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Question Paper Code	12266
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M.E. / M.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2023

Third Semester

M.E. - Embedded Systems Technologies

20PESEL315 - WIRELESS AND MOBILE COMMUNICATION

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
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| 1. Differentiate between interference range and detection range. | <i>2,K2,CO1</i> |
| 2. Define: delay spread. | <i>2,K1,CO1</i> |
| 3. Define: Hidden and exposed terminals. | <i>2,K1,CO2</i> |
| 4. Distinguish between narrowband and wideband systems. | <i>2,K2,CO2</i> |
| 5. What is a transparent bearer service in GSM? | <i>2,K1,CO3</i> |
| 6. What are the characteristics of SMS? | <i>2,K1,CO3</i> |
| 7. What is an access point? | <i>2,K1,CO4</i> |
| 8. Differentiate between PCF and DCF in IEEE 802.11. | <i>2,K2,CO4</i> |
| 9. Define a mobile node. | <i>2,K1,CO5</i> |
| 10. What are home agents in mobile IP? | <i>2,K1,CO5</i> |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

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| 11. a) Explain the Ground Wave Propagation Model with neat diagram and derive the expression for the total received power and electric field strength. | <i>13,K2,CO1</i> |
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OR

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| b) Explain the four types of satellite orbits with its advantages and disadvantages. | <i>13,K2,CO1</i> |
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| 12. a) Compare and contrast the various types of multiple access techniques. | <i>13,K2,CO2</i> |
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OR

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| b) Explain the various algorithms used in TDMA in detail. | <i>13,K2,CO2</i> |
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| 13. a) Explain the GSM protocol architecture in detail. | <i>13,K2,CO3</i> |
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OR

b) Explain the types of handover in detail. *13,K2,CO3*

14. a) Elaborate on the Bluetooth protocol architecture. *13,K2,CO4*

OR

b) Explain the functions of HIPERLAN1 in detail. *13,K2,CO4*

15. a) Explain the encapsulation mechanisms and its types in detail with relevant diagrams in detail. *13,K2,CO5*

OR

b) Explain the registration mechanism of mobile IP in detail. *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Explain WML and WML scripts in detail. *15,K2,CO6*

OR

b) Explain Wireless Transport Layer Security in detail. *15,K2,CO6*