

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Winter, 2019 -20 Examination

Semester: 5
Subject Code: 03107301
Subject Name: Audio Video Systems

Date: 12/12/2019
Time: 10:30 am to 01:00pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Objective Type Questions - (Fill in the blanks, one word answer, MCQ-not more than Five in case of MCQ) (All are compulsory) (Each of one mark) **(15)**

1. Speed of Sound in air is _____KM/Second.
2. Loudness, or sound level, is measured in units called _____.
3. India uses _____color system.
4. Aspect ratio in HDTV is _____.
5. The Microphone which need external d.c. supply is _____.
6. Moving coil microphone's directivity is _____.
7. What is pitch?
8. _____ Threshold of pain.
9. VSB stand for_____.
10. Moving coil microphone's directivity is _____.
11. What is Contrast?
12. Efficiency of class B push pull amplifier is _____.
13. LCD stand for_____.
14. What is flicker effect for TV?
15. Write one characteristic of High Fidelity (Hi-fi) systems.

Q.2 Answer the following questions. (Attempt any three) **(15)**

- A) Explain Baffles and Enclosures briefly.
- B) Describe the construction of a carbon microphone and explain its functioning.
- C) Explain Terms: Hue, Saturation, Luminance, and Chrominance.
- D) Draw and explain horizontal sync.

Q.3 A) What do you understand by scanning? Why is it needed? Explain interlaced scanning. **(07)**

- B) Show that a total channel bandwidth of 7 MHz is necessary for successful transmission of both picture and sound signals in the 625 line TV system. **(08)**

OR

B) Explain HDTV and its features and briefly explain Digital TV Transmitter. **(08)**

Q.4 A) Draw and explain composite video signal with all specification. **(07)**

OR

A) Which modulation system is used for picture and sound? Why? Explain it in detail also give the comparison of positive and negative modulation which one is mostly used? Why? **(07)**

B) Explain construction and working of Variable Density method of Optical Recording sound system **(08)**