

Reg. No.

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B.E / B.TECH. DEGREE EXAMINATION, MAY 2023

Third Semester

CS18304 – Advanced Object Oriented Programming*(Computer Science and Engineering)***(Regulation 2018A)****TIME: 3 HOURS****MAX. MARKS: 100**

- CO 1** Students will be able to establish Java programs using OOP principles
CO 2 Students will be able to discriminate Java programs with the concepts classes and inheritance.
CO 3 Students will be able to manipulate Java applications using interfaces, strings and exceptions
CO 4 Students will be able to examine Java applications with IO streams and threads.
CO 5 Students will be able to demonstrate interactive Java programs using Applets.

PART- A (10 x 2 = 20 Marks)

(Answer all Questions)

	CO	RBT LEVEL
1. Why java is platform independent ?	1	1
2. List out the three principles of java.	1	4
3. What is the default access to a member in a class?	2	1
4. What is meant by dynamic method dispatch?	2	1
5. Compare and contrast class and interface.	3	2
6. What is the difference between static and non-static variables?	3	1
7. Mention the purpose of finally block in exception handling mechanism.	4	1
8. Differentiate multithreading and multitasking.	4	4
9. What is a package?	5	1
10. Distinguish between an applet and an application.	5	4

PART- B (5 x 14 = 70 Marks)

	Marks	CO	RBT LEVEL
11. (a) Demonstrate the selection and control statements in Java using suitable examples	(14)	1	2
(OR)			
(b) (i) Explain about command line arguments and develop a java program to input n numbers on command line arguments to calculate maximum of them.	(7)	1	2
(ii) Summarize the characteristics of java	(7)	1	2
12. (a) Develop a java program to implement the following:	(14)	2	3
(i) Default Constructor			
(ii) Parameterized Constructor			
(iii) Copy Constructor			
(iv) Overloaded constructors			

(OR)

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|----------------|---|-------------|----------|----------|
| (b) | (i) Construct a clock class that does the following: Accept hours, minutes and seconds, check the validity and set the time to AM or PM mode. | (10) | 2 | 3 |
| | (ii) Develop an abstract class to illustrate its usage | (4) | 2 | 3 |
| 13. (a) | Write a java program that enters a 8 digit string for a birthdate. The first two digits in the string are the months of birth, the next two are the day and the remaining four are the year. The java program should squeeze out these substrings and calculate the current age. Raise a negative age exception if the calculated age is negative. | (14) | 3 | 2 |
| (OR) | | | | |
| (b) | (i) Explain the methods available in the string buffer class with a program. | (7) | 3 | 2 |
| | (ii) What is an interface? How do you achieve multiple inheritance through interfaces? Explain with an example. | (7) | 3 | 2 |
| 14. (a) | Develop an application that executes two threads. First thread displays the alphabets A to Z at every one second. The second thread will display the alphabets Z to A at every two seconds. Both the threads need to synchronize the each other for printing alphabets. The second thread has to wait until the first thread finishes its execution. The applicable waits for all the threads to finish the execution | (14) | 4 | 3 |
| (OR) | | | | |
| (b) | (i) Construct a java program to perform input and output operations on files. | (9) | 4 | 3 |
| | (ii) Develop a java program to implement synchronization | (5) | 4 | 3 |
| 15. (a) | (i) Explain the lifecycle methods for an applet with an example. | (7) | 5 | 2 |
| | (ii) How Applets are prepared and executed? | (7) | 5 | 2 |
| (OR) | | | | |
| (b) | (i) Illustrate the creation of user defined package and import the same to perform arithmetic operations in java. | (14) | 5 | 2 |

PART- C (1 x 10 = 10 Marks)

(Q.No.16 is compulsory)

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LEVEL |
|------------|---|-------------|----------|--------------|
| 16. | Develop a java program to perform employee payroll processing using packages. | (10) | 5 | 3 |