Question Paper

MANIPAL UNIVERSITY

SCHOOL OF INFORMATION SCIENCES (SOIS)
SECOND SEMESTER MASTER OF SCIENCE - M.Sc (INFORMATION SCIENCE)
DEGREE EXAMINATION- APRIL 2017
Wednesday,19,2017
Time :10:00AM- 1:00PM

Software Engineering [MIS 504]

Marks: 100 **Duration: 180 mins.**

Answer all the questions.

1) Discuss following aspects of software engineering. (10)
a. Historical Aspects
b. Economical Aspects
c. Maintenance Aspect
d. Team Programming Aspects
e. Design and Programming Aspects

2) What is full form of ACM and IEEE? Discuss ACM/IEEE Code of Ethics ? (2+8) (10)

3) Write how to find scenarios? Discuss Heuristics for finding scenarios? (4+6) (10)

4) What is a detailed class diagram? Consider the elevator problem given below and give the detailed class diagram for the same? (10)
Product to control n elevators over m floors
Constraints
Each elevator has m buttons, 1 per floor
Illuminate when pressed & cause elevator to visit corresponding floor
Illumination canceled when the floor is visited
Each floor, except top & bottom, has 2 buttons
1 to request an up-elevator & 1 to request a down-elevator
Illuminate when pressed
Illumination cancelled when elevators visits floor & moves in desired direction
When an elevator has no requests, it remains

at its current floor with its doors closed

5)	With a neat diagram discuss software architectural design ? List various goals of sotware architecture design ? (5+5)	(10)
6)	Name 6 principles of user interface design? Explain any two 2 principles of user interface design in detail? what is a three click rule? (3+5+2)	(10)
7)	Discuss what in McCall's Quality Factors and Criteria? List McCall et al.identified 11 quality factors? (5+5)	(10)
8)	List Functional, Structural and any other Test Case design techniques and explain any 3 of them in detail?	(10)
9)	Explain two approaches used to design black box test cases for the following requirement. For a function that computes the square root of integer values in the range between 0 and 5000.	(10)
10)	Briefly explain the following three Software Licensing models i) Beta or field test ii) Capacity or performance iii) Cross license	(10)