Reg. No.										

MANIPAL UNIVERSITY
SCHOOL OF INFORMATION SCIENCES

SECOND SEMESTER M.Sc. INFORMATION SCIENCE
DEGREE EXAMINATION – APRIL / MAY 2016

SUBJECT: MIS 504 - SOFTWARE ENGINEERING

Monday, May 2, 2016

Time: 10.00 – 13.00 Hrs. Max. Marks: 100

1) Discuss following aspects of software engineering?
   a. Historical Aspects
   b. Economical Aspects
   c. Maintenance Aspect
   d. Team Programming Aspects
   e. Design and Programming Aspects

(2x5 = 10 marks)

2) What is the main aim of SRS? Name 4 contexts where SRS document is useful? Discuss SRS as contract document?

(2+2+6 = 10 marks)

3) Define Scenario? Discuss Scenario based design in brief? Discuss any two types of scenarios?

(2+5+3=10 marks)

4) Discuss the steps involved in developing the DFD model of a system

(10 marks)

5) Draw the use case diagram, give textual description and its mainline sequence of each use case? For the following:
A Super Market need to develop the software to encourage regular customers. For this the customer's needs to supply his residence address, telephone number and the driving license number. Each customer who registers for this scheme is assigned a unique customer number (CN) by the computer. A customer can present his CN to the check-out staff when he made any purchase. In this case, the value of his purchase is credited against his CN. At the end of the year, the supermarket awards surprise gifts to 10 customers who make the highest total purchase over the year. Also, it awards a 22 carat gold coin to every customer whose purchase exceeds RS. 30,000. The entries against the CN are reset on the last day of every year after the prize winner's lists are generated.

(3+3+4=10 marks)

6) Discuss software documentation in the course of a software project?

(10 marks)

7) Answer the following
   a) Distinguish between software verification and software validation?

   b) What are drivers and stub modules in the context of unit testing of a software product? Why are drivers and stub modules required?

(5+5=10 marks)

8) Explain system testing in detail?

(10 marks)

9) Briefly explain the following three Software Licensing models
   a) Beta or field test
   b) Capacity or performance
   c) Cross license

(3+3+4 = 10 marks)

10) What is software architecture? Name and explain different Architecture styles/models?

(3+3+4 = 10 marks)

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