

[Ratan Maurya - M-3] Q. bank.

(1) - Unit of electricity is?

- (a) - Coulomb (b) - Current (c) - volt
 (d) - work

(2) - MMF is? (Doubt)

- (a) - Force (b) - Power (c) - potential difference
 (d) - work done - BL. Thangavel (1).

(3) - For electrical circuit

- (a) - The circuit has power supply voltage source
(b) - The circuit provide complete path for current flow
(c) - The circuit has resistance.

(d) - All

(4) - (a) - The quantity of charge is determined by the attraction or repulsion force.

(b) - The tendency of charge to repel or attract each other is physical force.

(c) - Both

(5) - If 100 bulb are connected in series, if one bulb is fused then?

(a) - no will glow

(6) - In 3 phase S/S -

- (a) - The voltage equal in magnitude
(b) - The voltage direction change equal with an equal phase angle
(c) - The current should be equal in magnitude and varies in direct with equal phase angle.

(d) - All

(7) - The mass of an electron is compared to its charge?

- (a) - Very small (b) - small (c) - large.

(8) - What is max. no. of e^- in M shell?

- (a) - 18 (M) (b) - 32 (N) (c) - 16

(9) - Atom is stable when?

(a) - No. of proton equal to no. of electron.

(10) - Which substance is diamagnetic?

- (a) - Iron (b) - Iron-nickel (c) - Iron copper (d) - Bismuth

(11) - The principle of magnetism depends on?

- (a) - Permittivity (b) - Absolute permeability (c) - Relative permeability (d) - B & C

(12) - Material have a steady magnetic field has?

- (a) - High permeability (b) - low permeability (c) - Medium permeability.

(13) - If R - resistance of conductor, A - cross section area, L - length P = resistivity then?

- (a) - $A = PL/R$ (b) - $L = PR/A$ (c) - $A = PR/L$

(14) - If thermistors have negative temperature co-efficient then resistance _____ with sensed temperature?

- (a) - \uparrow (b) - \downarrow (c) - not affected.

(15) - If work done of 100 joule is performed in 100 sec. then power will be?

- (a) - 10 watt (b) - 100 watt (c) - 1 watt

(16) - The electric power mostly developed by?

- (a) - Piezo electricity (b) - Electromagnetic induction (c) - both

(17) - In colour code S/S if conductor has blue and yellow band (from left to right) then numerical value are?

- (a) - 46 (b) - 64 (c) - 74 (d) - 84

(18) - If conductor has resistance of 5 Ω and current applied to the conductor 5A then the power -

- (a) - 25 watt (b) - 5 watt (c) - 125 watt.

(19) - Form factor is?

- (a) - ratio of rms value to average value

(b) - " " peak value to " "

(c) - ratio of peak value to rms value

(20) - Two capacitor of capacitance of 5 μF each connected in parallel then the total capacity?

- (a) - 10 μF (b) - 2 μF (c) - 20 μF

(21) - Unit of capacitance.

- (A) q/v (B) v/q (C) vq

(22) - The conductor made of ceramic substance.

- (A) - it is made by depositing substance over ceramic rod
(B) - the resistance of this type of resistor is accurate
(C) - a and b

(23) - The capacitive reactance?

- (A) - False with frequency (B) - Rise with frequency (C) - not affected.

(24) - The induce electro magnetic force in a close loop of wire? depend on?

- (A) - change of flux (B) - Rate of change of flux (C) - Flux.

(25) - In circuit containing resistance, inductance then?

- (A) - current lag voltage with angle slight less than 90°
(B) - current lead voltage " " " long than 90°

(A) - current lags voltage by 90°

(26) - If voltage is applied to primary winding and secondary winding is open then power will draw?

- (A) - Fully primary (B) - only magnetizing

(27) - Ideal transformer has?

- (A) - Loss of flux (B) - Core loss (C) - Hysteresis (D) - NOT

(28) - If the all battery are connected in parallel then the voltage _____ and _____ current capacity?

- (A) - Small, large (B) - large, small (C) - Large, Large.

(29) - _____ filter is used to pass all frequencies above and below a particular range set by component values?

- (A) - High pass filter (B) - Band pass filter (C) - Band stop filter.

(30) - frequency related component are?

- (A) - Resistance & Inductance (B) - Capacitive & resistance (C) - Inductance & Capacitance

(31) - Lap winding?

(A) - High voltage and low current generator

(A) - " Current " " Voltage " (winding are connected in parallel)

(A) - low current and low voltage generator

(32) - When a coil rotate in magnetic field, the emf is induced in this, produce current in?

- (A) - Same direction of source (B) - opposite direction of source current (C) - No current produced

(33) - Current flowing through the armature sets up electro magnetic field in winding these new field tend to distort or bend the magnetic flux, it is called armature reaction, to counteract this armature reaction the winding is used?

- (A) - Lap winding (B) - Compensating wind (C) - interpole winding.

(34) - Speed of AC motor depend upon?

- (A) - the no. of stator poles. $RPM = \frac{120 \times f}{\text{no. of pole}}$

(A) - frequency of electrical source power and no. of poles

(35) - When uncharged body is come in contact with the charged body then it will charged?

- (A) - induction (B) - conduction (C) - Electro magnetic induction.

(36) - Transformer rated in?

- (A) - watt (B) - Kwatt (C) - KVA.

(37) - The substance having valence electron more than 4?

- (A) - Conductor (B) - insulator (C) - Semiconductor

(38) - The substance having less than 4?

- (A) - Conductor (B) - insulator (C) - Semi-conductor.

(39) - Reactive power? $P = \dots$
- wastage power in reaction of the circuit
induction

(38) - 1 kWh is equal to -?

3600 KJ.

(41) - What is the flux behavior when no load on the transform

(a) - The net flux through the core

(b) - Core loss

(c) - Iron loss

(d) - a and b.

(42) - In case of DC motor the hysteresis loss and eddy current losses come under which losses -?

(a) - Mechanical losses (b) - Electrical losses.

(43) - The bandwidth depends on -?

(a) - number of circuit elements (b) - resistance of circuit

Both a and b.

(44) - voltage transformer has ratio '1' then -?

transformer in stepup

(b) - " " stepdown

neither stepup nor stepdown but is used in electrical isolation of primary from secondary circuit.

(45) - In DC motor, electrical characteristics are -?

Torque and armature current

(b) - Speed and armature current

(c) - Torque and speed

All.

(46) - Hunting occurs in synchronous motor by -?

(a) - Varying load

(b) - varying alternating current

a and b.

(47) - The k of auto transformer is -?

(a) - greater than 1

(b) - lower than 1

nearly equal to 1

(48) - The force b/w 2 pole in a medium is -?

Directly proportional to their field strength

(b) - " " " Square of distance b/w them.

(c) - Directly " " absolute permeability of the medium

(d) - All

(49) - Magnetic potential is -?

Scalar quantity

(b) - vector quantity

(c) - Complex quantity

(d) - not defined.

(50) - In 3-phase generator -?

(a) - Voltage is same across all phase

(b) - Current is same across all phase

(c) - voltage is same and out of phase or varies by a constant value

(d) - All

(51) - They are weakly magnetized in the direction of magnetic field, this statement true for -?

(a) - Paramagnetic

(b) - ferromagnetic

diamagnetic

(52) - They are strongly magnetized in direction of magnetic field, this statement true for -?

(a) - Paramagnetic

ferromagnet

(c) - diamagnet.

(53) - Parallel connection of capacitor have _____ voltage as in all branches and _____ current in each branches -?

Same, different

(b) - different, same

(c) - Same, individual

(d) - different, individual.

(54) - In a multiple capacitor, if parallel plates are n, the number of capacitors are -?

(a) - n

(b) - n+1

n-1

(d) - 2n.

(55) - MTCS -

$V = IR$

(b) - $V = I/R$

(c) - $V = I^2 R$

(d) - $V = I/R^2$

(56) - In a lead acid battery, the capacity is independent of -?

rate of charge

(b) - rate of discharge

temperature

(d) - Density of electrolyte.

- (57) - Which is used to measure rate of flow of charge?
 (A) - Coulomb (B) - **ampere** (C) - Voltage.
- (58) - Which filter is used to select a band of frequency in radio and television broadcasting?
 (A) - Low pass filter (B) - **High pass filter**
 (C) - Band pass filter (D) - Band stop filter.
- (59) - What is power loss if I ampere is flowing and the resistance is R ohm-?
 (A) - $P = I^2 R t$ (B) - **$P = I^2 R$** (C) - $P = R^2 I$ (D) - $P = I^2 / R$.
- (60) - The property to oppose any change in direction of current are flux through it - is-?
 (A) - **Inductance** (B) - Induced EMF (C) - Self inductance
 (D) - Self inductance - emf.
- (61) - Which is used as frequency selection device-?
 (A) - Transformer (B) - Oscillator (C) - **Filter**
- (62) - The particles having same mass as proton with no charge is-?
 (A) - extra nuclear (B) - **neutron** (C) - proton (D) - electron
- (63) - The 3rd band from left to right in a resistor show-?
 (A) - Tolerance (B) - 1st value are digit
 (C) - 2nd value of digit (D) - **Decimal multiplier.**
- (64) - Reactive power is-?
 (A) - **Power developed across the inductor in the circuit**
 (B) - Power actually used in circuit
 (C) - rms value of current and voltage
 (D) - NDA.
- (65) - If the cell are connected in series then current is — across all cell and voltage is — at all cells.
 (A) - **Same, different** (B) - different, same
 (C) - Same, same (D) - different, different.

- (66) - Battery having vent cap to provide escape of — and to block escape of — ?
 (A) - water, gas (B) - electrolyte, gas (C) - **gas, electrolyte.**
- (67) - HTCS
 (A) - Insulator can hold or store electricity better than conductor
 (B) - good conductor can store more energy.
 (C) - Dielectric of a capacitor is never used to store charge.
 (D) - **All r correct.**
- (68) - Loss of DC generator that result from friction b/w the brush and commutator is-?
 (A) - Iron loss (B) - copper loss (C) - **Mechanical loss** (D) - electrical loss.
- (69) - The brushes used in a commonly DC generator are-?
 (A) - circular bar type (B) - triangular bar type (C) - **rectangular bar type.**
- (70) - The unit of conductance-?
 (A) - **Siemen** (B) - ohm (C) - ohm-meter.
- (71) - which type filter used in DC rectification s/s-?
 (A) - **Low pass** (B) - High pass
 (C) - band pass (D) - band stop
- (72) - what is permeability of vacuum — **$4\pi \times 10^{-7} \mu$** .
- (73) - A filter which passes low frequency but attenuates current within higher frequency-?
 (A) - **Low pass** (B) - High pass
 (C) - band pass (D) - band stop
- (74) - The cell like nickel cadmium, nickel metal are — & zinc chloride, carbon zinc batteries — ?
 (A) - Primary, ~~battery~~ Secondary (B) - **Secondary, primary**
 (C) - Primary, primary
- (75) - what will be power if a object is moving at angular velocity (ω) in radius per second and 'T' is torque expressed by object-?
 (A) - **$P = \omega T$** (B) - $P = \frac{1}{2} \omega^2 T$ (C) - $P = \omega T^2$

(76) - For a given frequency and given number of poles, the speed of alternator -?

(a) - Speed varies with load (b) - Cannot contribute to speed

(c) - Speed remain constant and is equal to $\frac{120f}{P}$

(77) - If resistor are connected in series, the voltage drop across resistor are -?

(a) - Additive (b) - Subtractive (c) - Multiple of each other

(d) - voltage is not affected in series circuit.

(78) - During charging of capacitor, it acts like.

(a) - short circuit (b) - Close circuit

(c) - open circuit (d) - short at end of charging cycle & open in beginning of cycle.

(79) - EMF induced in coil -

(a) - when flux linked with coil

(b) - when rotor remain stationary in uniform magnetic field.

(c) - when flux linked with coil remain stationary.

(80) - AC value which equivalent of DC value which has same amount of product of heat corresponding to AC value -?

(a) - Average value (b) - RMS value (c) - Peak value.

(81) - A prevention of a conductor from influence of an external magnetic field -?

(a) - Shielding (b) - Conduction (c) - Grounding (d) - none

(82) - If a capacitor connected in a circuit, due to capacitive reactance in a circuit -?

(83) - Molecule is the smallest part of substance is called -?

(a) - Compound (b) - Element (c) - Atom (d) - none

(84) - Shaded pole AC motor -? (Dewind)

(a) - Speed remain constant (b) - Speed vary with AC (c) - Speed vary with load.

(85) - Parallel connection of two capacitor -?

(a) - Current additive (b) - Power additive (c) - Voltage additive (d) - a & b.

(86) - If three capacitor, capacitance of 1 μ F are connected in series then net capacitance is -?

(a) - $\frac{1}{3} \mu$ F (b) - 3 μ F (c) - $\frac{1}{3}$ PF (d) - none

(87) - Transformer loss due to -?

(a) - Ampere (b) - Voltage (c) - ~~...~~ (d) - All

(88) - EMI is induced -?

(a) - when in close circuit magnetic flux will change

(89) - Dielectric, in b/w 2 parallel metallic plate -?

(a) - Resistor (b) - Capacitor (c) - Inductor

(90) - Synchronous motor -

(a) - Power factor correction (b) - Constant speed (c) - Voltage regulation (d) - All

(91) - HTCS about transformer -?

(a) - Core loss testing at secondary winding is open.

(b) - Core loss testing at secondary load is applied

(c) - All

(92) - When load is varied in alternator potential drop on terminal due to -?

(a) - armature resistance (b) - armature reactance

(c) - All.

(93) - it is a voltage dependent metal oxide material whose resistance sharply when \uparrow voltage -?

(a) - Thermistor (b) - Resistor (c) - Varistor.

(94) - Trickle charge -?

(a) - fresh and keep the batteries.

(95) - 2 resistor are in parallel then net resistance R is equal to -?

(a) - $R = \frac{R_1 \cdot R_2}{R_1 + R_2}$ (b) - $R = R_1 + R_2$ (c) - $R = R_1 + R_2$

- (96) - Atomic number equal to-?
 (a) - Proton + electron (b) - Proton + neutron (c) - neutron + electron
- (97) - RMS value of half wave rectifier is-? Peak value.
 $\sqrt{\frac{1}{2}}$ (a) - $0.707 \times \text{peak value}$ (b) - $1.414 \times \text{peak value}$ (c) - max. value of voltage
- (98) - required power for start the engine of N rotation per second and torque T joule of turbine-?
 $\sqrt{\frac{1}{2}}$ (a) - $2\pi NT$ (b) - $2\pi N/T$ (c) - $2\pi T/N$
- (99) - Force that move electron-?
 $\sqrt{\frac{1}{2}}$ (a) - EMF (b) - MMF (c) - electrostatic force
- (100) - Capacitor start and run motor has-?
 (a) - improved overload character (b) - higher efficiency (c) - High power factor $\sqrt{\frac{1}{2}}$ - All
- (101) - Measure the current in wheat stone Bridge when deflection is read zero-?
 (a) - ammeter (b) - Galvanometer (c) - voltmeter
- (102) - when coil passes through magnetic field the induced EMF
 $\sqrt{\frac{1}{2}}$ (a) - Perpendicular to line of force (b) - Parallel to line of force (c) - Cut line of force
- (103) - speed of alternator-?
 $\sqrt{\frac{1}{2}}$ (a) - $120 f/N$ (b) - $Nf/120$ (c) - $60 f/N$
- Imp - Flux intensity \rightarrow Tesla
 Magnetic flux \rightarrow wb
 Flux density \rightarrow wb/m²
- (104) - It opposes the change in current-?
 $\sqrt{\frac{1}{2}}$ (a) - Lenz law (b) - Farad law (c) - Right Hand rule
- (105) - Pair of dissimilar metal wire wound joined at one end and other is opened it sense heat-?
 (a) - Thermistor (b) - Thermo couple (c) - Thermometer
- (106) - In 3-phase balance circuit power is-?
 $\sqrt{\frac{1}{2}}$ (a) - $(\frac{2}{\sqrt{3}})^{1/2} \sqrt{3} V_L I_L \cos \phi$ (b) - $3 V_L I_L \cos \phi$ (c) -

- (107) - The time that required to charge 63% of voltage source?
 $\sqrt{\frac{1}{2}}$ (a) - Time constant (b) - Rate of charge (c) - Time factor (d) - All
- (108) - Material of brush in generator?
 $\sqrt{\frac{1}{2}}$ (a) - High grade Carbon graphite (b) - Bronze (c) - Iron
- (109) - Attenuation is expressed in-?
 $\sqrt{\frac{1}{2}}$ (a) - Decibels (b) - Columbs (c) - Hertz
- (110) - unit of capacitance is-?
 $\sqrt{\frac{1}{2}}$ (a) - Columbs/volt (b) - volt/columbs (c) - Columbs x volt
- (111) - _____ is used to vary the current?
 $\sqrt{\frac{1}{2}}$ (a) - Rheostat (b) - potentiometer (c) - thermocouple
- (112) - Power dissipated in inductive reactance of circuit is-?
 (a) - True power (b) - Apparent power (c) - Reactive power (d) - Absolute Power
- (113) - Trickle charging method is used to establish-?
 (a) - Avoid Sulphation (b) - To keep it fresh (c) - To maintain electrolyte level
- (114) - _____ is property of magnetism which oppose the flux to pass through it-?
 $\sqrt{\frac{1}{2}}$ (a) - Reluctance (b) - Relativity (c) - Specific (d) - Resistance
- (115) - Brushes used in DC generator are-?
 (a) - Square box (b) - Rectangular box (c) - Triangular box (d) - All
- (116) - In series combination of capacitor-?
 (a) - Charge on each capacitor remain same (b) - Potential difference across each is different
- (117) - If large resistance required use-?
 $\sqrt{\frac{1}{2}}$ (a) - Wire wound resistor (b) - Carbon resistor
- (118) - When a metal loses electrons it become-?
 $\sqrt{\frac{1}{2}}$ (a) - Positive Ion (b) - Negative ion (c) - Both

- (119) - The type of cell in which reversible reaction take place-?
- (a) - Primary cell (b) - Secondary cell (c) - None
- (120) - The speed of drift charge is called the velocity of-?
- (a) - charge (b) - current (c) - Voltage.
- (121) - Thermoelectric principle used in-?
- (a) - Exhaust gas temperature.
- (122) - Single pole shaded motor has-?
- (a) - low starting torque (b) - loss efficiency (c) - All.
- (123) - Building block of all matter is-?
- (a) - ATOM (b) - molecules (c) - Compound
- (124) - If we ↑ the no. of turns then inductance -
- $\propto \mu_0 \mu_r N^2 A$
- (125) - 3-phase induction motor Direction of rotation-?
- (a) - In capacitive circuit-?
- Current lead voltage by 90°
- (127) - Which is used to measure rate of flow of charge-?
- (a) - Coulomb (b) - Ampere (c) - Ampere/sec.
- (128) - Convert chemical energy into electrical energy-?
- (a) - DC - Generator (b) - Battery (c) - Inverter.
- (129) - Capacitor is made up of-?
- (a) - conductor (b) - Insulator (c) - Semi-conductor.
- (130) - Two parallel conductor current in same direction-?
- (a) - Create magnetic flux in opposite direction
- (b) - Create attraction (c) - Both.
- (131) - Photoelectric method of electricity is used -?
- In A/c Satellite or space probes.

- (159) - Battery regarding zinc iron, magnesium cell - Primary cell.
- (160) - If substance has high permeability & less hysteresis has then it is used to be-? - Electromagnet.
- (161) - maintenance of transformer-?
- (162) - If magnetic line of force in one material cut then other then - Mutual induction.
- (163) - If primary of transformer is connected with alternating sinusoidal voltage & there is load in series then-?
- (164) - If substance get magnetized in opposite direction to magnetic force-?
- Diamagnetic.
- (165) - In capacitor start induction motor-?
- Shift 90° between start to Run winding within
- (166) - State of battery does not depends on-?
- Rate of charge.
- (167) - Strength of pole is-?
- Directly proportional to the pole strength & inversely proportional to the square of distance b/w them.
- (168) - If capacitor connected in series-?
- Charge across both capacitor is same.
- (169) - Ni-cad & Ni/Zn
- Sec Alkaline battery.
- (170) - Factor related to lead acid battery-?
- Voltage, current, efficiency.
- (171) - Permittivity of free space-?
- $\mu = 4\pi \times 10^7 \text{ esu/m}$
- (172) - opposite effect of capacitance & inductance are equal when-?
- Resonance.
- (173) - Magnetic potential is - Scalar quantity.

(174) - To Counter the effect of field distortion, shifting brushes increment so which winding is used?

- (a) - Field winding (b) - Compensating winding (c) - Armature winding

(175) - Which property associated with magnetism?

- (a) - Permittivity (b) - Coercivity ~~(c) - Both~~

(176) - The magnet hold some of its magnetism, the property is?

- (a) - Reluctance ~~(b) - Retativity~~ (c) - Permittivity

(177) - Kirchoff law applicable to?

- AC & DC

(178) - Direction of rotation can not be changed in?

- single phase shaded pole motor.

(179) - Field intensity = $\frac{\text{Ampere} \times \text{turn}}{\text{meter}}$

(180) - Kinetic energy $KE = \frac{1}{2} mv^2$

(181) - Capacitor start and run motor has?

- (a) - Impresment in out load characteristics
(b) - Higher efficiency
(c) - Higher power factor

~~(d) - All~~

(182) - Reciprocal of reluctance \rightarrow Permanence

(183) - To shield items from the effect of flux by surrounding them with - permeability material.

(184) - Thermocouple junction are made of variety of metal, depend on \rightarrow temp. range required to measured and the max. temp to which they are exposed.

(185) - RMS value of sinusoidal AC circuit is equal to its value at angle of $\rightarrow 45^\circ$

(186) - SI unit of absolute permittivity - $\frac{Coulomb}{meter}$

(187) - If a transformer steps up the voltage then \rightarrow it will step down the current by some ratio.

(188) - The value of DC voltage source can be adjust so that the resistor dissipates the same amount of heat as it did when it was in AC circuit \rightarrow RMS value.

(189) - If two parallel conductor having current in same direction then \rightarrow they will attract each other.

(190) - Magnet do not lost their permanent magnetism until temp. \rightarrow is elevated above $400^\circ C$.

(191) - RMS value of half wave rectifier?

- (a) - half of peak value.

~~(b) - 0.707~~ of peak value.

(192) - AC Theory?

$$V_{RMS} = \frac{V_{max}}{\sqrt{2}}$$

(193) - To parallel conductor current in same direction?

- (a) - Create magnetic flux in opposite direction.

~~(b) - Create attraction~~ (c) - Both

(194) - Resistance is independent on?

- mass of conductor.

(195) - Inductors are connected in?

- Series.

(196) - magnetic poles are always in?

- Pairs.

(197) - In a DC motor electrical dependent unit are?

- Torque, voltage.

(198) - ~~But~~ The voltage buildup process of DC generator is?

- Cumulative.

- (199) - In autotransformer the amplification factor (K) is -?
 - Nearly equal to unity.
- (200) - ferrite is a -?
 - non-metallic
- (201) - If substance has high permeability & less hysteresis then it is used to be -?
 - Electromagnet.
- (202) - If magnetic line of force in one material cut other then?
 - Mutual induction.
- (203) - If substances get magnetized in opposite direction to magnetic force -?
 - Diamagnetic.
- (204) - Autotransformer?
 - Turn ratio is equal to unity.
- (205) - current in inductor -?
 (a) - Can change instantaneously (b) - Can't change instantaneously
 (c) - Has to rise or fall exponentially ~~(d) - Both B and C~~
- (206) - Power unit is -?
 (a) - J/q ~~(b) - J/sec~~ (c) - J.g (d) - J.sec.
- (207) - Total loss of transformer depends upon -?
 (a) - voltage (b) - current (c) - Independent on load factor
~~(d) - A & B~~
- (208) - Known resistance used in wheatstone bridge are resistors
 (a) - some ~~(b) - Precision~~ (c) - Equal
 (d) - variable
- (209) - Self-inductance is sometime analysis called -?
 (a) - Electronic inertia ~~(b) - Electrical inertia~~ (c) - induction inertia
- (210) - when electron is completely removed from atom, it is said to be -?
 - Ionized.

- escape
- (211) - I watt -?
~~(a) - 1J/sec~~ (b) - 1Jsec (c) - 1J.
- (212) - Conductor carry current in same direction -?
 (a) - Field strength (b) - Both conductors attached to each other
 (c) - force will depend upon current flowing through ~~the~~ conductor ~~(d) - All~~
- (213) - When capacitor is charged using a D.C source under steady condition charging circuit will behave -?
 (a) - Short circuit ~~(b) - open circuit~~
 (c) - Depend on type and size of plate of capacitor.
- (214) - In a ----- battery negative plate deteriorates -?
~~(a) - Primary~~ (b) - Secondary (c) - Both.
- (215) - The property of coil to induced e.m.f of nearby coil is called -?
~~(a) - Mutual inductance~~ (b) - Self inductance (c) - Self reactance
- (216) - When a secondary coil of transformer is not connected to any load the primary coil will draw -?
~~(a) - only magnetizing current~~ (b) - max^m current
 (c) - min^m current
- (217) - Capacitor in series -?
~~(a) - Plate separation ↑, charge ↓~~
 (b) - " " ↓ " ↑
- (218) - Construction of DC motor -?
 - armature, field, brush and end frame assembly.
- (219) - Trickle charging is required for -?
 - used fully charged condition.
- (220) - Unit of resistivity is - ohm-meter.
 - Conductance is reciprocal of resistance.

(221) - unit of conductivity is -

- $\frac{1}{\rho}$ Siemens/meter.

(222) - varistor is -

- non-linear resistor.

(223) - Relative permeability -?

- $\mu_r = 1$.

(224) The force b/w two magnetic pole placed in medium is -?

- Directly proportional to pole strength
- inversely " " square of distance b/w them.
- " " " absolute permeability of medium them.

(225) - Magnetic field strength (H) -
- unit is Henry N/Wb.

(226) - Flux Density measured in weber/m² (vector quantity)

(227) - Magnitude of mutual force -?

$$F = \frac{\mu_0 I_1 I_2}{2\pi d} \text{ Wb/m}^2.$$

(228) - Ampere-turns (AT) - unit of H.O.F.]

(229) - unit of reluctance is -?
→ AT/Wb.

(230) - Permeance is reciprocal and implies the ease or readiness with which magnetic flux is developed. measured in Wb/AT or Henry.

(231) - Reluctivity - is specific reluctance and corresponds to resistivity which is specific resistance.

$$\text{Ampere-turns} = H \times l$$

(232) - induced e.m.f is -?

- (a) - Dynamically induced
- (b) - statically induced
- (c) - both

(233) - self-inductance - property of coil due to which opp any ↑ or ↓ of current at flux through it.
measured in terms of coefficient of self-inductance

(234) - coefficient of self-inductance -?

- the weber-turns per ampere in coil.

(235) - Unit of self inductance is -?

- Henry.

(236) - mutual inductance - define as ability of one coil to produce e.m.f in a nearby coil by induction when the current in the first coil changes.

(237) - coefficient of mutual inductance -?

- the weber-turns in one coil due to one ampere current in the other.

(238) - Coefficient of coupling -?

- ratio of mutual inductance actually present b/w the two coils to max^m possible value.

(239) - Capacitor start motor -?

(a) - improvement in overload characteristic (b) - High efficiency

(c) - High power factor (d) - All

(240) - HTCS related to interpole -?

(a) - Interpoles are placed ~~below~~ below the main poles

(b) - The field produced by interpole doesn't cancel the field about the armature winding.

(c) - Interpoles are placed b/w main poles

(d) - All.

(241) - High magnetising magnet to shield magnet -?

(a) - low permeability (b) - High permeability (c) - medium permeability

(242) - HTCS.

(a) - Inductance is more, more no. of flux lines.

(b) - " " less, " no. of flux

(c) - more inductance, less line no. of flux.

(243) - Terminal voltage varies in generator due to -?

- Armature reaction

- (244) - Constant losses at full load & no load — Core loss.
- (245) - which is (-) temp. coefficient — electrolyte + Carbon.
- (246) - Power dissipated in circuit is — $\pm 2R$.
- (247) - what is reactive power — $P = I^2 X$ ($X = X_L$ or X_C).
- (248) - half wave rectifier — $V_{RMS} = \frac{V_{max}}{\sqrt{2}}$
- (249) - full wave rectifier — $V_{RMS} = \frac{V_{max}}{\sqrt{2}}$
- (250) - Internal resistance of battery — ?
min. during charging and max. during discharging.
- (251) - Ceramic Capacitors — (Read about it).
- (a) - Temp. Stable (b) - (c) - Both.
- (252) - Permanent magnet — ?
- (a) - Permeability is less than 1.
(b) - " " equal to 1.
(c) - " " is more than 1.
- (253) - Power is zero when? (a) (b) (c)
- (a) - Purely resistive (b) - Inductor (c) - Capacitor.
- (254) - while charging capacitor, A graph was plotted which show
- (a) - voltage (b) - current (c) - $I \cdot V$
- (255) - Permanent magnet retativity —
- (256) - Battery capacity depend upon — (1) rate of discharge
(2) - Temp. (3) - Density of electrolyte (4) - Quality of active material.
- Battery rating — Ampere-hour capacity (2) Reverse capacity.
(3) Zero cracking power, (4) Cell cracking power.

- apparent power — It is product of rms value of applied voltage and circuit current,
 $S = VI = (IR) \cdot I = I^2 Z$ volt-ampere.
- active power — It is power which actually dissipated in circuit
resistive $P = I^2 R = VI$
- Reactive power — power developed in inductive reactance of circuit.
— Reciprocal of power is called $\cos \phi$ - factor
- Inductive reactance — \uparrow linearly with frequency
Capacitive — \downarrow with frequency.