Reg. No. : | | | | | | | | | | |

Question Paper Code: 31453

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

Fifth Semester

Electronics and Communication Engineering

01UEC503 – ELECTRONIC MEASUREMENTS AND INSTRUMENTATION

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Compare moving coil and moving iron meters.
2. State the advantages of moving iron type instruments.
3. List the applications Q meter.
4. What is the difference between analog and digital storage oscilloscope?
5. Write a short note on sweep generators.
6. What is meant by wave analyzer?
7. How will you categorize the digital voltmeter?
8. What is meant by automatic zeroing?
9. Point out the analog elements used in digital data acquisition system.
10. How the transducers are classified on the basis of principle of operation?

PART - B (5 x 16 = 80 Marks)

11. (a) Suggest suitable bridges to measure the following parameters and explain (i) unknown capacitance (ii) unknown inductance. (16)

Or

(b) Explain the static and dynamic characteristics of a measurement system. (16)

12. (a) Explain in detail about cathode ray oscilloscope and its operation. (16)

Or

(b) (i) How RF power and voltage are measured? Explain in detail. (8)

(ii) Discuss the working principle of sampling oscilloscope. (8)

13. (a) Explain in detail about sweep generators. (16)

Or

(b) Give a detailed account of spectrum analyzers. (16)

14. (a) Explain any two types of digital voltmeter. (16)

Or

(b) What is automation in digital instruments? Explain in detail. (16)

15. (a) Explain the generalized diagram of a digital data acquisition system and give the uses of data acquisition system. (16)

Or

(b) Build a computer based spectrum analyzer using IEEE 488 bus and explain. (16)