BE **Semester-VIII (Electrical) Question Bank**

Commissioning of Electrical Equipment

All questions carry equal marks (10 marks)

Q.1	Differentiate between type and routine test. Explain any two routine test of Power transformer with necessary circuit diagram.
Q.2	Explain the Troubleshooting and Maintenance of induction motor.
Q.3	Explain the significance of Polarization Index Number. Explain drying out procedure of Power Transformer.
Q.4	Explain Mechanical Endurance and Impulse testing of Circuit breakers.
Q.5	Explain Vibration and Noise measurement of synchronous machines.
Q.6	Explain the properties of Transformer oil. Explain Dielectric test of transformer oil.
Q.7	Explain voltage drop and bar to bar test of DC machines.
Q.8	Explain the different methods of slip measurement of Induction Motor.
Q.9	Explain variation of voltage and frequency on performance of Induction motor.
Q.10	Explain Hopkinson's Test of D.C.Machines.
Q.11	Explain measurement of DC and AC Resistance of Armature and Field winding of synchronous machines.
Q.12	Explain Murray loop test of cable.
Q.13	Explain the different methods of earth resistance measurement
Q.14	List out the necessary conditions of Synchronization. Draw the circuit diagram of synchronization of alternator with grid.
Q.15	Explain the Phase group of Power Transformer with necessary vector and winding diagram.
Q.16	Explain charging current making and breaking test of isolator.
Q.17	Explain degree of protection (IP Grade) of Induction Motor.
Q.18	What are different types of tests performed on electrical equipment? Explain them briefly.
Q.19	What is polarization Index? What is the importance of it? Explain briefly.
Q.20	How the D.C/A.C resistance, insulation resistance and block rotor test can be performed on three phase induction motor?
Q.21	What is the significance of partial discharge measurement and Tan Delta test in case of transformer?
Q.22	Explain the following test regarding circuit breaker 1) Mechanical endurance test 2) Measurement of breaker time 3) Impulse testing.
Q.23	How can we find Dy1 & Dy11 connection in the case of transformer?
Q.24	How can you find out the polarity test in case of three phase power transformer and what is the significance of it? Can we connect Dy1 & Dy11 transformer in parallel? Give your reason.
Q.25	What is the working of ELCB? What are the different tests performed on it?
Q.26	Explain with the help of circuit diagram the partial discharge test of transformer.
Q.27	For the following conditions explain in detail troubles, causes and its remedies for synchronous of motor. i) Motor fails to start ii) Motor fails to synchronize iii) motor starts but fail to come up to full speed

Q.28	A 3 phase, 6900/415 volt step down transformer having terminals A1, B1, C1 on primary side and having terminal A2, B2, C2 on secondary side and N indicate the neutral terminal on primary side. Now A1 and A2 are short circuited and by applying 3- phase supply of 435 V on primary the following reading was obtained A 1, B1=435V B1, B2=415 C1, B2=440 A1, N=250 B1, C1=435V B1, C2=415 A1, C2= 25 C1, A1=435V C1, C2=420 C2, N=225 Then with the help of phasor diagram find the vector group of Transformer.
Q.29	List out the various test performed on the synchronous machine. Explain any two tests with necessary circuit diagram and also explain its significance.
Q.30	State the causes for vibration in motors and generators. Explain the harmful effects of vibration. How are the vibration measured.
Q.31	What is polarization index? How can you measure the slip of induction motor?
Q.32	Explain the procedure of alignment of shaft of electrical machines
Q.33	In an industry main motor of 300 KW slip ring induction motor was burnt. An other motor of same size and rating was tested in workshop and found its meggar value of 0.5 M Ohm. To prevent heavy loss of production it becomes compulsory to install this within minimum possible time motors. As a engineer what will be your decision.
Q.34	State the types of cable fault locators and their applications.
Q.35	Explain the procedure of installation of synchronous machines arriving in dismantled condition at site.
Q.36	Explain the procedure of locating earth fault and open circuit in shunt field of D.C machine
Q.37	Explain Hammer test for Induction Motor
Q.38	Explain Soil resistivity measurement.
Q.39	Explain short time current test of Circuit breaker
Q.40	Explain Location finding technique for fault in underground cables