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# Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)



## VI SEMESTER B.TECH DEGREE(OPEN ELECTIVE) END SEMESTER EXAMINATIONS

**MAY 2016**

**SUBJECT: ESSENTIALS OF INDUSTRIAL COMPUTING [CSE 348]-  
REVISED CREDIT SYSTEM  
DATE:16-05-2016**

Time: 3 Hours

MAX. MARKS: 50

### Instructions to Candidates:

- ❖ Answer **ANY FIVE FULL** questions.
- ❖ Missing data, if any, may be suitably assumed.

- 1A. Explain the unstructured, procedural and object oriented programming techniques in detail. 5M
- 1B. Explain any two types of relationships that can exist between classes, with respect to different types of loan scenarios in banking application. 5M
- 2A. Explain encapsulation and polymorphism. 2M
- 2B. How is the order of magnitude of the algorithm calculated? Explain Priori and Posteriori analysis. 4M
- 2C. What are the pros and cons of brute force technique of algorithm design? Explain how the selection sort(code) be solved using Brute force technique and analyze the same. 4M
- 3A. Explain with examples, use of sentinel values, ordering tests in case statements by frequency, minimizing array references methods of code tuning. 5M
- 3B. How does the driving path of query in table join affect the efficiency of SQL? Explain with a query example. 3M
- 3C. What are NP problems? 2M
- 4A. Explain in detail the three levels of usability testing performed in user interface design. 5M
- 4B. Explain the prototype model of software development. 3M
- 4C. How does the spiral model improve the efficiency of software development? 2M
- 5A. Explain the different types of software testing. 5M
- 5B. How is client server approach different from host centric approach? Explain the services provided by different servers. 5M
- 6A. What are the features of virtual private network? Explain its working. 5M
- 6B. What are the features that a webserver is expected to possess? Describe the working of a web server (flow of control in step wise manner), when an URL is invoked. 5M