

B.Sc. Sem.-5 Examination

SE-305 (A)

Electronics

April-2025

Time : 2-30 Hours]

[Max. Marks : 70

- Instructions: (1) All questions carry equal marks.
 (2) Symbols used here have their usual meanings.
 (3) Figures to the right indicate marks.

- 1 (A) Explain the term Microphone requirements. Explain following qualities of Microphone in detail: Sensitivity, Frequency Response, Signal to Noise Ratio, Output impedance, Distortion & Directivity. 07
 (B) With diagram explain principle, construction, working & features of Condenser Microphone. 07
- OR**
- (A) With diagram explain principle, construction, working & Features of Ribbon Microphone. 07
 (B) With diagram explain principle & working of Carbon Microphone. The sensitivity of a microphone is 90dB below 1V. Find the output voltage. 07
- 2 (A) Draw Horn Loudspeaker, Shapes of Horn Loudspeaker & Horn Loudspeaker with Folded Horn. List its features 07
 (B) With diagram explain Column Loudspeaker, Woofer and tweeter in a common enclosure and dual cone loudspeaker 07
- OR**
- (A) With diagram explain Folded Baffle, Box type Baffle or enclosure and Bass Reflex Enclosure. 07
 (B) With diagram explain Cross-Over Circuit for loudspeakers in detail. 07
- 3 (A) Write a short note on Optical Memory Disc. 07
 (B) Write a short note on Radial and Tangential Tracking. 07
- OR**
- (A) With figure explain recording system and playback system. 07
 (B) Explain Selectavison (RCA) and Vide High Density 07
- 4 (A) With diagram explain principle, construction, working & features of Crystal Microphone. 07
 (B) With diagram explain Moving coil loudspeaker, Frequency Response of Moving coil loudspeaker and Equivalent circuit of Moving coil loudspeaker. 07
- OR**
- (A) Explain in detail regarding video disc formats and LASER vision. 07
 (B) With diagram explain principle, construction, working & features of Electret Microphone. 07
- 5 Attempt any seven out of twelve. 14
 (A) In moving coil microphone signal to noise ratio is about ___ dB.
 (B) In crystal microphone output impedance is about _____ ohm.
 (C) Carbon microphone distortion is about _____ %
 (D) Sensitivity of Electret microphone is _____.
 (E) Non-linear distortion is less than _____ % in Horn loudspeaker.
 (F) The medium frequency loudspeaker covers 500 Hz to 5000 Hz is known as _____.
 (G) The high frequency loudspeaker covers the frequencies above 5000 Hz is known as _____.
 (H) A cross-over circuit is a _____ circuit having a cut off frequency equal to cross over frequency.
 (I) In video disc, average track pitch is _____ μm .
 (J) Average pit _____ in video disc is 0.4 μm .
 (K) The TS laser has higher power output with _____ threshold current.
 (L) In optical memory discs, the disc is split into a series of tracks, which vary from about 35 to _____.