

ESE/RETEST EXAMINATION
ELECTRONIC TEST & MEASUREMENTS(OLD)
(ET-402)
MAX MARKS: 70
TIME: 3Hrs

Part-A

Q1. Choose correct answer from the choices

1x10=10

i) Principally CRO is a

- a) Ammeter
- b) Voltmeter
- c) Wattmeter
- d) Watt-hour meter

ii) Digital multimeter is used for measuring

- a) a.c. voltage and resistance
- b) a.c. current and voltage
- c) d.c. current and resistance
- d) a.c. and d.c. current, voltage and resistance

iii) The horizontal plates of a CRO are supplied with to observe the waveform of signal.

- a) Sinusoidal wave
- b) Cosine wave
- c) Square wave
- d) None of the above

iv) A CRO is used to measure

- a) Voltage
- b) Frequency
- c) Phase
- d) All of above

v) In a CRO the X plates are oriented

- a) horizontally
- b) vertically
- c) at an angle of 20° of horizontal
- d) at an angle of 70° of horizontal

vi) The most common output of function generator is/are

- a) Sine waves
- b) Triangular waves
- c) Square waves
- d) all of the above

vii) Wave analyzers have very important applications in the following fields:

- a) Electrical measurements
- b) Sound measurements and



- c) Vibration measurements.
- d) All of the above

viii) Spectrum analyzer is used to measure

- a) frequency
- b) loss angle of a dielectric
- c) insulating resistance
- d) harmonics

ix) Bolometer is used to measure which of the following ?

- a) Frequency
- b) power of incident electromagnetic radiation
- c) Velocity
- d) Wavelength

x). A data acquisition system _____

- a) used for data processing, conversion and transmission
- b) accepts data as an input
- c) removes noise
- d) boosts the signal

Q2. Fill in the blanks

1x5=5

- i) The full form of CRT is _____.
- ii) Sweep generator is a _____ base generator circuit
- iii) In function generator, the output waveform of integrator is _____.
- iv) The full range of audibility in audio frequency oscillator is 0Hz to _____ KHz
- v). _____ is used for low Microwave power measurements.

Q3. Write True or False

1x5=5

- i) Multimeter can be used only for low resistance measurement..
- ii) Transducer is not used to convert a physical quantity into an electrical signal
- iii) CRO is generally an x-y plotter.
- iv) A digital voltmeter reduces parallax error.
- v) Heterodyne Wave Analyzer works on the principle of mixing.

Q4. Match part A with B

1x5=5

- A**
- a) Heart of CRO
 - b) Sweep generator
 - c) Spectrum analyzer
 - d) Distortion analyzer
 - e) Attenuator

- B**
- i) displays the amplitudes of an input
 - ii) measures the total harmonic power present in the test wave
 - iii) CRT
 - iv) modifies the amplitude of the input signal.
 - v) is a time base generator



PART B

- Q5. What is a cathode ray oscilloscope (CRO)? 2
- Q6. List three advantages of digital multimeter. 2
- Q7. What is aquadag? 2
- Q8. What is a Lissajous pattern? 2
- Q9. What is EMM? 2
- Q10. Name 5 CRO front panel controls.. 5
- Q11. Draw a neat diagram of CRT and label it. 5
- Q13. What is IEEE bus interface? Draw a neat diagram of IEEE bus interface. 5
- (Answer any two questions from below)**
- Q14. Describe the working principle of any one type of electronic multimeter. 10
- Q15. Explain working of function generator with block diagram. 10
- Q16. Describe in brief the working of harmonic analyzer with block diagram. 10
- Q17. Write the components of data acquisition system and explain any three components. 10

