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Roll No. :

328832(28)

APR-MAY 2022

B. E. (Eighth Semester) Examination, 2020

(New Scheme)

(Et&T Engg. Branch)

CONSUMER ELECTRONICS

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note ; Part (a) of each unit is compulsory carry 2 marks. Attempt any two parts from (b), (c) and (d) carry 7 marks.

Unit-I

1. (a) Define Aspect Ratio. Why width is longer than height?

2

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- (b) What do you understand by interlaced scanning?
How it reduces flicker and conserves bandwidth? 7
- (c) Explain the process of vertical Resolution and
Horizontal Resolution in a monochrome television
system. 7
- (d) What are the constituents of composite video signal?
Explain with suitable waveform and indicate different
levels. 7

Unit-II

2. (a) Can white light be obtained by combining the three
primary colours? If so, then in what proportion? 2
- (b) What is meant by Interleaving process? Explain the
process by bandwidth of colour signals. 7
- (c) How phase errors occur in colour transmission?
Explain how it is corrected in PAL colour system? 7
- (d) Write short notes on : 7
- (i) High definition TV
 - (ii) Digital TV

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Unit-III

3. (a) What unit of sound pressure is used for rating
microphones? 2
- (b) What are the characteristics of microphones? Explain. 7
- (c) Explain the various steps involved in reconstitution
of the audio signal. 7
- (d) With the help of a diagram explain the working of
a dynamic microphone. 7

Unit-IV

4. (a) Why is a loudspeaker called a reverse transducer? 2
- (b) Explain in detail the working of a permanent magnet
loudspeaker. 7
- (c) A long cable used for a loudspeaker has a finite
resistance of 1Ω . The amplifier used delivers,
100 W peak power at 10 A and 10 V at the primary
of an output transformer. Calculate power loss in
the cable for (i) 100 V line system and (ii) non
- 100 V line system. 7

- (d) Explain the significance of speaker matching systems and PA system characteristics. 7

Unit-V

5. (a) What amount is detected by a Lambda sensor in exhaust. 2
- (b) List the information provided by Instrument panel displays in automobiles with suitable block diagram. 7
- (c) Explain sequence of operations in a washing cycle alongwith hardware and software development. 7
- (b) With the help of a suitable block diagram explain the working of an LCD Timer with alarm. 7