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Question Paper Code:ACS552



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

B.Tech VI Semester End Examinations (Regular) - May, 2019

Regulation: IARE – R16

JAVA PROGRAMMING

Time: 3 Hours

(ECE)

Max Marks: 70

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

UNIT – I

- (a) Explain type conversion and type casting with examples. [7M]

(b) Write a Java program that inputs an integer which represents a temperature on the Fahrenheit scale and then compute and prints its Equivalent Celsius value in decimal form. Use the conversion formula. [7M]
- (a) Demonstrate constructor overloading with the help of a sample java program. [7M]

(b) Distinguish between C, C++ and java. Discuss about various conditional statements in java with suitable examples. [7M]

UNIT – II

- (a) Explain the importance of inheritance with the help of an example. [7M]

(b) Differentiate “this” and “super” keywords usage in java. Illustrate the use of “super” keyword in method overriding with example. [7M]
- (a) What is an abstract class? Demonstrate with a sample java program. [7M]

(b) Illustrate a java program to create an abstract class named Shape that contains two integers and an empty method named print Area(). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extends the class Shape. Each one of the classes contains only the method printArea() that prints the area of the given shape. [7M]

UNIT – III

- (a) What is try, catch, throw, finally in exception handling? Write a sample program to demonstrate the same. [7M]

(b) Write a java program to demonstrate ArrayIndexOutOfBoundsException exception. [7M]

6. (a) What is exception handling? Explain multiple catches for single try block with a suitable example. [7M]

(b) i. Differentiate between checked and unchecked exceptions. [7M]

ii. Trace the program and find out the output

```
public class Test
{
public static void aMethod() throws Exception
{
try
{
throw new Exception();
}
finally
{
System.out.print("finally ");
}
}
public static void main(String args[ ])
{
try
{
aMethod();
}
catch (Exception e)
{
System.out.print("exception ");
}
System.out.print("finished");
}
}
```

UNIT – IV

7. (a) What is an extending interfaces? Explain with a suitable example. [7M]

(b) i. Examine can a class extend an interface. Give an example.

ii. Predict output of the program?

[7M]

```
interface A
{
System.out.println("Interface A");
}
static
{
System.out.println("Interface A");
}
}
```

8. (a) Define interface and its use in java. Discuss about interface and its methods in Java. [7M]

(b) i. List the advantages of packages in Java. Demonstrate how many ways packages can be imported.

ii. Identify the output of the following program. interface Sample

```
{
int x=12; void show();
default void display()
{
System.out.println("default method of interface");
}
Static void print(String str)
{
System.out.println("Static method of interface:"+str);
}
}
```

[7M]

UNIT – V

9. (a) Explain inputstream Hierarchy with a neat sketch. [7M]

(b) Examine the following program and find the output [7M]

```
public static void main(String[ ] args)
{
String name = null;
File file = new File("/folder", name);
System.out.print(file.exists());
}
```

10. (a) Explain the steps of java database connectivity and give syntax for each of them. [7M]
(b) Describe about the following code. [7M]

```
static final String USER = "username";  
static final String PASS = "password";  
System.out.println("Connecting to database...");  
conn = DriverManager.getConnection(DB_URL,USER,PASS);  
System.out.println("Creating statement...");  
stmt = conn.createStatement(); String sql;  
sql = "SELECT id, first, last, age FROM Employees";  
ResultSet rs = stmt.executeQuery(sql);
```

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