IH Used Paper BTECH-28-10-20

Code No: 135CD **R16**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, October - 2020
ELECTRONIC MEASUREMENTS AND INSTRUMENTATION
(Common to EEE, ECE, CSE)

Time: 2 hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks
- - -

1.a) Draw the circuit for D.C current meter and explain its working.
b) What are the different types of errors found in a measurement? Explain all. [7+8]

2. Draw the circuit of an electronic multimeter and explain how DC and AC currents, Voltages and resistance are measured. [15]

3. Draw the block diagram of an RF spectrum analyzer and explain its working and also write its applications. [15]

4.a) Determine the dynamic range of a spectrum analyzer with a third-order intercept point of +40 dBm and noise level of -100 dBm.
b) How is broad band sweep frequencies generated using a sweep generator. [8+7]

5.a) Compare and contrast between analog and digital storage CROs.
b) Discuss the screen of a CRT and factors affecting the brightness of the display. [7+8]

6.a) Briefly discuss the procedure for making amplitude and time measurements on an oscilloscope.
b) Explain with neat sketches the time base generator in the CRO. [8+7]

7.a) How are passive transducers classified? Explain the principle of those transducers briefly.
b) With the help of a neat sketch explain working principle and applications of LVDTs. [8+7]

8.a) What are the significance of bridge circuit measurements over direct meter measurements?
b) Write a short note on the principle of Wheat stone Bridge. Give its limitations. [8+7]

---ooOoo---