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Seat No.	
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[5559]-140

S.E. (II Semester) (Electronics/ETC) EXAMINATION, 2019

ANALOG COMMUNICATION

(2015 PATTERN)

Time : 2 Hours

Maximum Marks : 50

- N.B. :—**
- (i) Answer Q. No. 1 or 2, 3 or 4, 5 or 6, 7 or 8.
 - (ii) Neat diagrams must be drawn wherever necessary.
 - (iii) Figures to the right indicate full marks.
 - (iv) Your answers will be valued as a whole.
 - (v) Use of logarithmic tables side rule, Mollier charts, electronic pocket calculator and steam tables is allowed.
 - (vi) Assume suitable data, if necessary.

1. (a) What is base communication ? What are its limitations ? [6]
(b) Explain non-linear modulator for DSBSC generation. [6]

Or

2. (a) What are the tracking methods in AM superheterodyne receiver. [6]
(b) Explain the following terms : [6]
 - (i) Selectivity
 - (ii) Sensitivity
 - (iii) Fidelity
 - (iv) Image Frequency.

3. (a) Describe Armstrong method for FM generation. [6]
(b) Draw and explain FM stereo receiver. [6]

Or

4. (a) Explain Pre-emphasis and De-emphasis. [6]
(b) Justify ratio detector act as Detector as well as limiter. [6]

P.T.O.

5. (a) Explain different types of internal noise. [6]
(b) Derive expression for Friss formula for noise factor of amplifier in cascade. [7]

Or

6. (a) Explain the performance of SSBSC in presense of noise.[7]
(b) There resistors have values $R_1 = 10 \text{ k}\Omega$, $R_2 = 14 \text{ k}\Omega$ and $R_3 = 24 \text{ k}\Omega$. It is known that thermal noise voltage generated by R_1 is $0.3 \text{ }\mu\text{V}$. Assume $T = 27^\circ\text{C}$. Calculate thermal noise voltage generated by :
(i) the *three* resistors connected in series.
(ii) the *three* resistors connected in parallel. [6]
7. (a) Describe types of sampling with their merits and demerits.[7]
(b) Compare PAM, PWM and PPM with waveform. [6]

Or

8. (a) With the help of neat diagram, explain the transmitter and receiver of pulse code modulation. [7]
(b) What is meant by 'Aperture effect' ? How can it be reduced ? [6]