

No. of Printed Pages : 4  
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181052/171052/  
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**5th Sem / Eltx**

**Subject:- Audio Video Systems / Consumer Eltx**

Time : 3Hrs. M.M. : 100

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Microphone converts.

- a) Sound signals into electrical signals
- b) Electrical signals into sound signals
- c) Both (a) & (b)
- d) Neither (a) & (b)

Q.2 Sound waves with frequency 20Hz to 20KHz are termed as

- a) Inaudible sound      b) Infrasonic
- c) Ultrasonic            d) Audible sound

Q.3 Which modulation is used for carrying an audio Waveform in digital form.

- a) PCM                    b) ASK
- c) PSK                    d) FSK

Q.4 A high voltage represent a binary.

- a) 1                        b) 0
- c) both                    d) None of these

Q.5 The spacing between picture carrier & sound carrier frequency in TV is.

- a) 8 MHz
- b) 5.5 MHz
- c) 5 MHz
- d) None of these

Q.6 What is horizontal scanning frequency in hertz.

- a) 15,750 Hz
- b) 15,000 Hz
- c) 12,750 Hz
- d) None of above

Q.7 Optical range extends from.

- a) 0 nm to 10 mm
- b) 1nm to 1mm
- c) 5 nm to 5 mm
- d) None of the above

Q.8 Full form of JPEG is.

- a) Joint pressure expert group
- b) Joint picture expert group
- c) Joint pic expert Group
- d) Joint photographic expert group

Q.9 Which of the following is an example of lossless compression.

- a) JPEG
- b) MPEG
- c) BMP
- d) RLE (Run length Encoding)

Q.10 Which of the following displays has minimum power Consumption ?

- a) Fluorescent
- b) LED
- c) LCD
- d) Nixie Tubes

(1)

181052/171052/  
121052/031051

(2)

181052/171052/  
121052/031051

## **SECTION-B**

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Define flicker noise.
- Q.12 What is full form of Hi-Fi.
- Q.13 Define quantisation.
- Q.14 Expand EHT.
- Q.15 Frequency for picture If carrier is \_\_\_\_\_.
- Q.16 Expand NTSC.
- Q.17 Define Hue.
- Q.18 Define digital Video.
- Q.19 Write one application of JPEG.
- Q.20 Expand CCTV.

## **SECTION-C**

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Explain working principle of horn type loudspeaker.
- Q.22 Write short note on variable area method of optical recording.
- Q.23 Explain Condenser Microphone.
- Q.24 Give the advantages of digital system over analog system.

(3)

181052/171052/  
121052/031051

Q.25 Discuss the function of AGC.

Q.26 Explain why VSB transmission is used?

Q.27 What is negative modulation?

Q.28 Define frequency interleaving.

Q.29 State and explain Grassman's law.

Q.30 Explain colour triangle.

Q.31 What is the need of compression?

Q.32 Compare JPEG and MPEG.

Q.33 Write short note on H.261

Q.34 Give advantages of LCD television over CRT television.

Q.35 Mention different characteristics of LCD to characterize its quality.

## **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 What do you mean by Interlaced scanning? Explain why it is needed.
- Q.37 Explain the PAL colour TV system by giving its main features viz U & V signals, burst, colour sub carrier etc.
- Q.38 Draw and explain block diagram of LCD Television.

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(4)

181052/171052/  
121052/031051