

Reg. No.

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**B.E. / B.TECH. DEGREE EXAMINATIONS, DEC 2019**

Third Semester

**CS18304– ADVANCED OBJECT ORIENTED PROGRAMMING***(Computer Science and Engineering)***(Regulation 2018)****Time: Three Hours****Maximum : 100 Marks**

Answer ALL questions

**PART A - (10 X 2 = 20 Marks)**

	CO	RBT
1. List the features of Java.	1	R
2. Differentiate right shift and unsigned right shift operators.	1	U
3. Mention the uses of final keyword.	2	U
4. Define static method. State the reason why main method is declared as static in Java.	2	U
5. Differentiate String and StringBuilder class.	3	U
6. What is the difference between checked and unchecked exceptions?	3	U
7. Mention the two ways of creating threads.	4	R
8. Write a Java program to read an integer from console using BufferedReader class and print the same.	4	AP
9. List down the steps involved in executing an applet program.	5	R
10. Illustrate two event handling mechanisms with an example.	5	R

**PART B - (5 X16 = 80 Marks)**

11. (a) (i) Explain in detail about looping statements with suitable examples.	(8)	1	AP
(ii) Write a Java program to display the middle digit of a given number.	(8)	1	AP
a) If the number of digits is even, display the two middle digits.			
b) If the number of digits is odd, display one middle digit.			
(OR)			
(b) (i) Illustrate the concept of multidimensional arrays with a suitable example.	(8)	1	U
(ii) Explain Javadoc comments with an example. List down the steps involved in executing the program.	(8)	1	U
12. (a) (i) Explain with suitable examples, the different types of constructors in Java.	(8)	2	AP

- (ii) Construct a Queue and perform the following functions in Java: (8) 2 AP
- ENQUEUE
  - DEQUEUE
  - DISPLAY
- (OR)**
- (b) (i) Illustrate multilevel and hierarchical inheritance with an example. (8) 2 AP
- (ii) Discuss in detail dynamic method dispatch with an example. (8) 2 AP
13. (a) (i) Implement multiple inheritance in Java. (8) 3 U
- (ii) Explain any six methods in String class with an example. (8) 3 U
- (OR)**
- (b) (i) Write a Java program to check whether a string is a valid password. If the password does not satisfy the rules, raise an exception for each case and handle it.
- Password rules:
- A password must have at least ten characters
  - A password consists of only letters and digits
  - A password must contain at least two digits
- (ii) Elaborate the use of finally block in exception handling. (4) 3 AP
14. (a) Explain in detail Interthread communication with an example. (16) 4 AP
- (OR)**
- (b) (i) Write a short note on classes and methods used in reading and writing files. (8) 4 AP
- (ii) Write a Java program to copy the contents from one file to another. On copying, replace each vowel by '@' symbol. (8) 4 AP
15. (a) Explain with a suitable example, the various access protection for the following cases: (16) 5 U
- Same package
  - Same package subclass
  - Same package non-subclass
  - Different package subclass
  - Different package non-subclass
- (OR)**
- (b) (i) Explain about the life cycle of an applet. (8) 5 U
- (ii) Implement event handling in a frame window. (8) 5 U