

- (c) Hopkinson's (d) Swinburne
- k)** In electric motor in which both rotor and stator field rotates with same speed is called _____ motor
- (a) charge (b) dc
(c) synchronous (d) universal
- l)** The efficiency of a 3-phase induction motor is approximately proportional to
- (a) $(1 - s)$ (b) s
(c) N (d) Ns
- m)** For which among the following the current ratings are not required?
- (a) Circuit breakers (b) Relays
(c) Isolators (d) Load break switch
- n)** The dielectric strength of transformer oil is expected to be
- (a) 11 kV (b) 33 kV
(c) 100 kV (d) 330 kV

Attempt any four questions from Q-2 to Q-8

- Q-2 Attempt all questions (14)**
- (a) Explain the tan delta test on transformer. (07)
- (b) Explain the significance of the load losses (short-circuit losses) of power transformers and the method of short-circuit test for loss measurement. (07)
- Q-3 Attempt all questions (14)**
- (a) Explain Hopkinson's test for determination of efficiency of DC shunt machine. (07)
- (b) Explain commissioning steps for DC machine. (07)
- Q-4 Attempt all questions (14)**
- (a) What is polarisation index? What is its significance? (07)
- (b) Explain the classification of various tests performed on induction motor. (07)
- Q-5 Attempt all questions (14)**
- (a) Explain open circuit test and short circuit test on synchronous machine. (07)
- (b) Explain field test on two identical dc series machines. (07)
- Q-6 Attempt all questions (14)**
- (a) Explain temperature rise test on bus bar. (07)
- (b) Explain process of measuring earth resistance. (07)
- Q-7 Attempt all questions (14)**
- (a) State the characteristics of transformer oil. Explain the testing of transformer oil. (07)
- (b) Explain drying out process of synchronous machine. (07)
- Q-8 Attempt all questions (14)**
- (a) Explain Murray loop test and warley loop test. (07)
- (b) Explain testing and commissioning of lightning arrester. (07)

