* 4218 *

C14–AEI–305

# 4218

## BOARD DIPLOMA EXAMINATION, (C–14)

## OCT/NOV—2015

## DAEI—THIRD SEMESTER EXAMINATION

ELECTRONIC MEASURING INSTRUMENTS

*Time* : 3 hours ] [ *Total Marks* : 80

**PART—A** 3×10=30

***Instructions*** : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

**1.** List the types of analog instruments.

**2.** Draw the circuit diagram of differential voltmeter.

**3.** What is a Megger?

**4.** List the different types of digital voltmeters.

**5.** List any three specifications of digital multimeter.

**6.** State the use of CRO for voltage measurement.

**7.** Write the expression for deflection sensitivity of a CRT.

**8.** List the conditions for stationary waveforms in a CRO.

**9.** List any three applications of audio-frequency oscillator.

**10.** State the necessity of plotters.

## PART—B

10×5=50

***Instructions*** : (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

**11.** Explain the working of PMMC instrument with necessary circuit diagram.

**12.** Explain the resistance measurement using Wheatstone bridge.

**13.** Explain the working of digital LCR meter with the help of a block diagram.

**14.** *(a)* List any five advantages of digital instruments over analog instruments. 5

*(b)* List any five specifications of digital CLR meter. 5

**15.** *(a)* List any five front panel controls of CRO. 5

*(b)* Explain the procedure for measurement of frequency of CRO. 5

**16.** Explain the following sections in CRO : 4+3+3=10

*(a)* Vertical deflection system

*(b)* Delay line

*(c)* Horizontal deflection system

**17.** Explain the working of RF signal generator with the help of block diagram.

**18.** Explain the working of logic analyzer with block diagram.

★ ★ ★