1480

Code : 15EE43T

Register Number | | | | | | | |

IV Semester Diploma Examination, April/May-2018

COMMUNICATION AND COMPUTER NETWORK

Time : 3 Hours] **[Max. Marks : 100**

Note : (i) Answer any **six** questions from Part – **A**. (each question carries **5** marks.)
(ii) Answer any **seven** questions from Part – **B**. (each question carries **10** marks.)

PART – A

(Each question carries **5** marks.)

1. Define Modulation. List different types of modulation. **5**

2. Explain Ground wave propagation with sketch. **5**

3. Draw the diagram showing the basic elements of fiber-optic communication system. **5**

4. List the problems faced by conventional semi conductor components in microwave frequencies and write the remedies to overcome them. **5**

5. Explain the working of a satellite transponder with a block diagram. **5**

6. List the applications of satellite communication. **5**

7. Explain the concept of frequency re-use in mobile communication. **5**

8. Define : **5**
   Channel capacity
   Band width
   Baud rate
   Bit rate

9. List the function of
   (a) Router
   (b) Repeater
   (c) gateway
   in a computer network. **5**

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PART – B

(Each questions carries **10** marks.)

10. (a) Differentiate half duplex and full duplex communication. **5**

    (b) Sketch the electromagnetic spectrum and mark the major segments. **5**

11. (a) Explain the working of super heterodyne receiver with a neat block diagram. **8**

    (b) Write the expression for characteristic impedance of a co-axial cable. **2**

12. (a) Illustrate diode amplitude modulation with a circuit diagram and wave form. **8**

    (b) Define TDM and FDM. **2**

13. (a) Explain the working of optical transmitter with a diagram. **6**

    (b) List the advantage and disadvantage of fiber optic cable. **4**

14. Explain with a diagram working of two cavity klystron amplifier. **10**

15. Explain the working of satellite earth station with a block diagram. **10**

16. (a) Explain the concept of GPS. **4**

    (b) Compare 2G with 3G GSM system. **3**

    (c) Compare synchronous and asynchronous mode of data transmission. **3**

17. Explain GSM system architecture with a neat block diagram. **10**

18. (a) Explain the working of FSK modem with diagram. **5**

    (b) Explain TCP/IP model with a diagram. **5**

19. (a) Explain concept of star network topology and ring network topology with a diagram. **5**

    (b) Explain the working of Wireless Access Point (WAP) with a diagram. **5**