Enrol.No. .....

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LDRP INSTITUTE OF TECHNOLOGY & RESEARCH, GANDHINAGAR.
MID SEMESTER EXAM
B.E. Semester VI (EE)
Electrical Machine-III (EE 602)

Time: 12:00 pm to 1:30 pm **Date: 4/3/2015**
Max. Marks: 30

Instructions: 1) Figures to the right indicate full marks.
2) Use of scientific calculator is permitted.
3) Indicate clearly, the options you attempt along with its respective Que. No.
4) Use the last page of main supplementary for rough work.

Q-1 **(All compulsory)**

(A) Explain brake test for DC machine. **[05]**

(B) Explain Double revolving field theory. **[05]**

Q-2 **Answer the following question.**

(A) Explain Hopkinson's test for determination of efficiency of DC shunt Machine. **[05]**

(B) Briefly explain the principles of operation of DC servo motor. **[05]**

OR

(A) Explain the operation of A. C. servo motor. **[05]**

(B) A brake test conducted on a DC shunt motor the full load readings are observed as, Tension on tight side=9.1 kg, Tension on slack side =0.8 kg, Total current =12 A, supply voltage =110V, speed=1350 r.p.m, The radius of the pulley is 7.5 cm. Calculate its full load efficiency. **[05]**

Q-3 **Attempt any Two**

(A) Explain construction, working & applications of switched reluctance motor. **[05]**

(B) Explain the Permanent Magnet (PM) synchronous motor. **[05]**

(C) Explain Capacitor start single phase induction motor. **[05]**

(D) Explain split phase single phase induction motor. **[05]**

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