Hall Ticket Number :										

R-17

Code: 7G674

IV B.Tech. I Semester Supplementary Examinations May/June 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)

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			Marks	CO	Blooms Level
		UNIT–I			
1.	a)	Define disaster and list out the important perceptions on disasters.	7M	CO1	L1
	b)	Explain the various hazards affecting the environment.	7M	CO1	L2
		OR			
2.	a)	Explain the relationship between hazard, disaster and vulnerability in detail.	7M	CO1	L2
	b)	Explain the risk factors of disaster.	7M	CO1	L2
		UNIT–II			
3.	a)	Explain in detail about the Tsunami.	7M	CO2	L2
	b)	Explain in detail about the Earthquakes.	7M	CO2	L2
		OR			
4.	a)	Differentiate between Natural Disasters and Manmade Disasters.	7M	CO2	L2
	b)	List a few major natural disasters that occurred in India.	7M	CO2	L1
		UNIT–III			
5.	a)	Explain in detail about the impacts of disaster on ecology.	7M	CO3	L2
	b)	List the impacts of human-induced disasters.	7M	CO3	L1
		OR			
6.	a)	Explain in detail about disaster impacts on psycho social environment.	7M	CO3	L2
	b)	Describe the trends in disaster management.	7M	CO3	L2
		UNIT–IV			
7.	a)	Discuss major issues involved in disaster preparedness.	7M	CO4	L3
	b)	Describe the different steps in relief distribution in disaster management.	7M	CO4	L2
		OR			
8.	a)	Describe structural and non-structural mitigation measures in disaster management.	7M	CO4	L2
	b)	Describe the important phases of disaster cycle.	7M	CO4	L2
		UNIT–V			
9.	a)	Discuss the environmental impacts of land use changes and urbanization	7M	CO5	L3
	b)	Explain the use of quick reconstruction technologies.	7M	CO5	L2
		OR			
10.	a)	Explain the factors to be considered while planning the rebuilding works after a major disaster due to earthquake.	7M	CO5	L2
	b)	Define sustainable development an what are the challenges of sustainable development in India	7M	CO5	L1

END

Hall Ticket Number :										

R-17

Code: 7GA71

IV B.Tech. I Semester Supplementary Examinations May/June 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)

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			Marks	CO	Blooms Level
		UNIT–I			
1.	a)	Discuss various evolutionary phases outlining the specific characteristics of each phase in shaping the development of human resource management.	7M	1	1
	b)	Elucidate any three competitive challenges influencing human resource management.	7M	1,3	2
		OR			
2.	a)	Consider you are starting a new company. Being a human resource specialist, write in detail how would you set up an HR Department. Give focus to details of the various processes involved.	7M	1,4	5
	b)	Distinguish between managerial and competitive challenges influencing human resource management.	7M	1,4	3
		UNIT–II			
3.	a)	Explain various barriers to human resource planning.	7M	2,3	3
	b)	Define job analysis, job description and job specification. Analyze the job role of a project manager.	7M	1,3	4
		OR			
4.	a)	Paristo is a start-up E-commerce company which was incorporated recently with a vision of reaching 100 Crore turnover in the first 5 years. As a HR Manager, explain the steps involved in preparing human resource planning for the first five years to meet the 100 Crore turnover target.	7M	3,5	6
	b)	Present the factors that affect the job design.	7M	3,4	4
		UNIT–III			
5.	a)	Discuss the different types of recruitment practices followed in an organization?	7M	1,4	4
	b)	Compare any two selection tests and identify a better selection test for a sales person job considering the problem of bias in the selection tests.	7M	3,4	5
		OR			

6.	a)	Orienting employees to their workplaces and their jobs is one of the most neglected functions in many organizations. What happens when orientation to new employees is not carried effectively?	7M	4,5	6
	b)	What do you mean by social media recruiting? Evaluate the effectiveness of recruitment process through social media.	7M	4,5	5

UNIT–IV

7.	a)	Training like any other human resource function, should be evaluated to determine its effectiveness". Present various ways to evaluate training.	7M	3,4	5
	b)	Present various career stages for a job role of your choice in IT sector.	7M	1,4	5

OR

8.	a)	You are the HR Manager of the Zoyato company, which is a BPO. You have recently recruited HR trainees for the company. Carefully device Training plan for the new trainees.	7M	3,5	6
	b)	Compare the advantages and disadvantages of training.	7M	3,4	4

UNIT–V

9.	a)	As a HR Manager of an IT company device a suitable performance appraisal system considering the latest trends in IT industry.	7M	4,5	6
	b)	Define Collective bargaining process. Present any one case on collective bargaining.	7M	2,15	5

OR

10.	a)	Contrast any three performance appraisal methods and suggest a suitable appraisal method for a frontline service employees of ITC hotel.	7M	1,5	4
	b)	Explain how rewards increases employee motivation and performance.	7M	2,5	5

****END****

Hall Ticket Number :										

R-17

Code: 7G371

IV B.Tech. I Semester Supplementary Examinations May/June 2022

Optical Fiber Communication

(Electronics and Communication Engineering)

Max. Marks: 70 Time: 3 Hours

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

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			Marks	CO	Blooms Level
		UNIT–I			
1.	a)	Elaborate about acceptance angle for skew rays and Numerical aperture of graded-index fibers.	8M		
	b)	A step-index silica fiber with a core radius much longer than the operating wavelength of light has a core refractive index of 1.50 and a cladding refractive index of 1.48. Estimate the values of i. Numerical aperture of the fiber. ii. Maximum acceptance angle in air. iii. Maximum acceptance angle in water having a refractive index of 1.33.	6M		
		OR			
2.	a)	Categorize the fiber configurations of Step-Index (SI) and Graded Index (GI) Fibers with appropriate diagrams.	8M		
	b)	Explore the bound or guided modes in cylindrical optical fibers.	6M		
		UNIT–II			
3.	a)	Compute the expression for resonant frequency in laser diode.			
	b)	A silicon avalanche photodiode has a quantum efficiency of 65 percent at a wavelength of 900 nm. Suppose 0.5μW of optical power produces a multiplied photocurrent of 10μA.what is the multiplication M?	14M		
		OR			
4.		Express about external quantum efficiency and the external power generated in the LED with necessary equation.	14M		
		UNIT–III			
5.	a)	Evaluate the peak emission wavelength of an LED that uses A1 0.11GA0.89AS as active region.	7M		
	b)	Compare any two parameters of Si, Ge, InGaAs pin and avalanche photodiodes	7M		
		OR			

6. a) Define the quantum efficiency and the responsivity of a photo detector. 7M

   b) A double hetero junction InGaAsP LED emitting at a peak wavelength of 1310 nm has radiative and non-radiative recombination times of 30 and 100 ns resp. The drive current of 40mA. Find bulk recombination time, the internal quantum efficiency, internal power level. 7M

UNIT–IV

7. a) Derive an expression for fiber to fiber coupling loss 'L_F'. 7M

   b) Classify the fiber related losses occurs in joining two fibers. Also calculate the coupling loss if the refractive index profiles of receiving and emitting fiber are 1.98 and 2.20 respectively. 7M

OR

8. Explain connector types; also compare the six popular fiber optic connectors with their features and applications. 14M

UNIT–V

9. a) What are the underlying principles of the WDM technique? What are its various advantages? How is it deferent from FDM technique? 7M

   b) Discuss about the Point to Point Fiber Optic Link and its characteristics with an example? 7M

OR

10. a) Describe with diagram to explain the operation of a unidirectional WDM system. 7M

    b) Explain about the operational principles of wavelength division multiplexing. 7M

END

Hall Ticket Number :										

R-17

Code: 7G375

IV B.Tech. I Semester Supplementary Examinations May/June 2022

Satellite Communications

(Electronics and Communication Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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			Marks	CO	Blooms Level
		UNIT–I			
1.	a)	Write about the future trends of satellite communications.	6M	CO1	L1
	b)	Write about the orbital effects in communication system performance.	8M	CO1	L1
		OR			
2.	a)	Explain the general and technical characteristics of a satellite communication system.	8M	CO1	L2
	b)	Explain about LEO and MEO satellite systems.	6M	CO1	L2
		UNIT–II			
3.	a)	What are two approaches used for equipment reliability in the event of failure of communication capacity of the satellite? Explain	7M	CO1	L2
	b)	Write a short note on Telemetry and Tracking.	7M	CO1	L2
		OR			
4.	a)	Draw the block diagram of typical onboard control system for a spinner satellite and explain its operation.	8M	CO1	L1
	b)	Explain satellite antennas in detail.	6M	CO1	L3
		UNIT–III			
5.	a)	Explain Satellite switched TDMA with onboard processing.	7M	CO2	L3
	b)	Illustrate the procedure for *Ku*-band down link design.	7M	CO2	L3
		OR			
6.	a)	Consider a 4GHz receiver with the following gains and noise temperatures: T_{in}=25K, T_{RF}=50K, T_{IF}=1000K, T_m=500K, G_{RF}=23 db, G_{IF}=30db. Calculate the system noise temperature assuming that the mixer has a gain G_m=0db. Recalculate the system noise temperature when the mixer has a 10db loss.	8M	CO2	L4
	b)	Discuss various modulation and multiplexing techniques used with satellite links.	6M	CO2	L2
		UNIT–IV			
7.	a)	Explain the general aspects of coverage and frequency consideration of low earth orbit.	7M	CO3	
	b)	Draw the block diagram of a general earth station and explain.	7M	CO3	L2
		OR			
8.	a)	What are the four important factors that influence the design of any satellite communication system? Explain	7M	CO3	L1
	b)	Discuss in detail about Molniya and Elliptical orbits	7M	CO3	L2
		UNIT–V			
9.	a)	Explain in detail about GPS position location.	7M	CO3	L3
	b)	Explain about signal processing techniques used in GPS receiver.	7M	CO3	L3
		OR			
10.	a)	Discuss in detail the process of satellite signal acquisition.	7M	CO3	L3
	b)	What are the major sources of error in GPS receiver? Discuss in detail.	7M	CO3	L2

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Hall Ticket Number :										

R-17

Code: 7G17E

IV B.Tech. I Semester Supplementary Examinations May/June 2022

Computer Networks

(Electronics & Communication Engineering)

Max. Marks: 70 Time: 3 Hours

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

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			Marks	CO	Blooms Level
		UNIT–I			
1.		What are Computer Networks? Discuss briefly about the Network Hardware with suitable diagram and examples?	14M	1	L2
		OR			
2.	a)	Distinguish between Guided transmission media, wireless transmission media	7M	1	L1
	b)	Is what way achieved Public Switched Telephone Network? Explain	7M	1	L3
		UNIT–II			
3.		Categorize the design issues of Data Link Layer with suitable examples	14M	2	L3
		OR			
4.		Describe the Following i) ALOHA ii) CSMA iii) CSMA/CD and iv) CSMA/CA	14M	2	L1
		UNIT–III			
5.	a)	Give the salient features of IP Version 6. Header format and extension header format	8M	3	L1
	b)	The importance of Network layer design issues with suitable examples	6M	3	L4
		OR			
6.	a)	Suggest the principles of congestion control with suitable examples	10M	3	L3
	b)	Define Routing?	4M	3	L2
		UNIT–IV			
7.		Explain the real transport protocol of UDP and how will you calculate checksum in UDP Its header format and operations	14M	4	L4
		OR			
8.		Recommended various steps in making a Remote Procedure Call explain with suitable diagram	14M	4	L5
		UNIT–V			
9.		Explain in detail about the DNS. Why is DNS implemented as distributed system?	14M	5	L4
		OR			
10.	a)	Discuss briefly about DES	4M	5	L1
	b)	Write a Short note on i) HTTP ii) FTP ii) E-MAIL iii) TELNET	10M	5	L2

END