Total No. of Questions : 12] [Total No. of Pages :4

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[3864] - 251
B.E. (Electronics)
MANAGEMENT INFORMATION SYSTEM
(2003 Course)

Time : 3 Hours] *[Max. Marks : 100*

Instructions to the candidates:

1) *Answer any three questions from each section.*
2) *Answers to the two sections should be written in separate books.*
3) *Neat diagrams must be drawn wherever necessary.*
4) *Figures to the right indicate full marks.*
5) *Use of logarithmic tables, slide rule, mollier charts, electronic pocket calculator and steam table is allowed.*
6) *Assume suitable data, if necessary.*

SECTION - I

Q1) a) What do you understand by the term "convergence technology"? What are its implications for the technology industry? **[8]**

b) Describe various information purposes. Elaborate how decision-making can be viewed to be the dominant purpose of using information. **[8]**

OR

Q2) a) Explain key concept of MIS. **[8]**

b) Why does open system view of business organization hold for its systems, sub-systems and their components also? **[8]**

Q3) a) Why does a technological shift from energy based to data driven technologies create a new market need to use information decision 'smarter'? **[10]**

b) Define- information integrity, information integrity risk. **[6]**

OR

Q4) a) Why is a business process in a complex and changing environment an open system? **[8]**

b) Explain why there is a shift from collective design decision to individual design decision with example. **[8]**

P.T.O.

Q5) a) i) "The focus of a System Dynamics study is not a system, whatever it is, but a problem".

What is the significance of "System Dynamics" methodology in studying the complex system failures'? Explain with the help of an example.

ii) Consider the following "job backlog-anxiety system".

"In a situation of high backlog of work, a larger number of tasks are to be completed, which causes anxiety to rise. Rise in anxiety makes it more difficult to concentrate and complete any given task. This increases the average time to complete a task. This results in slowing down of task completion rate, which in turn has the job backlog depleted less rapidly".

Present above system by its causal-loop representation? Is it a feedback loop? If yes, which type, negative or positive?

[9]

b) List and briefly describe stages in approaching a problem in a system using the System Dynamics methodology. **[9]**

OR

Q6) a) " In engineering design and control, there is a subject area of "systems engineering", which is concerned with planning and design of (large) systems to achieve proper balance, performance, and economy. For example, design and development and launching into the space of a communication satellite is a systems engineering project".

What is the difference in studying a system from the "system engineering" angle and from "System Dynamics" angle? Explain with the help of an example of your choice. **[8]**

b) Describe the following System Dynamics variables **[10]**

i) Level variable
ii) Rate variable
iii) Parameters and input variable
iv) Supplementary variable
v) Auxiliary variable.

SECTION - II

Q7) a) What do you understand by following terms? Explain with the help of example. **[8]**

i) Closed system and open system.
ii) Closed loop and open loop.

b) Develop a systems view of Integrity Information Technology Development System. In the process explain the significance of System Dynamics modeling for Integrity Information System Development. **[10]**

OR

Q8) a) A common problem of large development projects is threefold:

i) the cost overruns

ii) the need to hire and train additional personnel midway through the project, and

iii) overrunning the scheduled time allotted.

For a product/system/service development firm, fig(1) gives a "hiring (or firing) system" adopted by the development project firm for adjusting workforce, and fig. (2) a system for assessing "the time required and the time remaining".

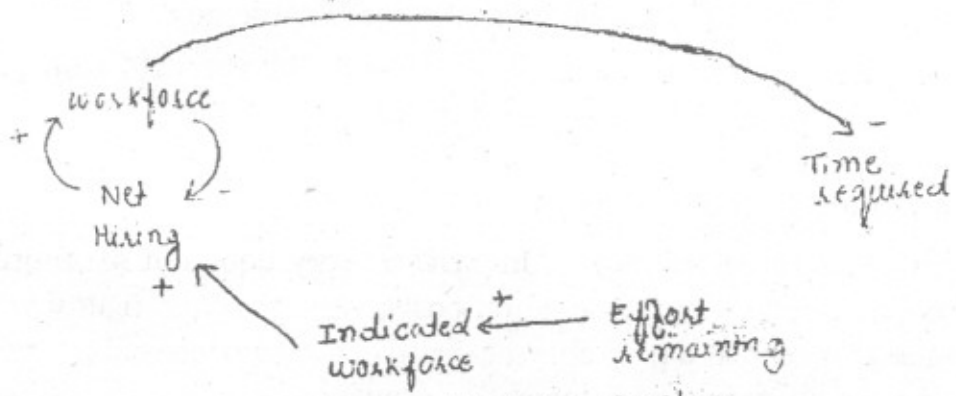

Fig. 1 - Hiring System

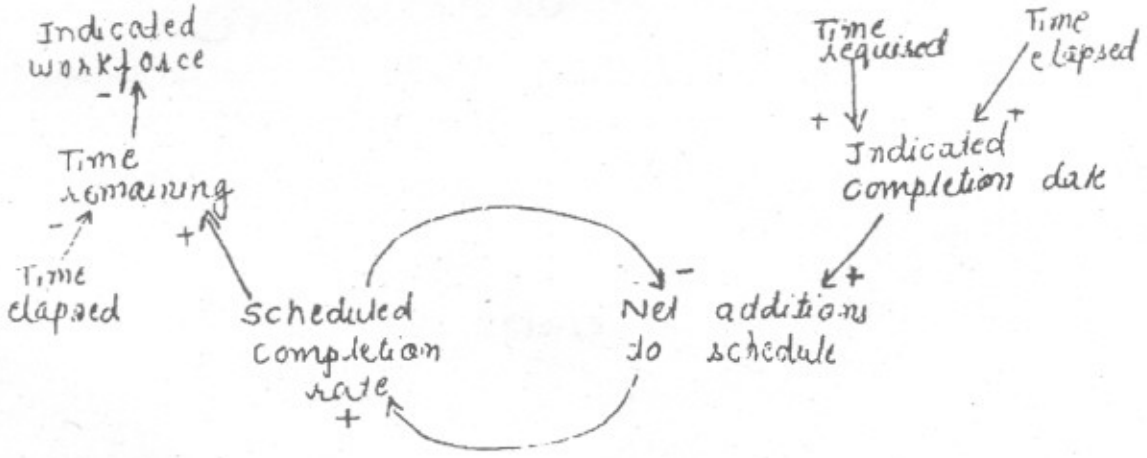

Fig. 2 - A system for assessing "The time required and time remaining"

i) Develop an integrated causal-loop model showing an overview of a development project structure. What more can you say about causal loop model and the structure? [9]

ii) Identify feedback loops in the project structure and explain their nature. Do these feedback loops control the system problems? Explain. [9]

Q9) a) Why are existing perceptions of certainty, risk, uncertainty, and risk the concern of information economics? [8]

b) "I*I in computerized information system, which has a context specific application, is an interdisciplinary area". Explain briefly. [8]

OR

*Q10)*a) What is the theory of uncertainty avoidance, i.e., risk aversion? What does it state? What is its implication for decision making? [8]

b) Explain why "Usability Risk" by itself is irrelevant with respect to determining which decision action to choose. [8]

*Q11)*a) Define components of I*I risk. [8]

b) "In SEU Theory equation of information value does not account for information analysis and evaluation costs, which are the reality when information is seen as a workable mechanism for decision-making under complex and changing environment". Discuss. [8]

OR

*Q12)*a) Write short notes on -Acquisition cycle, Utilization cycle, information integrity cycle under the I*I technology development. [8]

b) Give Cost benefit Analysis equation of Information Integrity and each term of the equation. [8]