

JK LAKSHMIPAT UNIVERSITY, JAIPUR

INSTITUTE OF ENGINEERING AND TECHNOLOGY

EndTerm Examination (Regular/Backlog), NOV. 2017

B. Tech in Computer Engineering, Semester V

Roll No.....

COURSE CODE: System Analysis & Design / CSE506

Time: 3 hours

Max. Marks: 100

Instructions to students:

1. Do not write anything other than your roll number on question paper.
2. Assume suitable data wherever required and mention it clearly.
3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.

Q.1A Objective type multiple choice questions (10 questions @ 1 mark)

10

- i. In a DFD external entities are represented by a
- ii. A) Rectangle B) Ellipse
C) Diamond shaped box D) Circle
..... can be defined as most recent and perhaps the most comprehensive technique for solving computer problems.
- iii. A) System Analysis B) System Data
C) System Procedure D) System Record
Which of the following is / are the Characteristics of information?
- iv. A) Accuracy and Relevance B) Form of information and Timeliness
C) Completeness and Purpose D) All A, B & C
The data Flow Diagram is the basic component of system
- v. A) Conceptual B) Logical
C) Physical D) None of the above
Data cannot flow between two data stores because
- vi. A) it is not allowed in DFD B) a data store is a passive repository of data
C) data can get corrupted D) they will get merged
Which of the following Information systems are aimed at improving the routine business activities on which all organizations depend?
- vii. A. MIS B. DSS
C. TPS D. MSS
The first step in the systems development life cycle (SDLC) is:
- viii. A. Analysis. B. Design.
C. Problem/Opportunity Identification. D. Development and Documentation.
Technical writers generally provide the _____ for the new system.
- ix. A. programs B. network
C. analysis D. documentation
Documentation is prepared
- x. A. at every stage B. at system design

Q.2	Short answer type questions	10
Q.2A	What do you mean by System scope?	
Q.2B	What are non-functional requirements?	
Q.2C	How can we derive the size of software product?	
Q.2D	What is project estimation?	
Q.3A	Explain the characteristics of a system	05
Q.3B	Explain Top Down & Bottom Up Strategy with suitable example.	05
Q.4A	Explain Decision Tree with suitable example.	05
Q.4B	What are the characteristics of a good test case?	05
Q.5A	Who can be the interviewer? What are the essential qualities required for it? And what type of questions should be asked in an interview?	05
Q.5B	Why we do System Requirement Specification? What are the techniques used for SRS? Explain in detail.	05
Q.6A	Explain various characteristics of System Testing?	05
Q.6B	Describe the tools and techniques of cost-benefit analysis	05
OR		
Q.6B	What is the difference between High Coupling and Low Coupling?	05
Q.7A	Write the difference between Physical DFD and Logical DFD.	05
Q.7B	Explain in detail all the steps involves in detailed System design.	05
OR		
Q.7B	What do you mean by Categories of Information? Explain various kind of information categories.	05
Q.8	Assume that you are given the following details Is of a small mail order catalogue system that allows people to shop from home : When a customer receives the catalogue and wants to buy something, he can telephone, fax or email his order to the company. The company gets the order and sends the goods and an invoice. When the customer receives the goods with a delivery note, he sends payment and receives a receipt for payment. Draw the context diagram and data flow diagrams up to level2 to analyze the requirements of this system. Also, give the data dictionary.	10
Q.9A	A university maintains data about the following entities with attributes : 1. Course Number, title, credits, syllabus and prerequisites. 2. Course offered Course number, year, semester, instructor, timings and classroom. 3. Student Student-id, name and degree program. 4. Instructor Identification number, name, department and title.	10

The enrollment of students in courses and grades awarded to students in each course must be appropriately recorded. Construct an E-R diagram for the university using standard notation.

(A) List and illustrate the primary uses and elements of a decision table.

(B) Illustrate the concepts of logical and physical design with a suitable example.

Q.9B What are different methodologies of system design? What do you understand by module coupling and cohesion? 10

OR

Q.9B Draw the context diagram and a set of data flow diagrams for developing a library management system with the following functionalities. List the assumptions made in your analysis. 10

- (i) Inquiring the availability of a book by giving the ISBN or title or author's name.
- (ii) Renting a book that is available
- (iii) Returning a book after use
- (iv) Reserving a book when it is not available
- (v) Collection of overdue charges
- (vi) Maintaining book details
- (vii) Maintaining supplier details who supply.