



ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE - 2007
ANALYSIS AND DESIGN OF INFORMATION SYSTEM
SEMESTER - 4

Time : 3 Hours]

[Full Marks : 70

Group - A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following : 10 × 1 = 10
- i) A feasibility study
- a) includes a statement of the problem
 - b) consider a single solution
 - c) both (a) and (b)
 - d) none of these. ☐
- ii) Which of the following is not a phase in the SDLC ?
- a) Analysis current system
 - b) Define the latest technology
 - c) Design a new system
 - d) Develop a new system. ☐
- iii) During what phase is the SRS performed ?
- a) System design phase
 - b) System development phase
 - c) System analysis phase
 - d) All of these. ☐
- iv) What is abstract in coding ?
- a) The classification of objects, grouped according to their significant similarities
 - b) The classification of objects, grouped according to their significant differences
 - c) The classification of objects, grouped according to their names
 - d) Hiding information inside a class so that it can only be known in an abstract manner. ☐
- v) A data dictionary is a list containing details of
- a) data elements input to the system
 - b) data elements output to the system
 - c) all data elements, data structure and data flows
 - d) none of these. ☐



- vi) Normalization is used to
- a) mathematically optimize the process
 - b) increase the data integrity
 - c) remove the data redundancy
 - d) both (b) & (c). ☐
- vii) Project risk factor is considered in
- a) waterfall model
 - b) prototyping model
 - c) spiral model
 - d) iterative enhancement model. ☐
- viii) Which of the following is not a part of a DFD ?
- a) Disk storage
 - b) Arrow
 - c) Circle
 - d) Data store. ☐
- ix) COCOMO model is
- a) Constructive Cost Model
 - b) Constructive Cost Effective Model
 - c) Constructive Cost Estimation Model
 - d) Constructive Cost Elimination Model. ☐
- x) With respect to software matrices, which of the following is not true ?
- a) An indirect measure focuses on attributes of a project, which can be measured by examining a process, product or resource
 - b) A direct measure focuses on attributes of a project, which can be measured by examining a process, product or resource
 - c) External attributes are always measured indirectly
 - d) Lines of code is a direct measurement. ☐
- xi) Alpha testing done by
- a) customer
 - b) tester
 - c) developer
 - d) all of these. ☐
- xii) Verification testing is also called
- a) alpha test
 - b) beta test
 - c) gamma test
 - d) systems acceptance test. ☐

**Group - B****(Short Answer Type Questions)**Answer any *three* questions. $3 \times 5 = 15$

2. What are the stages of SDLC ? What are the features of a good quality software ?
3. How many types of project are present according to COCOMO ? Give an example of each.
4. Distinguish between validation & verification.
5. Define Business Process Re-engineering (BPR). How does Business Process Re-engineering differ from Business Improvement ?
6. Briefly discuss the decision making process with a diagram.

Group - C**(Long Answer Type Questions)**Answer any *three* questions. $3 \times 15 = 45$

7. What is entity and attribute ? Draw an ERD of a Hospital with all its entity and activity.
8. Briefly describe Spiral model. What is the drawback of waterfall model ?
9. Describe DSS. Distinguish between MIS and DSS. Briefly discuss the Herbert Simon's Model. Give any two example of DSS product. $4 + 4 + 5 + 2$
10. a) Draw the Decision Table of the following :

 If a customer uses electricity for domestic purposes and if the consumption is less than 300 units per month then bill with minimum monthly charges.

 Domestic customers with consumption of 300 units or more per month are billed at special rate.

 Non-domestic users are charged double that of domestic users. (Minimum and special rates are doubled) 3
- b) What purposes does a dialogue serve ? 2



- c) Briefly describe menu-driven, keyword and question / answer dialogues. 3
- d) What are the characteristics of software that make it different from hardware ? 2
- e) What are the main input design considerations ? What is the advantage implied by the term WYSIWYG ? 2 + 1
- f) What are the most common input and output media ? 2

11. Write short notes on any three of the following : 3 × 5

- a) Data Dictionary
- b) Form Design
- c) Security and Control
- d) SRS Document
- e) Structured English.