Sem-IV | INST | ETI | CBGS / 25-05-16 Electrical Technology & Instrument Q.P. Code: 551302 Total Marks: 80 Note: 1) Question no 1 is compulsory 2) Solve any Three questions from remaining questions 3) Assume suitable data if required and mentioned it 4) Figure to the right indicates full marks 0.1 Solve the following a) Explain the types of DC motor b) Explain the use of slip rings and brush assembly. c) State the advantages of bridge circuits for the measurement of RLC. d) What is sensitivity of voltmeters? Explain. a) A 230V, d.c. Shunt motor takes a no load current of 3A and runs at 1100 r.p.no. 10 Q.2 If the full load current is 41A, find the speed on Full load. Assume armature resistance as 0.25Ω and that of shunt field winding as 230 Ω . b) Explain the Torque slip characteristics of 3 Φ induction motor. 10 0.3 a) Explain series and shunt type of ohm meter 10 b) A bridge is shown in the figure. Calculate the current through Galvanometer. 10 where Rg = 300 Ω 20KΩ J'4KQ Q. 4) a) Explain how rotating magnetic field is produced in 3 Φ induction motor 10 b) Describe how the Q-meter is used for the measurement of the following: 10 i) Large value capacitor ii) High value Resistor iii) Self capacitance of a coil. Q(5) a) A(3 Φ, 4 pole, 50Hz induction motor has a star connected rotor. The voltage 10 across each phase of the rotor at standstill is 121 V. The rotor resistance is 0.3Ω and standstill reactance is 0.8 Ω per phase. If in the running condition rotor current per phase is 15A, calculate the speed at which it is running. b) Explain the various performance parameters of digital voltmeters. 10 Write short notes on (any two) 20

b) Explain the various performance

Write short notes on (any two 1) Star Delta Starter

2) Megger

3) Any one type of ADC