

FOURTH SEMESTER B.A./B.Sc. DEGREE EXAMINATION, APRIL 2019

(CUCBCSS—UG)

Common Course for L.R.P.

ELE 4A 14—BASICS OF AUDIO AND VIDEO MEDIA

(2014 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A*Answer all questions.**Each question carries 1 mark.*

1. The period of 50 Hz sound signal is _____.
2. Decibel is defined as _____.
3. Octave is defined as the interval of _____.
4. Typical reverberation period of a big concert hall is about _____ seconds.
5. Impedance of ribbon microphone is of the order of _____.
6. Squawker is used to reproduce sound frequency in the range of _____.
7. Notch filter is usually used to filter _____ frequency.
8. _____ is the fastest ADC.
9. MIDI stands for _____.
10. Motion vector is associated with _____.

(10 × 1 = 10 marks)

Part B*Answer any five questions.**Each question carries 2 marks.*

11. Define Loudness and Phon.
12. What is frequency response of a microphone ?
13. What are crossover networks ?
14. What are the various distortions in loudspeakers ?

Turn over

15. What are the purposes of a graphic equaliser ?
16. What are the basic D/A conversion techniques ?
17. What are the advantages of Blue ray recording ?

(5 × 2 = 10 marks)

Part C

Answer any six questions.

Each question carries 5 marks.

18. Explain the following terms associated with sound waves :
 - (a) Harmonics.
 - (b) Overtone.
 - (c) Timbre.
 - (d) Pitch.
 - (e) Threshold of hearing.
19. Explain the growth and decay of sound in an enclosure.
20. Explain the characteristics of microphone.
21. Explain the working principle of a moving coil cone type loudspeaker.
22. Explain the principle of operation of a parametric equaliser.
23. How audio compression is carried out in MP3?
24. Explain how stereo recording is carried out.
25. Explain the working principle of VCD recording and play back.

(6 × 5 = 30 marks)

Part D

Answer any two questions.

Each question carries 15 marks.

26. Explain the acoustical features and design of auditoriums.
27. Explain the construction and working of various types of microphones.
28. What are the various types of A/D conversion methods ? Explain.
29. Explain any one video compression standard with necessary block diagram.

(2 × 15 = 30 marks)