

Hall Ticket Number :

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R-17

Code: 7G674

IV B.Tech. I Semester Regular & Supplementary Examinations January 2022

Disaster Management

(Common to All Branches)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

UNIT-I

- | | Marks | CO | Blooms Level |
|--|-------|-----|--------------|
| 1. a) Define Disaster and Hazard. Write a detailed note on Natural disaster. | 7M | CO1 | L1 |
| b) Explain the difference between hazard and vulnerability with examples. | 7M | CO1 | L2 |

OR

- | | | | |
|--|----|-----|----|
| 2. a) How can we mitigate on the disasters in the environment? | 7M | CO1 | L1 |
| b) How does capacity influence disaster? Explain with example. | 7M | CO1 | L1 |

UNIT-II

- | | | | |
|--|----|-----|----|
| 3. a) How Earthquake is measured and what are all the damages caused by Tsunami. | 7M | CO2 | L1 |
| b) Explain the necessary steps to be avoid dangerous epidemics after a flood disaster? | 7M | CO2 | L2 |

OR

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|---|----|-----|----|
| 4. a) List the activities that trigger human-induced disasters. | 7M | CO2 | L1 |
| b) Describe the Bhopal Gas Tragedy | 7M | CO2 | L2 |

UNIT-III

- | | | | |
|---|----|-----|----|
| 5. a) Explain in detail about the impacts of disaster on environment. | 7M | CO3 | L2 |
| b) Explain in detail about Recent Trends in Disaster Management. | 7M | CO3 | L2 |

OR

- | | | | |
|---|----|-----|----|
| 6. a) How does climate change affect disasters? | 7M | CO3 | L1 |
| b) Explain in detail about urban disaster. | 7M | CO3 | L2 |

UNIT-IV

- | | | | |
|---|----|-----|----|
| 7. a) Discuss the important steps in relief distribution. Examine the problem areas during recovery phase of disaster management. | 7M | CO4 | L3 |
| b) Discuss key stages of Disaster Cycle. | 7M | CO4 | L3 |

OR

- | | | | |
|---|----|-----|----|
| 8. a) Explain the role and functions of a disaster manager. | 7M | CO4 | L2 |
| b) Discuss the principles of community based disaster management. | 7M | CO4 | L3 |

UNIT-V

- | | | | |
|--|----|-----|----|
| 9. a) Describe the role of sustainable development in disaster management. | 7M | CO5 | L2 |
| b) Explain the need of quick reconstruction technologies in disaster management. | 7M | CO5 | L2 |

OR

- | | | | |
|--|----|-----|----|
| 10. a) Explain the factors to be considered while planning the rebuilding works after a major disaster due to flood. | 7M | CO5 | L2 |
| b) Describe the role of land use planning and development regulations in disaster management. | 7M | CO5 | L2 |

END

Hall Ticket Number :

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R-17

Code: 7GA71

IV B.Tech. I Semester Regular & Supplementary Examinations January 2022

Human Resource Management

(Common to All Branches)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

Marks CO Blooms Level

UNIT-I

- | | | | | |
|-------|--|----|-----|---|
| 1. a) | Explain the nature and scope of human resource management in the context of an organization. | 7M | 1,2 | 1 |
| b) | Discuss any three ethical issues faced by human resource professionals with an example for each of them. | 7M | 1,2 | 2 |

OR

- | | | | | |
|-------|--|----|-----|---|
| 2. a) | Write a short notes on competitive challenges influencing HRM. | 7M | 1,3 | 3 |
| b) | Discuss the functions of human resource management by highlighting the operative functions and its strategic intent. | 7M | 1,4 | 3 |

UNIT-II

- | | | | | |
|-------|--|----|-----|---|
| 3. a) | Elucidate the importance of human resource planning. | 7M | 1,4 | 3 |
| b) | Give different methods of collecting data for job analysis and compare any two of the methods. | 7M | 4,5 | 5 |

OR

- | | | | | |
|-------|--|----|-----|---|
| 4. a) | Explain in detail about Human Resource Information systems and its applications in business world. | 7M | 3,5 | 4 |
| b) | What is job design? Present any three techniques of job design. | 7M | 3,4 | 4 |

UNIT-III

- | | | | | |
|-------|--|----|-----|---|
| 5. a) | L&G is an IT based start-up company that opts for campus recruitment. If you are a HR specialist of L & G, what process you will you recommend for the recruitment of fresher's. | 7M | 4,5 | 6 |
| b) | Explain any three factors that affect the selection decision outcomes. | 7M | 3,4 | 4 |

OR

- | | | | | |
|-------|--|----|-----|---|
| 6. a) | Narrate the process of recruitment with appropriate steps and examples. | 7M | 1,4 | 5 |
| b) | Develop an orientation program for the undergraduate students of any degree program. | 7M | 3,4 | 6 |

UNIT-IV

- | | | | | |
|-------|---|----|-----|---|
| 7. a) | Compare the different types of training. | 7M | 1,3 | 2 |
| b) | What is development? What are the factors influencing executing development in an organization. | 7M | 2,3 | 6 |

OR

- | | | | | |
|-------|---|----|-----|---|
| 8. a) | Explain different ways an organization can support employees in career advancement. | 7M | 2,5 | 5 |
| b) | How can training helps employees in career progression in the organization? | 7M | 3,5 | 5 |

UNIT-V

- | | | | | |
|-------|--|----|-----|---|
| 9. a) | Elucidate the procedure for arriving at the compensation for a job role. | 7M | 2,3 | 4 |
| b) | Explain the grievance handling procedure with the help of organizational related grievances. | 7M | 3,4 | 5 |

OR

- | | | | | |
|--------|--|----|-----|---|
| 10. a) | Distinguish between monetary and non-monetary perquisites and give three examples for each of them. | 7M | 4,5 | 4 |
| b) | Give the importance of collective bargaining and state reasons why maintaining cordial employee-employer relationship is needed. | 7M | 4,5 | 5 |

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R-19

Code: 7G576

IV B.Tech. I Semester Regular & Supplementary Examinations January 2022

Management Science

(Electrical and Electronics Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

	Marks	CO	Blooms Level
UNIT-I			
1. Explain in detail, the evolution of Management Thought.	14M	1	2
OR			
2. Explain in detail, the different types of Organisation Structures	14M	1	2
UNIT-II			
3. Examine in detail, the objectives, need and methods of Inventory Management.	14M	2	3
OR			
4. Examine in detail, the concept of product life cycle with suitable examples	14M	2	3
UNIT-III			
5. Explain in detail, the significance and functions of a HR MANager	14M	3	2
OR			
6. Explain in detail, the process of Recruitment and Selection.	14M	3	2
UNIT-IV			
7. Explain in detail, the various sources of financing.	14M	4	3
OR			
8. Explain in detail, the process of Project Management.	14M	4	3
UNIT-V			
9. Examine in detail, the concept of ERP.	14M	5	3
OR			
10. Examine in detail, the significance of ethics in business.	14M	5	3

END

Hall Ticket Number :

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R-17

Code: 7G271

IV B.Tech. I Semester Regular & Supplementary Examinations January 2022

Power Semiconductor Drives

(Electrical and Electronics Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

		Marks	CO	Blooms Level
UNIT-I				
1.	Discuss the operation of Single phase fully controlled converter fed separately excited dc motor for continuous current operation and draw the output voltage and current waveforms.	14M	CO1	BL2
OR				
2.	Derive the output voltage equation and draw the speed torque characteristics of Three phase semi controlled converter fed dc series motor.	14M	CO1	BL3
UNIT-II				
3.	Discuss the Multi-quadrant operation of an Electrical drives with suitable application.	14M	CO2	BL2
OR				
4.	Discuss the Four quadrant operation of D.C motors by dual converters.	14M	CO2	BL2
UNIT-III				
5. a)	Discuss the Two Quadrant operation of Type B chopper fed drives and draw the relevant waveforms.	7M	CO3	BL3
b)	A DC Series motor fed from 400V dc source through a chopper, has the following parameters. $R_a=0.05$, $R_f=0.07$, $k=5 \times 10^{-3}$ Nm/amp ² . The average armature current of 200A ripple free. For a chopper duty cycle of 50%. Determine i) Input power from the source ii) Motor speed	7M	CO3	BL3
OR				
6.	Discuss the operation of four quadrant chopper fed dc separately excited motor.	14M	CO3	BL2
UNIT-IV				
7. a)	Discuss the operation of static scherbius drive system with neat sketch.	7M	CO5	BL4
b)	Explain stator voltage speed control of induction motor.	7M	CO5	BL2
OR				
8. a)	What is the necessity of Slip power Recovery scheme	7M	CO5	BL2
b)	Distinguish between Static Scherbius drive and Static Kramers drive.	7M	CO5	BL4
UNIT-V				
9.	Discuss the operation of VSI Fed synchronous motor drive.	14M	CO5	BL2
OR				
10.	How the load commutated inverter can be employed for starting of synchronous motor .Discuss briefly.	14M	CO5	BL2

END

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R-19

Code: 7G273

IV B.Tech. I Semester Regular & Supplementary Examinations January 2022

Distribution of Electric Power

(Electrical and Electronics Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

	Marks	CO	Blooms Level
UNIT-I			
1. a) What is meant by load factor and loss factor? Obtain the relationship between load factor and loss factor	7M	1	1
b) Discuss how the factors affecting distribution system losses.	7M	1	2
OR			
2. Classify different types of loads and draw their characteristics in detail	14M	1	4
UNIT-II			
3. a) List the design and operational aspects that affects the primary feeder voltage level	7M	2	1
b) Discuss the coordination procedure between fuse and a circuit breaker	7M	2	2
OR			
4. a) List out types protective devices used and explain principle of operation of any two protective devices	7M	2	1
b) Discuss briefly the design considerations in distribution system	7M	2	2
UNIT-III			
5. a) Explain indoor and outdoor substation and list out its merits and demerits.	8M	3	1
b) Show that if the voltage drops are limited, six feeders can carry only 1.25 times as much load as the four feeders	6M	3	5
OR			
6. a) Discuss about double bus bar with two circuit breakers	7M	3	2
b) Derive the relationship for power loss and voltage drop for substation service area with 'n' primary feeders	7M	2	6
UNIT-IV			
7. a) How do you justify economically the connection of capacitors for the improvement of p.f.	7M	4	5
b) A 3 phase, 5 kW induction motor has a power factor of 0.85 lagging. A bank of capacitor is connected in delta across the supply terminal and power factor raised to 0.95 lagging. Determine the kVAR rating of the capacitor in each phase?	7M	4	5
OR			
8. a) Write the causes for low power factor in power system	6M	4	2
b) A 3 phase transformer rated 7000kVA and has a over load capability of 125% of the rating. If the connected load is 1150 kVA with a 0.8p.f. (lag), determine the following (i) the kVAR rating of shunt capacitor bank required to decrease the kVA load of the transformer to its capability level (ii) the p.f. of the corrective level (iii) the kVAR rating of the shunt capacitor bank required to correct the load p.f. to unity.	8M	4	5
UNIT-V			
9. a) Explain the various factors affecting the distribution system planning	8M	5	2
b) Discuss about substation expansion	6M	5	2
OR			
10. Discuss different types of distribution system planning models.	14M	5	2

END

Code: 7G373

IV B.Tech. I Semester Regular & Supplementary Examinations January 2022

Digital Signal Processing

(Electrical and Electronics Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

	Marks	CO	Blooms Level
UNIT-I			
1. a) Determine the response $y(n)$, $n \geq 0$ of the system described by the linear constant coefficient difference equation: $y(n)-2y(n-1)+2y(n-2)=x(n)+x(n-1)$ where $x(n)=(2)^n u(n)$ and initial conditions are $y(-1)=y(-2)=0$	8M	1	L3
b) Prove Circular Convolution and Complex Conjugate DFT properties.	6M	1	L4
OR			
2. a) Give Comparison between CTFT, DTFT & DFT.	7M	1	L5
b) What do you mean by LTI System and explain its properties with suitable examples?	7M	1	L1
UNIT-II			
3. a) Calculate DFT of the sequence $x(n)=\{1,2,3,4,4,3,2,1\}$ using DIT-FFT algorithm.	10M	1	L6
b) What is Twiddle Factor and its importance in FFT?	4M	1	L1
OR			
4. Explain in brief about procedural steps involved in decimation in time and decimation in frequency.	14M	1	L4
UNIT-III			
5. a) Determine cascade & direct form-I Realization for following system. $Y(n)=-0.7 y(n-1)+0.5 y(n-1)+0.7x(n)-0.1 x(n-2)$	8M	2	L3
b) Describe IIR Filter designing and realization.	6M	2	L1
OR			
6. a) Discuss about different analog to digital transformation techniques.	6M	2	L5
b) Discuss Butterworth filter approximation method.	8M	2	L2
UNIT-IV			
7. a) Enlist different window functions with their characteristics.	8M	2	L1
b) Explain the characteristics of FIR digital filters	6M	2	L2
OR			
8. a) Design a Filter if $H_d(e^{jw})= e^{-j3w} ; -\pi/4 \leq w \leq \pi/4$ $0 ; \pi/4 < w < 3\pi/4$ Using Hanning Window for $N=8$	10M	2	L6
b) Give a comparative analysis of IIR & FIR Digital filters	4M	2	L5
UNIT-V			
9. a) What are the major blocks in Musical sound processing? Explain briefly.	7M	3	L1
b) Explain about D/A conversion in signal processing applications.	7M	3	L2
OR			
10. a) Describe spectral analysis of non-stationary signals in DSP.	7M	3	L1
b) Discuss signal compression techniques.	7M	3	L4

END