Duration: 3hrs **[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.

Q1. Attempt any FOUR Questions 20

a) Explain the concept of frequency reuse with clustering.
b) Compare LTE and LTE advanced.
c) What is Hidden and Exposed station problem?
d) What are the roles of EIR and HLR entities in a GSM network?
e) Discuss about the mobile services and data services in GSM.

Q2 a) What do you mean by Self Organizing Networks. Explain the architecture of SON. 10

Q2 b) What is a need of Micro Mobility? Explain Cellular IP in detail. 10

Q3 a) What are the different Handover mechanism in GSM? Explain each handover mechanism in brief. 10

Q3 b) Explain the protocol architecture of IEEE 802.11 with diagram. 10

Q4 a) Explain the GPRS architecture, explain each block in detail. 10

Q4 b) Explain snooping TCP and mobile TCP with their merits and demerits. 10

Q5 a) What is spread spectrum? Why is it used? Explain any one of the spread spectrum techniques. 10

Q5 b) Explain Mobile Terminated Call and Mobile Originated Call. 10

Q6 a) Explain the mechanism for IP packet delivery using mobile IP. 10

Q6 b) Discuss in detail about Wi-Fi security protocol. 10

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