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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

M.B.A.

SEM: IV - THEORY EXAMINATION (2021 - 2022)

Subject: System Analysis &amp; Design

Time: 3 Hours

Max. Marks: 100

## General Instructions:

1. The question paper comprises three sections, A, B, and C. You are expected to answer them as directed.
2. Section A - Question No- 1 is 1 marker & Question No- 2 carries 2 mark each.
3. Section B - Question No-3 is based on external choice carrying 6 marks each.
4. Section C - Questions No. 4-8 are within unit choice questions carrying 10 marks each.
5. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

## SECTION A

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## 1. Attempt all parts:-

- 1-a. .... can be defined as data that has been processed into a form that is meaningful to the recipient and is of real or perceive value in current or prospective decisions (CO1) 1
- (a) System
  - (b) Information
  - (c) Technology
  - (d) Service
- 1-b. .... Phase is a time consuming phase and yet a very crucial phase (CO1) 1
- (a) Feasibility Study
  - (b) Requirement Phase
  - (c) Analysis Phase
  - (d) Testing Phase
- 1-c. Which of the following is not a factor in the failure of the systems developments projects? (CO2) 1
- (a) size of the company
  - (b) inadequate user involvement
  - (c) failure of systems integration
  - (d) continuation of a project that should have been cancelled
- 1-d. Data Definition Language (DDL) (CO2) 1
- (a) describes how data are structured in the data base
  - (b) specifies for the DBMS what is required; the techniques used to process data
  - (c) determine how data must be structured to produce the user's view
  - (d) All of the above
- 1-e. Which of the following is involved in the system planning and designing phase of the Software Development Life Cycle (SDLC)? (CO3) 1
- (a) Sizing
  - (b) Parallel run
  - (c) Specification freeze
  - (d) All of the above
- 1-f. Which of the following is the main advantage of deploying a 4GT model for producing small-scale products, programs, and applications? (CO3) 1
- (a) The productivity of software engineers is improved
  - (b) The time required for developing software is reduced

	(c) CASE tools and code generators help the 4GT model by providing a credible solution to their problems	
	(d) None of the above	
1-g.	Modifying the software by restructuring is called: (CO4)	1
	(a) Adaptive maintenance	
	(b) Perfective maintenance	
	(c) Corrective maintenance	
	(d) Preventive maintenance	
1-h.	In which of the following stage in supplier selection and evaluation standard enquiry forms are sent to the vendors, asking them to present their detailed information ? (CO4)	1
	(a) Survey stage	
	(b) Enquiry stage	
	(c) Negotiation & Selection stage	
	(d) Experience stage	
1-i.	Which of the following is a form of functional testing? (CO5)	1
	(a) Security testing	
	(b) Performance testing	
	(c) Boundary value analysis	
	(d) Usability testing	
1-j.	Black Box techniques are also known as: (CO5)	1
	(a) Design based testing	
	(b) Specification-based testing	
	(c) Error guessing technique	
	(d) None of the mentioned	
2. Attempt all parts:-		
2.a.	Define Probabilistic system? (CO1)	2
2.b.	How can we represent external entities in a DFD? (CO2)	2
2.c.	What are the drawbacks of interview? (CO3)	2
2.d.	Describe robustness of any software. (CO4)	2
2.e.	In what environment we can perform Beta Testing? Discuss it. (CO5)	2
SECTION B		30
3. Answer any <u>five</u> of the following:-		
3-a.	What is SYSTEM ANALYST? Discuss the roles of a system analyst. (CO1)	6
3-b.	Explain various phases of Rapid Application Development model? (CO1)	6
3-c.	What are the various characteristics of a good System Requirement Document? (CO2)	6
3-d.	What is Cost and benefit analysis? (CO2)	6
3.e.	Discuss the purpose of Gantt chart in detail ? (CO3)	6
3.f.	Explain the importance of maintenance. Which category consumes maximum effort and why? (CO4)	6
3.g.	Discuss the limitations of software testing. Why do we say that complete testing is impossible?(CO5)	6
SECTION C		50
4. Answer any <u>one</u> of the following:-		
4-a.	Explain Prototype model with its advantages and disadvantages? (CO1)	10
4-b.	How does the Spiral model overcome the limitations of the Waterfall cycle model? Explain. (CO1)	10

5. Answer any one of the following:-
- 5-a. Discuss briefly the concept of Decision Table with a suitable diagram? (CO2) 10
- 5-b. Explain the classification of Cost and Benefit analysis? (CO2) 10
6. Answer any one of the following:-
- 6-a. Explain in detail the various strategies used by the users to determine the user's information requirements? (CO3) 10
- 6-b. Construct network diagram which shows the floor infrastructure of a City University. What are the multiplexing types use in the diagram? And why Router and switches are used in the network? Explain it. (CO3) 10
7. Answer any one of the following:-
- 7-a. What criteria are used for evaluating performance? How performance evaluation should be done to make it successful? (CO4) 10
- 7-b. Explain OOA and its techniques. How OOA & OOD differ from each other? Differentiate them. (CO4) 10
8. Answer any one of the following:-
- 8-a. Explain ISO 9000 series. Write down the procedures for getting a ISO certificate. (CO5) 10
- 8-b. What do you mean by DPPM (Defective Parts Per Million) in six sigma? Explain the principles of six sigma. (CO5) 10