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| R-15 |
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Code: 5G381

IV B.Tech. II Semester Regular Examinations March 2019

Cellular & Mobile Communications

(Electronics & 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 |
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- 1. a) What are the limitations of conventional mobile telephone system? 4M
- b) Describe the principle of Operation of cellular mobile system and explain the Cellular Concept with neat diagram. 10M

OR

- 2. a) Derive the desired C/I for a Normal case in an Omni directional antenna system. 8M
- b) Explain about mobile fading characteristics. 6M

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| UNIT-II |
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- 3. a) What are the different types of Non co-channel interference in a cellular system? Explain 10M
- b) Explain the effects of antenna design Parameters for the interference in a cellular system 4M

OR

- 4. a) Write short notes on (i) Space Diversity (ii) Time Diversity 6M
- b) Discuss how antenna height effects the coverage and interference of cellular system 8M

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| UNIT-III |
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- 5. a) Explain the mobile radio propagation over water and flat open area and write the general expression. 8M
- b) Describe the effect of antenna height in near and long distance mobile propagation. 6M

OR

- 6. a) Explain the sum-and-difference patterns and their synthesis in detail. 8M
- b) Explain the design aspects and merits of an omni-directional antenna in cell site. 6M

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| UNIT-IV |
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- 7. What is the importance of frequency management chart? Give the structure of the channels in 800 MHz system with frequency ranges? 14M

OR

- 8. a) Describe in detail the adjacent channel assignment using omni-directional and directional antennas 8M
- b) Explain how channel sharing and channel borrowing is performed 6M

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| UNIT-V |
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- 9. Explain the significance of Hand-off in Mobile Communication. Explain (i) Delaying Handoff (ii) Forced Handoff (iii) Soft Handoff and (iv) Intersystem Handoff 14M

OR

- 10. a) Explain TDMA in detail 10M
- b) Explain GSM Channels 4M

Code: 5G384

IV B.Tech. II Semester Regular Examinations March 2019

Wireless Communication & Networks

(Electronics & Communication Engineering)

Max. Marks: 70

Time: 3 Hours

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

UNIT-I

1. a) Explain the concept of Frequency reuse. 6M
 b) If a normal GSM time slot consists of 8 trailing bits, 12 guard bits, 26 synchronization Bits and three bursts of 58 bits of data, find the frame efficiency of GSM TDMA frame. 8M

OR

2. a) Derive the expression for the system spectral efficiency of FDMA. If a US AMPS cellular operator is allocated 15 MHz total spectrum, guard band is 10 KHz and full duplex channel bandwidth is 40 KHz & number of channels allocated for control signaling is 20. Find the spectral efficiency of FDMA. 7M
 b) Explain with a block diagram the working of Frequency hopped spread Spectrum. What is the difference between Fast frequency hopping and Slow Frequency Hopping? 7M

UNIT-II

3. a) Illustrate the Signaling System No-7 architecture with a diagram. 10M
 b) List the differences between wireless and fixed telephone networks. 4M

OR

4. a) Explain ATM protocol stack. Explain the functions of each layer. 7M
 b) Explain the ATM cell header with a diagram. Mention the functions of VCI, Payload Type, Cell Loss Priority and Header Error Control. 7M

UNIT-III

5. a) Explain Wireless Datagram Protocol. 8M
 b) What is Wireless Markup Language Script? What are the major difference between JavaScript and WML Script? 6M

OR

6. a) Explain the following: 10M
 i. A home agent (HA)
 ii. A foreign agent (FA)
 iii. Foreign agent care-of address
 iv. Co-located care-of address
 b) Explain the process of tunneling in mobile IP. 4M

UNIT-IV

7. a) Discuss protocol architecture of IEEE 802.11. 8M
 b) Explain radio specifications and baseband specification of Bluetooth. 6M

OR

8. a) Write short notes on narrowband microwave LANs 8M
 b) Explain Logical Link Control and Adaptation Protocol (L2CAP). 6M

UNIT-V

9. a) What is CDPD? Explain the reference architecture in CDPD. 8M
 b) Explain the features of HiperLAN. 6M

OR

10. a) Explain the protocol layers in GPRS 10M
 b) What is HiperLAN/2? 4M

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Code: 5GA82

IV B.Tech. II Semester Regular Examinations March 2019

Human Resource Management

(Common to All Branches)

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 |
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1. What is meant by HRM? Discuss the functions of human Resource Management with relevant examples?

OR

2. Define Human Resource Management and discuss the difference between Personnel Management and HRM.

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| UNIT-II |
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3. How does the HR planning process facilitate the achievement of an organization's strategic objectives

OR

4. What is Job Analysis? Explain the job design methods in detail?

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| UNIT-III |
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5. What are various sources of applicants that organizations use when recruiting?

OR

6. What is selection? Explain different types of selection tests and process of selection

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| UNIT-IV |
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7. Discuss the different methods of training used by an organization for enhancing employee performance

OR

8. Explain the objectives, importance and factors influencing executive development

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| UNIT-V |
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9. Should effective Grievance Handling Procedure retains a potential employee in an organization – explain.

OR

10. Suppose you are a supervisor. Evaluate the different performance appraisal methods used in your organization?
