

Roll No.

OLE-3043
B. Tech. 3rd Semester (EE)
Examination – April, 2021

MEASUREMENT AND INSTRUMENTATION

Paper : PCC-EE-210-G

Time : Three Hours]

[Maximum Marks : 75

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all. Q. No. 1 is *compulsory*. Attempt *four* more question from the sections A, B, C & D by Selecting at least *one* question from each Section.

1. (i) What do you mean by Absolute standards.

$2.5 \times 6 = 15$

(ii) What is indicating instrument ?

(iii) What is creep in energy meter ?

(iv) Write down Limitations of Wheatstone bridge.

(v) What do you mean by earthing ?

(vi) What is Meggar ?

SECTION – A

2. Draw and explain the block diagram of Generalized Instruments in detail. 15

OR

3. Explain Basic schemes for the measurement of displacement with transducers in detail. 15

SECTION – B

4. What is difference between Absolute and Secondary Instruments? Based upon Principle of operation, Explain Recording & Integrating instruments in detail. 15

OR

5. Explain the working principle of Moving iron type and Moving Coil type instruments. Draw the circuit diagram of Induction type instruments working as Ammeter & Voltmeter both. 15

SECTION – C

6. Explain Construction, operating principle, Torque equation, Shape of scale, Errors, Advantages & Disadvantages of Electrodynamic Wattmeter. 15

OR

7. Explain the Construction, operation, principle, torque equation and errors of Single phase power factor meters. 15

SECTION – D

8. What is loss of charge method? Explain the Measurement of high resistance by direct deflection method 15

OR

9. Derive General balance equation of AC bridges. Draw and explain the Circuit diagram, phasor diagram, advantages & disadvantages of Anderson Bridge. 15
