d. Write a program in java to calculate factorial of a number recursively.

2. [7+7=14 ]

- a. Explain all static members of class. Give an example to show their behavior.  
b. Explain the technique of garbage collection and finalization.

OR

- c. What is interface? Illustrate the behavior of interface by example  
d. Explain boxing ,unboxing, autoboxing, autounboxing

3. [7+7=14]
- a. What is the purpose of finally block in exception handling .Give an example.

b. Write a program to create your own exception class and handle your own exception.

OR

- c. Explain synchronization in multi-threading. Give an example.  
d. Write a program to sort a string array.

4. [7+7= 14]

- a. What is applet? Explain applet life cycle.
- b. Explain behavior of BorderLayout manager by example.

OR

- c. Write a swing program to demonstrate the behavior of RadioButtons.
- d. Write a swing program to create a login frame having user name field, password field and login button . Take necessary event handling to validate given username and password .

5. [ 7+7=14]

- a. What is JDBC? Explain briefly the type-II driver ,its advantages and disadvantages.
- b. Briefly discuss the steps of JDBC connectivity. Give an example

OR

- c. What is servlet technology. Explain servlet life cycle.
- d. Write a servlet program to read user name and email submitted by an HTML form and show them in response.