

# ECM42 Communication Engineering

897

REG. NO

OCTOBER 2021

Time: Three hours

Maximum Marks: 75

- Note:
1. Answer ALL the questions in PART-A (1 mark each)
  2. Answer any ONE question from each unit in PART-B (3 marks each)
  3. Answer any ONE question from each unit in PART-C (10 marks each)
  4. The question paper contains TWO Pages

## PART-A (1x10=10)

1. Define Symmetrical Network.
2. Define Directive gain.
3. Define VSB.
4. How do you select the IF frequency in Radio Receiver.
5. Define frequency modulation.
6. Define Sampling theorem.
7. What is MP3 system?
8. State the advantages of Piezo-electric microphone.
9. Define Scanning.
10. State the need for Blanking Pulse.

## PART-B (3x5=15)

### UNIT-I

11. Compare Equaliser and attenuator.
12. Draw the diagram of Broad side array and its Radiation pattern.

### UNIT-II

13. Derive the expression for AM signal.
14. Draw the block diagram of SSB Transmitter.

### UNIT-III

15. Compare AM and FM.
16. Draw the circuit diagram of DPCM Transmitter.

### UNIT-IV

17. Compare woofer and tweeter.
18. Draw the frequency response characteristics of velocity ribbon microphone.

### UNIT-V

19. Compare PAL, NTSC and SECAM.
20. Write short notes on Plasma display.

897

PART-C (10x5=50)

UNIT-I

21. Draw the circuit diagram of constant k. low pass filter and find its circuit elements and cut off frequency.
22. Explain sky wave propagation with neat diagram.

UNIT-II

23. Explain the phase shift method of SSB generation and mention its advantages.
24. With neat block diagram explain Super heterodyne receiver.

UNIT-III

25. With block diagram explain the Stereophonic FM Transmitter.
26. Explain about generation and demodulation of PCM with a neat diagram.

UNIT-IV

27. Explain the construction and working principle of moving coil microphone.
28. Explain about Dolby system with a neat diagram.

UNIT-V

29. Draw the block diagram of monochrome TV Transmitter and explain.
30. Draw the block diagram of Digital Colour TV Receiver and explain.

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