

B. N. BANDODKAR COLLEGE OF SCIENCE, THANE
S. Y. B. SC. (INFORMATION TECHNOLOGY) SEMESTER – IV EXAMINATION; APRIL
2015
COURSE CODE – USIT403

Duration: 2½ Hrs

Total

Marks: 75

N.B. 1. All questions are compulsory.

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| Q. 1 | Answer any two out of following | 10 |
| | a Explain any 5 features of java? | |
| | b What is constructor? Explain types of constructor with example? | |
| | c Explain final variable, final class and finalizer method in java? | |
| | d Explain Method overloading with example? | |
| Q. 2 | Answer any two out of following | 10 |
| | a What is inheritance? Explain types of inheritance in java? | |
| | b What is multithreading? Explain how to create a thread? | |
| | c List some of the most common types of exceptions that might occur in java. Give example? | |
| | d Design a java class for the use of interface | |
| Q. 3 | Answer any two out of following | 10 |
| | a Define: a. FilenameFilter b.listFiles() | |
| | b Explain FileInputStream and FileOutputStream with example? | |
| | c Explain chararrayreader class in java? Explain with an example? | |
| | d What is Stream class? How are the stream classes classified? | |
| Q. 4 | Answer any two out of following | 10 |
| | a Define Data Structure? Explain various types of data Structure? | |
| | b Define Stack? Explain operation of stack? | |
| | c Write a java program to implement the Sequential search algorithm? | |
| | d Explain Circular Queue with an example? | |
| Q. 5 | Answer any two out of following | 10 |
| | a Define Link list? Explain all the operation of link list? | |
| | b Write an algorithm for traversing a link a link list? | |
| | c Draw the tree if suppose following eight numbers are inserted into an empty binary search tree T: 50, 33, 44, 22, 77, 35, 60 and 40. | |
| | d Write a note on Binary Search Tree? | |
| Q. 6 | Answer any two out of following | 10 |
| | a Design a class in java for implementing Bubble sort? | |
| | b Explain Sequential representation of graph with example? | |
| | c Write a note on Depth-First Search? | |

Q. 7 **d** Write down all the operation of Graph?
 Answer any three out of following

- a** Explain nested if else with example?
- b** How to define String in java?
- c** Write a note on PrintStream class?
- d** Write a note on Duplicating an array?
- e** What is direct graph and multigraphs?
- f** List the node of the following tree T in a. Preorder b. inorder c. postorder

