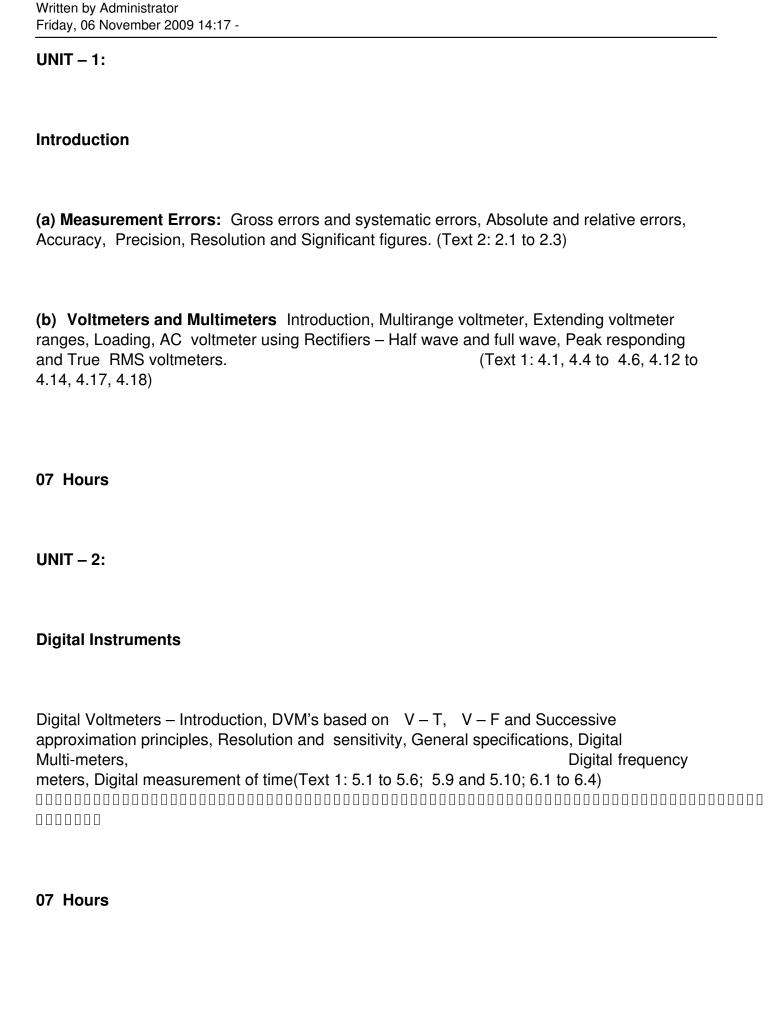
Written by Administrator

Friday, 06 November 2009 14:17 -
Sub Code
06IT35
IA Marks
25
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Exam Hours

Written by Administrator Friday, 06 November 2009 14:17 -
03
Total Hrs.
52
Exam Marks
100
PART – A



Written by Administrator Friday, 06 November 2009 14:17 -
UNIT – 3:
Oscilloscopes
Introduction, Basic principles, CRT features, Block diagram and working of each block, Typical
CRT connections, Dual beam and dual trace CROs, Electronic switch(Text 1: 7.1 to 7.9, 7.12, 7.14 to 7.16)
OC Haves
06 Hours
UNIT – 4:
Special Oscillosoppes
Special Oscilloscopes
Delayed time-base oscilloscopes, Analog storage, Sampling and Digital storage
oscilloscopes(Text 2: 10.1 to 10.4)
06 Hours

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PART – B
UNIT – 5:
Signal Generators
Introduction, Fixed and variable AF oscillator, Standard signal generator, Laboratory type signal generator, AF sine and Square wave generator, Function generator, Square and Pulse generator, Sweep frequency generator, Frequency synthesizer(Text 1: 8.1 to 8.9 and Text 2: 11.5, 11.6)
06 Hours
UNIT – 6:
Measurement of resistance, inductance and capacitance
Whetstone's bridge, Kelvin Bridge; AC bridges, Capacitance Comparison Bridge, Maxwell's bridge, Wein's bridge, Wagner's earth connection (Text 1: 11.1 to 11.3, 11.8, 11.9, 11.11, 11.14 and 11.15)
07 Hours

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UNIT – 7:
Transducers - I
Introduction, Electrical transducers, Selecting a transducer, Resistive transducer, Resistive position transducer, Strain gauges, Resistance thermometer, Thermistor, Inductive transducer, Differential output transducers and LVDT, (Text 1: 13.1 to 13.11)
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UNIT – 8:
Miscellaneous Topics

Written by Administrator Friday, 06 November 2009 14:17 -
(a) Transducers - II – Piezoelectric transducer, Photoelectric transducer, Photovoltaic
transducer, Semiconductor photo devices, Temperature transducers-RTD, Thermocouple (Text 1: 13.15 to 13.20)
(b) Display devices: Digital display system, classification of display, Display devices, LEDs, LCD displays(Text 1: 2.7 to 2.11)
(c) Bolometer and RF power measurement using Bolometer (Text 1: 20.1 to 20.9)
(d) Introduction to Signal conditioning(Text 1: 14.1)
06 Hours
TEXT BOOKS:
1. "Electronic Instrumentation", H. S. Kalsi, TMH, 2004

"Electronic Instrumentation and Measurements", David A Bell, PHI / Pearson

2.

Education, 2006.

**REFERENCE BOOKS:** 

Written by Administrator Friday, 06 November 2009 14:17 -

- 1. "Principles of measurement systems", John P. Beately, 3<sup>rd</sup> Edition, Pearson Education, 2000
- 2. "Modern electronic instrumentation and measuring techniques", Cooper D & A D Helfrick, PHI, 1998.
- 3. "Electronic and Electrical measurements and Instrumentation", J. B. Gupta, S. K. Kataria & Sons, Delhi
- 4. **Electronics & electrical measurements,** A K Sawhney, , Dhanpat Rai & sons, 9<sup>th</sup> edition.

**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 Texts:

**UNIT – 1: (a)** Text 2: 2.1 to 2.3; **(b)** Text 1: 4.1, 4.4 to 4.6, 4.12 to 4.14, 4.17, 4.18

**UNIT – 2:** Text 1:5.1 to 5.6; 5.9 and 5.10; 6.1 to 6.4

**UNIT – 3:** Text 1: 7.1 to 7.9, 7.12, 7.14 to 7.16

**UNIT - 4:** Text 2: 10.1 to 10.5

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**UNIT - 5:** Text 1: 8.1 to 8.9 and Text 2: 11.5, 11.6

**UNIT – 6:** Text 1: 11.1 to 11.3, 11.8, 11.9, 11.11, 11.14 and 11.15

**UNIT - 7:** Text 1: 13.1 to 13.11

**UNIT – 8:** (a) Text 1: 13.15 to 13.20.2 (b) Text 1: 2.7 to 2.12 (c) Text 1: 20.1 to 20.9, (d) Text 1: 14.1