

B.SC. (I. T.) SEM. - II (2011 COURSE) : SUMMER - 2018

SUBJECT: DATA STRUCTURES

Day : **Thursday**
Date : **17/05/2018**

S-2018-0972

Time : **10.00 am to 12.00 Noon**
Max. Marks : 40

N. B. :

- 1) Attempt **ANY FIVE** questions.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Explain with examples/ diagrams **WHEREVER** necessary.
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- Q. 1** What is meant by algorithm? Describe the characteristics of an algorithm. **(08)**
Give appropriate example.
- Q. 2** Distinguish between Linear and Binary Search with appropriate examples. **(08)**
- Q. 3** Distinguish between Time Complexity and Space Complexity of Algorithm, with appropriate examples. **(08)**
- Q. 4** Explain the working of Bubble Sort & Merge Sort with detailed examples. **(08)**
- Q. 5** Explain BFS and DFS, with appropriate examples. **(08)**
- Q. 6** Describe Any Four applications of stack as a data structure. **(08)**
- Q. 7** a) Write Pseudo-code/steps for Sequential Search. **(04)**
b) Write an algorithm for Insertion Sort. **(04)**

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