2.2 – D.C. MACHINES

[1] Voltage equation of a dc motor is

- **A. V = Eb + IaRa**
- **B.** Eb = V + IaRa
- **C.** V = Eb/IaRa
- **D.** V = Eb + Ia2Ra

[2] Both Hopkinson's test and Field test

- **A.** Require two electrically coupled series motors
- **B. Need two similar mechanically coupled motors**
- **C.** Use negligible power
- **D.** Are regenerative tests

[3] which of the following motor has the constant speed?

- **A.** Series motor
- **B. Shunt motor**
- **C.** Cumulatively compound motor
- **D.** All of the above

[4] The usual test to find the efficiency of the traction motor is

- **A. Field's test**
- **B.** Retardation test
- **C.** Hopkinson's test
- **D.** Swinburn's test

[5] A DC series motor is best for driving

- **A.** Lathes
- **B. Cranes and hoists**
- **C.** Shears and punches
- **D.** Machine tools

[6] Retardation test on a dc shunt motor is used for finding

- **A. Stray loss**
- **B.** Copper loss
- **C.** Friction loss
- **D.** Iron loss

[7] In a DC series motor increasing the load current will

- **A. Decrease the speed**
- **B.** Increase the speed
- **C.** Better commutation
- **D.** Increase the back emf

[8] One of the main advantage of the swinburn's test is

- **A.** It is applicable both shunt and compound motors
- **B.** It needs one running test
- **C. It is very economical and convenient**
- **D.** It ignores any charge in iron loss

[9] the main disadvantage of hopkinson's test for finding efficiency of shunt dc motors is that it

- **A.** Requires full load power
- **B.** Ignores any change in iron loss
- **C.** Needs one motor and one generator
- **D. Requires two identical shunt machines**

[10] The most economical method of finding no losses of a large dc shunt motor is

- **A.** Hopkinson's test
- **B. Swinburn's test**
- **C.** Retardation test
- **D.** Field's test

2.3 – D.C. MOTOR

[1] The basic requirement of a dc armature winding is that it must be
- **A. a closed one**
- **B.** a lap winding
- **C.** a wave winding
- **D.** either b or c

[2] The sole purpose of a commutator in a dc generator is to
- **A.** increase output voltage
- **B.** reduce sparking at brushes
- **C.** provide smoother output
- **D. convert the induced ac into dc**

[3] In small DC machines, armature slots are sometimes not made axial but are skewed, results in
- **A.** quieter operation
- **B.** slight decrease in losses
- **C.** saving of copper
- **D. both a and b**

[4] The critical resistance of the dc generator is the resistance of
- **A.** armature
- **B. field**
- **C.** load
- **D.** brushes

[5] In a dc generator, the generator, the generated emf is directly proportional to the
- **A.** field current
- **B. pole flux**
- **C.** number of armature parallel paths
- **D.** number of dummy coils

[6] The commutation process in a dc generator basically involves
- **A.** passage of current from moving armature to a stationary load
- **B. reversal of current in an armature coil as it crosses MNA**
- **C.** conversion of ac to dc
- **D.** suppression of reactance voltage

[7] The essential condition for stable parallel operation of two dc generators having similar characteristics is that they should have
- **A.** same kilowatt output ratings
- **B. dropping voltage characteristics**
- **C.** same percentage regulation
- **D.** same no load and full load speed

[8] An ideal dc generator has ..... voltage regulation.
- **A.** low
- **B. zero**
- **C.** positive
- **D.** negative

[9] Which generator has poorest voltage regulation
- **A. series**
- **B.** shunt
- **C.** compound
- **D.** high

[10] The voltage regulation of an over compound dc generator is always
- **A.** Positive
- **B.** negative
- **C.** zero
- **D.** high

2.4 - INDUCTION MOTORS

[1**]** The crawling in an induction motor is caused by

A. improper design of the machine
B. low voltage supply
C. high loads
D. harmonics developed in the motor
Ans = D

[2**]** The speed of an induction motor

A. decreases too much with the increase of load
B. increase with the increase of load
C. decreases slightly with the increase of load
D. remains constant with the increase of load

[3**]** The effect of increasing the length of the air gap in an induction motor will increase

A. power factor
B. speed
C. magnetising current
D. air-gap flux

[4**]** the difference between the synchronous speed and the actual speed of an induction motor is known as

A. Regulation
B. back lash
C. slip
D. lag

[5**]** Rotating magnetic field is produced in **A.**...

A. single - phase induction motor
B. three phase induction motor
C. dc series motor
D. ac series motor

[6**]** The stator core of the induction motor is made of

A. Laminated cast iron
B. Mild steel
C. Silicon steel stampings
D. Soft wood

[7**]** Star- delta starter of an induction motor

A. Inserts resistance in rotor circuit
B. Inserts resistance in stator circuit
C. Applies reduced voltage to rotor
D. Applies reduced voltage to stator

[8**]** The starting torque of a 1-phase induction motor is

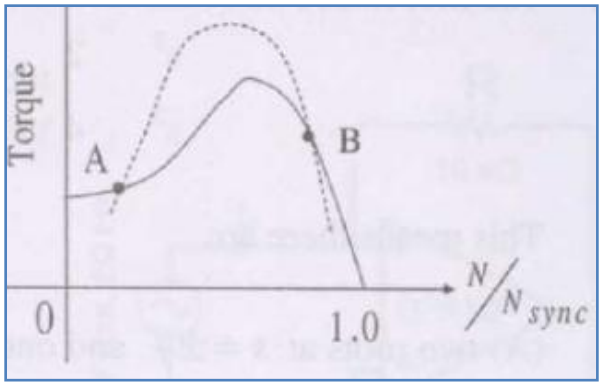
A. High
B. Medium
C. Low
D. Zero

[9**]** The thrust developed by a linear induction motor depends on

A. Synchronous speed
B. Rotor input
C. Number of poles
D. both A and B

[10**]**A 3-phase squirrel cage induction motor supplied from a balanced 3-phase source drives a mechanical load. The torque-speed characteristics of the motor (solid curve) and of the load (dotted curve) are shown. Of the two equilibrium points A and B, which of the following options correctly describes the stability of A and B? **[**GATE 2009**]**

A.A is stable B is unstable
B.A is unstable B is stable
C.Both are stable
D.Both are unstable



2.5 – SYNCHRONOUS MOTOR

[1**]** In a synchronous motor, damper winding is provided to

A. Stabilize rotor motion
B. Suppress rotor oscillations
C. Develop necessary starting torque
D. Both B and C

[2**]** Synchronous capacitor is

A. An ordinary static capacitor bank
B. An over excited synchronous motor driving mechanical load
C. An over excited synchronous motor running without mechanical load
D. None of the above

[3**]** A synchronous machine is called as doubly excited machine because

A. It can be over excited
B. It has two sets of rotor poles
C. Both its rotor and stator are excited
D. It needs twice the normal exciting current

[4**]**If the field of a synchronous motor is under excited, the power factor will be

A. Lagging
B. Leading
C. Unity
D. More than unity

[5**]** The direction of rotation of a synchronous motor can be reversed by reversing

A. Current to the field winding
B. Supply phase sequence
C. Polarity of rotor poles
D. None of the above

[6**]**A synchronous motor connected to infinite busbars has at constant full-load, 100% excitation and unity pf. On changing the excitation only, the armature current will have

A. leading pf with under-excitation
B. leading pf with over excitation
C. lagging pf with over excitation
D. no change of pf

[7**]** The maximum value of torque angle a in a synchronous motor is.....degrees electrical

A. 45
B. 90
C. between 45 and 90
D. below 60

[8**]** The angle between the synchronous rotating stator flux and rotor poles of a synchronous motor is

A. Synchronizing angle

B. Torque angle
C. Power factor angle
D. Slip angle

[9**]** In a synchronous machine when the rotor speed becomes more than the synchronous speed during hunting, the damping bars develop
A. synchronous motor torque
B. dc motor torque
C. induction motor torque
D. induction generator torque

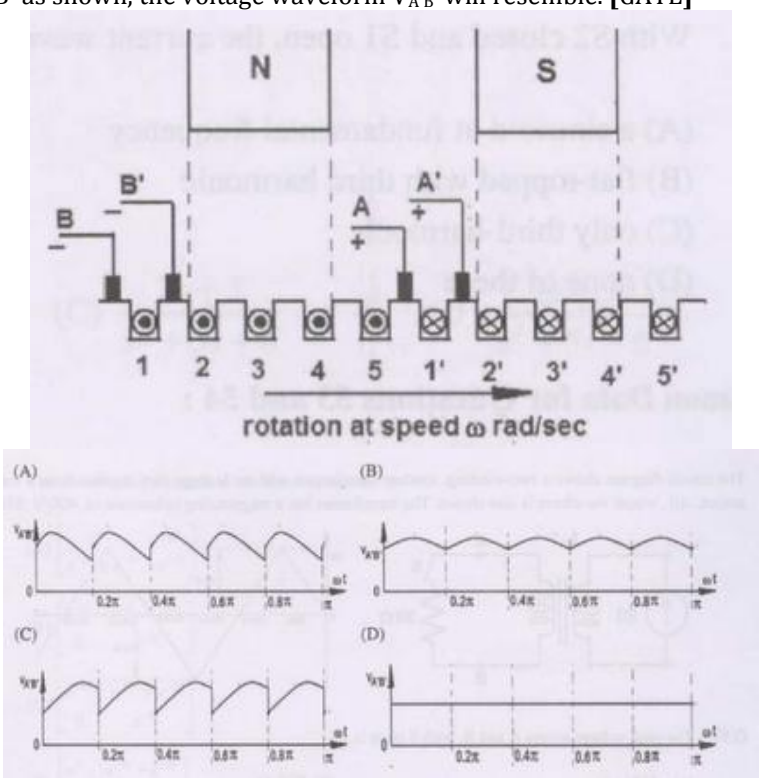
[10**]** When load on a synchronous motor is increased its armature current is increased provided it is
A. normally excited
B. over excited
C. under exciter
D. all of the above

2.6 – GENERAL ELECTRICAL MACHINE

[1**]**A field excitation of 20A in a certain alternator results in an armature current of 400A in short circuit and a terminal voltage of 2000V on open circuit. The magnitude of the internal voltage drop within the machine at a load current of 200A is **[**GATE2009**]**

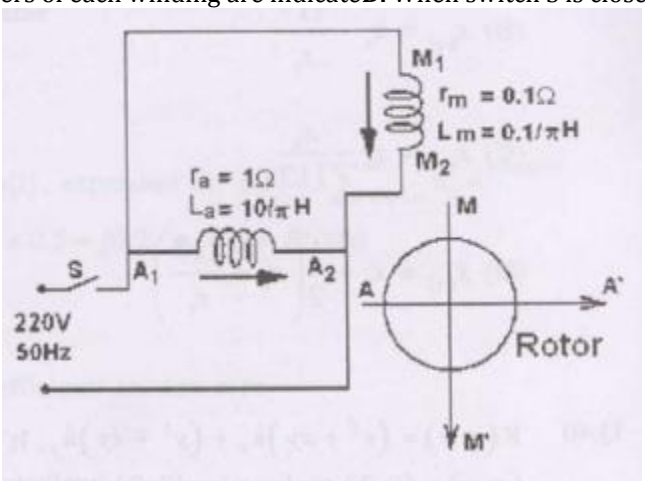
A.1V
B.10V
C.100V
D.1000V

[2**]** Figure shows the extended view of a 2 pole dc machine with 10 armature conductors.Normal brush positions are shown by A and B, placed at the interpolar axis. If the brushes are now shifted, in the direction of rotation, to A' and B' as shown, the voltage waveform $V_{A'B'}$ will resemble. **[**GATE**]**



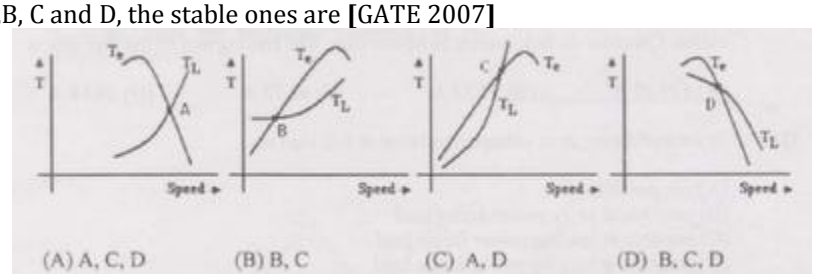
Ans: A

[3]A 220V,50Hz,single-phase induction motor has the following connection diagram and winding orientations shown.MM' is the axis of the main stator winding(M_1M_2) and AA' is that of the auxiliary winding (A_1A_2). Directions of the winding axes indicate direction of flux when currents in the windings are in the directions shown. Parameters of each winding are indicate**D.** When switch S is closed, the motor **[**GATE**]**



A. rotates clockwise
B. rotates anticlockwise
C. does not rotate
D. rotates momentarily and comes to a halt

[4] The electromagnetic torque Te of a drive, and its connected load torque Tl are as shown below. Out of the operating points A,B, C and D, the stable ones are **[**GATE 2007**]**



Ans:C

[5] In a transformer, zero voltage regulation at full load is **[**GATE 2007**]**

A. Not possible
B. Possible at unity Power factor load
C. Possible at leading Power factor load
D. Possible at lagging Power factor load

[6] The DC motor, which can provide zero speed regulation at full load without any controller is **[**GATE 2007**]**

A. Series
B. Shunt
C. Cumulative Compound
D. Differential Compound

[7] A single phase 10kVA, 50 Hz transformer with 1kV primary winding draws 0.5A and 55W, at rated voltage and frequency, on no loa**D.** A second transformer has a core with all its linear $\sqrt{2}$ times the corresponding dimensions of the first transformer. The core material and lamination thickness are the same in both transformers. The primary windings of both the transformers have the same number of turns. If a rated voltage of 2kV at 50Hz is applied to the primary of the second transformer, then the no load current and power, respectively, are **[**GATE2012**]**

A. 0.7 A,77.8W
B. 0.7A,155.6 W
C. 1A,110W
D. 1A,220W

[8**]** The locked rotor current in a 3-phase, star connected 15kW, 4-pole, 230V, 50Hz induction motor at rated conditions is 50**A.** Neglecting losses and magnetizing current, the approximate locked rotor line current drawn when the motor is connected to a 236V, 57Hz supply is **[**GATE2012**]**

A. 58.5A
B. 4**5.0A**
C. 45.7A
D. 55.6A

[9**]** A 220V, 15kW,1000rpm shunt motor with armature resistance of 0.25Ω, has a rated line current of 68A and a rated field current of 2.2**A.** The change in field flux required to obtain a speed of 1600 rpm while drawing a line current of 52.8A and a field current of 1.8A is **[**GATE2012**]**

A. 18.18% increase
B. 18.18% decrease
C. 36.36% increase
D. 3**6.36% decrease**

[10**]** In 8 - pole wave connected motor armature, the number of parallel paths are

A. 8
B. 4
C. 2
D. 1

[11**]** A salient pole synchronous motor is running at no loa**D.** Its field current is switched off. The motor will

(A) come to stop.
(B) continue to run at synchronous speeD.
(C) continue to run at a speed slightly more than the synchronous spee**D.**
(D) continue to run at a speed slightly less than the synchronous spee**D.**

[12**]** The emf induced in the primary of a transformer

(A) is in phase with the flux.
(B) lags behind the flux by 90 degree.
(C) leads the flux by 90 degree.
(D) is in phase opposition to that of flux.

[13**]**The frequency of the rotor current in a 3 phase 50 Hz, 4 pole induction motor at full load speed is about

(A) 50 Hz.
(B) 20 Hz.
(C) 2 **Hz.**
(D) Zero.

[14**]** The two windings of a transformer is

(A) conductively linke**d.**
(B) inductively linked.
(C) not linked at all.
(D) electrically linke**d.**

[15**]** The **D.C.** series motor should always be started with load because

(A) at no load, it will rotate at dangerously high speeD.
(B) it will fail to start.
(C) it will not develop high starting torque.
(D) all are true.

[16**]** Out of the following methods of heating the one which is independent of supply frequency is

(A) electric arc heating
(B) induction heating
(C) electric resistance heating
(D) dielectric heating

[17**]** In a stepper motor the angular displacement

(A) can be precisely controlled.
(B) it cannot be readily interfaced with micro computer based controller.
(C) the angular displacement cannot be precisely controlle**d.**

(D) it cannot be used for positioning of work tables and tools in NC machines.

[18] The generation voltage is usually

(A) between 11 KV and 33 **KV.**
(B) between 132 KV and 400 KV.
(C) between 400 KV and 700 KV.
(D) None of the above.

[19] When a synchronous motor is running at synchronous speed, the damper winding produces

(A) damping torque.
(B) eddy current torque.
(C) torque aiding the developed torque.
(D) no torque.

[20**]** A hysteresis motor

(A) is not a self-starting motor.
(B) is a constant speed motor.
(C) needs dc excitation.
(D) can not be run in reverse speed.

[21**]** If a transformer primary is energized from a square wave voltage source, its output voltage will be

(A) A square wave.
(B) A sine wave.
(C) A triangular wave.
(D) A pulse wave.

[22**]** The power factor of a squirrel cage induction motor is

(A) low at light load only.
(B) low at heavy load only.
(C) low at light and heavy load both.
(D) low at rated load only.

[23**]** In a **D.C.** machine, the armature mmf is

(A) stationary w.r.t. armature.
(B) rotating w.r.t. fiel**d.**
(C) stationary w.r.t. field.
(D) rotating w.r.t. brushes.

[24**]** In a transformer the voltage regulation will be zero when it operates at

(A) unity p.f.
(B) leading p.f.
(C) lagging p.f.
(D) zero p.f. leading.

[25**]** The primary winding of a 220/6 V, 50 Hz transformer is energised from 110 V, 60 Hz supply. The secondary output voltage will be

(A) 3.6 V.
(B) 2.5 V.
(C) 3**.0 V.**
(D) 6.0 V.

[26**]** The relative speed between the magnetic fields of stator and rotor under steady state operation is zero for a

(A) dc machine.
(B) 3 phase induction machine.
(C) synchronous machine.
(D) single phase induction machine.

Ans: All are correct

[27**]** The current from the stator of an alternator is taken out to the external load circuit through

(A) slip rings.
(B) commutator segments.
(C) solid connections.
(D) carbon brushes.

[28**]** A motor which can conveniently be operated at lagging as well as leading power factors is the

(A) squirrel cage induction motor.
(B) wound rotor induction motor.
(C) synchronous motor.
(D) DC shunt motor.

[29**]** The most suitable servomotor for low power applications is

(A) a dc series motor.
(B) a dc shunt motor.
(C) an ac two-phase induction motor.
(D) an ac series motor.

[30**]** The size of a conductor used in power cables depends on the

(A) operating voltage.
(B) power factor.
(C) current to be carried.
(D) type of insulation used.

[31**]**The size of the feeder is determined primarily by

(A) the current it is required to carry.
(B) the percent variation of voltage in the feeder.
(C) the voltage across the feeder.
(D) the distance of transmission.

[32**]** The emf induced in the primary of a transformer

(A) is in phase with the flux.
(B) lags behind the flux by 90 degree.
(C) leads the flux by 90 degree.
(D) is in phase opposition to that of flux.

[33**]** The relative speed between the magnetic fields of stator and rotor under steady state operation is zero for a

(A) dc machine.
(B) 3 phase induction machine.
(C) synchronous machine.
(D) single phase induction machine.
Ans: all options are correct

[34**]**As the voltage of transmission increases, the volume of conductor

(A) increases.
(B) does not change.
(C) decreases.
(D) increases proportionately.
HINT:-Due to skin effect

[35**]**In a 3-phase synchronous motor

(A) the speed of stator MMF is always more than that of rotor MMF.
(B) the speed of stator MMF is always less than that of rotor MMF.
(C) the speed of stator MMF is synchronous speed while that of rotor MMF is zero.
(D) rotor and stator MMF are stationary with respect to each other.
HINT:-Motor is magnetically locked into position with stator, the rotor poles are engaged with stator poles and both run synchronously in same direction.

[36**]**An alternator is delivering rated current at rated voltage and 0.8 power-factor lagging case. If it is required to deliver rated current at rated voltage and 0.8 power-factor leading, the required excitation will be

(A) less.
(B) more.
(C) more or less.
(D) the same.
HINT:-Over excitation gives leading power factor and under excitation gives lagging p.f .

[37**]** Out of the following methods of heating the one which is independent of supply frequency is (A) electric arc heating

(B) induction heating

(C) **electric resistance heating**
(D) dielectric heating

[38**]**In a capacitor start single-phase induction motor, the capacitor is connected
(A) in series with main winding.
(B) in series with auxiliary winding.
(C) in series with both the windings.
(D) in parallel with auxiliary winding.
HINT:-To make single phase motor self start. We split the phases at 90 degree. Hence, motor behaves like a two phase motor.

[39**]**A synchro has
(A) a 3-phase winding on rotor and a single-phase winding on stator.
(B) a 3-phase winding on stator and a commutator winding on rotor.
(C) **a 3-phase winding on stator and a single-phase winding on rotor.**
(D) a single-phase winding on stator and a commutator winding on rotor.
HINT:-The basic synchro unit called a synchro transmitter. It's construction similar to that of a Three phase alternator.

[40**]** A ceiling fan uses
(A) split-phase motor.
(B) capacitor start and capacitor run motor.
(C) universal motor.
(D) capacitor start motor.
HNIT:-To give starting torque and to maintain speed.

[41**]** The torque-speed characteristics of an **A.C.** operated universal motor has a _____characteristic and it_____ be started under no-load condition.
(A) inverse, can
(B) nearly inverse, can
(C) inverse, cannot
(D) nearly inverse, cannot
HINT:-N direct proportional to 1/ T

[42**]** In the heating process of the _____type a simple method of temperature control is possible by means of a special alloy which loses its magnetic properties at a particular high temperature and regains them when cooled to a temperature below this value.
(A) Indirect induction over
(B) core type induction furnace
(C) coreless induction furnace
(D) high frequency eddy current
HINT:-Magnetic property of alloy changes with change of the temperature and Heat is produced due to eddy current = Square(i) * R and i proportional to square(f)

[43**]** In order to reduce the harmful effects of harmonics on the **A.C.** side of a high voltage **D.C.** transmission system _____are provide**D.**
(A) synchronous condensers
(B) shunt capacitors
(C) shunt filters
(D) static compensators
HINT:-
Xc= 1/ωC

[44**]**An **A.C.** tachometer is just a _____with one phase excited from the carrier frequency.
(A) two-phase **A.C.** servomotor
(B) two-phase induction motor
(C) **A.C.** operated universal motor
(D) hybrid stepper motor.
HINT:-It is a special purpose machine. It's stator coil can be energized by electronically switched
current.

[45**]** The rotor frequency for a 3 phase 1000 RPM 6 pole induction motor with a slip of 0.04 is_____Hz

(A) 8
(B) 4
(C) 6
(D) 2

HINT:-

f = N P/ 120 = 1000* 6/120 = 50 Hz

Rotor frequency fr=s * f = 0.04 * 50= 2.0 Hz

[46**]** The speed-torque characteristics of a DC series motor are approximately similar to those of the _____motor.

(A) universal
(B) synchronous
(C) DC shunt
(D) two-phase

HINT:-Universal motor has same characteristics as DC series motor
It is known as an **A.**c series motor.

[47**]**In case of a universal motor, torque pulsation is minimized by _____.

(A) load inertia
(B) rotor inertia
(C) both rotor and load inertia
(D) none of the above

[48**]** A hysteresis motor

(A) is not a self-starting motor.
(B) is a constant speed motor.
(C) needs dc excitation.
(D) can not be run in reverse spee**d.**

[49**]** The most suitable servomotor for low power applications is

(A) a dc series motor.
(B) a dc shunt motor.
(C) an ac two-phase induction motor.
(D) an ac series motor.

[50**]** The size of a conductor used in power cables depends on the

(A) operating voltage.
(B) power factor.
(C) current to be carried.
(D) type of insulation use**d.**

[51**]**A stepper motor is

(A) a dc motor.
(B) a single-phase ac motor.
(C) a multi-phase motor.
(D) a two phase motor.

HINT:-Stepper motor works on 1-phase-ON or 2-phase –ON modes of operation

[52**]** A motor which can conveniently be operated at lagging as well as leading power factors is the

(A) squirrel cage induction motor.
(B) wound rotor induction motor.
(C) synchronous motor.
(D) DC shunt motor.

[53**]** The D.C**.** series motor should always be started with load because

(A) at no load, it will rotate at dangerously high speed.
(B) it will fail to start.
(C) it will not develop high starting torque.
(D) all are true.

[54**]** The 'sheath' is used in cable to

(A) provide strength to the cable.
(B) provide proper insulation.
(C) prevent the moisture from entering the cable.

(D) avoid chances of rust on strands.

HINT:-The sheath in underground cable is provided to give mechanical strength.

[55] The drive motor used in a mixer-grinder is a

(A) dc motor.

(B) induction motor.

(C) synchronous motor.

(D) universal motor.

HINT:-The universal motor is suitable for AC & DC both supply systems.

[56] A balanced three-phase, 50 Hz voltage is applied to a 3 phase, 4 pole, induction motor. When the motor is delivering rated output, the slip is found to be 0.05. The speed of the rotor m.m.f. relative to the rotor structure is

(A) 1500 r.p.m.

(B) 1425 r.p.m.

(C) 25 r.p.m.

(D) 75 r.p.m.

HINT:-NS = 120f /P = 120 x 50 /4 =1500rpm

N = NS (1-s) = 1500 (1-0.05) = 1425

Relative speed = 1500 – 1425 = 75 rpm

[57] The primary winding of a 220/6 V, 50 Hz transformer is energised from 110 V, 60 Hz supply. The secondary output voltage will be

(A) 3.6 V.

(B) 2.5 V.

(C) 3.0 V.

(D) 6.0 V.

[58] The current from the stator of an alternator is taken out to the external load circuit throu

(A) slip rings.

(B) commutator segments.

(C) solid connections.

(D) carbon brushes.

[59] In a 3 – phase induction motor the maximum torque

(A) is proportional to rotor resistance r2 .

(B) does not depend on r2 .

(C) is proportional to square root of r2 .

(D) is proportional to square of r2 .

[60] In a **D.C.** machine, the armature mmf is

(A) stationary w.r.t. armature.

(B) rotating w.r.t. field.

(C) stationary w.r.t. field.

(D) rotating w.r.t. brushes.

[61] In a transformer the voltage regulation will be zero when it operates at

(A) unity p.f.

(B) leading p.f.

(C) lagging p.f.

(D) zero p.f. leading.

[62] In a stepper motor the angular displacement

(A) can be precisely controlled.

(B) it cannot be readily interfaced with micro computer based controller.

(C) the angular displacement cannot be precisely controlled.

(D) it cannot be used for positioning of work tables and tools in NC machines.

[63] The power factor of a squirrel cage induction motor is

(A) low at light load only.

(B) low at heavy load only.

(C) low at light and heavy load both.

(D) low at rated load only.

[64] The generation voltage in India is usually

(A) between 11 KV and 33 **KV.**
(B) between 132 KV and 400 KV.
(C) between 400 KV and 700 KV.
(D) None of the above.

[65] When a synchronous motor is running at synchronous speed, the damper winding produces
(A) damping torque.
(B) eddy current torque.
(C) torque aiding the developed torque.
(D) no torque.

[66]If a transformer primary is energised from a square wave voltage source, its output voltage will be
(A) A square wave.
(B) A sine wave.
(C) A triangular wave.
(D) A pulse wave.

[67] A salient pole synchronous motor is running at no load. Its field current is switched off. The motor will
(A) come to stop.
(B) continue to run at synchronous speed.
(C) continue to run at a speed slightly more than the synchronous speed.
(D) continue to run at a speed slightly less than the synchronous speed.

[68] The frequency of the rotor current in a 3 phase 50 Hz, 4 pole induction motor at full load speed is about
(A) 50 Hz.
(B) 20 Hz.
(C) 2 **Hz.**
(D) Zero.

[69] The speed of a dc motor can be controlled by varying
A. its flux per pole
B. resistance of armature circuit
C. applied voltage
D. all of the above

[70] Regarding Ward-Leonard system of speed control which statement is false?
A. It is usually used where wide and very sensitive speed control is required
B. It is used for motors having ratings from 750kW to 4000Kw
C. Capital outlay involved in the system is right since it uses two extra machines
D. It gives a speed range of 10:1 but in one direction only
E. It has low overall efficiency especially at light loads

[71] In a DC motor, unidirectional torque is produced with the help of
A. Brushes
B. Commutator
C. End-plates
D. Both a and b

[72] The counter emf of dc motor
A. Often exceeds the supply voltage
B. Aids the applied voltage
C. Helps in energy conversion
D. Regulates its armature voltage

[73] The Eb/V ratio of a dc motor is an indication of its
A. Efficiency
B. Speed regulation
C. Starting torque
D. Running Torque

[74] The induced emf in the armature conductors of a dc motor is
A. Sinusoidal
B. Trapezoidal
C. Rectangular

D. Alternating

[75] A dc motor can be looked upon as dc generator with the power flow

A. Reduced
B. Reversed
C. Increased
D. Modified

[76] A series motor is best suited for driving

A. Lathes
B. Cranes and hoists
C. Shears and punches
D. Machine tools

[77]The Ta/Ia graph of a dc series motor is a

A. Parabola from no load to overload
B. Straight line throughout
C. Parabola throughout
D. Parabola upto full load and a straight line at overloads

[78] When load is removed, ...motor will run at the highest speed.

A. Shunt
B. Cumulative – compound
C. Differential compound
D. Series

[79] The power factor of a squirrel cage induction motor is

A. Low at light loads only
B. Low at heavy loads only
C. Low at light and heavy loads both
D. Low at rated load only

[80] The synchronous speed of a linear induction motor does not depend on

A. Width of pole pitch
B. Number of poles
C. Supply frequency
D. Any of the above