

GOVERNMENT POLYTECHNIC, BARGARH

Department Of Electrical Engineering

Semester: 4th

Subject: EM&I

Branch: Electrical Engineering

Session: 2022-23(WINTER)

No of Period :75 (60L+15T)

Name of Faculty: Rashmita Gouda

| Period | Date | Topics to be covered |
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| 1 | 14.02.2023 | Chapter-1: Define Accuracy, precision, Errors, |
| 2 | 15.02.2023 | Resolutions Sensitivity and tolerance |
| 3 | 16.02.2023 | Classification of measuring instruments. |
| 4 | 18.02.2023 | Deflecting and controlling in indicating type of instruments. |
| 5 | 20.02.2023 | Tutorial class: Revision of previous taught topics (lecture no. 1-4) |
| 6 | 21.02.2023 | damping arrangements in indicating type of instrument, Calibration of instruments. |
| 7 | 22.02.2023 | Chapter-2: Describe Construction, principle of operation of PMMC Instrument |
| 8 | 23.02.2023 | Errors, ranges merits and demerits of PMMC Instrument |
| 9 | 25.02.2023 | Describe Construction, principle of operation of MI Instrument. |
| 10 | 27.02.2023 | Tutorial class: Revision of previous taught topics. (lecture no. 6-9) |
| 11 | 28.02.2023 | Errors, ranges merits and demerits of MI type Instrument |
| 12 | 01.03.2023 | Describe Construction, principle of operation of Dynamometer type Instrument |
| 13 | 02.03.2023 | Errors, ranges merits and demerits of Dynamometer type Instrument |
| 14 | 04.03.2023 | Describe Construction, principle of operation, errors, ranges merits and demerits of: Rectifier type instruments |
| 15 | 06.03.2023 | Tutorial class: Revision of previous taught topics. (lecture no. 11-14) |
| 16 | 09.03.2023 | Describe Construction, principle of operation of Induction type Instrument |
| 17 | 06.03.2023 | Errors, ranges merits and demerits of Induction type Instrument |
| 18 | 11.03.2023 | Extend the range of instruments by use of shunts and Multipliers. Solve numerical |
| 19 | 11.03.2023 (4.00-5.00 p.m.) Extra class) | Chapter-3: Describe Construction of Dynamometer type wattmeter |
| 20 | 13.03.2023 | Tutorial class: Revision of previous taught topics & solve numerical (lecture no. 16-19) |
| 21 | 14.03.2023 | Principle of working of Dynamometer type wattmeter |
| 22 | 15.03.2023 | LPF type Wattmeter |
| 23 | 16.03.2023 | The Errors in Dynamometer type wattmeter and methods of their correction |
| 24 | 18.03.2023 | Induction type watt meters |
| 25 | 20.03.2023 | Tutorial class: Revision of previous taught topics (lecture no. 21-25) |
| 26 | 21.03.2023 | Chapter-4: Introduction Single Phase Induction type Energy meters- construction, |
| 27 | 22.03.2023 | Single Phase Induction type Energy meters- working principle |
| 28 | 23.03.2023 | Compensation & adjustments |
| 29 | 25.03.2023 | Testing of Energy Meters |
| 30 | 25.03.2023 (4.00-5.00 p.m.) | Tutorial class: Revision of previous taught topics (lecture no. 26-29) |

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| | Extra class | |
| 31 | 27.03.2023 | Chapter-5: MEASUREMENT OF SPEED, FREQUENCY AND POWER FACTOR: Tachometer, types and working principles |
| 32 | 28.03.2023 | Principle of operation of Mechanical Type frequency meters |
| 33 | 29.03.2023 | Construction of Mechanical Type frequency meters |
| 34 | 03.04.2023 | Principle of operation and construction of Electrical Type frequency meters |
| 35 | 04.04.2023 | Tutorial class: Revision of previous taught topics (lecture no. 31-34) |
| 36 | 05.04.2023 | Principle of operation of Dynamometer type single phase power factor meters. |
| 37 | 06.04.2023 | working of Dynamometer type single phase power factor meters. |
| 38 | 08.04.2023 | Three phase power factor meters |
| 39 | 08.04.2023 (4.00-5.00 p.m.) Extra Class | Chapter-6: Classification of resistance. Measurement of low resistance by potentiometer method |
| 40 | 10.04.2023 | Tutorial class: Revision of previous taught topics (lecture no. 36-39) |
| 41 | 11.04.2023 | Measurement of medium resistance by wheat Stone bridge method |
| 42 | 12.04.2023 | Measurement of high resistance by loss of charge method. |
| 43 | 13.04.2023 | Earth tester, Construction, principle of operations of Megger |
| 44 | 15.04.2023 | Construction and principles of Analog Multimeter. |
| 45 | 15.04.2023 (4.00-5.00 p.m.) Extra Class | Tutorial class: Revision of previous taught topics (lecture no. 41-44) |
| 46 | 17.04.2023 | Construction and principles of Digital Multimeter. |
| 47 | 18.04.2023 | Measurement of inductance by Maxwell's Bridge method. |
| 48 | 19.04.2023 | Measurement of capacitance by Schering Bridge method |
| 49 | 20.04.2023 | Chapter-7: Define Transducer, sensing element, Classify transducer. Give examples of various class of transducer. |
| 50 | 22.04.2023 | Tutorial class: Revision of previous taught topics (lecture no. 46-49) |
| 51 | 24.04.2023 | Resistive transducer - Linear and angular motion potentiometer. |
| 52 | 25.04.2023 | Thermistor, Resistance thermometers. |
| 53 | 26.04.2023 | Wire Resistance Strain Gauges |
| 54 | 27.04.2023 | Inductive Transducer - Principle of linear variable differential Transformer (LVDT) & Uses of LVDT. |
| 55 | 29.04.2023 | Tutorial class: Revision of previous taught topics (lecture no. 51-54) |
| 56 | 29.04.2023 (4.00-5.00 p.m.) Extra Class | Variable area capacitive transducer. |
| 57 | 01.05.2023 | Change in distance between plate capacitive transducer. |
| 58 | 02.05.2023 | Piezo electric Transducer |
| 59 | 03.05.2023 | Hall Effect Transducer with their applications. |
| 60 | 04.05.2023 | Tutorial class: Revision of previous taught topics (lecture no. 56-59) |
| 61 | 06.05.2023 | Chapter-8: OSCILLOSCOPE : Principle of operation of Cathode Ray Tube |
| 62 | 06.05.2023 (4.00-5.00 p.m.) Extra Class | Principle of operation of Oscilloscope (with help of block diagram). |
| 63 | 08.05.2023 | Measurement of DC Voltage & current |
| 64 | 09.05.2023 | Measurement of AC Voltage, current, |
| 65 | 10.05.2023 | Tutorial class: Revision of previous taught topics (lecture no. 61-64) |

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| 66 | 11.05.2023 | Phase measurement |
| 67 | 13.05.2023 | Frequency measurement |
| 68 | 13.05.2023 (4.00-5.00 p.m.) Extra class | Tutorial class: Revision of chapter – 1 & Previous year question discussion |
| 69 | 15.05.2023 | Revision of chapter – 2 & Previous year question discussion. |
| 70 | 16.05.2023 | Revision of chapter – 3 & Previous year question discussion. |
| 71 | 17.05.2023 | Revision of chapter – 4 & Previous year question discussion. |
| 72 | 18.05.2023 | Revision of chapter – 5 & Previous year question discussion. |
| 73 | 20.05.2023 | Revision of chapter – 6 & Previous year question discussion. |
| 74 | 22.05.2023 | Revision of chapter – 7 & Previous year question discussion. |
| 75 | 23.05.2023 | Revision of chapter – 8 & Previous year question discussion. |


Signature Of Faculty


Signature of HOD