

Duration: 3hours

[Max Marks:80]

- N.B. : (1) Question No 1 is Compulsory.
(2) Attempt any three questions out of the remaining five.
(3) All questions carry equal marks.
(4) Assume suitable data, if required and state it clearly. Support Your Answer with a neat Sketch wherever Required.

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| 1 | Attempt any FOUR | [20] |
| a | Explain AD Hoc Wireless Network | 5 |
| b | Describe the Concepts of DSSS with a suitable example. | 5 |
| c | Explain hidden station and Exposed Station problem? | 5 |
| d | What are the different types of Handover Mechanisms in GSM? Explain | 5 |
| e | Define the Terms Shadowing, Reflection, Refraction, Scattering and Diffraction in Signal Propagation | 5 |
| 2 | a What do you mean by Frequency Re-use? What are the benefits of frequency reuse techniques? | [10] |
| | b What is tunneling and encapsulation? Explain with examples. | [10] |
| 3 | a Explain GSM system architecture and all different interfaces. with Neat sketch | [10] |
| | b What are different wireless LAN threats and solutions for the same. | [10] |
| 4 | a What are the GSM security mechanisms? Which three algorithms are implemented for the same? Describe any one algorithm in detail. | [10] |
| | b When and how the process of agent advertisement and registration is executed in Mobile IP? | [10] |
| 5 | a Explain UMTS System Architecture in Detail. What are the UMTS Domains and interfaces? | [10] |
| | b How is the packet delivered to and from the mobile node? | 10] |
| 6 | a What is a self-organizing network? | [10] |
| | b What is the role of MAC management in IEEE 802.11? | [10] |