

**FOURTH SEMESTER B.Sc. (L.R.P.) DEGREE EXAMINATION, APRIL 2016**

(CUCBCSS—UG)

Common Course

**A 14—BASICS OF AUDIO AND VIDEO MEDIA**

Time : Three Hours

Maximum : 80 Marks

**Part I**

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

1. Name the nerve that carry signals from ear to brain \_\_\_\_\_.
2. Reverberation is caused by \_\_\_\_\_ of sound waves
3. Sound waves consists of a sequence of compressions and \_\_\_\_\_.
4. For quality microphones non-linear distortion should be less than \_\_\_\_\_ %
5. A transducer that converts electrical signals to sound waves is called \_\_\_\_\_.
6. The base coating material in a magnetic tape is \_\_\_\_\_.
7. A camera converts brightness and colour into \_\_\_\_\_ signals.
8. The expansion of VCD is \_\_\_\_\_.
9. The S/N ratio of a cone type speaker is less than or equal to \_\_\_\_\_ dB.
10. The audible range of frequencies is between 20 Hz and \_\_\_\_\_ Hz.

(10 × 1 = 10 marks)

**Part II**

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

11. Describe the mechanism of hearing of human ear.
12. Explain Sabine's formula for reverberation time.
13. List the characteristics that determine quality of a microphone.
14. Define directivity of a microphone.
15. Distinguish between low pass and high pass filters.
16. What is DA conversion ?
17. Explain the principle of analog video recording.

(5 × 2 = 10 marks)

**Turn over**

**Part III**

*Answer any six questions.  
Each question carries 5 marks.*

18. Describe growth and decay of sound in an enclosure.
19. Discuss the principle of capacitor microphone and explaining its working.
20. Discuss the electrodynamic loud speaker.
21. Distinguish parametric and graphic equalisers.
22. Discuss ac and dc biasing of magnetic recording in tapes.
23. Distinguish analog and digital mixers.
24. Distinguish MPEG 1, 2 and 3.
25. Discuss need and scope of video compression.

(6 × 5 = 30 marks)

**Part IV**

*Answer any two questions.  
Each question carries 15 marks.*

26. Explain the acoustics of studio reverberation and acoustics of auditorium.
27. Explain ribbon microphone.
28. Discuss magnetic recording on a tape and explain recorded wavelength, gap width and tape speed.
29. Explain VCD, DVD, and blue ray disc recording and playing.

(2 × 15 = 30 marks)