

MANIPAL UNIVERSITY**THIRD SEMESTER MSc. INFORMATION SCIENCE
DEGREE EXAMINATION – NOVEMBER 2015****SUBJECT: MSC 665.6 (ELECTIVE 3) – SOFTWARE ENGINEERING**

Friday, November 20, 2015

Time: 10:00 – 13:00 Hrs.

Max. Marks: 100

1. Write short notes on:

1A. Costs of software engineering

1B. CASE

(5+5 = 10 marks)

2. List any five software applications and give an example for each of them.

(10 marks)

3. Name at least five problems with the software projects in the following point of views:

3A. The Manager's point of view

3B. The Members of the Project Team

(5+5 = 10 marks)

4. Briefly explain Software Lifecycle Development models and its importance in software development.

(10 marks)

5. Explain the Organization and Team Structures of a software development organization.

(10 marks)

6. Prepare a decision tree and decision table for the following: Library Membership Software (LMS) which should support the following three options: New Member, Renewal and Cancel Membership. When the new member option is selected the software should ask for the member's name, address, and phone number. If proper information is entered the software should create a membership record for the new member and print a bill for the annual membership charges and the security deposit payable. If the renewal option is chosen the LMS should ask for the members name and the membership number. If the member details entered are valid then the membership expiry date in the membership record should be updated and the annual membership charges payable by the member should be printed. If the member's details entered are invalid then an error message should be displayed. If the cancel membership option is selected, the membership of a valid member entered is cancelled. A cheque for the balance amount due to the member is printed and his membership record is deleted.

(10 marks)

7. Write a short note on the following with suitable example:

7A. Object and Class.

7B. Inheritance and multiple inheritance.

(4+6 = 10 marks)

8A. Write the steps involved in clean room testing.

8B. List the classification of documents prepared during a software product develop.

(5+5 = 10 marks)

9. What is software validation? Give the testing process block diagram? Briefly discuss testing stages with the necessary diagram?

(3+3+4 = 10 marks)

10. Discuss code review in detail.

(10 marks)

