

**B.Tech. – VIEP – ELECTRICAL ENGINEERING
(BTCLVI)**

00275

Term-End Examination

December, 2016

**BIEE-007(S) : ELECTRICAL MEASUREMENTS AND
MEASURING INSTRUMENTS**

Time : 3 hours

Maximum Marks : 70

***Note :** Attempt any **seven** questions. All questions carry equal marks. Use of scientific calculator is allowed.*

1. Explain the constructional features and working of a moving coil instrument with the help of a neat diagram. 10
2. What are the various methods of extension of range of ammeters and voltmeters ? Explain any two methods in brief. 10
3. What is earth resistance ? With the help of a neat diagram, explain how earth resistance is measured with the help of earth tester. 10
4. What do you mean by wattmeter constant ? Explain the measurement of power with the help of a dynamometer type wattmeter with suitable diagram. 10

5. Draw the circuit of wheatstone bridge and derive the condition of balance. What is the condition for maximum sensitivity of wheatstone bridge ? 10
6. Name the various AC bridges used for the measurement of inductance and capacitance. Briefly explain any one bridge with the help of a circuit diagram to measure the capacitance. 10
7. State and explain the laws of illumination. Define lux and lumen. 10
8. With the help of a neat diagram, explain the construction and working of a dual beam CRO. 10
9. Write short notes on any *two* of the following : $2 \times 5 = 10$
- (a) Tri Vector Meter
 - (b) Absolute and Working Standard
 - (c) Ballistic Galvanometer
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