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**JAYA GROUP OF INSTITUTIONS – THIRUNINRAVUR.**

**6<sup>TH</sup> SEMESTER – B.E .**

**INTERNAL ASSESSMENT - III (MODEL EXAMINATION - III)**

Sub. Name: **MEASUREMENTS AND INSTRUMENTATION**

Date: **10/04/2015**

Sub. Code: **EC2351**

Branch: **ECE**

Duration: **180 Minutes**

Max.Marks:**100**

**PART – A (10X2=20) Answer all questions**

1. What are the applications of dynamic characteristic of instrument?
2. Write the basic principle of multimeter.
3. What is the application of delayed time base oscilloscope?
4. Define true rms voltmeter.
5. Define pulse time and fall time.
6. Define Settling time.
7. What is automatic zeroing?
8. Mention the types of DVM.
9. Define data loggers.
10. What is the applications of optical time domain reflectometer?

**PART – B (5X16=80) Answer the questions as per the choice**

11. a) i. What are the various errors in measurements and explain them? (6)
- ii. Draw the basic construction of permanent magnet moving coil instrument and explain its working. Derive its torque expression. (10)
- OR
- b) Explain in detail about Maxwell's bridge and Schering bridge. (16)
12. a) With a neat block diagram and explain the function of Digital storage oscilloscope. (16)
- OR
- b) Discuss about the RF voltages and power measurements. (16)

13. a ) Explain about the function of spectrum analyzer and digital spectrum analyzer? (16)

OR

b) With a neat block diagram and explain the function of Frequency synthesizer and its types. (16)

14.a) Explain about the measurement of frequency and time interval with frequency range. (16)

OR

b) Explain the operation of the following DVM

1. Ramp type. (8)

2. Successive approximation type . (8)

15. a) Explain the elements of digital data acquisition system and their function. (16)

OR

b) Draw the functional block diagram and explain the fiber optic measurements for power and system loss. (16)

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