

4. The basic GSM is based on _____ traffic channels. CO2 [K₁]

- a) Connection oriented.
- b) Connection less.
- c) Packet switching.
- d) Circuit switching.

5. **Assertion (A):** Radio transmission can interfere with other senders, or electrical devices can destroy data transmitted via radio. CO3 [K₂]

Reason (R): Radio transmission can cover larger areas and can penetrate (thinner) walls, furniture, plants etc.

- a) Both A and R are Individually true and R is the correct explanation of A
- b) Both A and R are Individually true but R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

6. Matching the following CO4 [K₂]

List I	List II
A. IEEE 802.11	i. To remove triangular routing problem
B. GRE	ii. BSS
C. Optimization of tunneling	iii. The current location of MN
D. COA	iv. IP and other networks

- | | A | B | C | D |
|----|-----|-----|----|-----|
| a) | iv | i | ii | iii |
| b) | iii | i | iv | ii |
| c) | ii | iii | iv | i |
| d) | ii | iv | i | iii |

7. Identify the order for processes of DSSS receiver CO3 [K₂]

3) Demodulator 4) Data 2) Integrator 3) Signal

- a) 1-3-2-4
- b) 1-2-3-4
- c) 3-1-2-4
- d) 4-1-3-2

8. Which of the following includes short-range radio frequency communication technology for remotely storing and retrieving data using devices called RFID tags and RFID readers? CO5 [K₂]

1. Network-based positioning 2. Real-time location system (RTLS)
3. Radio frequency identification (RFID) 4. Wireless wide area network (WWAN)

- a) 1
- b) 1,2
- c) 1,2,3
- d) 1,3,4

9. **Assertion (A):** The home network is the subnet the MN belongs to with respect to its IP address. CO3 [K₂]
Reason (R): The foreign network is the current subnet the MN visits and which is not the home network.
- a) Both A and R are Individually true and R is the correct explanation of A b) Both A and R are Individually true but R is not the correct explanation of A
c) A is true but R is false d) A is false but R is true
10. Identify the order of development of different generations of mobile telecommunications systems CO2 [K₂]
1) GPRS 4) PDC 2) CDMA 3) AMPS
a) 1-3-2-4 b) 1-2-3-4
c) 2-1-4-3 d) 3-4-1-2

PART B (10 x 2 = 20 Marks)
(Answer not more than 40 words)

11. List the types of handoff and their properties. [CO1] [K₂]
12. What are the features of cellular system? [CO1] [K₂]
13. Differentiate TDMA and FDMA. [CO2] [K₂]
14. What are the versions of CSMA? [CO2] [K₂]
15. Why is the PHY layer in IEEE 802.11 subdivided? [CO3] [K₂]
16. In what situations can collisions occur wireless networks? Distinguish between collisions on PHY and MAC layer. [CO3] [K₂]
17. Write the benefits of location information for routing in ad-hoc networks. [CO4] [K₂]
18. What is the basic purpose of DHCP? Names the entities of DHCP. [CO4] [K₂]
19. Define user interface in Pervasive computing. [CO5] [K₂]
20. List the drawback of pervasive computing over health. [CO5] [K₂]

Answer any FIVE Questions: -
PART C (5 x 14 = 70 Marks)
(Answer not more than 300 words)

Q.No. 21 is Compulsory

21. Explore about differences between WiFi and WiMax wireless connectivity technologies in brief. [CO3] [K₂]
22. Why CDMA is needed and explain it with an example how basic function of CDMA is being applied to signals? [CO1] [K₂]
23. (i) Draw the functional architecture diagram of a GSM network. (7) [CO2] [K₁]
(ii) Describe about combined RA/LA update procedures of GPRS. (7) [CO2] [K₂]

24. Briefly explain about protocol layers and components of Bluetooth with neat diagram. [CO3] [K₂]
25. Distinguish between I- TCP, Snooping TCP and Mobile TCP with advantages and disadvantages. [CO4] [K₂]
26. Enumerate how tunneling works in general and especially for mobile IP using IP-in-IP, minimal, and generic routing encapsulation, respectively. Discuss the advantages and disadvantages of these three methods. [CO4] [K₂]
27. (i) Describe the various components involved in pervasive computing architecture. (7) [CO5] [K₂]
- (ii) Explain how Smart sensors and actuators are used in pervasive computing. (7) [CO5] [K₂]
