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Roll No. /031051

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 In Grassman's law, the value of B is

- a) .11 b) .59
- c) .3 d) none of these

Q.2 In Tv, aspect ratio is

- a) 3:4 b) 4:3
- c) both d) none of these

Q.3 In composite Video Signal, the black-level is kept at

- a) 12.5% b) 72%
- c) both d) none of these

Q.4 In blanking pulse, Front Porch duration is

- a) 1.0 ms b) 2.0 ms
- c) 1.5 ms d) none of these

Q.5 In blanking pulse, Back Porch duration is

- a) 4.7 ms b) 5.8 ms
- c) 12 ms d) none of these

Q.6 In Indian tv system, retrace period is:

- a) 64 ms b) 52 ms
- c) 12 ms d) none of these

Q.7 In US tv system the no of lines is :

- a) 625 b) 525
- c) 819 d) none of these

Q.8 The white level in CVS is :

- a) 12.5% b) 75%
- c) both d) none of these

Q.9 Identity secondary color:

- a) red b) green
- c) cyan d) none of these

Q.10 To remove half-line discrepancy, what measure is taken:

- a) blanking pulses b) equalizing pulses
- c) both d) none of these

SECTION-B

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

- Q.11 Carbon microphone converts _____ energy to _____ energy.
- Q.12 db is unit of which energy ?
- Q.13 A loudspeaker converts _____ energy to _____ energy.
- Q.14 Name any one camera tube.
- Q.15 The no of lines in US tv system is _____.
- Q.16 Expand DTH _____.
- Q.17 Expand LED _____.
- Q.18 Expand LCD _____.
- Q.19 Expand DTT _____.
- Q.20 Expand CATV _____.

SECTION-C

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

- Q.21 Explain the working of carbon microphone.
- Q.22 Draw horizontal sync details showing all dimensions.
- Q.23 Give the equation for luminance in color tv system.
- Q.24 Explain the need of time compression.
- Q.25 Explain horizontal & vertical deflection current with neat diagrams.

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- Q.26 Explain vestigial sideband transmission with bandwidth diagram for Indian tv system:
a) monochrome tv b) color tv
- Q.27 Draw the vector diagrams of PAL B TV system with angles.
- Q.28 Explain optical sound recording with proper diagrams.
- Q.29 Clearly, explain the difference between LCD & LED tv systems.
- Q.30 Explain additive & subtractive mixing of colors R,G,B.
- Q.31 Explain the concept of color triangle.
- Q.32 Explain H.26x video formats.
- Q.33 Explain the below terms:
a) DTH b) DTT
- Q.34 Explain VOD in TV system.
- Q.35 Clearly, explain the need for compression in audio-video signals.

SECTION-D

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

- Q.36 Explain compatibility considerations in TV systems.
- Q.37 Explain PALtv receiver in detail.
- Q.38 Explain MPEG-x compression formats for video.

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