

**615****October 2017**

Time - Three hours  
(Maximum Marks: 75)

- [N.B: (1) Q.No. 8 in PART - A and Q.No. 16 in PART - B are compulsory. Answer any FOUR questions from the remaining in each PART - A and PART - B.  
(2) Answer division (a) or division (b) of each question in PART-C.  
(3) Each question carries 2 marks in PART - A, 3 marks in Part - B and 10 marks in PART - C.]

PART - A

1. Mention two types of aircraft landing system.
2. State the features of ISDN.
3. State the different digital codes used in digital communication system.
4. State the different modulation techniques used in digital communication.
5. State the various light sources used in optical communication.
6. What is apogee and perigee?
7. What is TDMA and FDMA?
8. What is adjacent channel interference?

PART - B

9. State any three applications of RADAR.
10. Draw a simple ISDN architecture diagram.
11. Define any two characteristics of data transmission circuits.
12. Draw the block diagram of ASK demodulator.
13. Differentiate single mode and multi mode fiber.
14. Draw a microwave transmitter block diagram.
15. Draw a basic diagram to illustrate FDMA system.
16. Name the important sub-systems of GSM architecture.

PART - C

17. (a) Draw the block diagram of basic pulsed RADAR system and explain.

(Or)

- (b) Draw and explain cylindrical scanning used in FAX communication system.

18. (a) Explain any three characteristics of data transmission circuits.

(Or)

- (b) (i) Explain with neat block diagram the working of PSK modulator.

- (ii) Draw PSK waveforms.

19. (a) Briefly explain the different types of optical fiber.

(Or)

- (b) Explain fiber optic receiver with diagram.

20. (a) Explain about geostationary synchronous satellites. State its advantages and disadvantages.

(Or)

- (b) With neat block diagram explain microwave link repeater.

21. (a) (i) What is roaming?  
(ii) Explain how hand-off takes place with neat diagram in four steps.

(Or)

- (b) Explain GSM architecture with neat diagram.

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