GOVERNMENT POLYTECHNIC CHAPRA

MORHOWRAH, BIHAR

DEPARTMENT OF ELECTRONICS ENGINEERING

DIPLOMA - 5TH SEMESTER - INTERNAL EXAMINATION – 2022

SUBJECT CODE: **1621505**

SUBJECT NAME: **TELEVISION ENGINEERING**

1. Explain scanning and types of scanning process with neat sketch and proper labeling.

2. Define Photoelectric effect. Explain its different types with diagram.

3. Write down the comparison between image orthicon, vidicon & plumbicon camera tube.

4. Draw the block diagram of T.V Transmitter and explain.

5. Draw the block diagram of T.V receiver and explain.

6. Write short notes on:

1. Contrast ratio
2. Basic principle of camera tube
3. Hue
4. Saturation

7. Explain with the help of suitable diagram about the elements of picture tube.

8. Write down the history of television.

9. Explain about the elements of Television system and broadcasting with the help of block diagram.

10. Why is the number of scanning line chosen 625?

11. Define the following: persistence of vision, flickering, aspect ratio, interlace ratio, contrast , contrast ratio.

12. State about kell factor.

13. What is the difference between monochrome tube and color tube.

14. Draw the diagram of electron multiplier and explain it.

15. Explain the working principle of image orthicon with the help of suitable diagram.

16. Explain the working principle of vidicon camera tube with the help of suitable diagram.

17. Explain the working principle of plumbicon with the help of suitable diagram.

18. Explain in detail about the composite video signal.

19. Explain with the help of suitable block diagram about the basic T.V transmission.

20. Brief about the propagation of Television system.

21. Why FM is preferred over AM for audio signal?

22. Why AM is preferred over FM for video signal?

23. Explain with the help of suitable block diagram about the basic T.V reception.

24. Explain about the classification of TV receiver.

25. Explain with the help of block diagram about the tuner.

26. What is the main function of tuner?

27. Explain with the help of diagram about the compatibility between monochrome picture tube and color picture tube.

28. Distinguish between additive mixing and subtractive mixing.

29. State the Three color theory in detail.

30. State the grassman’s law.

31. Define the term: luminance, hue, saturation.

32. Explain with the help of block diagram about the color television camera.

33. What is color signal generation?

34. What is gamma correction in color TV?

35. Differentiate between NTSC, PAL, and SECAM system.

36. Differentiate between monochrome and color signal.

37. Distinguish between electrostatic system and magnetic deflection system.

38. What is high mode power supply.

39. Write the principle of Remote control.

40. Explain about the remote control in detail with the help of block diagram.

41. Compare between wireless and wire remote control?

42. Explain the working principle of automatic brightness control circuit.

43. Explain the working principle of automatic gain control circuit.

44. What is booster amplifier and how a good booster can be helpful?

45. Write about CCTV with the help of diagram.

46. Write down the applications of CCTV camera?

47. Explain with the help of diagram about the cable television.

48. Briefly explain about the TV game.

49. What is the difference between radio and TV transmission?

50. What are the important characteristics of camera tube?

51. How we can troubleshoot color receiver.

52. How we can troubleshoot monochrome receiver.

53. Justify the choice of a rectangular frame with width to height ratio equal to 4/3 for television

transmission and reception.

The choice of aspect ratio = 4/3 is having some reasons**,**

54. How is the illusion of continuity is created in TV pictures.

55. Why the frame reception rate been chosen to be 25 and not 24 as in motion pictures?

56. Mention the major function of the camera tube.

57. Compare between number of scanning lines and frames of Indian and American Televisions.

58. Why is scanning necessary in television system?

59. Why is number of scanning lines in a frame always odd?

60. What do you understand by flicker?

61. What do you mean by interlaced scanning?