C 61212 (Pages : 2) Name.....

Reg. No.....

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 equiliser ?

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 equiliser.

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)