Hall Ticket Number :										

R-11/R-13

Code : 1GA71

IV B.Tech. I Semester Supplementary Examinations May 2018

Management Science

(Common to EEE & CSE)

Max. Marks: 70 **Time: 03 Hours**

Answer *any* ***five*** questions

All Questions carry equal marks (14 Marks each)

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1. a) With a block diagram describe the functional organization and state its applications. 7M

   b) Analyze the functions involved in Matrix organization and state its advantages. 7M

2. a) Differentiate between X bar, R, C and P charges with examples. 7M

   b) List the factors which affect inventory management and explain the ABC analysis with a graph. 7M

3. a) What are the 4 P's marketing? Highlight their importance. 7M

   b) With a neat sketch discuss the product life cycle. Also, state the consumer protection act 1986. 7M

4. a) What are the objectives of HRM? Highlight the importance of each objective. 7M

   b) Analyze the process of Human Resource Planning with examples. 7M

5. Consider the Network for the following project and determine the following
   i. Critical path
   ii. ES, EF, LS, LF
   iii. TF, FF

Activity	Duration
1-2	14
1-4	3
2-3	7
2-4	0
3-5	4
4-5	3
5-6	10

14M

6. a) When is the SWOT analysis done? Discuss the process involved with an illustration. 7M

   b) Identify the steps involved in strategy formulation and implementation. 7M

7. a) Identify the benefits of Value analysis? State its applications. 7M

   b) List the principles of Just-In-Time practices. 7M

8. a) Examine the ethical issues involved in information technology. 7M

   b) Highlight the theories of utilitarianism and altruism with examples. 7M

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Hall Ticket Number :										

R-11 / R-13

Code: 1G47C

IV B.Tech. I Semester Supplementary Examinations May 2018

Soft Computing Techniques

(Electrical & Electronics Engineering)

Max. Marks: 70 Time: 3 Hours

Answer any five questions

All Questions carry equal marks (14 Marks each)

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1. a) What is Artificial Intelligence? Explain the Heuristic Search and Hill Climbing algorithm with the Heuristic Evaluation function. 8M

   b) What are problems in Hill Climbing Technique? Explain the methods to overcome the problems. 6M

2. a) Solve the following Constraint satisfaction problem

   SEND + MORE= MONEY 10M

   b) Consider the following statements:

   1. John likes all kinds of foods.
   2. Apples are food.
   3. Chicken is food.
   4. Anything anyone eats and is not killed by is food.
   5. Bill eats Penuts and is still alive.
   6. Sue eats everything Bill eats.

   Solve "What does Sue eats?" using resolution. 4M

3. a) Explain Perceptron training algorithm 4M

   b) Explain the working of an autocorrelator (connection matrix, recognition of stored patterns, Recognition of noisy patterns) for the following patterns:

   A1=(-1,1,-1,1)
   A2=(1,1,1,-1)
   A3=(-1,-1,-1,1) 10M

4. a) Write a short note on Hamming net. 4M

   b) With neat architecture, explain the training algorithm of Kohonen self-organizing feature maps. 10M

5. a) Find the power set and cardinality of the given set

   X={2,4,6}

   Also find cardinality of power set. 4M

   b) Consider the following fuzzy sets with ordered pairs{(x,μ(x)}

   A_1={(2,1),(4,0.3),(6,0.5),(8,0.2)}
   B_1={(2,0.5),(4,0.4),(6,0.1),(8,1)}

   Perform union, intersection, difference and complement over fuzzy sets A and B. 10M

6. a) Write a short note on fuzzification. 4M

   b) Two fuzzy relations are given by

   R= x1 [0.6 0.3]
   X2 [0.2 0.9]

   S= z1 z2 z3
   Y1[1 0.5 0.3]
   Y2[0.8 0.4 0.7]

   Obtain fuzzy relation T as a composition between the fuzzy relations. 10M

7. a) Write a short note on fuzzy ordering. 4M

   b) The two fuzzy vectors of length 4 are defined as

   A_1=(0.5,0.2,1.0,0.8)
   B_1=(0.8,0.1,0.9,0.3)

   Find the inner product and outer product. 10M

8. a) With a neat diagram, explain the architecture of a fuzzy logic controller. 8M

   b) Explain GA with crossover operators. 6M

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Hall Ticket Number :										

R-11 / R-13

Code : 1G272

IV B.Tech. I Semester Supplementary Examinations May 2018

Switch Gear and Protection

(Electrical & Electronics Engineering)

Max. Marks: 70 **Time: 03 Hours**

Answer *any five* questions
All Questions carry equal marks (14 Marks each)

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1.	a)	Explain the terms Recovery voltage and Restriking voltage with respect to circuit breaker.	6M
	b)	What is resistance switching of circuit breaker? Derive the expression for critical resistance.	8M
2.	a)	Explain the merits and demerits of SF6 gas circuit breaker.	4M
	b)	Explain the operation of SF6 circuit breaker with relevant sketch in a detailed manner	10M
3.	a)	Explain the working principle of induction type electromagnetic relay.	9M
	b)	What are different types of distance relays? Compare their merits and demerits.	5M
4.	a)	What are static relays? Discuss the advantages and disadvantages of static relays	8M
	b)	What is comparator? Explain any one type of amplitude comparator in detail.	6M
5.		Describe construction, principle of operation and application of Buchholz relay. Why is this form of protection an ideal protection scheme?	14M
6.	a)	Describe the application of time-graded overcurrent protection of radial, parallel and ring-main feeder systems.	9M
	b)	With a schematic diagram explain the carrier-current transmission line protection.	5M
7.	a)	Describe the various methods of grounding	8M
	b)	What are the advantages of neutral grounding	6M
8.	a)	State the various causes of overvoltage in a power system.	5M
	b)	Explain clearly valve type lightning arrester used for overvoltage protection of transmission lines.	9M

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