

NOVEMBER/DECEMBER 2019

**BEL42 — ELECTRONIC COMMUNICATION
SYSTEM.**

Time : Three hours

Maximum : 75 marks

SECTION A — ($10 \times 2 = 20$ marks)

Answer ALL questions.

1. Define directive gain in antenna.
2. What are arrays?
3. Sketch the needs for modulation.
4. Expand SSB modulation.
5. Define frequency modulation?
6. Sketch the significance of ratio detector.
7. State sampling theorem.
8. What is PPM?
9. What is meant by CDMA?
10. Write down the radar range equation?



SECTION B — (5 × 5 = 25 marks)

Answer ALL Questions

11. (a) Write a short note on beam width and polarization ?

Or

- (b) Discuss in detail parabolic antenna.

12. (a) Describe the working of balanced modulator.

Or

- (b) Elaborate SSB modulation.

13. (a) Derive the expression for frequency modulated wave?

Or

- (b) Sketch the functions of varactor diode.

14. (a) Elucidate the pulse width modulation?

Or

- (b) Illustrate delta modulation ?

15. (a) Explain in detail FDM.

Or

- (b) Discuss in detail satellite communication.

SECTION C — (3 × 10 = 30 marks)

Answer Any THREE Questions

16. Explain in detail different types of antenna.
17. Elaborate amplitude modulation with a neat sketch.
18. Describe in detail a balanced slope detector.
19. With a neat sketch explain pulse code modulation.
20. Elaborate fiber optic communication.
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