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T.Y.B. Sc. (Sem. VI) Examination March - 2025

Electronics - VII

(Advance Communication Systems)

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions

(૧)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.

Fill up strictly the details of signs on your answer book

Name of the Examination:

T.Y.B. Sc. (Sem. VI)

Name of the Subject :

Electronics - VII (Advance Communication Systems)

Subject Code No.: **2103000206020092**

Seat No.:

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Student's Signature

- (2) Figure on the right indicates full marks.
- (3) All symbols and abbreviations have their usual meaning.
- (4) Non-programmable calculators are allowed.
- (5) Q.1 is compulsory.
- (6) Assume data if necessary.

Q.1 Write Very Short Answers

[08]

1. What is noise? Explain quantization of noise
2. Define Critical Angle
3. Define companding in PCM
4. Give the full form of FDMA and CDMA

Q.2. A. Explain different type of Pulse Modulation in detail

[08]

B. Explain natural sampling and flat-top sampling

[06]

OR

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[1]

[P.T.O.]

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Q.2. A Define dynamic range. Prove that the dynamic range for each magnitude bit in a linear PCM code is 6dB. **[08]**

B Explain advantages and disadvantages of digital transmission **[06]**

Q.3. A Explain the advantages and disadvantages of geosynchronous satellites **[08]**

B Give the different classification of optical fibre **[06]**

OR

Q.3. A Explain single channel PCM transmission system using block diagram **[08]**

B Explain folded binary code in PCM, mid tread quantization and quantum **[06]**

Q.4. **Write Short Notes (ANY TWO)** **[14]**

1. Geosynchronous satellites
2. Splices and Couplers
3. TDMA
4. Sample and Hold