TED (10) – 4049/5051

(REVISION — 2010)

Reg. No. .....

Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2018

AUDIO AND VIDEO SYSTEMS

[*Time* : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. What is timbre ?
2. What is the advantage of interlaced scanning ?
3. State the need of equalizing pulses.
4. What is the need of AGC circuit ?
5. Define luminance. (5 × 2 = 10)

PART — B

(Maximum marks : 30)

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

1. Give a brief account of the working principle of Dolby system.
2. Explain the need of dc and ac biasing in magnetic recording.
3. Explain the advantages and disadvantages of SMPS.
4. Explain the calculation of approximate bandwidth in 625 line system.
5. Explain the drawbacks of non - keyed AGC System.
6. Compare additive and subtractive mixing of colours.
7. What are the requirements for compatibility ? (5 × 6 = 30)

Marks

PART — C

(Maximum marks : 60)

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

UNIT — I

III Explain with block diagrams the recording of Compact Disc and play back. 15

OR

IV (a) Explain the construction and working principle of ribbon microphone. 8

(b) Explain sound synthesis with block diagram. 7

UNIT — II

V With a detailed block diagram, explain monochrome TV receiver. 15

OR

VI (a) Explain the composite video signal with diagram. 8

(b) With diagram, explain vestigial sideband transmission. 7

UNIT — III

VII (a) Explain sync separator with a block diagram. 7

(b) Explain the working of a typical transistor keyed AGC circuit. 8

OR

VIII (a) With a block diagram, explain sound signal separation in TV receiver. 8

(b) With circuit diagram, explain the working of electronic tuner. 7

UNIT — IV

IX (a) Explain PAL decoder with block diagram. 8

(b) Compare PAL and SECAM colour TV systems. 7

OR

X (a) Explain with figure the operation of PIL colour picture tube. 7

(b) Explain Digital TV receiver with block diagram. 8