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CS/MBA(SUPPLE)/SEM-4/SM-405/09
SYSTEM ANALYSIS AND DESIGN (SEMESTER - 4)

1. .....
Signature of Invigilator

2. .....
Signature of the Officer-in-Charge

Reg. No. | | | | | | | | | | | | | | | |

Roll No. of the Candidate | | | | | | | | | | | | | | | |

CS/MBA(SUPPLE)/SEM-4/SM-405/09

ENGINEERING & MANAGEMENT EXAMINATIONS, JULY – 2009

SYSTEM ANALYSIS AND DESIGN (SEMESTER - 4)

Time : 3 Hours] [Full Marks : 70

INSTRUCTIONS TO THE CANDIDATES :

1. This Booklet is a Question-cum-Answer Booklet. The Booklet consists of **32 pages**. The questions of this concerned subject commence from Page No. 3.
2. a) In **Group – A**, Questions are of Multiple Choice type. You have to write the correct choice in the box provided **against each question**.
   b) For **Groups – B** & **C** you have to answer the questions in the space provided marked 'Answer Sheet'. Questions of **Group – B** are Short answer type. Questions of **Group – C** are Long answer type. Write on both sides of the paper.
3. **Fill in your Roll No. in the box** provided as in your Admit Card before answering the questions.
4. Read the instructions given inside carefully before answering.
5. You should not forget to write the corresponding question numbers while answering.
6. Do not write your name or put any special mark in the booklet that may disclose your identity, which will render you liable to disqualification. Any candidate found copying will be subject to Disciplinary Action under the relevant rules.
7. **Use of Mobile Phone and Programmable Calculator is totally prohibited in the examination hall.**
8. You should return the booklet to the invigilator at the end of the examination and should not take any page of this booklet with you outside the examination hall, **which will lead to disqualification**.
9. Rough work, if necessary is to be done in this booklet only and cross it through.

No additional sheets are to be used and no loose paper will be provided

FOR OFFICE USE / EVALUATION ONLY

Marks Obtained

	Group – A										Group – B			Group – C				
Question Number																	***Total Marks***	***Examiner's Signature***
Marks Obtained																		

.....

Head-Examiner/Co-Ordinator/Scrutineer

S-52006 (16/07)

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SYSTEM ANALYSIS AND DESIGN
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GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following : 10 × 1 = 10

i) Prototype is a

a) working model of the existing system

b) mini model of the existing system

c) mini model of the proposed system

d) none of these. ☐

ii) Evolutionary model is also known as

a) Meta model

b) Incremental model

c) both of these

d) none of these. ☐

iii) A system analyst does which of the following ?

a) An attempt to improve an existing system

b) Establishes a computer network

c) An inter-disciplinary approach to problem solving

d) All of these. ☐

iv) Actor is component of

a) component diagram

b) use case diagram

c) data flow diagram

d) collaboration diagram. ☐

v) Network data model is represented by

a) Table

b) Tree

c) Graph

d) all of these.

vi) Which is not a method of System requirements ?

a) Interviewing

b) Observation

c) Document review

d) Feasibility study.

vii) Unit testing involves

a) software testing

b) code testing

c) program testing

d) human testing.

viii) Which is the most important factor for selecting hardware ?

a) Maintenance & support

b) Speed of processor

c) Quality & price

d) Able to meet functional requirements.

ix) DFD should not contain any

a) flow of information

b) bubble

c) loops

d) process.

x) The kind of error that was not detected during software product development is called

a) adoptive maintenance

b) corrective maintenance

c) perfective maintenance

d) all of these.

xi) Audit Trail is

a) Audit around the computer

b) Audit through the computer

c) Audit with the computer

d) All of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. 3 × 5 = 15

2. What is the difference between Alpha & Beta Testing ? Explain with example.

3. What do you understand by Business Process Re-engineering ?

4. What are the advantages of using Prototype model of SDLC ?

Discuss the characteristics of CASE tools.

5. Discuss on Event face diagram & Event flow diagram.

6. Highlight the differences between logical DFD and Physical DFD.

GROUP – C

(Long Answer Type Questions)

Answer any *three* questions. 3 × 15 = 45

7. a) What do you understand by a SYSTEM & its essential elements ? 5

   b) What is sub-system ? What are the advantages of decomposing a system into sub-systems ? 5

   c) What do you mean by System Boundary & Interfaces ?

   Discuss above issues with suitable diagram. 5

8. a) Discuss System Quality Assurance in SAD. 10

   b) What are Unit testing & Integration testing ? 5

9. An Educational Institute admits students every year, a batch of 60 students for 1st year MBA course. Following procedures are done for admission :

   i) Newspaper advertisement

   ii) Submission of filled up application forms by the candidates

   iii) Written test & GD + PI is conducted

   iv) Final list of 60 students published

   v) The selected candidates are asked to deposit Rs. 60,000 within a week.

   In this domain, perform the following : $6 \times 2\frac{1}{2}$

   a) Identify actors

   b) Develop the use cases

   c) Complete the class diagram with properties

   d) Draw Interaction diagram

   e) Draw activity diagram

   f) Draw total system diagram with packages.

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

    a) Division Remainder method & Mid-square Hashing method

    b) Bench marking

    c) Audit trails

d) IEEE/ISO Standards.

11. Build the DFD :

Argos has a store in Patrick Street. Cork, Customers come into the store and browse the catalog of products. Once they have located the product they would like to purchase, they can take the unique identification number each product has and enter it into the inventory devices on the shop floor. By entering the number, the system will be able to show the customer the details of the product, whether it required home delivery and how many are left in stock. If the customer wants to purchase the product they fill in a slip of paper with the identification code and the desired quantity and queue for the check-out and give it to the sales assistant. At the check-out, the sales assistant will take the slip and input the identification number into the system via their keyboard. If it shows that there are still some of the product in stock, the customer will be asked for payment (cash, laser or credit card). Once the transaction is completed it is saved to the transaction file and the customer will be given a receipt which also shows that counter they should collect the product at and an approximation of how long they will be waiting. In the stock room as transactions occur, staff are notified of the product and quantity and will search the stock room and bring the product to the counter for collection. They will input into the system that the order has been filled and that the customer can collect it (the product catalog will be amended for stock level); the overhead screen will indicate to the customer that they may collect their order and at which counter. The customer may then pick-up the product and leave the store. Periodically, as products are purchased the stock will run out (stock levels will be checked) and will have to be reordered from the supplier. Argos uses a wide number of suppliers so they keep a list of their contact details and the products they supply. Argos records all details relating to orders in the product order file, this can be used to verify incoming orders later. The supplier receives a batch order for products periodically which they will fill and notify Argos of the delivery time and cost. 15

END