



NCF-003-1272004 Seat No. \_\_\_\_\_

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

**April / May - 2017**

**Amplifier & Oscillators : Paper - VIII**

**(New Course)**

**Faculty Code : 003**

**Subject Code : 1272004**

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

[Total Marks : 70

- Instructions :** (1) All questions carry equal marks.  
(2) Figures on right hand side indicate marks.

- 1 Answer the following : (Any Seven) 14**
- (1) Define Amplifier and Oscillator.
  - (2) What is stabilization in Transistor amplifier circuit?
  - (3) Draw transistor amplifier practical circuit.
  - (4) Define Amplifier gains: Current gain, Voltage gain, Power gain.
  - (5) What is meant by frequency response of an amplifier?
  - (6) What is decibel?
  - (7) Why do you cascade the amplifiers?
  - (8) What are the various coupling schemes used in cascaded amplifiers?
  - (9) What is meant by bandwidth?
  - (10) What is impedance matching in cascaded amplifiers?
- 2 Answer the Following : (Any Two) 14**
- (1) Write a note on Bias stabilization of transistor amplifier circuit. 7
  - (2) Write guidelines for design of transistor biasing circuits. 7
  - (3) Write a note on Diode compensation for variations in Base-Emitter voltage  $V_{BE}$ . 7

<b>3</b>	<b>Answer the Following :</b>	<b>14</b>
	(1) Write the advantages of negative feedback in amplifiers.	7
	(2) Write a note on $r'_e$ – Model of CE transistor amplifier.	7
<b>OR</b>		
<b>3</b>	<b>Answer the Following :</b>	<b>14</b>
	(1) Write about classification of amplifiers.	5
	(2) Write a note on distortion in amplifiers.	5
	(3) Explain voltage and current amplifier in brief.	4
<b>4</b>	<b>Answer the following :</b>	<b>14</b>
	(1) Draw the graph of frequency response of an amplifier and explain terms: Cutoff frequencies and Midband.	7
	(2) Write a note on crossover distortion in push-pull amplifier.	7
<b>5</b>	<b>Answer the following : (Any two)</b>	<b>14</b>
	(1) Draw and explain two-stage R-C coupled transistor amplifier.	7
	(2) Draw and explain transformer coupled CLASS-A power amplifier.	7
	(3) Draw and explain direct coupled transistor amplifier.	7
	(4) Write a note on Colpitt's Oscillator.	7

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