Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

EX-8003 (3) (CBGS)

B.E. VIII Semester

Examination, May 2019

Choice Based Grading System (CBGS)

Special Machine

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five out of eight questions.
ii) All questions carry equal marks.

1. Describe the VR and PM rotor structures and their torque production along with their torque angle characteristics. 14

2. Give the principle of operation of switched reluctance motor. How the torque is produced explain in brief with the help of expression. Also explain shaft position sensing. 14

3. Explain the construction and principle of operation of Brush Less DC Motor. What do you mean by winding pattern series and parallel. 14

4. a) What are the characteristics, parameter and properties of permanent magnet motors? 7
   b) Classify the permanent magnet motor in details. 7

5. Write the short note on any two of the following 14
   a) Design parameter of DC Brushed Motor
   b) Speed control of DC Brushed motor
   c) Permanent magnet material

6. Explain the PM synchronous motor construction and operation along with speed control and give its applications. 14

7. Explain in brief 14
   a) PM step motors
   b) Hybrid step motors
   c) Sensor less control

8. a) What are the power electronics converter for stepper motor? Explain any one in brief. 7
   b) Explain partition of Energy and the effect of saturation in switch reluctance motor. 7

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