

M.Sc. (Part—I) Semester—I (C.B.C.S. Scheme) Examination
ELECTRONICS

1-ELE-2 : Instrumentation and Measurement Techniques

Time : Three Hours]

[Maximum Marks : 80

Note :— All questions are compulsory and carry equal marks.

EITHER

- | | | |
|--------|---|---|
| 1. (a) | Explain dot-matrix impact and non-impact printers. | 6 |
| (b) | Explain construction and working of LED. | 4 |
| (c) | List various display devices and give details of any one of them. | 6 |

OR

- | | | |
|-----|---|---|
| (p) | Explain working of touch screen. | 6 |
| (q) | Describe construction and working of LCD. | 6 |
| (r) | Explain what is printer character set. | 4 |

EITHER

- | | | |
|--------|---|---|
| 2. (a) | Draw and explain digital frequency meter. | 8 |
| (b) | Draw and explain digital phase meter. | 8 |

OR

- | | | |
|-----|---|---|
| (p) | Explain microprocessor based instrumentation system. | 8 |
| (q) | Explain (with principle) the digital capacitance meter. | 8 |

EITHER

- | | | |
|--------|--|---|
| 3. (a) | List the uses of CRO and explain the working of CRT with internal structure. | 8 |
| (b) | Draw and explain the block diagram of spectrum analyzer. | 8 |

OR

- | | | |
|-----|--|---|
| (p) | Draw and explain the ramp type digital voltmeter. | 8 |
| (q) | Give the detailed explanation of signal generator. | 8 |

EITHER

- | | | |
|--------|--|---|
| 4. (a) | Draw and explain the block diagram of signal conditioning. | 8 |
| (b) | Describe temperature transducers. | 8 |

OR

- | | | |
|-----|--|---|
| (p) | Explain strain gauge as mechanical transducer. | 8 |
| (q) | Describe LVDT in detail. | 8 |

EITHER

- | | | |
|--------|--|---|
| 5. (a) | Explain the measurement of non-linear distortion using any one method. | 8 |
| (b) | Draw and explain cavity wave meter. | 8 |

OR

- | | | |
|-----|---|---|
| (p) | How the frequency response is measured in audio amplifier ? | 8 |
| (q) | Explain amplitude modulation and its measurement using CRO. | 8 |

