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Total Number of Pages : 02

B.Tech
ROP3B001

3rd Semester Regular / Back Examination: 2021-22
OBJECT-ORIENTED PROGRAMMING WITH JAVA
BRANCH(S): AEIE, AERO, AG, AUTO, BIOMED,
BIOTECH, C&EE, CHEM, CIVIL, CSE, CSEAIME, CST, ECE, EEE, EIE, ELECTRICAL,
ELECTRICAL & C.E, ELECTRONICS & C.E, ETC, IT, MANUTECH, MECH, METTA,
MINERAL, MINING, MME, MMEAM, PE, PLASTIC, PT

Time : 3 Hour

Max Marks : 100

Q.Code : OF609

Answer Question No.1 (Part-1) which is compulsory, any eight from Part-II and any two from Part-III.

The figures in the right hand margin indicate marks.

Part-I

Q1 Answer the following questions :

(2×10)

- Write two advantages of a compiled and interpreted language over only a compiled language.
- Justify that Java is a simple and robust language.
- Write the use of Buffered Reader class.
- How typecasting is done in Java? Explain with two examples.
- Write the use of super keyword in Java.
- Explain the term Synchronization with respect to Java multithreading.
- What is Demon Thread?
- Differentiate between AWT and swing.
- How runnable interface is used to create a thread.
- Is multitasking and multithreading same? Justify your answer.

Part-II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6×8)

- Explain the features of an object oriented programming language.
- What is JVM and write its significance in executing a program?
- Explain the working of command line arguments in Java with an example.
- Explain Dynamic Method Dispatching with example.
- What is wrapper class? Explain the use of various wrapper classes with example.
- Write a program in Java to replace a word by another word in a given text. For example replace cat by dog in the text "catwood asks asks walcat to change cartage"
- Write a program in Java to create a user define exception so that when user enters mark more than full mark he will get a warning.
- Explain the limitation of multiple inheritance and how it is overcome by using interface.
- Write a program in Java swing to create two text fields to read the input and a command button to add these numbers. The result should be displaced in a third text field.

- j) Create a user defined package to find the average of n numbers and import to your main program to find the standard deviation of n numbers.
- k) Explain the following
Member inner class, Static inner class, Local inner class, Anonymous inner class
- l) How the keywords throw and throws are used in exception handling? Explain with example.

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

- Q3 Why Java is called an object oriented programming Language? Explain briefly various data types and operators used in Java. (16)
- Q4 Differentiate between method overloading and method overriding with suitable examples. Write a program to find $c(n, r) = \frac{n!}{r!(n-r)!}$ by inheriting from a class that computes the factorial of a number. (16)
- Q5 Explain briefly the life cycle of thread in Java. Write all methods and their role in Thread execution. (16)
- Q6 What is Abstract Window Toolkit? Explain different Event Handling mechanisms mentioning keyboard and mouse events separately. (16)