

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/  
COMMERCIAL PRACTICE - APRIL - 2022**

**TELEVISION ENGINEERING**

[Maximum marks: 100]

(Time: 3 Hours)

**PART – A**

(Maximum Marks: 10)

Marks

I. Answer all the questions in one or two sentences. Each question carries 2 marks

1. What is the principle of microphone and types?
2. Write down the comparison between NTSC, PAL and SECAM?
3. What do you meant by Additive mixing?
4. Compare different types of displays?
5. Write down the concept of DTV? (5 x 2 = 10)

**PART – B**

(Maximum Marks: 30)

II. Answer any *five* of the following questions. Each question carries 6 marks

1. With a neat sketch explain the principle of operation of ribbon microphone?
2. With a block diagram briefly explain the operation of CCD camera?
3. What are the different types of colour picture tube? With a neat sketch explain trinitron in detail?
4. With neat block diagram explain the operation of set top box?
5. Explain in detail about Hi-Fi Stereo System?
6. What is R-Y and B-Y signal? Explain the significance of selecting R-Y and B-Y signal?
7. Distinguish the different video compression techniques? (5 x 6 = 30)

**PART – C**

(Maximum Marks: 60)

(Answer one full question from each unit. Each full question carries 15 marks)

**UNIT – I**

III. (a) Draw and explain the working of a electro-dynamic loud speakers? (9)

(b) Explain in detail about PA system? (6)

**OR**

- IV. (a) Draw and explain the construction of condenser microphones? (7)  
(b) Briefly explain the concept of DOLBY system? (8)

**UNIT-II**

- V. (a) Briefly illustrate composite video signal? (9)  
(b) With a neat block diagram explain PAL decoder? (6)

**OR**

- VI. (a) With a neat sketch explain in detail about chromaticity diagram? (8)  
(b) Write short notes on fundamentals of colour TV? (7)

**UNIT-III**

- VII. (a) With a neat diagram explain digital TV transmitter? (10)  
(b) What are the hardware parts of DTV? (5)

**OR**

- VIII. (a) Explain MAC signal transmission? (7)  
(b) Explain video compression techniques? (8)

**UNIT-IV**

- IX. (a) Briefly explain digital TV satellite system? (10)  
(b) Explain about CATV system? (5)

**OR**

- X. (a) Explain about CAS? (5)  
(b) Compare LCD and LED display? (10)

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