



**HCV-003-027502**

Seat No. \_\_\_\_\_

**M. Sc. (ECI) (Sem. V) (CBCS) Examination**

**October / November - 2017**

**Advance Communication**

**Electronics : Paper - XVIII**

**Faculty Code : 003**

**Subject Code : 027502**

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

- Instructions :**
- (1) Attempt all questions.
  - (2) Make suitable diagram whenever necessary
  - (3) Figures to the right indicate full marks of questions.

- 1** Answer the following questions : (any seven out of ten) **14**
- (A) Calculate the bit rate for number of input are 24 and having 65 kb/s voice pcm is used for basic input.
  - (B) Give the properties of line coding..
  - (C) Define Hue and Luminance and saturation.
  - (D) Define Manchester line coding
  - (E) Define cross talk and Guard time.
  - (F) Explain Grassman's Law.
  - (G) Explain HDB3 line coding.
  - (H) Give disadvantages of TDM.
  - (I) Advantages of Digital Multiplexing.
  - (J) Explain High Density Bipolar Signalling.
- 2** Answer the following questions :
- (A) Explain bit rate and bandwidth efficiency of digital multiplexing. **5**
  - (B) Explain types TDM and FDM **5**

- (C) Compare Line coding and Source coding. 4
- OR**
- (C) Explain receiver path for PCM 4
- 3** Answer the following questions : 14
- (A) What do you mean by line coding and explain with its types?
- (B) Explain colour television with suitable block diagram.
- OR**
- 3** Write short notes on :
- (A) Companding 5
- (B) Additive mixing of primary colours. 5
- (C) Disadvantages of DM 4
- 4** Answer the following questions : 14
- (A) Encode the following binary data stream using all line coding :  
10110100101.
- (B) Explain PCM with required block diagram.
- 5** Answer the following : (any two out of four) 14
- (A) What is PAM/TDM system? Its principle and explain it with block diagram.
- (B) Give comparison between DM, ADM, PCM, DPCM.
- (C) Define quantizer, give its type and explain each.
- (D) What is digital multiplexer? Explain PCM/TDM system.
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