SLR-TJ – 390

Seat No.	

Set **P**

B.E. (Electrical Engg.) (Part – II) Examination, 2017
ELECTRICAL INSTALLATION TESTING AND MAINTENANCE

Day and Date : Wednesday, 22-11-2017 Max. Marks : 100
Time : 3.00 p.m. to 6.00 p.m.

***Instructions** : 1) Q. No. **1** is **compulsory**. It should be solved in **first 30 minutes** in Answer Book Page No. **3**. **Each** question carries **one** mark.*
*2) **Answer MCQ/Objective type questions on Page No. 3 only. Don't forget to mention, Q.P. Set (P/Q/R/S) on Top of Page.***

MCQ/Objective Type Questions

Duration : 30 Minutes Marks : 20

1. Choose the correct alternatives : **(20×1=20)**

1) Do's and Don'ts are observed carefully in safety precautions as per _____
a) IS 5216-1962 b) IS 5216-1964 c) IS 5216-1966 d) IS 5216-1969

2) In fire extinguisher we use
a) CO_2 b) SO_2 c) O_2 d) H_2O

3) The torque of induction motor is
a) Directly proportional to V b) Directly proportional to V^2
c) Inversely proportional to V d) Inversely proportional to V^2

4) Brake test is _____ method of testing machine.
a) Regenerative b) Direct c) Indirect d) All of these

5) Swinburne test is also called as _____
a) Load test b) Brake test c) No load test d) Full load test

6) Swinburne test is
a) Direct test b) Indirect test c) Special test d) All of these

7) While conducting momentary overload test on induction motor, the duration of excess load 50 H.P. motor is ?
a) 2 sec b) 5 sec c) 8 sec d) 9.5 sec

8) While conducting momentary overload test on induction motor, the duration of excess load above 500 H.P. motor is
a) 5 sec b) 10 sec c) 15 sec d) 20 sec

9) Out of different methods available for testing of d.c. motors, Swinburne's test and Hopkinson's test are commonly used in practice on
   a) Shunt generators b) Series motors
   c) Shunt motors d) All of these

10) Swinburne's test and brake tests
   a) Both are direct method of testing
   b) Direct method of testing, indirect method of testing
   c) Indirect method of testing, direct method of testing
   d) Both are indirect method of testing

11) The impulse test level is determined by operating level is _____ times normal operating value.
   a) 1 to 2 b) 2 to 2.5 c) 4 to 5 d) 7 to 9

12) As per I.E.C. for 66 kv system voltage, the impulse withstand voltage is
   a) 100 kv b) 150 kv c) 220 kv d) 325 kv

13) In insulation resistance test of 132 kv transformer, minimum insulation resistance is
   a) 250 M Ω b) 500 M Ω c) 750 M Ω d) 1000 M Ω

14) For induced type transformer test, test voltage is equal to _____ highest system voltage + 1000 volt.
   a) Twice b) Thrice c) Four times d) None of these

15) In moisture proofness test, humidity is maintained to _____
   a) 70% b) 80% c) 90% d) 110%

16) In dielectric absorption test by using megger, insulation resistance is measured at regular interval of _____ and recorded.
   a) 24 hour b) 12 hour c) 30 min d) 5 min

17) For class A insulating material, maximum operating temperature is
   a) 60°C b) 90°C c) 95°C d) 105°C

18) Polarization index is greater than _____ for class A insulation.
   a) 1 b) 1.5 c) 2 d) 2.5

19) While installing electrical machines, checking of foundation for correct level is to be carried out then, we use
   a) Spirit level b) Dial indicator c) Bearing puller d) Filler gauge

20) Thermal relays are used for the protection of motors against over-current owing to
   a) Short circuit b) Heavy loads c) Earth fault d) All the above

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B.E. (Electrical Engg.) (Part – II) Examination, 2017
ELECTRICAL INSTALLATION TESTING AND MAINTENANCE

Day and Date : Wednesday, 22-11-2017 Marks : 80

Time : 3.00 p.m. to 6.00 p.m.

SECTION – I

2. Solve **any four** : **(4×5=20)**

   1) What are the objectives of testing of machine ?

   2) Explain the term :

      a) Safety

      b) Accountability

      c) Authority

      d) Responsibility.

   3) Write the factors on which severity of shock is depends.

   4) What precautions to be taken to avoid the fire due to electric reason.

   5) Write the procedure for developing preventive maintenance.

   6) Explain routine and breakdown maintenance of transformer.

3. Solve **any two** : **(2×10=20)**

   1) What is indirect testing of machine ? Explain the Swinburne test in detail.

   2) Explain the back to back test for transformer.

   3) Explain test for determination of magnetizing current and core losses.

SECTION – II

4. Solve **any four** : **(4×5=20)**

   1) State factors on which life of insulation depends.

   2) List the properties of transformer oil.

   3) What are the effects of mis-alignment ?

   4) State the various methods of revarnishing.

   5) How will you interpret about the condition of insulation ?

   6) List the common trouble in electrical installation.

5. Attempt **any two** : **(2×10=20)**

   1) What are the requirements of foundations for installing rotating electrical machines as per IS 900-1992.

   2) Classify insulating materials in details as per IS.

   3) Explain with neat sketch the vacuum impregnation method of varnishing the insulation.
