



**Ph.D COURSE WORK EXAMINATIONS: JUNE 2017**

(Regulation 2015)

**INDUSTRIAL ENGINEERING**

P15IETE10: Decision Support Systems

**COURSE OUTCOMES**

- CO1:** Describe concept of managerial decision system and understand its various phases.
- CO2:** Demonstrate decision support system components, data analyzing and develop DSS.
- CO3:** Demonstrate tools and technologies of knowledge management in DSS.
- CO4:** Apply artificial intelligent system and expert system concepts.
- CO5:** Generalize implementation of management support system.

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 1 = 10 Marks)**

1. Assertion (A): Decision making is crucial for running a business enterprise which faces a large number of problems requiring decisions. CO1 [K<sub>3</sub>]  
Reason (R): Which product to be produced, what price to be charged, what quantity of the product to be produced, what and how much advertisement expenditure to be made to promote the sales, how much investment expenditure to be incurred are some of the problems which require decisions to be made by managers.  
 a) both A and R are individually true and R is the correct explanation of A      b) both A and R are individually true but R is not the correct explanation of A  
 c) A is true but R is false      d) A is false but R is true
2. SOP denotes CO2 [K<sub>1</sub>]  
 a) Standard operating policies      b) Standard operating procedures  
 c) Sequential operating principles      d) Sick operating policies
3. Integrating data from multiple heterogeneous sources that support analytical reporting, structured and/or ad hoc queries for decision making is CO2 [K<sub>2</sub>]  
 a) Data warehousing      b) Data integration  
 c) Data cleaning      d) Data consolidation
4. Matching type item with multiple choice code CO1 [K<sub>1</sub>]

List I	List II
A. Intelligence	i. Condition searching in the environment that call for decisions

B. Design	ii. Developing and analyzing possible courses of action
C. Choice	iii. selecting a course of action from those available
D. Implementation	iv. implementing the selected course of action

	A	B	C	D
a)	i	ii	iii	iv
b)	ii	iii	i	iv
c)	iv	iii	i	ii
d)	iii	iv	i	ii

5. Assertion (A): DSS has been designed in such a way that it can be used conveniently by individual decision makers but modern decision makers need to work in groups  
Reason (R): Group DSS is a process which has given way for the development of the group Decisions in team works CO3 [K<sub>3</sub>]
- a) both A and R are individually true and R is the correct explanation of A      b) both A and R are individually true but R is not the correct explanation of A  
c) A is true but R is false      d) A is false but R is true
6. 'An interactive computer based system, which helps in solving various un-structured problems with the help of the decision makers working in the groups' was spelled by CO2 [K<sub>2</sub>]
- a) Shingeo sheo      b) De Sanctis and Gallupe  
c) Gilbreth      d) Hawthorne
7. Which of the ensuing factors are precise, if Individual decision making is dependant on CO4 [K<sub>3</sub>]
1. Bounded rationality 2. Muddling 3. Psychological effects
- a) 1      b) 2,3  
c) 1,2,3      d) 1,3
8. PROLOG abbreviates \_\_\_\_\_ . CO4 [K<sub>1</sub>]
- a) PRO Life On Gambit      b) PROgramming License On Gift  
c) PROgrammation en LOGique      d) Pre Re Order Level Of Game
9. AI and expert systems originated from \_\_\_\_\_ university. CO4 [K<sub>2</sub>]
- a) Stanford      b) Berkeley  
c) Illinois      d) Clemson
10. Consider the following processes in a data warehousing and fix correct sequence. CO5 [K<sub>2</sub>]
1. Extracting and loading data  
2. Back up and archive data  
3. Cleaning and transforming data
- a) 1-3-2      b) 2-1-3  
c) 1-2-3      d) 3-2-1

**PART B (10 x 2 = 20 Marks)**

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|---|-----|-------------------|
| 11. List factors which make decision making imperative to business.                   | CO1 | [K <sub>1</sub> ] |
| 12. Recall organizational models in decision making.                                  | CO1 | [K <sub>1</sub> ] |
| 13. Extend applications of data warehousing.  | CO2 | [K <sub>1</sub> ] |
| 14. Outline steps involved in developing DSS.   | CO2 | [K <sub>2</sub> ] |
| 15. Translate the features of GDSS.   | CO3 | [K <sub>2</sub> ] |
| 16. Define group decision support systems.  | CO3 | [K <sub>2</sub> ] |
| 17. List software tools used in GDSS.   | CO3 | [K <sub>2</sub> ] |
| 18. Interpret characteristics of expert systems.                                      | CO4 | [K <sub>2</sub> ] |
| 19. What are the steps involved in developing expert systems.                         | CO4 | [K <sub>1</sub> ] |
| 20. List categories of risk to be managed in implementing management support systems. | CO5 | [K <sub>1</sub> ] |

**PART C (6 x 5 = 30 Marks)**

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|--|-----|-------------------|
| 21. Organize the assumptions involved in individual decision making. | CO1 | [K <sub>3</sub> ] |
| 22. Interpret 5 phases of decision making.                           | CO1 | [K <sub>2</sub> ] |
| 23. Categorize the functions of data warehouse tools and utilities.  | CO2 | [K <sub>4</sub> ] |
| 24. Translate the 3 approaches to system development.                | CO2 | [K <sub>2</sub> ] |
| 25. Analyze the ideal tools used in knowledge management.            | CO3 | [K <sub>4</sub> ] |
| 26. Distinguish forward and back ward chaining                       | CO4 | [K <sub>4</sub> ] |

**Answer any FOUR Questions**

**PART D (4 x 10 = 40 Marks)**

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|---|-----|-------------------|
| 27. Survey the various steps in decision making.  | CO1 | [K <sub>1</sub> ] |
| 28. Spell the components of DSS with relevant cases.                                    | CO2 | [K <sub>1</sub> ] |
| 29. Dissect the components of group DSS.  | CO2 | [K <sub>2</sub> ] |
| 30. Label chief components of expert systems.   | CO4 | [K <sub>1</sub> ] |
| 31. Identify foremost sways in successful implementation of management support systems. | CO5 | [K <sub>3</sub> ] |

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