

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2022
(Fourth Semester)

Branch – ELECTRONICS

ELECTRONIC COMMUNICATION – I

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 1 = 10)

- 1 By which name is an Ionospheric propagation also known as
(i) Sea wave propagation (ii) Ground wave propagation
(iii) Sky wave propagation (iv) All of the above
- 2 What is the role of transmitter in communication system?
(i) to decode a signal to be transmitted
(ii) to convert one form of energy into other
(iii) to detect and amplify information signal from the carrier
(iv) to produce Radio waves to transmit data
- 3 The low power carrier transmitted with SSB signal is called as?
(i) SSB Carrier (ii) Dummy carrier
(iii) Fake Carrier (iv) Pilot carrier
- 4 The most commonly used filters in SSB generation are
(i) Mechanical (ii) RC
(iii) LC (iv) Low pass Filter
- 5 FM is a part of general class of modulation known as
(i) Angle Modulation (ii) Phase Modulation
(iii) Amplitude Modulation (iv) Frequency Modulation
- 6 What is the role of Amplitude limiter in FM Receiver?
(i) Filtration (ii) Adjust the gain of receiver
(iii) Amplify a weaker signal (iv) demodulate a signal
- 7 To prevent overloading of the IF amplifier in a receiver one should use
(i) Squelch (ii) variable sensitivity
(iii) variable selectivity (iv) Double conversion
- 8 In a receiver, noise is usually developed at _____
(i) Audio stage (ii) Receiving Antenna
(iii) RF stage (iv) IF stage
- 9 The signal which are obtained by encoding each quantized signal into a digital word is called as
(i) PAM signal (ii) PCM signal
(iii) FM signal (iv) Sampling and quantization
- 10 FSK reception is
(i) Phase coherent (ii) Phase non-coherent
(iii) Phase coherent & non coherent (iv) Coincident

Cont...

SECTION - B (25 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 5 = 25)

- 11 a Describe the function of communication systems.
OR
b Elucidate the operation of percentage modulation.
- 12 a Explain the types of side band Transmissions .
OR
b Elaborate the operation of SSB transmitter.
- 13 a Discuss about the FM analysis.
OR
b Distinguish pre emphasis and De-emphasis.
- 14 a Explain the following terms of tracking and Electronic Tuning.
OR
b Enumerate the process of FM monophonic and Stereo Receiver.
- 15 a Elaborate the operation of PPM with diagram.
OR
b Give an account on BPSK with diagram.

SECTION -C (40 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 8 = 40)

- 16 a Discuss the process of Electromagnetic waves.
OR
b Describe the analysis of AM.
- 17 a Elucidate the single sideband power distribution.
OR
b Illustrate the SSB Receiver with neat diagram.
- 18 a Derive and expression for FM Noise suppression.
OR
b Write the principle of working PLL FM transmitter.
- 19 a Elaborate the working of super heterodyne analysis.
OR
b Enumerate the operation of PLL demodulator.
- 20 a Discuss about sample and Hold.
OR
b Describe the working of FSK with necessary diagram.

Z-Z-Z

END