MCA (Sem. - 1st)
SYSTEM ANALYSIS & DESIGN
SUBJECT CODE : MCA - 105
Paper ID : [B0105]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours   **Maximum Marks : 60**

Instruction to Candidates:

1) Attempt any one question from each Sections - **A, B, C & D**.

2) Section - E is **Compulsory**.

3) Use of Non-programmable **Scientific Calculator** is allowed.

Section - A

(1 × 10 = 10)

Q1) What are the main components responsible for the cost of software production? How cost benefit analysis is done? What role does system analyst play in this?

Q2) What are the different software development life cycle models? Explain classical waterfall model in detail.

Section - B

(1 × 10 = 10)

Q3) (a) Explain the relation between the Analysis and Design model of a software system.

(b) Describe the different system analysis tools for structured analysis.

Q4) Draw Data Flow diagrams and corresponding data dictionary for following problem.

"Guests can reserve rooms in a hotel in advance or on spot depending upon the availability. The operator would add data pertaining to the guests such as Name, arrival time, balance paid and Type of room (i.e. AC, Non AC, Deluxe, Suit). The SW should uniquely assign a token number on allotment of room. The hotel catering services manager would input the quantity and type of the food items as and when consumed by the guests along with the token number of the guest and corresponding date and time."

Section - C

(1 × 10 = 10)

Q5) (a) What are the main quality attributes of a good software design?

(b) What is inverted list file organization?

Q6) Describe the different ways of testing the software? Differentiate between top down and bottom up approaches.

Section - D

(1 × 10 = 10)

Q7) (a) How do you combat resistance to change the old system with the new system.

(b) What are the main qualities of a good implementation plan?

Q8) Describe the different phases in selection of software and hardware? How make vs buy decisions are made.

Section - E

(10 × 2 = 20)

Q9)

a) What is a system and subsystem?

b) Define coupling.

c) What is alpha testing?

d) Name any two information gathering tools.

e) What is structured English?

f) Give any two software selection criteria.

g) Describe any two characteristics of output interface design.

h) What is process model?

i) What is prototype model?

j) What are the main attributes of decision tables?

❂✿❂✿