

Total No. of Questions : 8]

SEAT No. :

PE-2279

[Total No. of Pages : 2

[6584]-183

**B.E. (Information Technology)**  
**WIRELESS COMMUNICATION**

**(2019 Pattern) (Semester - VII) (414445 D) (Elective - IV)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates :*

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume Suitable data if necessary.

- Q1)** a) Explain the Principle of TDMA. What are different features of TDMA? [9]
- b) What is MIMO? Explain two formats of MIMO. [9]

OR

- Q2)** a) What is OFDM technique? Also, explain OFDMA transmitter and receiver. [9]
- b) How Code Division Multiple Access Technique is implanted while accessing a channel for multiple users? Support your theory answer with example. [9]

- Q3)** a) What are the different challenges in WAP? Also, write down the advantages and disadvantages of WAP. [9]
- b) What is LoRaWAN? Elaborate LoRaWAN network elements. [8]

OR

- Q4)** a) What is NFC? What are the different characteristics of NFC? [9]
- b) What is Li-Fi? Explain the working principle of Li-Fi technology. [8]

*P.T.O.*

- Q5) a)** Explain security issues and challenges in GSM. [9]
- b) Explain in details Visible Light Communication. Also, explain its applications. [9]

OR

- Q6) a)** What is multimedia security? Explain multimedia security in 5G and 6G. [9]
- b) Explain Bluetooth Security Architecture in detail. [9]

- Q7) a)** What is quantum Technology? Explain quantum Technology for a 5G/6G wireless network? [9]
- b) Explain Simultaneous Transmission and Reflection (STAR) for 360° coverage in details. [8]

OR

- Q8) a)** Explain how 5G network works along-with its benefits. [9]
- b) State and explain various applications of wireless technology. [8]

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