

Model Question Paper

Eighth Semester B.Tech Degree Examination

(2013 scheme)

13.802 ENTERTAINMENT ELECTRONICS TECHNOLOGY(T)

Time 3 hrs

Max marks 100

Part A

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

1. List the parameters on which the quality of a microphone depends.
2. The output of a directive microphone is 0.25mV when the output of an omni-directional microphone placed under identical conditions with respect to source is only 3mV. Calculate the directivity of the microphone in dB.
3. Compare cone type and horn type speakers.
4. Draw the block diagram of a Hi-Fi reproducing system.
5. Mention the factors on which the reverberation time depends. Obtain the relation between them.
6. Give reasons for selecting the aspect ratio as 4:3.
7. Why the colour difference signals are used instead of colour signals for colour TV transmission?
8. Discuss MAC encoding format used in ECTV.
9. List the merits and demerits of plasma TV
10. Discuss the advantages of a DLP projector. (10x2 = 20)

Part B

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

MODULE I

11. Explain the principle, construction, working and characteristics of a moving coil microphone. (20)
12. a) Describe the working of an Electrodynamic Loudspeaker. Mention its advantages and disadvantages. (8)
b) Draw a basic cross-over network circuit and explain its objectives with the help of characteristic curves.
Calculate the value of L and C for tweeter to have a cross-over frequency of 1000Hz. The impedance of the tweeter is 16 ohms. (12)

MODULE II

13. a) Explain the playback process from a compact disc. (10)
b) What are the requirements for a good auditorium for pleasant listening? Give salient features of acoustical design for an auditorium. (10)
14. a) Write down the advantages of compact discs. With diagrams explain the optical recording of sound on a compact disc. (10)
b) What are the essential requirements for a good PA system?
An amplifier gives 100W audio power and this power is to be distributed in 5 loud speakers of 5W each. How will you connect 15 loud speakers. (10)

MODULE III

- 15 a) Sketch details of horizontal sync pulses and label it. Why are the front porch and black porch intervals provide before and after the horizontal sync pulse? Explain why the blanking pulse are not used as sync pulses. (10)
b) Draw the block diagram of a digital broadcast receiver-decoder and explain. (10)
- 16 a) Describe the working of a vidicon camera tube. Draw its light transfer characteristics. (10)
b) Explain the signal quantizing and encoding in a digital TV system. (10)

MODULE IV

- 17 a) What is 3D TV technology and how it is different from 2D presentation? Why it is necessary to use glasses while watching 3D programme? (10)
b) Describe the basic elements necessary for a home theatre and briefly explain the features that must be checked before shopping a front projection system. (10)
18. a) Explain the functioning of LCD panels. Compare the features of LCD and plasma Displays. (10)
b) Explain briefly how pictures are generated in Rear Projection TVs with either CRT, LCD or DLP devices. Describe the advantages and disadvantages of each system.(10)