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Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (Electrical & Electronics)/(Electronics & Electrical) (Sem.-7)

WIRELESS COMMUNICATION

Subject Code : BTEEE-804F

M.Code : 71968

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**Write briefly :**

1. Calculate channel capacity of TDMA in cell system.
2. What is called shadowing?
3. What are the limitations of 1G cellular network?
4. Write the drawback of Bit-Error-rate-Driven diversity.
5. Compare the capacity of a fading and a non-fading channel for information.
6. What are the main transmission technologies for WLAN?
7. Discuss the fundamental concepts of all-IP networks.
8. What is the frequency of separation between uplink and downlink in AMPS and GSM?
9. List the benefits of cellular-WLAN integration architecture.
10. Draw the forward link structure in IS-95 CDMA.



SECTION-B

11. Explain briefly the following terms used in telephony :
 - a) Busy hour calling rate
 - b) Unit call
12. How does multipath fading is mitigated with the design of base station antennas? Explain.
13. Write short notes on support of mobility on the Internet.
14. A group of N stations share 100 Kbps slotted ALOHA channel. Each station output a 500 bits frame on an average of 5000ms even if previous one has not been sent. What is the required value of N ?
15. Describe the functions of the MS and SIM. Why does GSM separate the MS and SIM?

SECTION-C

16. What signalling facilities are to be provided by subscriber's instrument in an automatic telephone exchange? Explain in detail. Also show how this is achieved by a schematic diagram?
17. What is difference between multiplexing and multiple access techniques? Are FDM and TDM similar to corresponding FDMA/TDMA respectively? If not, why? Explain the relative advantages and disadvantages of FDM A and TDMA.
18. Draw the IEEE 802.11 protocol architecture, name the main elements and describe their functions. Why is the PHY layer in IEEE 802.11 subdivided?

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.