MODEL QUESTION PAPER - I

Time : 3 Hrs   Max Marks : 100

Note : (i) Answwel all the question from Part - A. Each question carries 3 marks.

   (ii) Answer division (A) or (B) of each question in Part - B. Each question carries fourteen marks.

PART - A (10 x 3 = 30 Marks)

1.   Define radar, and mention its types.

2.   Define video phone and mention its uses.

3.   Define Nyguist rate and state the relation between signal to noise radio, Nyguist rate and channel bandwidth.

4.   Define FSK modulator and demodulator.

5.   Define light pipe or light guide.

6.   Define optical sources and optical detectors.

7.   State Kepler's first law and second law.

8.   What is Microwave link repeater?

9.   Define microcells and pico cells.

10. Define maximum traffic load of a cell.

PART - B (5 x 14 = 70 Marks)

11. (A) (i) Explain radar range equation?

   (ii) Explain the fundamentals of radar system.

(OR)

(B) (i) Explain the factors influencing maximum range?

   (ii) Explain A-scope display.

12. (A) With the blockdiagrams explain ASK modulator and demodulator.

(OR)

(B) (i) Explain forward error correcting codes.

(ii) Draw the blockdiagram of PSK demodulator and explain each block.

13. (A) (i) Explain single mode step index fiber and graded index fiber.

(ii) Explain attenuations in fiber.

(OR)

(B) (i) With the diagram explain LED optical source.

(ii) Explain LASER with diagram.

14. (A) (i) Explain station keeping in satellites.

(ii) Explain the operation of microwave transmitter with block diagram.

(OR)

(B) (i) Briefly explain geostationary orbit.

(ii) With a block diagram explain the operation of microwave link repeater.

15. (A) (i) Explain co-channel interference.

(ii) Draw the architecture of GSM system and explain its operation.

(OR)

(B) (i) Explain adjacent channel interference.

(ii) Explain GSM services.