

S. E. sem IV CRY Electronics M/J-2013

Sub :- EE M I 4 M.

05/06/13

1st Half-13-Mina - (d)-47

Con. 6672-13.

GS-7434

(3 Hours)

[Total Marks : 100

- N. B. :** (1) Question No. 1 is compulsory.
(2) Attempt any **four** questions out of the **remaining** questions.
(3) **Figures to right** indicates **full marks**.
(4) Assume **suitable** data wherever **required**.

1. Answer any **four** of the following :—

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| (a) How CRO is applicable for component testing ? Justify. | 5 |
| (b) What is Lissajous pattern ? How measurement of frequency can be done it with ? | 5 |
| (c) How power factor meter works ? | 5 |
| (d) What is back emf voltage equation ? | 5 |
| (e) What is hybrid stepper motor ? | 5 |
2. (a) What is dual trace, multi-trace, dual beam and sampling storage oscilloscope ? 10
(b) With the neat diagram and waveform explain the working of phase meter using Flip-Flop. 10
3. (a) What are the Essentials of indicating instrument ? Explain it in details. 10
(b) Explain the measurement of inductance by Maxwell's Hay's method. 10
4. (a) List various types of DVMS and explain in detail. 10
(b) What are the Requirements of a good laboratory type signal generator ? Explain A.F. signal generator. 10
5. (a) Explain construction and working principle of stepper motor. 10
(b) Explain Kelvin's double bridge. 10
6. (a) List various methods of analog to digital and digital to analog conversion and explain any one in detail. 10
(b) What is beat Frequency oscillator and explain its advantages. 10
7. (a) Describe the panel layout of CRO. 10
(b) How to Measure medium, low and high resistance ? 10
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