**20ECJ13**

**Hall Ticket Number:**

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| **III/IV B.Tech (Supplementary) DEGREE EXAMINATION** | | | |
| **July/August,2023** | **Electronics &Communication Engineering** | | |
| **Fifth Semester** | **Programming with Java** | | |
| **Time:** Three Hours | | **Maximum: 7**0 Marks | |
| *Answer Question No. 1 Compulsorily.* | | | (14X1 = 14 Marks) |
| *Answer* ***ANY ONE*** *question from each Unit.* | | | (4X14=56 Marks) |

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| 1. | a) | Find the output of the following program.  public class Solution{  public static void main(String[] args){  short x = 10;  x = x \* 5;  System.out.print(x);  }  } | CO1 | L2 | 1M |
|  | b) | Define encapsulation? | CO1 | L1 | 1M |
|  | c) | What is the use of java Virtual Machine? | CO1 | L1 | 1M |
|  | d) | Find the output of the following code.  class HelloWorld {  public static void main(String[] args) {  int Integer = 24;  char String = ‘I’;  System.out.print(Integer);  System.out.print(String);  }  } | CO1 | L2 | 1M |
|  | e) | When is the object created with new keyword? | CO2 | L3 | 1M |
|  | f) | What is meant by constructor overloading? | CO2 | L2 | 1M |
|  | g) | What would be the behaviour if this() and super() used in a method? | CO2 | L2 | 1M |
|  | h) | What will be the output of the following Java code?   1. **class** increment { 2. **public** **static** **void** main(String args[]) 3. { 4. **int** g = 3; 5. System.out.print(++g \* 8); 6. } 7. } | CO2 | L2 | 1M |
|  | i) | A class member declared protected becomes a member of subclass of which type? | CO3 | L1 | 1M |
|  | j) | What will be the output of the following Java program?   1. **class** A 2. { 3. **public** **int** i; 4. **public** **int** j; 5. A() 6. { 7. i = 1; 8. j = 2; 9. } 10. } 11. **class** B **extends** A 12. { 13. **int** a; 14. B() 15. { 16. **super**(); 17. } 18. } 19. **class** super\_use 20. { 21. **public** **static** **void** main(String args[]) 22. { 23. B obj = **new** B(); 24. System.out.println(obj.i + " " + obj.j); 25. } 26. } | CO3 | L2 | 1M |
|  | k) | Is interface is used to fully abstract a class from its implementation? | CO3 | L3 | 1M |
|  | l) | Define package. | CO3 | L2 | 1M |
|  | m) | What is the advantage of try{}catch(){} block. | CO4 | L2 | 1M |
|  | n) | Define deamon threads in java. | CO4 | L3 | 1M |
| **Unit -I** | | | | | |
| 2. | a) | Write a java program that reads a series of integers terminated by 0.The program should display the number of even numbers in the series, the number of odd numbers in the series, the number of positive numbers , and the number of negative numbers. The program should then display the average of all the numbers. | CO1 | L1 | 7M |
|  | b) | Explain the concept of Decision-making statements with example programs | CO1 | L3 | 7M |
|  |  | **(OR)** |  |  |  |
| 3. | a) | An election is contested by five candidates. The candidates are numbered 1 to 5 and a voting is done by marking the candidate number in a ballot paper. Write a java program to read the ballot and count the votes cast for each candidate using an array variable count. In case, a number read is outside the range 1 to 5 the ballot should be considered as a ‘spoilt ballot’, and the program should also count the number of spoilt ballots. | CO1 | L2 | 7M |
|  | b) | Discuss in detail about java Buzzwords. | CO1 | L1 | 7M |
|  |  | **Unit -II** |  |  |  |
| 4. | a) | Discuss in detail about the constructor in java. Do we copy constructor in java. | CO2 | L3 | 7M |
|  | b) | Analyze the final keyword to variables, methods, and classes with example programs. | CO2 | L4 | 7M |
|  |  | **(OR)** |  |  |  |
| 5. | a) | Discuss in detail about the classes and objects in java with example programs. | CO2 | L1 | 7M |
|  | b) | Explain the functioning of static keyword to variable and method with example programs. | CO2 | L3 | 7M |
|  |  | **Unit -III** | |  |  |
| 6. | a) | Explain the usage of Java Package. Which are the important things one need to keep in mind about package in Java? | CO3 | L4 | 7M |
|  | b) | What is the use of inheritance and explain the types of inheritance with example programs. | CO3 | L2 | 7M |
|  |  | **(OR)** |  |  |  |
| 7. | a) | Explain dynamic method dispatch with suitable example. | CO3 | L1 | 7M |
|  | b) | How to create nested packages in java. Explain with suitable example. | CO3 | L2 | 7M |
|  |  | **Unit -IV** |  |  |  |
| 8. | a) | What is similarity between Null Pointer Exception and Array Index out of Bound Exception in Java? What is difference between throw and throws keyword in Java? Write a program in Java to handle the Exception. | CO4 | L1 | 7M |
|  | b) | What is Thread? How can we create Thread in Java? Write a program in java to create multiple threads by using Runnable Interface. | CO4 | L3 | 7M |
|  |  | **(OR)** |  |  |  |
| 9. | a) | Explain exception handling with suitable example. | CO4 | L2 | 7M |
|  | b) | List the differences between process and thread with examples. | CO4 | L3 | 7M |

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