Hall Ticket Number :										

R-15

Code: 5G381

IV B.Tech. II Semester Regular & Supplementary Examinations September 2020

Cellular & Mobile 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) List the analog and digital cellular systems in United States and outside United States.	6M	1	1
	b) Derive the relation for C/I in terms of Co-channel interference reduction factor for an Omni-Directional antenna system	8M	1	3
	OR			
2.	a) Explain how basic cellular system is architectured?	8M	1	1
	b) List and explain the components that are to be considered for cellular systems that would affect system design if not choose properly.	6M	1	2
	UNIT–II			
3.	a) Design an Omni-directional Direction Antenna System in the worst cases and obtain C/I for different K patterns (K=7,9,12).	8M	1	3
	b) Analyze how Co-channel interference is reduced with diversity.	6M	1	4
	OR			
4.	a) Compare the effects of Gain on Base station antenna by lowering its height to one third when it is placed on a hill and a valley.	6M	3	3
	b) Explain the following non cochannel interference: i) Cross talk interference. ii) Near-end-far-end in terms of adjacent channel interference.	8M	2	1
	UNIT–III			
5.	a) In monopoly market, a cell site is assigned with 90 radios; construct transmitter with 3 antennas of omni-directional antenna setup.	9M	4	3
	b) Describe the effect of antenna height in near and long distance mobile Propagation.	5M	3	2
	OR			
6.	a) Explain Various umbrella-pattern antennas.	6M	3	1
	b) Derive the relation for phase difference between direct path and a ground-reflected path and deduce relationship with distance and height.	8M	3	3
	UNIT–IV			
7.	a) Explain channel sharing and borrowing techniques	7M	4	1
	b) From 1G frequency management chart, describe how channels are numbered and grouped in subsets.	7M	4	3
	OR			
8.	a) Explain Non-fixed channel assignment algorithms	8M	4	2
	b) Write short notes on how Underlaid-Overlaid cell arrangements	6M	4	1
	UNIT–V			
9.	a) Explain GSM with neat architecture.	10M	1	2
	b) Write short notes on CDMA system.	4M	1	2
	OR			
10.	Explain the following: a) Two level Handoff b) Forced Handoff c) Intersystem Handoff d) Mobile Assisted Handoff.	14M	5	2

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Hall Ticket Number :										

R-15

Code: 5GA82

IV B.Tech. II Semester Regular & Supplementary Examinations September 2020

Human Resource Management

(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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UNIT–I

1. Discuss the definition, nature and significance of Human Resource Management? 14M

OR

2. Discuss the role and functions of Human Resource Manager 14M

UNIT–II

3. a) Define Human Resource Planning? 4M
   b) Explain the need and importance of HRP in Organisations 10M

OR

4. a) Discuss the advantages of Human Resource Information System 6M
   b) Define Job Analysis? Explain the steps in Job Analysis 8M

UNIT–III

5. a) Discuss the definition of Recruitment 4M
   b) What are the Manpower Procurement functions of HRM 10M

OR

6. Explain the sources and factors influencing Recruitment? 14M

UNIT–IV

7. a) What are the differences between Training & Development 4M
   b) Critically explain the steps in employee training process? 10M

OR

8. Discuss the process and methods of Executive Development 14M

UNIT–V

9. a) Discuss the major components of employee compensation structure? 5M
   b) Explain the employee discipline and grievance procedure 9M

OR

10. a) Explain the definition and purpose of performance appraisal? 6M
    b) Discuss the steps and advantages of Collective Bargaining Process 8M

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Hall Ticket Number :										

R-15

Code: 5G384

IV B.Tech. II Semester Regular & Supplementary Examinations September 2020

Wireless Communication & Networks

(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)	Compare different wireless communication systems	7M		II
	b)	Discuss various wireless communication systems	7M		I
		OR			
2.	a)	Explain CSMA protocols in detail	7M		V
	b)	Explain TDMA with frame structure	7M		V
		UNIT–II			
3.	a)	Distinguish between wired and wireless networks	7M		
	b)	Explain SS7 architecture in detail	7M		V
		OR			
4.	a)	Discuss briefly about BISDN	7M		VI
	b)	Explain the traffic routing of wireless networks	7M		V
		UNIT–III			
5.	a)	Explain WAP architecture in detail	7M		V
	b)	Explain WAP session protocol	7M		V
		OR			
6.	a)	Explain wireless datagram protocol with diagrams	7M		V
	b)	Explain the registration and tunneling process	7M		V
		UNIT–IV			
7.	a)	Explain in detail about IEEE802.11 Protocol architecture and services	8M		V
	b)	Describe Spread spectrum LANs	6M		I
		OR			
8.	a)	Explain the functions of Logical link control and adaptation protocol in Bluetooth	8M		V
	b)	Describe radio specifications in Bluetooth	6M		I
		UNIT–V			
9.	a)	What is CDPD? Explain the reference architecture in CDPD	7M		I
	b)	Explain the protocol layers in GPRS	7M		V
		OR			
10.	a)	Describe the HIPERLAN-1 with necessary diagrams.	7M		I
	b)	What is adhoc networking and explain in detail with suitable figures	7M		I

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