

13/6/2011

S.E. ETRX TV (Rev)
Electronic + Electrical Measuring
Instruments + Machine
RK-1857 RK-1875

Con. 3508-11.

(3 Hours)

[Total Marks : 100

- N.B. : (1) Question No. 1 is **compulsory**.
(2) Attempt any **four** questions from the remaining **six** questions.
(3) Assume **suitable** data if **necessary**.
(4) **Figures** to the **right** indicate marks.

- 1.A) Compare 'true rms meter' and 'average responding meter'. 05
B) Why Kelvin's double bridge is superior to wheatstone's bridge in low resistance measurement. 05
C) Explain significance of back emf in D.C. motors. 05
D) Explain gear wheel method used for frequency measurement. 05
2. A) What are the different methods of converting analog to digital signal? Explain successive approximation type ADC. 10
B) Explain various performance parameters of digital voltmeters. 10
3. A) Explain construction and working of digital frequency meter with the help of neat labeled diagram. 10
B) Write a short note on component testing using CRO. 10
- 4.A) Explain requirements of a good laboratory type of signal generator. 10
B) Explain measurement of capacitance using Schering Bridge with the help of vector diagram 10
- 5 A) Explain the need of starter for induction motors. What are the various types of starters used for induction motors? Explain any one in details. 10
B) Draw and explain front panel of dual trace oscilloscope. 10
6. A) State the various types of stepper motors. Explain hybrid stepper motor in details. 10
B) Derive torque equation for moving iron meters. 10
7. Write a short note on (any three). 20
- A) megger.
B) Speed control of dc series motors.
C) Ohmmeter.
D) Weston type frequency meter.