

**SUBJECT:Special Electrical Machines (EEE-012)**

**Class: B. Tech. (EEE)VI Sem.**

**Question Bank**

1. What is the difference between Single and Double Cage Induction Motor and also explain how the equivalent circuits of an ordinary poly phase Induction Motor is also applicable to deep bar Induction Motor.
2. State and explain the deep cage bar induction motor with a suitable working diagram and also explain its necessity.
3. What is Slip Power Recovery Scheme? Explain the concept of constant power and torque control of a power drive with an example.
4. The stand still impedance of the outer cage of a double cage machine is  $(3 + j0.4)$  ohm and of the inner cage is  $(0.1 + j1.5)$  ohm. Compare the relative currents and torques of double cage at a Slip of 5% and at standstill.
5. What is servomotor and also draw its speed torque characteristics?
6. State and describe the method of starting of single phase induction motors.
7. Explain how a rotating field is produced in single phase induction motor at the time of starting.
8. Discuss the starting characteristics of split phase single phase induction motors with applications.
9. Discuss in detail principle of operation with suitable diagram & characteristics of hybrid stepper motor with its applications.
10. What is stepper motor? Discuss in detail operating principle of variable reluctance stepper motor with suitable diagram.
11. Define switched reluctance motor. Discuss its principle of operation & how torque is produced in it?
12. What is permanent magnet stepper motor? Discuss in detail working, principle of operation with suitable diagram.
13. Discuss the operating principle, construction and characteristics of Universal Motor.
14. What is the difference between Universal Motor, Induction Motor and DC Motor?
15. What is Linear Induction Motor & how it produces a linear force. Also discuss its applications.
16. Discuss the operating principle, working and characteristics of Repulsion Motor.
17. Discuss in detail principle of operation with suitable diagram & characteristics reluctance motor with its applications.
18. What is Hysteresis motor? Discuss in detail operating principle of variable reluctance stepper motor with suitable diagram.
19. Define permanent magnet dc motors. Discuss its principle of operation & working of this motor.

20. Explain the working, principle and important features of brushless dc motors with its applications
21. Discuss the operating principle, construction and characteristics of Universal Motor.
22. What is the difference between Universal Motor, Induction Motor and DC Motor?
23. What is Linear Induction Motor & how it produces a linear force. Also discuss its applications.
24. Discuss the operating principle, working and characteristics of Repulsion Motor.
25. What is PCB Motor & explain its working with suitable diagram? Also discuss its applications.
26. Discuss in detail principle of operation with suitable diagram & characteristics reluctance motor with its applications.
27. Define permanent magnet dc motors. Discuss its principle of operation & working of this motor.
28. What is Hysteresis motor? Discuss in detail operating principle of variable reluctance stepper motor with suitable diagram.
29. Discuss the operating principle, construction and characteristics of Universal Motor.
30. Explain the working, principle and important features of brushless dc motors with its applications
31. Discuss the operating principle, working and characteristics of Repulsion Motor.
32. What is Linear Induction Motor & how it produces a linear force. Also discuss its applications.