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Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)



VI SEMESTER B.TECH DEGREE (OPEN ELECTIVE) MAKE-UP EXAMINATIONS

JUNE/JULY 2016

**SUBJECT: ESSENTIALS OF INDUSTRIAL COMPUTING [CSE 348]-
REVISED CREDIT SYSTEM
DATE: 08-07-2016**

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

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

- 1A. Why is the software complex? Explain how the nonfunctional requirements add to the complexity of software(any four). 5M
- 1B. Identify the main classes and relationships between them in a typical Library Management System(Assumptions to be written). 5M
- 2A. What are the limitations of structured programming? 2M
- 2B. Explain any four main properties of an algorithm. 4M
- 2C. What are the components of space complexity of the algorithm? How does space time trade-off, affect the performance of the system? 4M
- 3A. With suitable examples, explain any two methods of code tuning in loops. 5M
- 3B. What is the need for SQL query tuning and why is it hard? Give two examples where the SQL queries are improved by applying tuning. 5M
- 4A. What are the three types of profile to be considered in the requirement analysis phase of User Interface design. 3M
- 4B. Mention any four tips for a good interface design. 2M
- 4C. Explain the various phases of software development using waterfall model. 5M
- 5A. What are the salient features of Object Oriented Analysis and Design? 3M
- 5B. Explain two important methods of designing the test cases. 2M
- 5C. What is a middleware in the context of client server technology? Explain the main features of any two different types of middleware. 5M
- 6A. Explain the functionalities of different layers of TCP/IP model. 5M
- 6B. What is load balancing in web applications context? Explain four main types of load balancing schemes. 5M