1. No-load speed of which of the following motor is highest?

A. Differentially compound motor
B. Cumulative compound motor
C. Series Motor
D. Shunt Motor

Ans:C

2. Which of the following rule is used to determine the direction of rotation of D.C motor?

A. Coloumb's Law
B. Lenz's Law
C. Fleming's Right-hand Rule
D. Fleming's Left-hand Rule

Ans:D

3. Counter EMF of the DC motor is

A. Less than the applied voltage
B. More than the applied voltage
C. Equal to the applied voltage
D. None of the above

Ans:A

4. If the back EMF of DC motor vanishes then

A. The motor continues to run
B. Motor will stop
C. Armature will burn
D. The motor continues to run in slow speed

Ans:C

5. Why is the speed of DC shunt motor dependent on Back EMF?

A. Because flux is proportional to the armature current
B. Because armature drop is negligible
C. Because Back EMF is equal to armature current
D. Because flux is constant in DC shunt motor

Ans:D

6. The reason for using starter while starting of DC motor is

A. To restrict armature current as there is no back E.M.F at starting
B. Motors are not self-starting

C. Restrict starting torque
D. None of the above

Ans:A

7. Sparking of commutator at D.C motor result in

A. Increase in power consumption
B. Damage to commutator insulation
C. Damage of commutator segments
D. All of the above

Ans:D

8. If T_a be the armature torque and I_a be the armature current then which of the following relation is valid for DC series motor before saturation?

A. $T_a \propto I_a$
B. $T_a \propto I_a^2$
C. $T_a \propto 1/I_a$
D. $T_a \propto 1/I_a^2$

Ans:B

9. The function of yoke in a DC machine is

A. To provide mechanical protection
B. To reduce eddy current
C. Flux path completion
D. Both 1 & 3

Ans:D

10. A 250 V, DC shunt motor takes a line current of 20 A. Resistance of shunt field winding is 200Ω and resistance of the armature is 0.3 Ω Find the armature current and the back e.m.f.

A. 18.75 A, 245 V
B. 25.32 A, 225 V
C. 15.65 A, 100 V
D. 10 A, 150 V

Ans:A

11. The frame of an induction motor is usually made of

A. Silicon steel
B. Cast iron
C. Aluminum
D. Bronze

Ans:B

12. A 3-phase 440 V, 50 Hz induction motor has 4% slip. The frequency of rotor current will be

A. 50 Hz
B. 25 Hz
C. 5 Hz
D. 2 Hz

Ans:D

13. An induction Motor with squirrel cage rotor is

A. Self-starting with high torque
B. Self-starting with zero torque
C. Self-starting with low torque
D. Not self-starting

Ans:C

14. At standstill condition the value of slip is

A. 0
B. Infinity
C. One
D. None of the above

Ans:C

15. A 4 pole 50 Hz induction motor is running at 1300 rpm. Find the speed of stator magnetic field with respect to the rotor?

A. 1500 rpm
B. 200 rpm
C. 1300 rpm
D. 3000 rpm

Ans:B