

LINEAR IC's & APPLICATIONS (Common to EC/TC/IT/BM/ML)

Written by Administrator
Friday, 06 November 2009 14:34 -

Sub Code

:

06EC46

IA Marks

:

25

Hrs/ Week

:

04

:

Exam Hours

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:

03

Total Hrs.

:

52

:

Exam Marks

:

100

PART - A

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UNIT 1:

Operational Amplifier Fundamentals: Basic Op-Amp circuit, Op-Amp parameters – Input and output voltage, CMRR and PSRR, offset voltages and currents, Input and output impedances, Slew rate and Frequency limitations; Op-Amps as DC Amplifiers- Biasing Op-Amps, Direct coupled -Voltage Followers, Non-inverting Amplifiers, Inverting amplifiers, Summing amplifiers, Difference amplifier. (Text 1: Chapter 1 – 1.2, Chapter 2 – 2.1, 2.2, 2.3, 2.4, 2.5, and Chapter 3 – 3.1, 3.2, 3.3, 3.4, 3.5, 3.6) □□□□□□□□□□□□□□□□□□□□

7 Hours

UNIT 2:

Op-Amps as AC Amplifiers: Capacitor coupled Voltage Follower, High input impedance - Capacitor coupled Voltage Follower, Capacitor coupled Non-inverting Amplifiers, High input impedance - Capacitor coupled Non-inverting Amplifiers, Capacitor coupled Inverting amplifiers, setting the upper cut-off frequency, Capacitor coupled Difference amplifier, Use of a single polarity power supply.

(Text 1: Chapter 4)

6 Hours

UNIT 3:

PHI/Pearson, 2004

2. **“Linear Integrated Circuits”**, D. Roy Choudhury and Shail B. Jain, 2nd edition, Reprint 2006, New Age International

REFERENCE BOOKS:

1. **“Op - Amps and Linear Integrated Circuits”**, Ramakant A. Gayakwad, 4th edition, PHI,

2. **“Operational Amplifiers and Linear Integrated Circuits”**, Robert. F. Coughlin & Fred.F. Driscoll, PHI/Pearson, 2006

3. **“Op - Amps and Linear Integrated Circuits”**, James M. Fiore, Thomson Learning, 2001

4. **“Design with Operational Amplifiers and Analog Integrated Circuits”**, Sergio Franco, TMH, 3e, 2005

Question Paper Pattern: Student should answer FIVE full questions out of 8 questions to be set each carrying 20 marks, **selecting at least TWO questions from each part**

Coverage in the Text books:

UNIT 1: (Text 1: Chapter 1 – 1.2, Chapter 2 – 2.1, 2.2, 2.3, 2.4, 2.5,

and Chapter 3 – 3.1, 3.2, 3.3, 3.4, 3.5, 3.6)

UNIT 2: Text 1: Chapter 4

UNIT 3: Text 1: (Text 1: Chapter 5 – 5.1, 5.2, 5.3, 5.5, 5.6, 5.9, 5.10)

UNIT 4: (Text 1: Chapter 6 – 6.1, 6.2, 6.4, 6.8, and Chapter 7 – 7.1, 7.2, 7.3)

UNIT 5: (Text 1: Chapter 7 – 7.4, 7.5, 7.6; Chapters 10 -10.1, 10.2, 10.3, 10.5;

Text 2: Sections 4.5, 4.8 and 4.9)

UNIT 6: Text 1: Chapter 9 – 9.2, 9.3, 9.5, 9.6; Chapter 11 – 11.2, 11.3, 11.4, 11.5

UNIT 7: Text 2: Chapter 6

UNIT 8: Text 2: Chapter 8 – 8.1, 8.2, 8.3, 8.4, 8.5; Chapter 9 – 9.1, 9.2, 9.3, 9.4;

Chapter 10 – 10. 1, 10.2, 10.3; Except 8.3.1, 8.4.1, 10.2.5, 10.4