

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(Fourth Semester)

Branch – ELECTRONICS

ELECTRONIC COMMUNICATION - I

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

- 1 Identify the type of modulation where the frequency of the modulated wave is equal to that of the carrier wave.
(i) Frequency modulation (ii) Phase modulation
(iii) Angle modulation (iv) Amplitude modulation
- 2 The type of signal transmission in which no power is wasted on the carrier is known as
(i) Amplitude modulation (ii) Sideband suppressed carrier signal
(iii) Frequency modulation (iv) Unsuppressed carrier
- 3 Frequency deviation in FM is
(i) Change in carrier frequency to the frequency above and below the centre frequency
(ii) Formation of side bands
(iii) The variation of the instantaneous carrier frequency in proportion to the modulating signal
(iv) All of the above
- 4 Demodulation is done in _____
(i) Receiver (ii) Channel
(iii) Transducer (iv) Receiving antenna
- 5 The technique(s) used for sampling is/are _____.
(i) Natural sampling (ii) Instantaneous sampling
(iii) Flat top sampling (iv) All of the above

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

- 6 a Classify the electromagnetic waves.
OR
b How to calculate the percentage of modulation?
- 7 a Classify the side band transmission.
OR
b Explain the function of crystal SSB filters.
- 8 a Narrate simple FM generator.
OR
b Distinguish direct and indirect FM generators.

Cont...

- 9 a Bring out the RF amplifier applications.
OR
b Describe the function of AGC
- 10 a Classify binary codes.
OR
b Describe code noise immunity.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Elucidate the block diagram of basic communication system.
OR
b Highlight the function of ionospheric layers.
- 12 a Discuss the function of SSB receiver with neat sketch.
OR
b Classify the demodulate methods of transmitted Single side band signal.
- 13 a Distinguish noise suppression and noise cancellation.
OR
b Classify the angle modulation with neat diagram.
- 14 a Examine the block diagram of superheterodyne receiver.
OR
b Elucidate the FM receiver block diagram with neat sketch.
- 15 a Enumerate the function of FSK with neat block diagram.
OR
b Elucidate the function of PPM with neat sketch.

Z-Z-Z

END