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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

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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.

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.