(Pages : 3)

E – 2470

Reg. No. : .....

Name : .....

Eighth Semester B.Tech. Degree Examination, May 2018
(2013 Scheme)
13.802 : ENTERTAINMENT ELECTRONICS TECHNOLOGY (T)

Time : 3 Hours Max. Marks : 100

PART – A

Answer **all** questions briefly. **Each** question carries **2** marks.

1. Why is a moving coil microphone not omnidirectional at higher audio frequencies ?
2. Why is loud speaker column used for a large audience ?
3. Calculate the values of L and C for tweeter to have a cross-over frequency of 1200 Hz. The impedance of tweeter is 16Ω.
4. How is a CD protected from dust, grease and scratches ?
5. How do pits and flats allow recovery of baseband signal in a CD ?
6. What is sub band coding in audio ?
7. How synchronization is achieved in TV System ?
8. Why picture signal is amplitude modulated and sound signal is frequency modulated in TV systems.
9. How image is formed on an OLED screen ?
10. State the characteristics of reflective type projection systems. **(10×2=20 Marks)**

P.T.O.

PART – B

Answer **any one full** question from **each** Module. **Each full** question carries **20** marks.

Module – I

11. With the help of neat diagram, explain the working of a condenser microphone. What are its advantages ? How they are eliminated in an electret microphone ? Explain its frequency response curve and mention its applications.

OR

12. A) With the help of neat sketches, explain the principle of working of a moving coil loud speaker. Why is it called 'Direct radiating type' speaker ? **10**

B) What do you understand by woofer, squawker and tweeter speakers ? Explain the necessity of cross-over networks. Why cannot electrolytic capacitor be used in cross-over networks ? **10**

Module – II

13. A) Explain the variable area method of optical recording of sound. Draw the apparatus used for the same. **12**

B) Compare the performance characteristics of a CD with conventional hi-fi disc. **8**

OR

14. A) Explain the principle of MP3 player. How data is compressed and stored ? How it is retrieved ? **12**

B) With necessary diagrams, explain digital audio broadcasting. **8**

Module – III

15. A) Explain the interlaced scanning sequence of the 625 lines in an Indian PAL TV system. **12**

B) Explain the video signal compression using H261 format. **8**

OR

16. A) With necessary block diagrams, explain the working of a DTH system both at the transmitter and receiver ends. **10**

    B) With neat block diagrams, explain a CATV system. **5**

    C) Explain various scrambling techniques used in digital TV transmission. **5**

Module – IV

17. A) Describe the 3D TV technology with respect to the transmitter and receiver sides. **12**

    B) Explain the principle of colour LCD monitor. Compare its performance with Plasma display. **8**

OR

18. A) Explain the techniques used in : (i) rear projection TV and (ii) front projection TV systems. **12**

    B) Explain the functioning of a home theatre system with surround sound system. **8**

(4×20=80 Marks)