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**B.Tech. DEGREE EXAMINATION, MAY 2017**  
Third / Fourth Semester

**15SE205J – PROGRAMMING IN JAVA**

*(For the candidates admitted during the academic year 2015 – 2016 onwards)*

- Note:**
- (i) **Part - A** should be answered in OMR sheet within first 45 minutes and OMR sheet should be handed over to hall invigilator at the end of 45<sup>th</sup> minute.
  - (ii) **Part - B** and **Part - C** should be answered in answer booklet.

Time: Three Hours

Max. Marks: 100

**PART – A (20 × 1 = 20 Marks)**  
Answer ALL Questions

1. In java the word true is
 

(A) A java keyword	(B) A Boolean literal
(C) Same as value 0	(D) Same as value 0
  
2. Which of these operators is used to allocate memory to array variable in java?
 

(A) Malloc	(B) Alloc
(C) New	(D) New malloc
  
3. What is the order of precedence of following operators?  
1.& 2.^ 3.?:
 

(A) 1→2→3	(B) 2→1→3
(C) 3→2→1	(D) 2→3→1
  
4. Which of these keyword can be used to prevent inheritance of a class?
 

(A) Super	(B) Constant
(C) Class	(D) Final
  
5. Which of these class relies upon its subclass for complete implementation of its methods?
 

(A) Object class	(B) Abstract class
(C) Array list class	(D) Inner class
  
6. Which of these is an interface for control over serialization and deserialization?
 

(A) Serializable	(B) Externalization
(C) File filter	(D) Object input
  
7. A class member declared protected becomes member of subclass of which type?
 

(A) Public member	(B) Private member
(C) Protected member	(D) Static member
  
8. Which of these keywords is used to refer member of base class from a subclass?
 

(A) Static	(B) Super
(C) This	(D) Final

9. Which of these is a mechanism for naming and visibility control of a class and its content?  
 (A) Object (B) Packages  
 (C) Interfaces (D) Inheritances
10. Which of these handles the exception when no catch is used?  
 (A) Default handler (B) Finally  
 (C) Throw handler (D) Java runtime system
11. Which of these method of thread class is used to suspend a thread for a period of time?  
 (A) Sleep() (B) terminate ()  
 (C) Suspend () (D) Stop ()
12. Which of the following reference types cannot be generic?  
 (A) Anonymous inner class (B) Interface  
 (C) Inner class (D) Static inner class
13. Which of these methods can convert an object into a list?  
 (A) Set list () (B) Convert list ()  
 (C) Singleton list () (D) Copy list ()
14. Which of these methods are used to register a keyboard event listener?  
 (A) Keylistener () (B) add Listener ()  
 (C) add keyListener () (D) event key board listener ()
15. What will this code print?  
`int arr[] = new int [5]`  
`System.out.print(arr);`  
 (A) 0 (B) Value stored int arr[0]  
 (C) 00000 (D) Garbage value
16. What will be the output?  
`Int X=100; double Y=100.1`  
`Boolean b=(X=Y);`  
`System.out.println(n)`  
 (A) Trace (B) False  
 (C) Compilation tails (D) An exception thrown at runtime
17. Which of the methods waits for the thread to terminate?  
 (A) Sleep() (B) Is alive ()  
 (C) Join () (D) Stop ()
18. Which of these method of class string used to obtain length of string object?  
 (A) get() (B) Size of ()  
 (C) Length of () (D) Length ()
19. Class test and public static void main ()  
`{ int X=0, Y=0;`  
`For (int Z=0; Z<5;Z++)`  
`{ if (++X>2)||(++y>2)){X++;}}`  
`System. out. println(X+” “ Y); what is result?`  
 (A) 5 3 (B) 8 2  
 (C) 8 5 (D) 10 3

20. Which of these class can be used to implement input stream that uses a character array as the source?
- (A) Buffered Reader  
(B) File Reader  
(C) Char array Reader  
(D) File Array Reader

**PART – B (5 × 4 = 20 Marks)**  
Answer ANY FIVE Questions

21. Display the below pattern using the concept of arrays with control statements
- ```
0
1 2
3 4 5
6 7 8 9.
```
22. Discuss the difference between constructor and method with example.
23. A palindromic prime is a prime number and also palindrome. For example 3 is a prime and also palindrome prime. Write a program, that displays the first 20 palindromic prime numbers.
24. Explain the use of “FINAL” and “THIS” keyword with sample java code.
25. Discuss about method overriding with example program.
26. What is the difference between exception and error? Discuss about exception handling with sample code.
27. Discuss about collection classes.

**PART – C (5 × 12 = 60 Marks)**  
Answer ALL Questions

- 28.a.i. Discuss about the types of variables and write an example program. (5 Marks)
- ii. Write java program to search an element and prints its position if the element is found in the given array. Implement binary search algorithm. (7 Marks)
- (OR)
- b. Create class called invoice that a hardware store might use to represent an invoice for an item sold at the store
- (i) An invoice should include four pieces of information as instances variables a part number (int), a part description (string), a quantity of the item (int) and a price (double)
- (ii) Your class should have a constructor that initializes the four instance variables.
- (iii) In addition, provide a method named get invoice amount that calculates the invoice amount (ie quantity \* price) then returns the amount as a double value.
- (iv) Write a test class named in voice test that demonstrates class invoice’s capabilities.

29. a. What is overloading? Explain constructor overloading and method overloading with an example program.

(OR)

b.i. Discuss about passing object as parameter and method returning object with sample code.

ii. Write a java program to prompt the user for sources and destination file names and then copies the content of source file to destination file.

30.a.i. Explain multiple inheritance with an example program.

ii. Create a java class shape with constructor to initialize the parameter dimension. Create two subclasses with the following

(1) Triangle with method to calculate area and circumference

(2) Square with method to calculate area

Write a test class, define main method and create object of each class and test all the methods.

(OR)

b.i. Write a program to develop a java package for the stack class. Create constructor to initialize top of the stack

(1) Push method to insert, if top is equal to 9, print stack is full

(2) Pop to remove, if top is equal to 0, print stack is empty create main class and test the methods in stack package.

31. a. Write a java program to explain the concept of array index out of bound and file not found exceptions. Also implement the user defined exception in java.

(OR)

b. Write a multi threaded program in which the first thread prints odd numbers between 100 to 200. Second thread print the prime number. Between 200 to 300. And third thread generate Armstrong number between 100 to 300.

32. a. Explain the following in detail with sample code.

(i) Event handling

(ii) Jbutto, Jcombox, Jlist

(OR)

b. Design a student course registration form with following fields using java swing components JBUTTON, JLABEL, JTEXTFIELD, JLIST, JTABLE components.

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