

LAGOS CITY POLYTECHNIC, IKEJA
SCHOOL OF ENGINEERING AND APPLIED SCIENCE
DEPARTMENT OF ELECT/ELECT COMPUTER ENGINEERING
2015/2016 SEMESTER EXAMINATION

COURSE	TITLE:	ELECTRICAL	MEASUREMENT
		AND INSTRUMENTATION I	NO OF QUESTION: 6
	COURSE CODE: EEC 126/128		TIME: ALLOWED:
2HRS			
FOR WHOM:	ND YR 1	CE, EE	PT
			INSTRUCTIONS:

Answer

any

- 4 Questions**
1. (a) Explain TEN(10) types of Electrical and Electronic Measuring Instruments.
 (b) Differentiate between Analogue and Digital Instrument
 (c) With the aid of a diagram explain the construction of a dynamometer wattmeter.

 2. (a) Explain the following:
 (i) Deflection torque (ii) Controlling torque (iii) Damping torque
 (b) (i) The following values were recorded from an experiment
 Voltmeter Reading 240V
 Ammeter Reading 70MA
 Power factor
 (ii) Determines the wattmeter reading.

 3. (a) With the aid of a diagram, Explain the term Wheat Stone Bridge
 (b) Z_1 for an Ac bridge the impedance are $Z_2 = 100\Omega$ and $Z_3 = 200\Omega$, $Z_4 = 400\Omega$.
 What is the value of Z_1 at balance.

 4. (a) Draw a block diagram of a digital frequency meter
 (b) Explain the term Potentrometer
 (c) Draw and label cathode Ray Tube

 5. (a) State three common types of error and explain.
 (b) Explain a voltmeter and Ammeter, with the aid of a diagram, show how they can be used to measure the current and voltage of a load.

 6. (a) In a tabular form, state the differences among Moving coil, moving iron and moving coil rectifier instrument.
 (b) A dynamometer voltmeter with its voltage coil connected across the load side of the instrument reads 250w. If the load voltage is 400v and the voltage coil branch has a resistance of 2000 Ω . Draw the circuit and calculate the power taken by the load.