

## FOURTH SEMESTER B.Sc. (L.R.P.) DEGREE EXAMINATION, APRIL 2018

(CUCBCSS—UG)

Common Course

A 14—BASICS OF AUDIO AND VIDEO MEDIA

Time : Three Hours

Maximum : 80 Marks

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

1. Minimum number of loud speakers needed for stereophonic reception is \_\_\_\_\_.
2. The primary role of loud speaker enclosure is \_\_\_\_\_.
3. Please state whether the below statement is right or wrong :  
"A microphone having distortion produces harmonics at the output."
4. Choose the right answer :  
Difference between a woofer and Tweeter is :  
(a) Power handling capacity of woofer is higher than that of tweeter.  
(b) Power handling capacity of tweeter is higher than that of woofer.  
(c) Woofer has lower frequency response than Tweeter.  
(d) None of the above.
5. In magnetic recording, AC biasing is better than DC biasing because \_\_\_\_\_.
6. The fastest Analogue to digital converter is \_\_\_\_\_.
7. Recording media used for analog video recording is \_\_\_\_\_.
8. MIDI stands for \_\_\_\_\_.
9. Video bandwidth of colour "under scheme" video recording is : \_\_\_\_\_.
10. Capacity of double layer BLURAY Disc is : \_\_\_\_\_.

(10 × 1 = 10 marks)

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

11. Explain the term 'threshold of hearing'.
12. Name any 5 important characteristics of a microphone.

**Turn over**

13. What is the basic working principle of a loud speaker ?
14. How audio is erased from audio tape ?
15. What is 'cross over network' ?
16. Explain the need for A/D and D/A Conversion in Digital tape recording
17. What is meant by "Video compression" ?

(5 × 2 = 10 marks)

### Part C

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

18. Explain the sources of audio disturbances in an auditorium.
19. Explain the stereophonic sound.
20. Define directivity, sensitivity and frequency response of microphones.
21. What is a cross over network ? Explain the working of a two way cross over network
22. With neat sketches, explain the need for AC bias in audio recording.
23. Explain the working of an eight bit Digital to analog converter.
24. Write a brief note on MPEG-4 standard.
25. What are the advantages and disadvantages of Digital video recording and playback ?

(6 × 5 = 30 marks)

### Part D

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

26. Explain the working of a 3 way cross over network. With a schematic, explain how an amplifier output impedance of 2000 ohms is connected to the speakers having 16 ohms impedances through 3 way cross over network.

*Or*

27. List out any 3 types of microphones and compare their features. With neat sketches explain the working of a dynamic microphone.
28. With a block diagram explain the working of analog video tape recorder. What are the advantages and disadvantages of analog video recording and playback systems.

*Or*

29. Briefly explain MPEG compression. With block diagram explain the working of MPEG2 Encoder and decoder.

(2 × 15 = 30 marks)