

Total No. of printed pages = 5

Et-601/CE&M/6th Sem/2018/M

**CONSUMER ELECTRONICS AND
MAINTENANCE**

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks
for the questions.

PART – A

Marks – 25

1. Fill in the blanks : 1×10=10
- (a) A moving coil microphone works on the principle of _____ .
 - (b) A carbon microphone has a high _____ ratio.
 - (c) The principle of moving coil loudspeaker is same as that of _____ .
 - (d) A squeaker has good response at _____ frequency.
 - (e) Public address system uses _____ type loudspeaker.

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- (f) The bandwidth of each TV channel is _____ MHz.
- (g) A stereo sounds system gives _____ dimensional sound effect.
- (h) VCR uses a _____ transformer.
- (i) Blue, green and red are _____ colors.
- (j) PAL stands for _____.

2. State whether the following statements are true or false : $1 \times 10 = 10$

- (a) A ribbon microphone is bi-directional.
- (b) A woofer has good response at low frequencies.
- (c) The noise is due to irregularities in magnetic coating on the tape is called hissing noise.
- (d) Pre-emphasis and De-emphasis improve signal to noise ratio.
- (e) Pinch roller keeps the play back away from capstan.
- (f) In a stereo, the two channels have separate amplifiers.
- (g) The 41-47 MHz range is used for TV.

- (h) A balun is a step down transformer.
- (i) VCR uses low pass and high pass filter.
- (j) Stereophony gives sense of directions to the listeners.

3. Multiple choice questions : 1×5=5

(i) Which of the following microphone is the cheapest ?

- (a) Moving coil
- (b) Condenser
- (c) Ribbon
- (d) Carbon

(ii) The audio frequency range is

- (a) 5 Hz to 1 KHz
- (b) 16 Hz to 20 KHz
- (c) 0 Hz to 20 KHz
- (d) 50 Hz to 20 KHz

(iii) The function of blend control in stereo system is

- (a) to dilute left channel
- (b) to dilute right channel
- (c) to dilute any of the two channels
- (d) None of the above

- (iv) During playback the take up reel is
- (a) in clockwise motion
 - (b) in anti-clockwise motion
 - (c) either clockwise or anti-clockwise motion
 - (d) Any of the above
- (v) In a TV receiver antenna the length of reflector rod
- (a) is the same as dipole
 - (b) is less than that of dipole
 - (c) is more than that of dipole
 - (d) may be equal, more or less than that of dipole.

PART - B

Marks - 45

1. Discuss the requirements of a good microphone. 4
2. Discuss of operation, features, and application of a moving coil loudspeaker. 4

3. Differentiate between microphone and loudspeaker. 4
4. Draw the simplified block diagram of AM radio receiver and explain in brief. 5
5. Explain the tape transport mechanism with proper diagram. 4
6. Draw the complete block diagram of a monochrome television receiver. 4
7. How does stereophonic system differ from monophonic system ? 4
8. Differentiate between primary and secondary colors. 4
9. Mention four common faults of radio receiver and their remedies. 4
10. Write a note on microwave oven. 4
11. Draw the block diagram of a VCR. 4