Total number of printed pages:5 **D/4th/DECE402**

2021

CONSUMER ELECTRONICS

Full Marks: 60

Time: Two hours

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

A. Multiple Choice Questions 1 x 20=20

1. Which of the following microphone is the cheapest?
   a. Moving coil
   b. Condenser
   c. Ribbon
   d. Carbon
2. The audio frequency range is
   a. 5 Hz to 1 KHz
   b. 16 Hz to 20 KHz
   c. 0 Hz to 20 KHz
   d. None of the above.
3. 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.
4. Carbon microphone is having
   a. High output
   b. Low output
   c. Medium output
   d. Zero output
5. In condenser microphone the most common voltage applied is
   a. 25 volt

b. 50 volt

c. 48 volt

d. 10 volt

6. During playback the take up reel is

a. in clockwise motion

b. in anti-clockwise motion

c. either clockwise or anti-clockwise motion

d. None of the above.

7. Frequency response of capacitor microphone ranges between

a. 18kHz to 25 MHz

b. 20 Hz to 20 kHz

c. 15 Hz to 20KHz

d. None of the above

8. Crystal microphone is having high output of range

a. 8 to 20 mV

b. 10 to 50 mV

c. 10 to 100 mV

d. 50 to 1000 mV

9. Frequency response of Moving coil microphone is

a. 20 to 1000 Hz

b. 40 to 15000 Hz

c. 35 to 1000 Hz

d. None of the above

10. Woofer is a type of loudspeaker which sound frequency ranging between

a. 40 Hz to 100 Hz

b. 50 Hz to 5000 Hz

c. 50 Hz to 500 kHz

d. 50 Hz to 1000 Hz

11. Squawker which sound frequency ranging between

a. 250 to 2000 Hz

b. 200 to 2000 Hz

c. 350 to 3000 Hz

d. None of the above

12. In speaker impedance matching

a. Lower impedance increase power

b. Increase impedance lower power

c. Zero impedance zero power

d. None of the above

13. In case of Magneto-optical recording, the magnetic medium is heated locally by a laser, which induces a rapid decrease of

a. Electric field

b. Magnetic field

c. Coercive field

d. None of the above

14. In Magnetic tape recorder, the reproduce head generates a signal which is

a. Proportional to the rate of change of flux

b. Proportional to the rate of change of electric field

c. Proportional to the rate of change of magnetic field

d. None of the above.

15. Treble sound is having frequency ranging between

a. 1,034 to 13,000 Hz

b. 2,048 to 16,384 Hz.

c. 2,038 to 15,688 Hz

d. 1,566 to 15,786 Hz.

16. The cathode of the tube comprises of a nickel cylinder whose ends are coated with

a. Barium oxide

b. Strontium oxide

c. Ferric oxide

d. Magnesium oxide

17. The inner surface of the cathode ray tube is provided with an extremely high voltage of around

a. 8KV

b. 10KV

c. 18KV

d. 25KV

18. NTSC uses a refresh rate of

a. 55 Hz

b. 40 Hz

c. 50 Hz

d. 60 Hz

19. SECAM uses

a. Frequency modulation

b. Amplitude modulation

c. Pulse modulation

d. None of the above.

20 Plasma display has very

a. Low contrast ration

b. High contrast ratio

c. Zero contrast ratio

d. None of the above.

B. Very Short Question 2*6=12

1. Explain the function of diaphragm in Microphone.
2. Define Phantom power in case of condenser microphone.
3. Explain the term Doppler distortion in Moving coil loudspeaker.
4. Define Impedance matching of a loudspeaker and also explain its importance.
5. Explain why Graphic equalizer is necessary in the Audio system.
6. Describe the function of Scanning and synchronizing circuit in the TV system.

C Short Question 4*7=28

1. Explain the working principle of the NTSC TV system in details.
2. Explain the working of recording head and playback head in the Magnetic tape recorder system. Also differentiate between two of them.

3. Explain why crossover network is necessary in the Audio system. Also define two different types of it.
4. Describe the main working function of RF tuner and common IF amplifier in Monochrome TV receiver.
4. Explain the main function of dielectric layer and phosphor coating in plasma cells in the working of Plasma display.
5. Explain in details about digital colour TV receiver system.
6. Differentiate between OLED and QLED in details.
7. Explain the monochrome TV transmitter system.

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