

Indian Statistical Institute, Bangalore

MS (QMS) 2014 - 15

Subject: Management Information System

Semester End Exam

Duration: 3 hours

Date: 03rd Nov 2014

**Note: The paper carries 122 marks. Answer as much as you can. However, the maximum you can score is 100.**

1. Answer the following in the context of development of software for the implementation of MIS
  - a. What are the different stages of the waterfall model for software development life cycle? Explain each stage briefly.
  - b. Explain the bottom up method to estimate the effort required to develop a Management Information System (MIS).
  - c. Any information system needs to undergo changes. How many different types of changes are there? Explain the changes briefly. [12 + 8 + 5 = 25]
2. Answer the following
  - a. What are functional and non-functional requirements of an information system? [4]
  - b. Give two examples of non-functional requirements with brief explanation. [6]
  - c. Explain the difference between fault and failure. In this context explain the situation that a system with more faults may fail less often compared to a system having more faults. [6]
  - d. What tests are carried out in the entire testing life cycle? Explain the tests briefly. [3 + 6 = 9]
3. The correctness of an information system needs to be assessed through review and testing. Answer the following in this context
  - a. What is the difference between verification and validation? [2]
  - b. What are black box and white box tests? [4]
  - c. Name three different coverage criteria for white box test with brief explanation. [6]
  - d. What are alpha and beta tests? What do you mean by user acceptance tests? When are these tests used? [4 + 2 + 4 = 10]
  - e. Do you think that performance may impact some other non-functional requirement? Explain. [3]
4. Answer the following
  - a. Explain the difference between purposive and non-purposive systems. [6]
  - b. What is a Use Case? Explain with an example. [9]
  - c. Name five data quality characteristics with brief explanation. [10]
5. What techniques are used to carry out SWOT analysis? Explain briefly. [2 + 10 + 10 = 22]