St. Michael Polytechnic College

St. Santhiyagappar Nagar
Kalayarkoil-630 551.

DEPT: EEE **YEAR/SEMESTER**: III / V
SUB.NAME: SPECIAL ELECTRICAL MACHINES

Each question carries 1(one) mark in PART-A and 12(twelve) marks in PART-B

PART-A

1. Write the torque equation of permanent magnet synchronous motor?

2. What type of supply is given the permanent magnet synchronous motor?

3. List any two application of synchronous reluctance motor?

4. State any two properties synchronous reluctance motor?

5. Write the emf equation of permanent magnet synchronous motor?

6. Mention any two advantages of pure reluctance motor?

7. List any two application of permanent magnet synchronous motor?

8. What is permanent magnet synchronous motor?

9. State any two advantages synchronous reluctance motor?

10. State the difference between permanent magnet motor and pure reluctance motor?

PART B

1. Derive from the first principles the emf equation of permanent magnet synchronous motor?(12)

2. Explain the operating principles of permanent magnet synchronous motor?(12)

3. Derive the torque equation of permanent magnet synchronous motor?(12)

4. Explain the microprocessor based control for permanent magnet synchronous motor?(12)

5. Explain the construction and working principles of permanent magnet synchronous motor?(12)