

- Q-2** **Answer in short. (Any ten)** **(20)**
1. Explain the term Frequency modulation .
 2. Classify the external noise and explain any one.
 3. Give the classification of RF spectrum
 4. Draw the waveform of frequency modulated carrier voltage.
 5. Why we preferred collector modulation then base modulation?
 6. Draw the basic circuit of square law diode detector.
 7. Draw the characteristics curve of square law diode detector
 8. What is the difference between varactor diode and rectifier diode?
 9. Mention the method of frequency modulation.
 10. Explain radiation resistance.
 11. What is the application of space wave propagation?
 12. Which factor affects to the magnitude of the space wave and surface wave?
- Q-3** Draw the block diagram of Modern electronics communication system and explain its function briefly. **(10)**
- OR**
- Q-3** Define Amplitude modulation. Derive the mathematical expression for the amplitude modulated voltage with necessary diagram. **(10)**
- Q-4** (a) Describe the working of square law diode modulation with proper circuit diagram. **(10)**
- OR**
- Q-4** (b) Describe the working of Collector modulation with proper circuit diagram **(05)**
- (c) Describe the working of linear diode detector with proper circuit diagram. **(05)**
- Q-5** (a) Draw the circuit of Slope detector and explain its working. **(05)**
- (b) Write a short note on: frequency Modulation using Varactor Diode **(05)**
- OR**
- Q-5** (c) Explain method of frequency modulation, and draw the circuit of an R-C capacitive reactance FET and obtain expression for the effective capacitance C_e offered by FET between drain and source terminals. **(10)**
- Q-6** Explain ground wave propagation with necessary diagrams. **(10)**
- OR**
- Q-6** Explain function and process of antenna action with necessary diagrams. **(10)**

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