Uka Tarsadia University
Subject Name: Basics of Electrical Engineering

CH: 3 Electrostatic field and Capacitance				
1.	Coulomb/m^2 is the unit of _____			
	A.	Electric charge	B.	Electric flux
	C.	Electric flux density	D.	Electric field intensity
૧.	Coulomb/m^2 _____ નો એકમ છે.			
	A.	ઇલેક્ટ્રીક ચાર્જ	B.	ઇલેક્ટ્રીક ફ્લક્ષ
	C.	ઇલેક્ટ્રીક ફ્લક્ષ ડેન્સીટી	D.	ઇલેક્ટ્રીક ફિલ્ડ ઇન્ટેન્સીટી
2.	1 pF = _____F			
	A.	10^{-3}	B.	10^{-6}
	C.	10^{-12}	D.	10^{-9}
૨.	1 pF = _____F			
	A.	10^{-3}	B.	10^{-6}
	C.	10^{-12}	D.	10^{-9}
3.	Two capacitors of 10 F and 15 F are connected in parallel. What will be the equivalent value of capacitance?			
	A.	6.03 F	B.	10 F
	C.	0.166 F	D.	25 F
૩.	10 F અને 15 F ના બે કેપેસીટર પેરેલલમાં જોડેલ છે. ઇક્વીવેલંટ કેપેસીટંસની કિંમત શું થાય?			
	A.	6.03 F	B.	10 F
	C.	0.166 F	D.	25 F
4.	The capacitor of 2.5 F is connected with 20 V supply. What will be the energy stored in			

	capacitor?			
	A.	100 joule	B.	500 joule
	C.	10 joule	D.	1000 joule
૪.	2.5 Fના કેપેસીટરને 20 V સપ્લાય સાથે જોડેલ છે. કેપેસીટરમાં સંગ્રહાયેલ એનર્જી કેટલી થાય?			
	A.	100 joule	B.	500 joule
	C.	10 joule	D.	10000 joule
5.	The dielectric strength of air is _____kV/mm			
	A.	0	B.	1
	C.	3	D.	2
૫.	હવાની ડાયઇલેક્ટ્રીક સ્ટ્રેંગ્થ _____ kV/mm છે.			
	A.	0	B.	1
	C.	3	D.	2
6.	The ability of a capacitor to _____is called as a capacitance.			
	A.	Store charge	B.	Charge and discharge
	C.	Oppose current	D.	Store resistance
૬.	કેપેસીટરની _____ ક્ષમતાને કેપેસીટન્સ કહેવાય.			
	A.	ચાર્જ સંગ્રહ કરવાની	B.	ચાર્જ અને ડીસ્ચાર્જ કરવાની
	C.	કરંટના વિરોધ કરવાની	D.	રઝિસ્ટરને સંગ્રહ કરવાની
7.	Permitivity of vacuum is _____			
	A.	$8.85 * 10^{-10}$ F/m	B.	$8.85 * 10^{-11}$ m/F
	C.	$8.85 * 10^{-12}$ F/m	D.	$8.85 * 10^{-12}$ m/F
૭.	શૂન્યાવકાશની પરમિએબીલીટી _____ છે.			
	A.	$4\Pi * 10^{-6}$ F/m	B.	$4\Pi * 10^{-7}$ m/F

	C.	$4\Pi * 10^{-7}$ F/m	D.	$4\Pi * 10^{-6}$ m/F
8.	Newton/ Coulomb is the unit of _____			
	A.	Electric charge	B.	Electric flux
	C.	Electric flux density	D.	Electric field intensity
૮.	Newton/ Coulomb _____ નો એકમ છે.			
	A.	ઇલેક્ટ્રીક ચાર્જ	B.	ઇલેક્ટ્રીક ફ્લક્ષ
	C.	ઇલેક્ટ્રીક ફ્લક્ષ ડેન્સીટી	D.	ઇલેક્ટ્રીક ફિલ્ડ ઇન્ટેન્સીટી
9.	1 μF = _____F			
	A.	10^{-3}	B.	10^{-6}
	C.	10^{-12}	D.	10^{-9}
૯.	1 μF = _____F			
	A.	10^{-3}	B.	10^{-6}
	C.	10^{-12}	D.	10^{-9}
10.	Energy stored in capacitor is given by the formula _____			
	A.	½ CV^2	B.	½ CV
	C.	½ QV	D.	½ QV^2
૧૦.	કેપેસિટરમાં સંગ્રહાયેલ એનર્જી _____ સુત્ર દ્વારા આપવામાં આવે છે.			
	A.	½ CV^2	B.	½ CV
	C.	½ QV	D.	½ QV^2
11.	Two capacitors of 10 F and 15 F are connected in series. What will be the equivalent value of capacitance?			
	A.	6.03 F	B.	10 F
	C.	0.166 F	D.	15 F

૧૧.	10 F અને 15 F ના બે કેપેસીટર સીરિઝમાં જોડેલ છે. ઇક્વીવેલંટ કેપેસીટંસની કિંમત શું થાય?			
	A.	6.03 F	B.	10 F
	C.	0.166 F	D.	15 F
12.	The dielectric strength does not depends upon _____			
	A.	Temperature	B.	Moisture
	C.	Thickness	D.	Strength of material
13.	Which of the following relation is correct?			
	A.	Q=CV	B.	C = QV
	C.	Q = C/V	D.	Q = V/C
14	If 2V is supplied to a 3F capacitor, calculate the charge stored in the capacitor.			
	A.	5 C	B.	6 C
	C.	2 C	D.	3 C
15	A 4microF capacitor is charged to 120V, the charge in the capacitor would be?			
	A.	480 C	B.	480 microC
	C.	30 C	D.	30 microC
16.	A capacitor consists of_____			
	A.	Two conductors	B.	Two semiconductors
	C.	Two dielectrics	D.	Two insulators
17.	Capacitance increases with _____			
	A.	Increase in plate area	B.	Decrease in plate area
	C.	Increase in distance between the plates	D.	Increase in density of the material
18.	Capacitance increases with _____			
	A.	Increase in distance between the plates	B.	Decrease in plate area

	C.	Decrease in distance between the plates	D.	Increase in density of the material
19.	If a 2 F capacitor has 1 C charge, calculate the voltage across its terminals.			
	A.	0.5 V	B.	2 V
	C.	1.5 V	D.	1 V
20.	If one plate of a parallel plate capacitor is charged to positive charge the other plate is charged to?			
	A.	Positive	B.	Negative
	C.	Positive or negative	D.	Not charged
21.	Calculate the capacitance of a capacitor that stores 40 microC of charge and has a voltage of 2 V.			
	A.	20 F	B.	20 microF
	C.	10 F	D.	10 microF
22.	What is the value of capacitance of a capacitor which has a voltage of 4 V and ha 8 C of charge?			
	A.	2 F	B.	4 F
	C.	6 F	D.	8 F
23.	Unit of capacitance is_____			
	A.	Volts	B.	Farad
	C.	Henry	D.	Newton
24.	Farad is the unit of _____			
	A.	Resistance	B.	Capacitance
	C.	Charge	D.	Voltage
25.	What is the total capacitance when three capacitors, C_1, C_2 and C_3 are connected in parallel?			
	A.	$C= C_1/(C_2+C_3)$	B.	$C= C_1+C_2+C_3$
	C.	$C= C_2/(C_1+C_3)$	D.	$1/C = 1/C_1+1/C_2+1/C_3$

26.	What is the total capacitance when three capacitors, C_1, C_2 and C_3 are connected in series?			
	A.	$C= C_1/(C_2+C_3)$	B.	$C= C_1+C_2+C_3$
	C.	$C= C_2/(C_1+C_3)$	D.	$1/C = 1/C_1+1/C_2+1/C_3$
27.	When capacitors are connected in parallel, the total capacitance is always _____ the individual capacitance values.			
	A.	Greater than	B.	Less than
	C.	Equal to	D.	Cannot be determined
28.	Three capacitors having a capacitance equal to 2 F, 4 F and 6 F are connected in parallel. Calculate the equivalent parallel.			
	A.	10 F	B.	11 F
	C.	12 F	D.	13 F
29.	Two capacitors having capacitance value 4 F, three capacitors having capacitance value 2 F and 5 capacitors having capacitance value 1 F are connected in parallel, calculate the equivalent capacitance.			
	A.	20 F	B.	19 F
	C.	18 F	D.	17 F
30.	When capacitors are connected in series, the equivalent capacitance is _____ each individual capacitance.			
	A.	Greater than	B.	Less then
	C.	Equal to	D.	Insufficient data provided
31.	When capacitors are connected in series _____ remains the same.			
	A.	Voltage across each capacitor	B.	Charge
	C.	Capacitance	D.	Resistance
32.	When capacitors are connected in parallel _____ remains the same.			
	A.	Voltage across each capacitor	B.	Charge
	C.	Capacitance	D.	Resistance

33.	When capacitors are connected in series _____ varies.			
	A.	Voltage across each capacitor	B.	Charge
	C.	Capacitance	D.	Resistance
34.	When capacitors are connected in parallel _____ varies.			
	A.	Voltage across each capacitor	B.	Charge
	C.	Capacitance	D.	Resistance
35.	Four 10 F capacitors are connected in series, calculate the equivalent capacitance.			
	A.	1.5 F	B.	2.5 F
	C.	3.5 F	D.	0.5 F
36.	Capacitor is a device used to_____in electrostatic field.			
	A.	store electrical energy	B.	vary the resistance
	C.	store magnetic energy	D.	dissipate energy
37.	Electric flux density is_____			
	A.	Area per unit charge	B.	Charge per unit area
	C.	Area per unit capacitance	D.	Capacitance per unit charge
38.	Electric field intensity is _____			
	A.	Charge per unit force	B.	Force per unit area
	C.	force per unit charge	D.	Area per unit force
39.	What is relative permittivity?			
	A.	Equal to the absolute permittivity	B.	Ratio of absolute permittivity to actual permittivity of air
	C.	Equal to the actual permittivity	D.	Ratio of actual permittivity to absolute permittivity
40.	What is the unit for relative permittivity?			
	A.	F/m	B.	Fm
	C.	No unit	D.	F/m^2

41.	Which of the following is the type of capacitor on the basis of dielectric strength?			
	A.	Paper capacitor	B.	Mica capacitor
	C.	Ceramic capacitor	D.	All of above
42.	Which of the following is the type of capacitor on the basis of configuration or shape?			
	A.	Spherical capacitor	B.	Cylindrical capacitor
	C.	Parallel plate capacitor	D.	All of above
43.	Flux per unit area is known as _____			
	A.	Electric flux density	B.	Dielectric strength
	C.	Electric field intensity	D.	Permittivity
44.	What is the unit of electric field intensity?			
	A.	N/C	B.	C/N
	C.	N/m^2	D.	m/N
45.	A capacitor consists of_____			
	A.	Two insulators separated by a conductor	B.	Two conductors separated by an insulator
	C.	Two insulators only	D.	Two conductors only
46.	_____ field is associated with the capacitor			
	A.	Electrostatic	B.	Magnetic
	C.	Both A and B	D.	None
47.	The property of a capacitor to store electricity is called its			
	A.	Capacitance	B.	Charge
	C.	Energy	D.	None of the above
48.	For capacitors connected in parallel, the total capacitance would be			
	A.	Product of the individual capacitances	B.	Inverse of the sum of inverse values of

				capacitors
	C.	Sum of the individual capacitances	D.	None of these
49.	Absolute permittivity of dielectric medium is represented as			
	A.	ε_0	B.	ε_r
	C.	$\varepsilon_r/\varepsilon_0$	D.	$\varepsilon_r\varepsilon_0$
50.	Force exerted between two charged body is _____			
	A.	Directly proportional to distance between two charged body	B.	Directly proportional to square of distance between two charged body
	C.	Inversely proportional to distance between two charged body	D.	Inversely proportional to square of distance between two charged body

CH: 5 Batteries				
1.	The device which convert chemical energy in to electrical energy is known as_____			
	A.	Battery	B.	Capacitor
	C.	Inductor	D.	Resistor
૧.	ઉપકરણ કે જે રાસાયણિક ઉર્જાને વિદ્યુત ઉર્જામાં રૂપાંતરિત કરે છે તે_____ તરીકે ઓળખાય છે.			
	A.	બેટરી	B.	કેપેસીટર
	C.	ઇન્ડકટર	D.	રઝિસ્ટર
2.	The capacity of a battery is expressed in terms of_____			
	A.	Current rating	B.	Voltage rating
	C.	Ampere hour rating	D.	None of the above
૨.	બેટરીની ક્ષમતા એ _____ તરીકે બતાવવામાં આવે છે.			
	A.	કરન્ટ રેટીંગ	B.	વોલ્ટેજ રેટીંગ
	C.	એમ્પીયર અવર રેટીંગ	D.	ઉપરમાંથી કોઇ નહિ
3.	Trickle charger of a storage battery helps to_____			
	A.	Maintain proper electrolyte level	B.	Increase its reverse capacity
	C.	Prevent sulphation	D.	Keep it fresh and fully charged
૩.	સ્ટોરેજ બેટરીનું ટ્રિકલ ચાર્જર એ_____ માટે મદદ કરે છે.			
	A.	ઇલેક્ટ્રોલાઇટનું યોગ્ય સ્તર જાળવવા	B.	રીવર્સ કેપેસીટી વધારવા
	C.	સલ્ફેશન અટકાવા	D.	તાજા અને સંપૂર્ણ રૂપે ચાર્જ રાખવા
4.	The cell in which chemical action is not reversible is known as _____			

	A.	Rechargeable cell	B.	Non-rechargeable cell
	C.	Voltaic cell	D.	Edison cell
૪.	જે સેલમાં રાસાયણિક ક્રિયા ઉલટાવી શકાય નહિ તે_____ તરીકે ઓળખાય છે.			
	A.	રિચાર્જેબલ સેલ	B.	રિચાર્જેબલ સેલ
	C.	વોલ્ટેઇક સેલ	D.	એડીશન સેલ
5.	The ampere -hour efficiency of battery is about _____			
	A.	75 % - 80 %	B.	90 % - 95 %
	C.	100 %	D.	10 %
૫.	બેટરીની એમ્પીયર – અવર કાર્યક્ષમતા લગભગ _____ છે.			
	A.	75% - 80%	B.	90% - 95%
	C.	100%	D.	10%
6.	At no load condition, the terminal voltage of the battery is _____e.m.f. of the battery.			
	A.	Greater	B.	Less
	C.	Equal	D.	None of the above
૬.	નો લોડની સ્થિતિમાં, બેટરીનું ટર્મિનલ વોલ્ટેજ એ બેટરીના ઇ.એમ.ફ. કરતાં _____ છે.			
	A.	વધારે	B.	ઓછું
	C.	સમાન	D.	ઉપરમાંથી કોઇ નહિ
7.	The group of cell connected in series and/or parallel to produce required voltage is known as_____			
	A.	Battery	B.	Capacitor
	C.	Inductor	D.	Resistor
૭.	આવશ્યક વોલ્ટેજ ઉત્પન્ન કરવા માટે સેલના જુથનું સીરિઝ અથવા પેરેલલ જોડાણ _____			

	જાણીતું છે.			
	A.	બેટરી	B.	કેપેસિટર
	C.	ઇન્ડક્ટર	D.	રઝિસ્ટર
8.	To prevent sulphation which one of the following charging method is used?			
	A.	Boost charging	B.	Trickle charging
	C.	Constant voltage charging	D.	Constant current charging
૮.	સલ્ફેશનને રોકવા માટે નીચેનીમાંથી કઈ ચાર્જિંગ પદ્ધતિનો ઉપયોગ કરવામાં આવે છે?			
	A.	બુસ્ટ ચાર્જિંગ	B.	ટ્રિકલ ચાર્જિંગ
	C.	કોન્સ્ટન્ટ વોલ્ટેજ ચાર્જિંગ	D.	કોન્સ્ટન્ટ કરંટ ચાર્જિંગ
9.	The electrode for a battery must be _____.			
	A.	A semi conductor	B.	An insulator
	C.	A good conductor of electricity	D.	A bad conductor of electricity
૯.	બેટરી માટે ઇલેક્ટ્રોડ _____ હોવું આવશ્યક છે			
	A.	સેમી કંડક્ટર	B.	ઇન્સ્યુલેટર
	C.	વીજળીનો એક સારા વાહક	D.	વીજળીનો ખરાબ વાહક
10.	The watt-hour efficiency of battery is about _____.			
	A.	75% - 80%	B.	90% - 95%
	C.	100%	D.	10%
૧૦.	બેટરીની વોટ - કલાકની કાર્યક્ષમતા લગભગ _____ છે.			
	A.	75 % - 80 %	B.	90 % - 95 %
	C.	100 %	D.	10 %

11.	The terminal voltage of the battery is always _____e.m.f. of battery.			
	A.	Greater	B.	Less
	C.	Equal	D.	None of above
૧૧.	બેટરીનો ટર્મિનલ વોલ્ટેજ હંમેશા બેટરીનો એએમએફ કરતા _____ હોય છે.			
	A.	વધારે	B.	ઓછુ
	C.	સમાન	D.	ઉપર માંથી કોઇ નહીં
12.	Ideally the internal resistance of battery should be_____ohm.			
	A.	0	B.	1
	C.	1.1	D.	5
૧૨.	આદર્શ રીતે બેટરીનો ઇન્ટરનલ રઝિસ્ટન્સ _____ ઓહ્મ હોવો જોઈએ			
	A.	0	B.	1
	C.	1.1	D.	5
13.	The efficiency of a battery is expressed in terms of_____			
	A.	Ampere hour efficiency	B.	Watt hour efficiency
	C.	Both A and B	D.	None of the above
14.	Battery container should be acid resistance therefore it is made up of			
		Glass		Plastic
		Wood		All of the above
15.	The terminal voltage when the battery is being charged decreases with			
		Increasing temperature		Increasing charging rate
		Increasing stage of charge		All of the above
16.	The open circuit voltage of any storage cell depends wholly upon			
		Its chemical constituents		On the strength of its electrolyte

		Its temperature		All of the above
17.	Internal resistance of a cell is reduced to by			
		Using vent plug to permit gas formed during discharge		Increasing the plate area
		Putting plates very close together		All of the above
18.	Internal resistance of a cell is due to			
		Resistance of electrolyte		Electrode resistance
		Surface contact resistance between electrode and electrolyte		All of the above
19.	Sulphation in a lead acid battery occurs due to			
		Heavy charging		Incomplete charging
		Fast charging		Trickle charging
20.	The capacity of a lead-acid battery depends on			
		Rate of discharge		temperature
		Density of dielectric		All of above
21.	The capacity of a lead acid cell does not depends on its			
		Temperature		Rate of discharge
		Rate of charge		Quantity of active material
22.	The capacity of a lead acid cell depends on			
		Amperes		Watt-amperes
		Watts		Ampere-hours
23.	The lead acid cell never be discharged beyond			
		1.8 V		1.9 V
		2 V		2.1 V
24.	In a lead acid battery the energy is stored in the form of			

		Charged ions		Chemical energy
		Electrostatic energy		Electromagnetic energy
25.	Which of the following factors adversely affects the capacity of the lead acid battery?			
	A.	temperature of surroundings	B.	Specific gravity of electrolyte
	C.	Rate of discharge	D.	All of the above
26.	In Ideal case, the Charging current for 200Ah battery would be _____?			
	A.	11 A	B.	12 A
	C.	15 A	D.	20 A
27.	In Ideal case, the Charging Time for 200Ah battery would be _____?			
	A.	25 hours	B.	10 hours
	C.	15 hours	D.	30 hours
28.	Specific Gravity of an electrolyte in a single cell or a battery is always _____.			
	A.	Equal to 1.0	B.	Less than 1.0
	C.	Greater than 1.0	D.	None of the above
29.	If a lead-acid cell is discharged below 1.8 V the following will happen.			
	A.	Capacity of cell will reduce	B.	Sulphation of plates will occur
	C.	Internal resistance will increase	D.	All of above
30.	Battery consist of			
	A.	Anode	B.	cathode
	C.	Electrolyte	D.	All of above
31.	Following will occur if level of electrolyte falls below plates			
	A.	Capacity of the cell is reduced	B.	Life of the cell is reduced
	C.	Open plates are converted to lead sulphate	D.	All above

32.	In constant voltage charging method, the charging current from discharged to fully charged condition.			
	A.	Decreases	B.	Increases
	C.	Remains constant	D.	Becomes zero
33.	Sulphated cells are indicated by			
	A.	The loss of capacity of the cell	B.	The decrease of the specific gravity
	C.	The low voltage of the cell on discharge	D.	All of above conditions
34.	What is the principle of battery?			
	A.	Converts electrical energy into mechanical energy	B.	Converts mechanical energy into electrical energy
	C.	Converts chemical energy into electrical energy	D.	Converts chemical energy into mechanical energy
35.	Which of the following is the requirement of battery?			
	A.	Long storage time	B.	Compact in size
	C.	Cost effective	D.	All of above
36.	Which of the following is the requirement of battery?			
	A.	Maintenance free	B.	Capable of supplying large current
	C.	More Storage time	D.	All of above
37.	Which of the following type of battery is non-rechargeable?			
	A.	Zinc-chloride battery	B.	Lead-acid battery
	C.	Nickel cadmium battery	D.	Nickel hydride battery
38.	Which of the following battery is not rechargeable type?			
	A.	Nickel hydride battery	B.	Lead-acid battery
	C.	Nickel cadmium battery	D.	Zinc-chloride battery

39.	Which of the following battery is rechargeable type?			
	A.	Nickel hydride battery	B.	Lead-acid battery
	C.	Nickel cadmium battery	D.	All of above
40.	Which of the following is the electrical characteristic of battery?			
	A.	E.M.F.	B.	Internal resistance
	C.	Terminal voltage	D.	All of above
41.	Which of the following is the electrical characteristic of battery?			
	A.	Capacity	B.	Terminal voltage
	C.	Efficiency	D.	All of above
42.	The emf of fully charged lead acid battery is _____			
	A.	1.2 V	B.	2.2 V
	C.	1.75 V	D.	1.5 V
43.	The emf of the battery depends on _____			
	A.	Specific gravity of electrodes	B.	Time elapsed since it was charged
	C.	Temperature	D.	All of above
44.	The opposition offered to the flow of current within a cell is known as _____of battery.			
	A.	Internal resistance	B.	Internal voltage
	C.	Internal capacitance	D.	Internal inductance
45.	Which of the following factors affect internal resistance of battery?			
	A.	Area of plates	B.	Specific gravity of electrodes
	C.	Spacing between the plates	D.	All of above
46.	If the battery capacity is 10AH means			
	A.	10 A current for 1 hour	B.	11 A current for 1 hour
	C.	5 A current for 10 hour	D.	2 A current for 1 hour

47.	Which of the following is the charging technique of lead acid battery?			
	A.	Constant current charging	B.	Constant voltage charging
	C.	Both A and B	D.	None
48.	Which of the following is the charging technique of lead acid battery?			
	A.	Boost charging	B.	Trickle charging
	C.	Both A and B	D.	None
49.	The process of generation of hydrogen gas at cathode and oxygen at anode when the cell is about of fully charge condition is known as _____			
	A.	Sulphation	B.	Gassing
	C.	Both A and B	D.	None
50.	In a lead acid battery, gassing occur during			
	A.	Discharging	B.	overloading
	C.	Charging	D.	all of the above

CH: 6 Electrical Wiring and safety				
1.	What is the full form of MCB?			
	A.	Minimum Circuit Breaker	B.	Maximum Circuit Breaker
	C.	Mix Circuit Breaker	D.	Miniature Circuit Breaker
૧.	MCB નું પુરૂ નામ શું છે?			
	A.	મીનીમમ સર્કિટ બ્રેકર	B.	મેક્ષીમમ સર્કિટ બ્રેકર
	C.	મીક્ષ સર્કિટ બ્રેકર	D.	મીનીએચર સર્કિટ બ્રેકર
2.	Which of the following material is used as fuse?			
	A.	Carbon	B.	Zinc

	C.	Wood	D.	Rubber
૨.	નીચેનામાંથી કયા મટિરીયલનો ઉપયોગ ફ્યુઝ તરીકે વપરાય છે?			
	A.	કાર્બન	B.	ઝિંક
	C.	લાકડુ	D.	રબર
3.	Earthing is necessary to _____.			
	A.	Avoid risk of fire due to earth leakage	B.	Avoid electric shock to human body
	C.	Keep the potential of all non current carrying conducting parts to zero with respect to earth	D.	All of above
૩.	અર્થીંગ _____ માટે જરુરી છે.			
	A.	અર્થ લિકેજને કારણે આગના જોખમને ટાળવા	B.	માનવ શરીરને ઇલેક્ટ્રિક આંચકોથી ટાળવા
	C.	જમીનના સંદર્ભમાં બધા નોન-કરંટ કેરીંગ કંડક્ટીંગ પાર્ટને જીરો પોટેંશિયલ પર રાખવા	D.	ઉપરના બધા જ
4.	Fuse is always connected in _____with phase wire.			
	A.	Series	B.	Parallel
	C.	Both series and parallel	D.	None of above
૪.	ફ્યુઝ હંમેશા ફેઝ વાયર સાથે _____ માં જોડાયેલ હોય છે.			
	A.	સીરિઝ	B.	પેરેલલ
	C.	બંને સીરિઝ અને	D.	ઉપરમાંથી કોઇ નહિ
5.	In Multi-stage building lighting which one of the following wiring system is used?			
	A.	Series wiring	B.	Parallel wiring

	C.	Stair-case wiring	D.	Go-down wiring
૫.	મલ્ટી-સ્ટેજ બીલ્ડીંગ લાઇટિંગમાં નીચેનામાંથી કઇ વાયરિંગ સિસ્ટમ વપરાય છે?			
	A.	સીરિઝ વાયરિંગ	B.	પેરેલલ વાયરિંગ
	C.	સ્ટેર કેસ વાયરિંગ	D.	ગોડાઉન વાયરિંગ
6.	The capacity of switches in domestic lightning is _____			
	A.	5 A and 15 A	B.	10 A and 100 A
	C.	25 A and 15 A	D.	15 A and 100 A
૬.	ડોમેસ્ટિક લાઇટિંગમાં સ્વીચની કેપેસીટી _____ છે.			
	A.	5 A અને 15 A	B.	10 A અને 100 A
	C.	25 A અને 15 A	D.	15 A અને 100 A
7.	In Christmas lighting which one of the following wiring system is used?			
	A.	Series wiring	B.	Parallel wiring
	C.	Stair-case wiring	D.	Go-down wiring
૭.	ક્રીસમસ લાઇટિંગમાં નીચેનામાંથી કઇ વાયરિંગ સિસ્ટમ વપરાય છે?			
	A.	સીરિઝ વાયરિંગ	B.	પેરેલલ વાયરિંગ
	C.	સ્ટેર કેસ વાયરિંગ	D.	ગોડાઉન વાયરિંગ
8.	The parallel wiring is not used for _____			
	A.	House appliances	B.	Switchboard wiring
	C.	Industrial loads	D.	decoration lighting
૮.	પેરેલલ વાયરીંગ _____ માટે વાપરી નહિ શકાય.			

	A.	હાઉસ એપ્લાયન્સીસ	B.	સ્વીચ બોર્ડ વાયરીંગ
	C.	ઇન્ડસ્ટ્રીયલ લોડ	D.	સુશોભન લાઇટિંગ
9.	The size and type of cable is selected for installation according to _____			
	A.	Nature of condition	B.	Operating voltage
	C.	Current carrying capacity	D.	All of above
૯.	ઇંસ્ટોલેશન માટે કેબલની સાઇઝ અને ટાઇપ _____પ્રમાણે પસંદ કરવામાં આવે છે.			
	A.	નેચરની સ્થિતિ	B.	ઓપરેટીંગ વોલ્ટેજ
	C.	કરંટ કેરીંગ કેપેસીટી	D.	ઉપરના બધા જ
10.	The material used for cable conductor is _____.			
	A.	Carbon	B.	Rubber
	C.	Copper	D.	Porcelain
૧૦.	કેબલ કંડક્ટર માટે _____ મટિરીયલ વપરાય છે.			
	A.	કાર્બન	B.	રબર
	C.	કોપર	D.	પોર્સેલીન
11.	The type of wiring depends on _____.			
	A.	Durability	B.	Cost
	C.	Safety and appearance	D.	All of the above
૧૧.	વાયરીંગનો પ્રકાર _____ પર આધાર રાખે છે.			
	A.	ટકાઉપણું	B.	કિંમત
	C.	સલામતી અને દેખાવ	D.	ઉપરના બધા જ
12.	Which one is the characteristic of fuse element?			

	A.	Low melting point	B.	Low conductivity
	C.	High cost	D.	None of above
૧૨.	ફ્યુઝ એલીમેંટની લાક્ષણિકતા કઇ છે?			
	A.	ઓછું મેલ્ટીંગ પોઇંટ	B.	ઓછી વાહકતા
	C.	વધારે કિંમત	D.	ઉપર માંથી કોઇ નહિ
13.	What is the full form of UPS?			
	A.	Uninterrupted Power Supply	B.	Unified Power Supply
	C.	Unused Power Supply	D.	Universal Power Supply
૧૩.	UPSનું આખું નામ શુ છે?			
	A.	અનઇનટરપ્ડેડ પાવર સપ્લાય	B.	યુનિફાઇડ પાવર સપ્લાય
	C.	અનયુઝ્ડ પાવર સપ્લાય	D.	યુનિવર્સલ પાવર સપ્લાય
14.	Which of the following material is not used as fuse?			
	A.	Copper	B.	Zinc
	C.	Wood	D.	Platinum
૧૪.	નીચેનામાંથી કયા મટિરીયલનો ઉપયોગ ફ્યુઝ તરીકે થતો નથી?			
	A.	કોપર	B.	ઝીંક
	C.	લાકડું	D.	પ્લેટિનમ
15.	Switch is always connected with _____.			
	A.	Phase wire	B.	Neutral wire
	C.	Earth wire	D.	None of above
૧૫.	સ્વીચ હંમેશા _____ સાથે જોડાયેલ હોય છે			

	A.	ફેઝ વાયર	B.	ન્યુટ્રલ વાયર
	C.	અર્થ વાયર	D.	ઉપર માંથી કોઇ નહીં
16.	In decoration lighting which one of the following wiring system is used?			
	A.	Series wiring	B.	Parallel wiring
	C.	Stair-case wiring	D.	Go-down wiring
૧૬.	સુશોભન લાઇટિંગમાં નીચેનામાંથી કઇ વાયરિંગ સિસ્ટમ વપરાય છે?			
	A.	સીરિઝ વાયરિંગ	B.	પેરેલલ વાયરિંગ
	C.	સ્ટેર કેસ વાયરિંગ	D.	ગોડાઉન વાયરિંગ
17.	The parallel wiring is used for _____.			
	A.	Go-down or tunnel lighting	B.	House appliances
	C.	Stair-case lighting	D.	decoration lighting
૧૭.	પેરેલલ વાયરિંગ _____ માટે વપરાય છે.			
	A.	ગોડાઉન અથવા ટનલ લાઇટિંગ	B.	હાઉસ એપ્લાયન્સીસ
	C.	સ્ટેર કેસ લાઇટિંગ	D.	સુશોભન લાઇટિંગ
18.	The material used for cable insulator is _____.			
	A.	Aluminium	B.	Rubber
	C.	Copper	D.	Zinc
૧૮.	કેબલ ઇન્સ્યુલેશન માટે _____ મટિરીયલ વપરાય છે.			
	A.	એલ્યુમિનિયમ	B.	રબર
	C.	કોપર	D.	ઝિંક
19.	In which type of wiring one lamp is controlled by two sources?			

	A.	Series wiring	B.	Parallel wiring
	C.	Stair-case wiring	D.	Go-down wiring
૧૯.	કયા પ્રકારનાં વાયરિંગમાં એક લેમ્પ બે સ્રોતો દ્વારા નિયંત્રિત થાય છે?			
	A.	સીરીઝ વાયરિંગ	B.	પેરેલલ વાયરિંગ
	C.	કેસ વાયરિંગ	D.	ગો-ડાઉન વાયરિંગ
20.	Which one is not the characteristic of fuse element?			
	A.	Low melting point	B.	Low conductivity
	C.	Low cost	D.	All of above
૨૦.	કઇ એક ફ્યુઝ એલિમેન્ટની લાક્ષણિકતા નથી?			
	A.	નીચું ગલનબિંદુ	B.	ઓછી વાહકતા
	C.	ઓછી કિંમત	D.	ઉપરમાંથી કોઇ નહીં
21.	Full form of ELCB is _____.			
	A.	Earth Leakage Circuit Breaker	B.	Electrically Leakage Circuit Breaker
	C.	Earth Linked Circuit Breaker	D.	Electrically Linked Circuit Breaker
૨૧.	ELCB નું પૂર્ણ ફોર્મ _____ છે			
	A.	અર્થ લિકેજ સર્કિટ બ્રેકર	B.	ઇલેક્ટ્રિકલી લિકેજ સર્કિટ બ્રેકર
	C.	અર્થ લિંક્ડ સર્કિટ બ્રેકર	D.	ઇલેક્ટ્રિકલી લિંક્ડ સર્કિટ બ્રેકર
22.	Fuse is always connected in series with _____			
	A.	Phase wire	B.	Neutral wire
	C.	Earth wire	D.	None of above
૨૨.	ફ્યુઝ હંમેશા _____ માં જોડાયેલ હોય છે			

	A.	ફેઝ વાયર	B.	ન્યુટ્રલ વાયર
	C.	અર્થ વાયર	D.	ઉપરમાંથી કોઇ નહીં
23.	The protection against small leakage current is provided by _____.			
	A.	Fuse	B.	MCB
	C.	ELCB	D.	None of above
૨૩.	નાના લિકેજ કરંટ સામેનું રક્ષણ _____ દ્વારા પૂરું પાડવામાં આવે છે.			
	A.	ફ્યુઝ	B.	MCB
	C.	ELCB	D.	ઉપરોક્તમાંથી કોઈ પણ નથી
24.	Normally how many terminals are there in electrical socket outlet?			
	A.	7	B.	4
	C.	6	D.	3
૨૪.	સામાન્ય રીતે ઇલેક્ટ્રિકલ સોકેટ આઉટલેટમાં કેટલા ટર્મિનલ્સ હોય છે?			
	A.	5	B.	4
	C.	6	D.	3
25.	Do not use electric appliances, if			
	A.	It is damaged	B.	wires are exposed
	C.	It works properly	D.	both a and b
26.	One of the main functions of personal protective system is to provide a _____ resistance path for a short circuit.			
	A.	High	B.	Low
	C.	Smooth	D.	adequate
27.	Generally earthing is provided for			

	A.	only for the safety of the equipment	B.	only for the safety of the operating personnel
	C.	both (A) and (B)	D.	none of the above
28.	The objective of the earthing is			
	A.	To provide as low resistance possible to the ground	B.	To provide as high resistance possible to the ground
	C.	To provide flow of normal currents	D.	None of the above
29.	Which of the following is the type of wiring?			
	A.	Series wiring	B.	Go-down wiring
	C.	Stair case wiring	D.	All of above
30.	Factors affecting wiring system are_____.			
	A.	Accessibility	B.	Maintenance
	C.	Safety	D.	All of above
31.	Which of the following accessories are used for electrical wiring?			
	A.	Switch	B.	Plug
	C.	Fuse	D.	All of above
32.	_____ is a manually operated device used to make and break an electrical circuit according to requirement			
	A.	Switch	B.	fuse
	C.	Wire	D.	Plug
33.	_____is a metal wire connected in series with a circuit to protect the circuit in the event of short circuit or overload.			
	A.	Switch	B.	Plug
	C.	Fuse	D.	Socket

34.	Which are types of plug used in electric wiring?			
	A.	Two pin plug	B.	Three pin plug
	C.	Both a and b	D.	None
35.	Which of the following is the type of lamp holders?			
	A.	Batten lamp holder	B.	Pendant lamp holder
	C.	Angle lamp holder	D.	All of above
36.	Which of the following is the component of Fluorescent Tube wiring?			
	A.	Starter	B.	Switch
	C.	Choke	D.	All of above
37.	Home appliances works on _____			
	A.	230 V AC	B.	400 V AC
	C.	50 V AC	D.	765 V AC
38.	Which of the following device which supplies power to a load when main supplies or input power source fails?			
	A.	UPS	B.	MCB
	C.	Fuse	D.	ELCB
39.	Switch used for stair case wiring is _____.			
	A.	One way switch	B.	Two way switch
	C.	Push button switch	D.	None of these
40.	VIR means _____.			
	A.	Vulcanized Indian rubber	B.	Vulcanized intra rubber
	C.	Vulcanized inter rubber	D.	Vulcanized insulation rubber
41.	PVC means_____			
	A.	Poly-volume chloride	B.	Poly-vinyl cable
	C.	Phase-vinyl chloride	D.	Poly-vinyl chloride

42.	Which of the following is not a wiring accessory?			
	A.	Cable	B.	Plug
	C.	Hammer	D.	Socket outlet
43.	The size and type of cable is selected for installation according to Operating voltage.			
	A.	True	B.	False
44.	Identify the wiring accessories among the following			
	A.	Hammer	B.	Pliers
	C.	Screw driver	D.	cable
45.	Which of the following is Wiring cable Material?			
	A.	Tough rubber sheathed	B.	Poly-vinyl chloride
	C.	Vulcanized Indian rubber	D.	All of above
४५.	Tough rubber sheathed is wiring cable material.			
	A.	True	B.	False
46.	Generally which colour is used to identify phase wire?			
	A.	Red	B.	Yellow
	C.	Blue	D.	All of above
४६.	Black colour is used to identify phase wire.			
	A.	True	B.	False
47.	Generally which colour is used to identify neutral wire?			
	A.	Black	B.	Red
	C.	Yellow	D.	Blue
48.	Generally which colour is used to identify ground wire?			
	A.	Blue	B.	Green

	C.	Red	D.	Orange
49.	_____is used to provide a tapping to pendant lamp, florescent tube or a ceiling fan through a flexible wire.			
	A.	Switch	B.	Fuse
	C.	Ceiling rose	D.	Socket outlet
50.	Base of ceiling rose is made of			
	A.	Bakelite	B.	Porcelain
	C.	Both A and B	D.	Copper

Unit 1: Fundaments of Electric circuits

1.	A body contains electrons more than its normal number has +ve charge –ve charge No charge None of the above
2.	The SI unit for measurement of electric charge is volt columb ohm farad
3.	The following is (are) the semiconductor(s) Silicon Germanium Carbon All of the above
4.	Kilowatt-hour(kWh) is a unit of? a) Current b) Power c) Energy d) Resistance
5.	The SI unit of power is? a) kW(kilo-watt) b) J/s(joules per second) c) Ws(watt-second) d) J/h(joules per hour
6.	Which among the following is a unit for electrical energy? a) V(volt) b) kWh(kilowatt-hour) c) Ohm d) C(coloumb)
7.	The resistance of pure metals _____ a) Increases with an increase in temperature b) Decreases with an increase in temperature c) Remains the same with an increase in temperature d) Becomes zero with an increase in temperature
8.	The resistance of insulators _____ a) Increases with an increase in temperature b) Decreases with an increase in temperature c) Remains the same with an increase in temperature d) Becomes zero with an increase in temperature
9.	Which of the following statements are true about metals? a) Metals have a positive temperature coefficient b) Metals have a negative temperature coefficient c) Metals have zero temperature coefficient d) Metals have infinite temperature coefficient
10.	Which of the following statements are true about insulators? a) Insulators have a positive temperature coefficient

	b) Insulators have a negative temperature coefficient c) Insulators have zero temperature coefficient d) Insulators have infinite temperature coefficient
11.	What is the unit of temperature coefficient? a) ohm/centigrade b) ohm-centigrade c) 1/centigrade d) centigrade
12.	A wire of length 2m and another wire of length 5m are made up of the same material and have the same area of cross section, which wire has higher resistance? a) Both have equal resistance b) The 2m wire has higher resistance c) The 5m wire has higher resistance d) The value of resistance cannot be determined from the given data
13.	The reciprocal of resistivity is_____ a) Conductance b) Resistance c) Conductivity d) Impedance
14.	The reciprocal of resistance is_____ a) Conductance b) Resistance c) Conductivity d) Impedance

Unit 2: Basic DC circuit

1.	Flow of electrons is known as			
	A.	Voltage	B.	Current
	C.	Power	D.	Resistance
૧.	ઇલેક્ટ્રોનનો પ્રવાહ_____તરીકે ઓળખાય છે.			
	A.	વોલ્ટેજ	B.	કરંટ
	C.	પાવર	D.	રઝિસ્ટન્સ
2.	Unit of resistance is _____			
	A.	volt	B.	Ampere
	C.	Ohm	D.	Mho
૨.	રઝિસ્ટન્સનો એકમ_____છે.			
	A.	વોલ્ટ	B.	એમ્પીયર
	C.	ઓહ્મ	D.	વોટ

3.	The_____of insulating materials is low.			
	A.	Resistance	B.	Ampere
	C.	Conductivity	D.	Specific resistance
4.	What is the unit of resistivity?			
	A.	ohm m	B.	Ohm
	C.	ohm/m	D.	m/ohm
૪.	રઝિસ્ટીવીટીનો એકમ શું છે?			
	A.	ohm m	B.	Ohm
	C.	ohm/m	D.	m/ohm
5.	1 kΩ =_____Ω			
	A.	10^{-6} Ω	B.	10^{6} Ω
	C.	10^{3}Ω	D.	10^{-3} Ω
૫.	1 kΩ =_____Ω			
	A.	10^{-6} Ω	B.	10^{6} Ω
	C.	10^{3}Ω	D.	10^{-3} Ω
6.	The resistance of a wire inversely proportional to_			
	A.	Length	B.	Temperature
	C.	Specific resistance	D.	Area
૬.	વાયરનો રઝિસ્ટન્સ_____વ્યસ્ત પ્રમાણમાં છે.			
	A.	લબાઇ	B.	તાપમાન
	C.	સ્પેસીફીક રઝિસ્ટન્સ	D.	ક્ષેત્રફળ
7.	The direct current quantity is			
	A.	Changing its magnitude but not change its direction with respect to time	B.	Changing its direction but not change its magnitude with respect to time
	C.	Changing its magnitude and direction with respect to time	D.	Does not change its magnitude and direction with respect to time
8.	Cosine of the angle between voltage and current is known as _____			
	A.	Power factor	B.	Peak factor
	C.	Form factor	D.	R.M.S.value
9.	What is the value of form factor?			
	A.	1.11	B.	2.5
	C.	1.41	D.	0.637
10.	An alternating EMF is represented by e= 400sin120πt V. What is the value of frequency?			
	A.	50 Hz	B.	25 Hz
	C.	60 Hz	D.	55 Hz

૧૦.	એક અલ્ટરનેરટિંગ ઇ.એમ.ફ.ને e= 400sin120πt V વડે બતાવાય છે. ફ્રીકવસીની રકિંમત શું થાય?			
	A.	50 Hz	B.	25 Hz
	C.	60 Hz	D.	55 Hz
11.	The ratio of maximum value by rms value is known as			
	A.	Peak factor	B.	Form factor
	C.	Power factor	D.	Average value
12.	As the temperature increases, the resistance of insulator			
	A.	Increases	B.	Decreases
	C.	No change	D.	None of above

13	Unit of voltage is			
	A.	Volt	B.	Ampere
	C.	Ohm	D.	Watt
૧.	વોલ્ટેજનો એકમ_____છે			
	A.	વોલ્ટ	B.	એમ્પીયર
	C.	ઓહ્મ	D.	વોટ
14	The resistivity is also known as _____			
	A.	Specific Resistance	B.	Specific Conductance
	C.	Reluctance	D.	Resistance
15	_____of the material is defined as the opposition to the flow of current.			
	A.	Conductance	B.	Voltage
	C.	Resistance	D.	Reluctance
૩.	કરંટના પ્રવાહના વવરોધને_____તરીકે વ્યાખ્યાવયત કરવામાં આવે છે.			
	A.	કન્ડકટન્સ	B.	વોલ્ટેજ
	C.	રઝિસ્ટન્સ	D.	રીલક્ટન્સ
16	If temperature increases the resistance of conductor _____			
	A.	Increases	B.	Decreases
	C.	No change	D.	None of above
૪.	જો તાપમાન વધે તો વાહકનો રઝિસ્ટન્સ_____.			
	A.	વધે	B.	ઘટે
	C.	કોઇ બદલાવ નરહ	D.	ઉપરમાથી કોઇ નરહ
17	Watt hour is the unit of _____			
	A.	Electric power	B.	Electric capacity
	C.	Electric energy	D.	Electric charge

૫.	વોટ અવર એ_____નો એકમ છે.			
	A.	ઇલેક્ટ્રીક પાવર	B.	ઇલેક્ટ્રીક કેપેસીટી
	C.	ઇલેક્ટ્રીક એનજી	D.	ઇલેકટ્રીક ચાર્જ
18	Rate of doing work is			
	A.	Energy	B.	Power
	C.	Joule	D.	Potential
૬.	કાયમ કરવાના દર_____છે.			
	A.	એનજી	B.	પાવર
	C.	જુલ	D.	પોટેન્સયલ
19	1 M Ω =			
	A.	10^{-6} Ω	B.	10^{6} Ω
	C.	10^{3}Ω	D.	10^{-3} Ω
૭.	1 M Ω = _____			
	A.	10^{-6} Ω	B.	10^{6} Ω
	C.	10^{3}Ω	D.	10^{-3} Ω
20	Which one of the following statements is true?			
	A.	Unit of emf is volt while the unit of potential difference is watt	B.	Unit of emf is watt while the unit of potential difference is watt
	C.	Unit of both emf and potential difference is volt	D.	Unit of both emf and potential difference is watt
૮.	નીચેનામાથી કયું વવધાન સાચું છે?			
	A.	ઇ.એમ.એફ.નું એકમ વોલ્ટ છે જ્યારે પોટેન્સયલ ડીફરન્સનો એકમ વોટ છે.	B.	ઇ.એમ.એફ.નું એકમ વોટ છે જ્યારે પોટેન્સયલ ડીફરન્સનો એકમ વોલ્ટ છે.
	C.	ઇ.એમ.એફ. અને પોટેન્સયલ ડીફરન્સ બનેનો એકમ વોલ્ટ છે.	D.	ઇ.એમ.એફ. અને પોટેન્સયલ ડીફરન્સ બનેનો એકમ વોટ છે.
21	The alternating current quantity is			
	A.	Changing its magnitude but not change its direction with respect to time	B.	Changing its direction but not change its magnitude with respect to time
	C.	Changing its magnitude and direction with respect to time	D.	Does not change its magnitude and direction with respect to time
૯.	અલ્ટરનેરટિંગ કરંટ ક્વોનટીટી એ _____			

	A.	જે સમય સાથે એનુંમલ્યુ ય બદલે છે પણ રદશા બદલતું નથી.	B.	જે સમય સાથે એની રદશા બદલે છે પણ મલ્યુ ય બદલતુંનથી.
	C.	જે સમય સાથે એનુંમલ્યુ ય અને રદશા બદલે છે.	D.	જે સમય સાથે એનુંમલ્યુ ય અને રદશા બદલતું નથી.
22.	The ratio of r.m.s. value to average value is known as			
	A.	Power factor	B.	Peak factor
	C.	Form factor	D.	Maximum value
23.	An alternating EMF is represented by e= 400sin120πt V. Maximum value of voltage			
	A.	400 V	B.	300 V
	C.	150 V	D.	100 V
૧૧.	એક અલ્ટરનેરટિંગ ઇ.એમ.ફ.ને e= 400sin120πt V વડે બતાવાય છે. વોલ્ટેજની મહત્તમ રકિંમત _____થાય.			
	A.	400 V	B.	300 V
	C.	150 V	D.	100 V
24.	An alternating current is represented by I= 200sin150πt A. What will be the value of angular velocity?			
	A.	100π	B.	150π
	C.	125π	D.	150
25.	An alternating current is represented by I= 20sin100πt A. What will be the value of angular velocity?			
	A.	100π	B.	150π
	C.	125π	D.	150
26.	An alternating EMF is represented by e= 440sin120πt V. Maximum value of voltage			
	A.	220	B.	440
	C.	230	D.	44.0
27.	Unit of current is			
	A.	Ohm	B.	Volt

	C.	Ampere	D.	Watt
28.	R=			
	A.	ρl/a	B.	ρl/2a
	C.	Pla	D.	None of the above
29.	Resistance of a conductor is depend upon			
	A.	Temperature	B.	Material of conductor
	C.	Length of conductor	D.	All of the above
30.	Resistance is .			
	A.	Support the electric current	B.	Break the electric current
	C.	Oppose the electric current	D.	None of the above
31.	2MΩ = .			
	A.	$2*10^{-6}$ Ω	B.	$2*10^{6}$ Ω
	C.	$2*10^{3}$Ω	D.	$2*10^{3}$Ω
32.	1mΩ = .			
	A.	10^{-6} Ω	B.	10^{6} Ω
	C.	10^{3}Ω	D.	10^{-3}Ω
32.	1μΩ = .			
	A.	10^{-6} Ω	B.	10^{-6} Ω
	C.	10^{3}Ω	D.	10^{3}Ω
33.	Unit of potential difference is			
	A.	Ohm	B.	Volt
	C.	Ampere	D.	Watt
34.	Materials which easily allow the passage of electric current are known as _			
	A.	Conductor	B.	Semiconductor
	C.	Insulator	D.	None of the above
35.	Materials which may or may not allow the passage of electric current are known as			
	A.	Conductor	B.	Semiconductor
	C.	Insulator	D.	None of the above
36.	Materials which cannot allow the passage of electric current are known as _			
	A.	Conductor	B.	Semiconductor
	C.	Insulator	D.	None of the above

13.	If voltage supplied to circuit is 15 V and resistance of the circuit is 3 ohm then what will be the value of current flowing through circuit?			
	A.	5 A	B.	2.5 A
	C.	3 A	D.	15 A
૧૩.	જો સરકીટને આપવામાં આવતો વોલ્ટેજ 15 V અને રઝિસ્ટર 3 ohm હોય તો સરકીટ માથી પસાર થતો કરંટ કેટલો થાય?			
	A.	5 A	B.	2.5 A
	C.	3 A	D.	15 A
14.	If three resistances of 20 Ω, 15 Ω and 50 Ω are connected in series any circuit, what will be the equivalent resistance of circuit?			
	A.	80 Ω	B.	82 Ω
	C.	85 Ω	D.	86 Ω
15.	What is the relation of ohm's law?			
	A.	V α R	B.	I α R
	C.	V/R = constant	D.	V α I
16.	If resistors R_1, R_2 and R_3 are connected in series, then what will be the equivalent resistance?			
	A.	$R = R_1 + R_2 + R_3$	B.	$R = 1/R_1 + 1/R_2 + 1/R_3$
	C.	$1/R = 1/R_1 + 1/R_2 + 1/R_3$	D.	$1/R = R_1 + R_2 + R_3$
17.	Resistors of 10 ohm and 20 ohm are connected in parallel. What is the equivalent resistance?			
	A.	2.5 Ω	B.	6.67 Ω
	C.	0.15 Ω	D.	1.67 Ω

18.	In duality concept, the voltage source can by replaced by source.			
	A.	Current	B.	Resistance
	C.	Inductor	D.	Power
19.	Which of the following is the equation of electric power?			
	A.	P= VR	B.	$P=V^2R$
	C.	$P=V^2/R$	D.	P=V/I
૧૯.	નીચેના માથી ઇલેક્ટ્રક પાવરનું સમીકરણ કયું છે?			
	A.	P= VR	B.	$P=V^2R$
	C.	$P=V^2/R$	D.	P=V/I
20.	The current flowing through whole circuit is same for circuit			
	A.	Parallel	B.	Series
	C.	Star	D.	Delta
21.	KVL states that in a closed circuit of the electric network _			
	A.	Σ V = 0	B.	Σ I = 0
	C.	Σ R = 0	D.	Σ P = 0
22.	An ideal current source should have			
	A.	Zero internal resistance	B.	Infinite internal resistance
	C.	Large value of emf	D.	None of above
૨૨.	આદશમ કરંટ સોસમ માટે_____હોવુ જોઇએ.			
	A.	ઇન્ટરનલરઝિસ્ટન્સ શન્ુ ય	B.	ઇન્ટરનલ રઝિસ્ટન્સ અનતં
	C.	ઇ.એમ.ફ.ની મોટી રકિમત	D.	ઉપરમાથી કોઇ નરહ

23.	If in any delta network resistance R_{12}= 12 ohm, R_{23}= 3 ohm and R_{31}=5 ohm then, What will be the equivalent star resistance R_2?			
	A.	1.8 ohm	B.	2 ohm
	C.	2.5 ohm	D.	1.1 ohm
24.	Three resistance each has value of 20 ohm are connected in delta network. Calculate the value of resistance for equivalent star network.			
	A.	30 ohm	B.	6.67 ohm
	C.	60 ohm	D.	20 ohm
13.	If voltage supplied to circuit is 10 V and resistance of the circuit is 5 ohm then what will be the value of current flowing through circuit?			
	A.	2.2 A	B.	2.1 A
	C.	2 A	D.	1 A
૧૩.	જો સરકીટને આપવામાં આવતો વોલ્ટેજ 10 V અને રઝિસ્ટર 5 ohm હોય તો સરકીટ માથી પસાર થતો કરંટ કેટલો થાય?			
	A.	2.2 A	B.	2.1 A
	C.	2 A	D.	1 A
14.	If three resistances of 10 Ω, 20 Ω and 30 Ω are connected in series circuit, what will be the equivalent resistance of circuit?			
	A.	60 Ω	B.	50 Ω
	C.	70 Ω	D.	40 Ω
15.	What is the relation of ohm's law?			
	A.	V = IR	B.	I α R
	C.	V/R = constant	D.	VI = R

16.	Resistors of 5 ohm and 2 ohm are connected in parallel. What is the equivalent resistance?			
	A.	1.43 ohm	B.	3 ohm
	C.	4 ohm	D.	0.7 ohm
17.	Which of the following is not limitation of ohm's law?			
	A.	It depends on temperature.	B.	It is only used for linear circuits.
	C.	It is applicable to DC circuits.	D.	It is applicable for inductive ac circuits.
18.	In duality concept, the inductor can by replaced by .			
	A.	Conductor	B.	Resistor
	C.	Capacitor	D.	Voltage
19.	Which of the following is the equation of electric power?			
	A.	W= VR	B.	$W=V^2R$
	C.	W=VI	D.	W=V/I
૧૯.	નીચેના માથી ઇલેક્ટ્રક પાવરનું સમીકરણ કયું છે?			
	A.	W= VR	B.	$W=V^2R$
	C.	W=VI	D.	W=V/I
20.	The voltage across each resistor connected in the circuit is same.			
	A.	Parallel	B.	Series
	C.	Star	D.	Delta

21.	KCL states that at a junction in any electric network			
	A.	Σ V = 0	B.	Σ I = 0
	C.	Σ R = 0	D.	Σ P = 0
૨૧.	KCL જણાવે છે કે કોઈપણ ઇલેક્ટ્રિક નેટવર્કના જંકશન પર_____.			
	A.	Σ V = 0	B.	Σ I = 0
	C.	Σ R = 0	D.	Σ P = 0
22.	If in any delta network R_{12}= 12 ohm, R_{23}= 3 ohm and R_{31}=5 ohm then, What will be the equivalent star resistance R_1?			
	A.	2 ohm	B.	3 ohm
	C.	20 ohm	D.	5 ohm
23.	Three resistance each has value of 10 ohm are connected in star network. Calculate the value of resistance for equivalent delta network.			
	A.	30 ohm	B.	10 ohm
	C.	100 ohm	D.	20 ohm
24.	If resistances of 5 ohm and 20 ohm are connected in series and supply voltage is 100 V. What will be the value of current?			
	A.	4 A	B.	5 A
	C.	7 A	D.	10 A
૨૪.	જો 5 ohm અને 20 ohmના બે રેસિસ્ટન્સ સીરિઝમાં જોડેલ હોય અને સપ્લાય વોલ્ટેજ 100 V હોય તો કરંટની રકમ શું થાય?			
	A.	4 A	B.	5 A
	C.	7 A	D.	10 A
25.	If resistances of 10 ohm and 25 ohm are connected in series and supply voltage is 100 V. What will be the value of current?			

	A.	2.0 A	B.	2.5 A
	C.	2.85 A	D.	3.0 A
26.	If two resistances of 23 ohms are connected in series and supply voltage is 230 V. What will be the value of current?			
	A.	2.0 A	B.	5.0 A
	C.	4.0A	D.	3.0 A
27.	If three resistances of 20 Ω, 40 Ω and 60 Ω are connected in series any circuit, what will be the equivalent resistance of circuit?			
	A.	120 Ω	B.	125 Ω
	C.	122 Ω	D.	115 Ω
28.	Resistors of 1 ohm and 6 ohm are connected in parallel. What is the equivalent resistance?			
	A.	6 ohm	B.	7 ohm
	C.	0.85ohm	D.	0.7 ohm
29.	Two Resistors of 2 ohm are connected in parallel. What is the equivalent resistance?			
	A.	2 ohm	B.	4 ohm
	C.	1 ohm	D.	2.5 ohm
30.	If voltage supplied to circuit is 10 V and resistance of the circuit is 2 ohm then what will be the value of current flowing through circuit?			
	A.	5 A	B.	2.5 A
	C.	3 A	D.	15 A
31.	The across each resistor connected in the parallel circuit is same.			
	A.	Voltage	B.	Power
	C.	Current	D.	Resistance
32.	The passing through each resistor connected in the series circuit is same.			
	A.	Voltage	B.	Power
	C.	Current	D.	Resistance
33.	If resistors R_1, R_2 and R_3 are connected in series, then what will be the equivalent resistance?			
	A.	$R = R_1 + R_2 + R_3$	B.	$R_1 = R - R_2 - R_3$
	C.	$R_2 = R - R_1 - R_3$	D.	All of the above
34.	If resistors R_1, R_2 and R_3 are connected in series, then what will be the equivalent resistance?			
	A.	$1/R = 1/R_1 + 1/R_2 + 1/R_3$	B.	$R = 1/(1/R_1 + 1/R_2 + 1/R_3)$
	C.	Both A and B	D.	$1/R = R_1 + R_2 + R_3$

35	If there are two bulbs connected in series and one blows out, what happens to the other bulb? a) The other bulb continues to glow with the same brightness b) The other bulb stops glowing c) The other bulb glows with increased brightness d) The other bulb also burns out
36	If two bulbs are connected in parallel and one bulb blows out, what happens to the other bulb? a) The other bulb blows out as well b) The other bulb continues to glow with the same brightness c) The other bulb glows with increased brightness d) The other bulb stops glowing
37	What is the basic law that has to be followed in order to analyze the circuit?

	a) Newton's laws b) Faraday's laws c) Ampere's laws d) Kirchhoff's law
38	The sum of the voltages over any closed loop is equal to _____ a) 0V b) Infinity c) 1V d) 2V
39	KCL means a) Kirchhoff's Capacitor Law b) Kirchhoff's Current Law c) Kirchhoff's Voltage Law d)None of the above
40	KVL means a) Kirchhoff's Variable Law b) Kirchhoff's Current Law c) Kirchhoff's Voltage Law d)None of the above
41	Σ I = 0 states_____ a) KVL b) KCL c) Ohms Law d)None of the above
42	Σ V = 0 a) KVL b) KCL c) Ohms Law d)None of the above
43	Which of the following statements are true? a) Power is proportional to voltage only b) Power is proportional to current only c) Power is neither proportional to voltage nor to the current d) Power is proportional to both the voltage and current
44	A 250V bulb passes a current of 0.3A. Calculate the power in the lamp. a) 75W b) 50W c) 25W d) 90W
45	KCL state a) Algebraic sum of all incoming current is equal to all outgoing current b) Algebraic sum of all current at node is equal to zero c)Both A and B d)None of the above
46	KVL state a) Algebraic sum of voltage rise is equal to all voltage drop in circuit b) Algebraic sum of all voltage at node is equal to zero c)Both A and B d)None of the above
47	If three resistance (R1, R2 & R3) are connected in series (Where V=Potential difference, I=Current) then V = IR1 + IR2 + IR3 V = I/R1 + I/R2 + I/R3 I = VR1 + VR2 + VR3

	I = V/R1 + V/R2 + V/R3
48	If three resistance (R1, R2 & R3) are connected in parallel (Where V=Potential difference, I=Current) then V = IR1 + IR2 + IR3 V = I/R1 + I/R2 + I/R3 I = VR1 + VR2 + VR3 I = V/R1 + V/R2 + V/R3

Ch:4 Electromagnetic induction

1.	Fleming's left hand rule is used to find the direction of			
	A.	Statically induced emf	B.	Dynamically induced emf
	C.	both statically and dynamically induced emf	D.	Force produced when a current carrying conductor is placed in a magnetic field
2.	The value of self induced emf is			
	A.	inversely proportional to number of turns	B.	inversely proportional to square of number of turns
	C.	directly proportional to number of turns	D.	directly proportional to square of number of turns
3.	The direction of dynamically induced emf can be found by using			
	A.	Right hand rule	B.	Cork screw rule
	C.	Fleming's left hand rule	D.	Fleming's right hand rule

4.	500 mH = H			
	A.	0.5	B.	0.05
	C.	5	D.	50
5.	The magnetic flux is measured in .			
	A.	Weber	B.	weber/m^2
	C.	m^2/weber	D.	weber/m^3
	મેગ્નેટીક ફ્લક્ષ_____માં માપવામાં આવે છે.			
	A.	Weber	B.	weber/m^2
	C.	m^2/weber	D.	weber/m^3
6.	The is defined as the total number of lines of force in a magnetic field.			
	A.	Magnetic flux	B.	Magnetic flux density
	C.	Magnetic pole	D.	Magnetic strength
૩૬.	મેગ્નેટીક રફલ્ડમાં ફોસમની કુલ લાઇન્સ ને_____તરીકે વ્યાખ્યાવયત કરવામાં આવે છે.			
	A.	મેગ્નેટીક ફ્લક્ષ	B.	મેગ્નેટીક ડેંસીટી
	C.	મેગ્નેટીક પોલ	D.	મેગ્નેટીક સ્ટ્રેંગ્થ
7.	The device which transfers power from one circuit to another circuit at same frequency is known as .			
	A.	Motor	B.	Generator
	C.	Inductor	D.	Transformer
૩૭.	જે ઉપકરણ એક જ ફ્રીકવન્સી પર પાવરને એક સરકીટમાથી બીજી સરકીટમાં રાસફર કરે એ _____તરીકે ઓળખાય છે.			
	A.	મોટર	B.	જનરેટર
	C.	ઇન્ડક્ટર	D.	રાન્સફોમમર
8.	The conversion from electrical energy to mechanical energy takes place in			
	A.	Motor	B.	Generator
	C.	Inductor	D.	Transformer

9.	M.M.F. of magnetic circuit is analogous to in electrical circuit.			
	A.	Electric current	B.	Current density
	C.	Electro motive force	D.	Resistance
10.	The reluctance of a material is defined as			
	A.	Opposition offered to the magnetic field	B.	Its ability to conduct magnetic flux
	C.	Opposition offered to the electric field	D.	None of above
૪૦.	મરટરીયલનો રીલક્ટંસ એ_____તરીકે વ્યાખ્યાવયત થાય છે.			
	A.	મેગ્નેરટક રફલ્ડને ઓફર થતો વવરોધ	B.	મેગ્નેરટક ફ્લક્ષમાં વહન થવાની ક્ષમતા
	C.	ઇલેક્ટ્રીક રફલ્ડને ઓફર થતો વવરોધ	D.	ઉપરમાથી કોઇ નરહ
11.	Hysteresis loss in magnetic material depends on _			
	A.	Area of hysteresis loop	B.	Frequency of reversed field
	C.	Volume of magnetic material	D.	All of above
12.	If two inductors having inductances of 1 mH and 5 mH are connected in series, then what will be the value of equivalent inductance of the circuit?			
	A.	6 mH	B.	2.5 mH
	C.	1.5 mH	D.	5.2 mH
13.	The direction of force produced when a current carrying conductor is placed in a magnetic field can be found by			
	A.	Fleming's right hand rule	B.	Coulomb's law
	C.	Lenz law	D.	Fleming's left hand rule

14.	The magnitude of dynamically induced emf is given by			
	A.	$B\ l\ v \sin\theta$	B.	$B\ l\ v \cos\theta$
	C.	$B\ I\ v \sin\theta$	D.	$B\ I\ l \sin\theta$
15	Area of hysteresis loop shows			
	A.	Hysteresis loss	B.	Eddy current loss
	C.	Both hysteresis and eddy current loss	D.	Copper loss
16.	100 mH = H			
	A.	0.1	B.	0.01
	C.	1	D.	10
३४.	100 mH =_____H			
	A.	0.1	B.	0.01
	C.	1	D.	10
17.	What is the unit of inductance?			
	A.	Farade	B.	Ohm
	C.	Henry	D.	Mho
18.	The magnetic flux density is measured in .			
	A.	Weber	B.	weber/m^2
	C.	m^2/weber	D.	weber/m^3

૩૬.	મેગ્નેટીક ફ્લક્ષ ડેંસીટી_____માં માપવામાં આવે છે.			
	A.	Weber	B.	weber/m^2
	C.	m^2/weber	D.	weber/m^3
19.	The magnetic flux is defined as the total number of in magnetic field.			
	A.	Lines of force	B.	Magnetic density
	C.	Magnetic pole	D.	Magnetic strength
20.	The device which step up or step down the voltage level at same frequency is known as .			
	A.	Motor	B.	Generator
	C.	Inductor	D.	Transformer
21.	The conversion from mechanical energy to electrical energy takes place in			
	A.	Motor	B.	Generator
	C.	Inductor	D.	Transformer
22.	E.M.F. of electrical circuit is analogous to in magnetic circuit.			
	A.	M.M.F.	B.	Reluctance
	C.	Flux	D.	Flux density
23.	The opposition offered to the magnetic field is defined as			

	A.	Reluctance	B.	M.M.F.
	C.	Flux density	D.	Field intensity
24.	If two inductors having inductances of 10 mH and 15 mH are connected in series, then what will be the value of equivalent inductance of the circuit?			
	A.	50 mH	B.	25 H
	C.	52 H	D.	25 mH

25.	The device which transfers power from one circuit to another circuit at same frequency is known as transformer. A) True B) False
26	2000 mH =_____H a) 0.2 b) 2 c) 0.02 d) 20
27	1000 μH =_____H a) 0.1 b) 0.01 c) 0.001 d) 1
28	The total number of magnetic field lines passing through an area is termed as? a) Voltage b) EMF c) Magnetic flux d) Magnetic flux density
29	The formula for induced emf if magnetic field, length and velocity of conductor all are mutually perpendicular is _____ a) EMF=B^2l b) EMF =Bil c) EMF =Blv d) EMF =B^2v
30	What does emf stand for? a) Electronic magnetic force b) Electromotive force

	c) Electromagnetic force d) Electromated force
31	Unit of EMF is a) m b) Voltage c) Amp d) Wb
32	According to Faraday's laws of electromagnetic induction, an emf is induced in a conductor whenever? a) The conductor is perpendicular to the magnetic field b) Lies in the magnetic field c) Cuts magnetic lines of flux d) Moves parallel to the magnetic field
33	According to Fleming's right hand rule, the thumb points towards? a) Current b) E.M.F. c) Motion of the conductor d) Magnetic flux
34	According to Fleming's right hand rule, the index finger points towards? a) Current b) E.M.F. c) Motion of the conductor d) Magnetic flux
35	According to Fleming's right hand rule, the middle finger points towards? a) Current b) E.M.F. c) Motion of the conductor d) Magnetic flux
36	The relation between the direction of induced emf and the direction of motion of the conductor is? a) Parallel b) Equal c) Not related d) Perpendicular
37	Which, among the following, is the formula for induced emf? a) $e=d\phi/dt$ b) $e=dt/d\phi$ c) $e=t*\phi$ d) $e=t^2\phi$
38	According to_____induced emf is equal to rate of change of magnetic flux. a) Newton's law b) Lenz law c) Faraday's law d) Coulomb's law
39	What is the principle of the transformer? a) Gauss law b) Coulomb's law c) Electromagnetic induction d) Ampere's law

40	Permeability of free space is also known as _____ a) Magnetic constant b) Electric constant c) Electrostatic constant d) Magnetostatic constant
41	Which of the following expressions is correct with respect to relative permeability? a) $B = \mu_r\mu_0/H$ b) $B = \mu_r\mu_0H$ c) $B = \mu_r/\mu_0H$ d) $B = \mu_r\mu_0/H^2$
42	Reciprocal of reluctance is _____ a) Permeance b) Susceptibility c) Resistance d) Conductance
43	The electrical equivalent of reluctance is? a) Resistance b) Inductance c) Capacitance d) Conductance
44	The B/H characteristics can be determined using _____ a) Ammeter b) Fluxmeter c) Voltmeter d) Multimeter
45	The B/H curve can be used to determine? a) Iron loss b) Hysteresis loss c) Voltage loss d) Eddy current loss
46	If two inductors having inductances of 30 mH and 22 mH are connected in series, then what will be the value of equivalent inductance of the circuit? a) 52 mH b) 52H c) 25 H d) 25mH
47	E.M.F. of electrical circuit is analogous to M.M.F in magnetic circuit. a) True b) False
48	Which device converts mechanical energy in to electrical energy? a) Generator b) Motor c) Transformer d) None of the above
49	Which device converts electrical energy in to mechanical energy? a) Generator b) Motor c) Transformer d) None of the above
50	Which of the following is static device?

	a) Generator b) Motor c) Transformer d) None of the above