
INSTRUCTIONAL OBJECTIVES

IO1. To understand the benefits of two different languages Integration, especially the issues related with the integration of java with other languages like Assembly, C, C++ using JNI.

IO3: Understand and create components in Microsoft Environment and EJB.

STUDENT OUTCOMES:

1. An ability to use current techniques, skills, and tools necessary for computing practice.(Outcome i)

i1. An ability to understand current techniques and Skills

An ability to use and apply current technical concepts and practices in the core information technologies (outcome j)

PART – A

3 X 4 =12

1. Write the machine generated header file code for the following java code:

```
package jni_str_Pkg;
class JNI_strclass
{
    public static String native reverse(String str)
    public int[] native Sorting(int a[], float n)
    /*body of class*/
}
```

2. State the 4 different exception handling functions.
3. What are the advantages of MSMQ?
4. Explain the terms.
- a) MSMQQueueInfos
- b) MSMQQuery

Part B

1 * 13 = 13

5. a. i) Write a program using JNI concept

(7)

1) Define a **java main class**, with one native method " Exchange swap(Exchange obj)" which takes object as an argument.

2) Define a C / C++ code to swap two numbers and return the object

- ii). Write a MSMQ program in VB to send messages. Explain in detail about the steps involved for the above

(6)

(OR)

5. b. i) Write a program using JNI concept

(7)

1) Define a **java main class**, with one native method which takes integer as an argument."

Native void palindrome(int n);

2) Define a C / C++ code to check whether the number is palindrome or not.

- ii) Explain the basic elements of MSMQ

(6)

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PART – A

3 X 4 =12

1. Write the machine generated header file code for the following java code:

```
package jni_str_Pkg;
class JNI_strclass
{
    public static int native reverse(String str, int n)
    private native Ipthello Increment(Ipthello o, short s)
    /*body of class*/
}
```

2. How user can obtain the JNIEnv pointer for the current thread?
3. List and explain important methods of **MSMQQueue** object.
4. What is the purpose of EnableNotification in MSMQ.

Part B

1 * 13 = 13

5. a i) Write a program using JNI concept (7)

- 1) Define a **java main class**, with one native method “divide(int a, int b)”which takes integer as an argument.

- 2)Define a **C / C++** code to throw exception if the divisor is zero

- ii) discuss in detail about MSMQ transaction with corresponding code snippet. (6)

(OR)

5. b. i) Write a program using JNI concept (7)

- 1) Define a **java main class**, with one native method which takes String as an argument.

- 2)Define a **C / C++** code to check whether the string is palindrome or not.

- ii) In MSMQ, explain any 6 different objects models. (6)

REGISTER NUMBER:

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Question No		Objective	Outcome	Outcome (Marks)	Mark(s) Scored
1		IO1	i	i1	
2				i1	
3		IO3	j	j	
4				j	
5 a/b	i	IO1	i	i1	
	ii	IO3	j	j	
Total				i(11 or 15)	
				J(14 or 10)	

Staff Signature: