ELECTRICIAN

NSQF LEVEL - 5

1st Year

QUESTION BANK

SECTOR: Electrical



DIRECTORATE GENERAL OF TRAINING MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP GOVERNMENT OF INDIA



Post Box No. 3142, CTI Campus, Guindy, Chennai - 600 032

Sector : Electrical **Duration: 2-Years**

Trade : Electrician - Question Bank - NSQF Level - 5

1st Year

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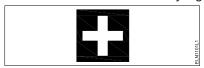
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Electrician Semester - 1

Module - 1 : Safety Practice and Hand Tools

Level 1

1 What is the name of the safety sign	tv siar	safety	of the	name	the	hat is	1 W	1
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A Warning sign

- B Mandatory sign
- C Prohibition sign
- D Information sign
- 2 What is smothering in extinguishing of fire?
 - A Adding the fuel element to the fire
 - B Removing the fuel element from the fire
 - C Using of water to lower the temperature
 - D Isolating the fire from the supply of oxygen
- 3 Which step of the 5s-concept refers "Standardization"?
 - A Step 1

B Step - 2

C Step - 3

- D Step-4
- 4 What is the name of road safety sign?



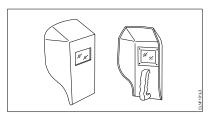
- A Mandatory sign
- Cautionary sign В
- C Informatory sign
- Prohibition sign
- 5 What is the back ground colour of warning signs in the basic category?
 - A Blue

B White

C Yellow

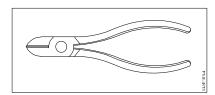
- D Green
- 6 What is the full form of BIS?
 - A Board of Indian Standard
- B Bureau of Indian Standard
- C Board of International Standard D Bureau of International Standard 1

7 What is the name of PPE?



- A Nose mask
- C Face shield

- B Head shield
- D Hand screen
- 8 What is the name of the tool?



- A Wire stripper
- C Combination pliers
- B Crimping tool
- D Diagonal cutting pliers
- 9 What is the name of the safety sign?



A Warning sign

- B Mandatory sign
- C Prohibition sign
- D Information sign
- 10 What is the name of the cautionary sign?



A School

B Guarded

C Unguarded

- D Pedestrian crossing
- 2 Electrician (NSQF Level-5) QB: Sem-1 Mod-1: Safety Practice & Hand Tools

Level 2

1	Which is the physical hazard?		
	A Smoking	B Vibration	
	C Corrosive	D Radio active	
2	Which is the correct sequence of o the fire extinguisher?	pperation to be performed when using	l
	A Pull, Aim, Squeeze, Sweep		
	B Pull, Aim, Sweep, SqueezeC Push, Arrange, Squeeze, Swee	20	
	D Push, Arrange, Sweep, Sequen		
2			
3	Which plier is used for making wire	•	
	A Flat nose plier C Round nose plier	B Long nose plier D Diagonal cutting plier	
	C Round nose pilei	Diagonal cutting pilet	
4	What is the use of pincer?		
	A Twisting the flexible wires		
	B Cutting small diameter of wires		
	C Extracting the pin nails from the		
	D Holding small objects, where fin	nger cannot reach	
5	Which type of fire extinguisher is us	used for fire on electrical equipment?	
	A Halon type	B Foam type	
	C Gas cartridge type	D Stored pressure type	
6	Which is the waste disposal method	od that produces heat?	
	A Recycling	B Composting	
	C Incineration	D Waste compaction	
7	Which Personal Protective Equipm from fumes?	ment (PPE) is used for the protection	
	A Apron	B Goggles	
	C Ear mask	D Nose mask	

8 Which method is used to lift and move heavy loads?								
	Α	Winches		В	Crane and slings			
	С	Layers and Rollers		D	Machine moving platforms			
9	W	hat is starving in extinguishing	of f	ire'	?			
	Α	Adding fuel to the fire		В	Using water to cool the fire			
	С	Removing fuel element from the	ne f	ire				
	D	D Preventing oxygen supply to the fire						
10	W	hich disposal method of waste	sav	ve l	ot of energy?			
	Α	Land fill		В	Recycling			
	С	Incineration		D	Composting			
11		hich artificial respiriation methouries on the chest and belly?	od i	s to	be performed to the victim with			
	Α	Schafer's method	В	M	outh to mouth method			
	С	Mouth to nose method	D	Ne	elson's arm-lift back pressure method			
12	W	hich type of occupational healt	h h	aza	ard is cause for infection?			
	Α	Electrical hazard		В	Biological hazard			
	С	Physiological hazard		D	Psychological hazard			
13	W	hat is the use of this tool?						
			_					

4 Electrician (NSQF Level-5) QB : Sem-1 - Mod-1 : Safety Practice & Hand Tools

D Loosening and tightening the bolts and nuts

A Holding the hot substancesB Cutting and twisting the wiresC Extracting nails from the wood

- 14 How will you diagonise the victim is suffering under cardiac arrest?
 - A Gets pain in spinal guard
 - B Mouth will be closed tightly
 - C Heavy swelling on his stomach
 - D Appears blue colour around his lips
- 15 What will be first-aid to be given to stop the bleeding of the victim?
 - A Applying ointment
 - B Keep the injured portion upward
 - C Covering the wound portion by dressing
 - D Applying pressure over the injured portion
- 16 Which is the golden hour for the victim injured on head with risk of dying?
 - A First 15 minutes B First 30 minutess
 - C First 45 minutes D First 60 minutes
- 17 Which condition of the victim is referred as COMA stage?
 - A Unconscious but can respond to calls
 - B Conscious but cannot respond to calls
 - C Breathing but cannot respond to calls
 - D Lie totally senseless and do not respond to calls

Level 3

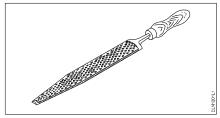
- 1 What immediate action should be taken to rescue the victim, if he is still in contact with the electrical power supply?
 - A Pull or push him from the contact by hand
 - B Inform your authority about this electric shock
 - C Call someone for helping to remove him from contact
 - D Break the contact by switching OFF the power supply

Electrician Semester - 1

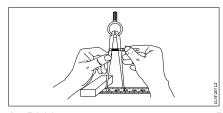
Module - 2 : Basic Workshop Practice (Allied Trade)

Level 1

1 What is the name of the file?

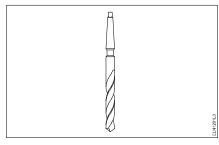


- A Rasp cut file
- C Double cut file
- B Single cut file
- D Curved cut file
- 2 What is the name of the tool?



A Divider

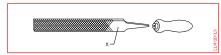
- B Inside caliper
- C Odd leg caliper
- D Outside caliper
- 3 What is the name of the drill bit?



A Flat drill bit

- B Taper shank bit
- C Countersink bit
- D Straight shank bit

- 4 What is the name of the stake used for general purpose in sheet metal work?
 - A Square stake B Hatchet stake
 - C Blow horn square stake D Bevel edge square stake
- 5 What is the number 1.25 indicates in ISO metric fine thread M12 x 1.25.?
 - A Diametric of the thread
- B Pitch of the thread
- C Depth of the thread
- D Length of the thread
- 6 Name the part marked 'X' of the file.

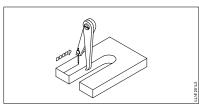


A Edge

B Heel

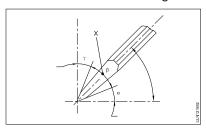
C Tang

- D Shoulder
- 7 What is the name of the tool?



A Jenny caliper

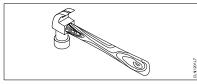
- B Inside caliper
- C Outside caliper
- D Firm joint caliper
- 8 What is the name of the angle marked 'X' of the chisel?



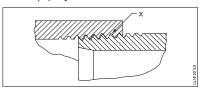
A Rake angle

- B Point angle
- C Clearance angle
- D Inclination angle

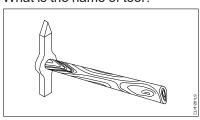
9 What is the name of tool?



- A Claw hammer
- C Cross pein hammer
- B Ball pein hammer
- D Straight pein hammer
- 10 What is the name of the formation of thread marked as 'X' in the galvanized sheet pipe joint?



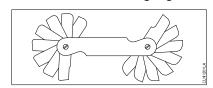
- A Hemp
- C Tapered male thread
- B Full form thread
- D Parallel female thread
- 11 What is the name of tool?



- A Claw hammer
- C Cross pein hammer
- B Tacks hammer
- D Straight pein hammer

Level 2

1 What is the use of this gauge?



8 Electrician (NSQF Level-5) QB: Sem-1 - Mod-2: Basic Workshop Practice (Allied Trade)

	С	Check the diameter of cylindrical Check the height and parallism of Set the job on machines paralled	of jo	bb			
2	W	hat is the cause for twisting defe	ct ir	timber?			
	A C	Defective storage Improper seasoning	B D	Uneven shrinkage Irregularity in growth of branches			
3	A B C	hat is the use of mortise chisel? General chiseling work in wood Making rectangular holes in wood Paring and finishing joints in wood Light chiseling cleaning sharp co	od	ers and in wood			
4	W	hich type of stake is used for sha	rp b	pends in sheet metal?			
	Α	Square stake	В	Hatchet stake			
	С	Blow horn stake	D	Bevel edge square stake			
5	W	hich type of cold chisel is used fo	rso	quaring materials at the corners?			
	Α	Web chisel	В	Cross cut chisel			
	С	Half round chisel	D	Diamond point chisel			
6 Which type of caliper is used to draw the materials?				w parallel lines along the outer edges of			
	Α	Inside caliper	В	Jenny caliper			
	С	Outside caliper	D	Spring joint caliper			
7	W	hich file is used for sharpening th	e b	lunt teeth of a tenon saw?			
	Α	Square file	В	Round file			
	С	Triangular file	D	Half round file			
8	W	hat is the use of firmer chisel?					
	Α	Paring and finishing joints	В	General chiseling work			
	С	Making rectangular holes in woo	d				
	D	Light chiseling and to clean shar	рс	orner			
		EL		D : W D (

A Check the internal radius of the job

9	Which type of half lap joint is used if one part of a job meets another part at some distance from the ends?					
	Α	End-lap input	В	Cross-lap joint		
	С	Middle-lap joint	D	Corner-half lap joint		
10		hich type of notch is used for mak side flange?	king	ga metal tray with 90° bend and an		
	Α	'V' notch	В	Slant notch		
	С	Square notch	D	Straight notch		
11	W	hat is the purpose of hem folding	in s	sheet metal work?		
	B C	Helps for forming a square box Helps for bending sheet metal ea Prevents burrs forming after cutti Prevents the sheet from damag	ng	y		
12	W	hich defect in timber is caused du	e to	improper seasoning?		
	Α	Knot	В	Twisting		
	С	Cracking	D	Cupping		
13	W	hich type of notch is used for ben	din	g the edge of the sheet?		
	Α	'V' notch	В	Slant notch		
	С	Square notch	D	Straight notch		
14	W	hat is the purpose of cross cut co	ld d	chisel?		
	Α	Cutting keyways	В	Cutting curved grooves		
		Squaring materials at corners				
	D	Removing metal from large flat so	urfa	ice		
15	W	hich type of notch is used to mak	e a	job with 90° bend?		
		'V' notch	_	Slant notch		
	С	Square notch	D	Straight notch		
16	W	hich type of curve cutting hand sa	w i	s used for internal cutting in wood?		
	Α	Compass saw	В	Key hole saw		
	С	Coping saw	D	Fret saw		
10		Electrician (NSQF Level-5) QB : Sem-1 - Mod	I-2 : l	Basic Workshop Practice (Allied Trade)		

17	What is the name of the stake use	ed for sheet metal work?
		ELNYZOILB
	A Square stake	B Hatchet stake
	C Blow-horn stake	D Bevel-edge square stake
18	Which type of chisel is used for se	parating metals after chain drilling?
	A Flat chisel	B Web chisel
	C Cross cut chisel	D Diamond point chisel
19	Which type of stake is used for rive articles?	eting or seaming tapered cone shaped
	A Square stake	B Hatchet stake
	C Blow horn stake	D Bevel edged square stake
Le	evel 3	
1	What defect will occur in timber due	to irregularity in growth of the branches?
	A Knot	B Cupping
	C Cracking	D Twisting
2	Which defect in the timber is caus	ed to reduce its strength?
	A Twisting	B Cupping
	C Cracking	D Irregularity
3	Which cause for knot defect in tim	bers?
	A Defective storage	B Uneven shrinkage
	C Growth of branches	D Improper seasoning

Electrician Semester - 1

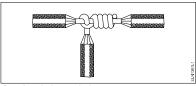
Module - 3 : Wire - Joints, Soldering, U.G. Cables

Level 1

What is the possible range to measure the size of the wire in a Standard
Wire Gauge (SWG)?

A 0-44 B 0-42 C 0-38 D 0-36

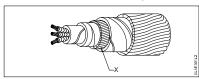
2 What is the name of the wire joint?



A Aerial tap joint B Knotted tap joint

C Duplex cross tap joint D Double cross tap joint

3 What is the name of the part marked as 'X' in the under ground (UG) cable?



A Bedding B Armouring
C Lead sheath D Paper insulation

4 What is the full form of "XLPE' Cable?

A Cross Line Poly Ethylene B X'ess Line Phase Earthing

C Cross Linked Poly Ethylene D Excess Length Paper and Ebonite

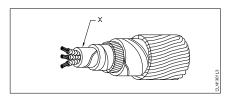
5 How many electrons are there in the valence shell of a copper atom?

A 1 B 2 C 8 D 18

6 What is the unit of insulation resistance?

A Ohm B Kilo ohm 12 C Milli ohm D Mega ohm

7 What is the name of the part marked 'X' in UG cables?



A Serving

B Bedding

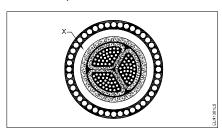
C Armouring

- Lead sheath
- 8 What is the name of the joint?



A Married joint

- B Scarfed joint
- C Western union joint
- D Britannia straight joint
- 9 Name the part marked 'X' of belted U.G cable.



A Jute filling

B Armouring

C Lead sheath

- D Paper insulation
- 10 What does the number 1.40 represent if a stranded conductor is designated as 7/1.40?
 - A Area of cross section
- B Radius of one conductor
- C Diameter of all conductor
- D Diameter of each conductor
- 11 What is the value of electrical conductivity of aluminium conductor?
 - A 61 mho/m

B 56 mho/m

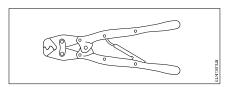
C 35 mho/m

D 28 mho/m

12 What is the	rating	factor	of	cable	provided	with	coarse	excess	current
protection?									

A 1.11 B 1.23 C 0.81 D 0.707

- 13 What is the size of neutral conductor compared to phase conductor in U.G cable?
 - A Same size of phase conductor
 - B Half size of phase conductor
 - C 1/4 size of phase conductor
 - D 1/3 size of phase conductor
- 14 What is the name of the tool?



A Cutting plier

B Wire stripper

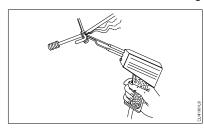
C Crimping tool

- D Side cutting plier
- 15 What is the unit for Quantity of electricity?
 - A Mho

B Coulomb

C Volt/second

- D Ampere/second
- 16 What is the name of the soldering method?



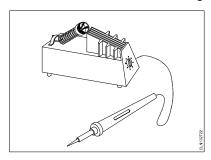
A Dip soldering

B Soldering iron

C Soldering gun

- D Soldering with flame
- 14 Electrician (NSQF Level-5) QB: Sem-1 Mod-3: Wire Joints, Soldering, U.G. Cables

- 17 Which formula is used to find Electro Motive Force (EMF)?
 - A EMF = Potential difference voltage drop
 - B EMF = Potential difference + voltage drop
 - C EMF = Potential difference + voltage drop/2
 - D EMF = Potential difference + 2 x voltage drop
- 18 What is the current rating factor for close excess current protection of cable?
 - A 0.81 B 0.92 C 1.23 D 1.5
- 19 What is the name of the soldering method?



- A Dip soldering B Soldering with blow lamp
- C Soldering with soldering gun
- D Temperature controlled soldering

Level 2

- 1 What is the current carrying capacity of 32 amp.rated cable, if it is protected by the rewirable fuse?
 - A 13 Amp

B 16 Amp

C 26 Amp

- D 39 Amp
- 2 Which type of soldering flux is used for soldering galvanised iron?
 - A Rosin

B Zinc chloride

C Sal ammonia

D Hydrochloric acid

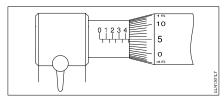
3	Which method of soldering is used for quantity production and for tinning work?					
	A Dip solderingC Soldering with soldering iron		Soldering with a flame Soldering with soldering gun			
4	What is the purpose of 'serving' layer	er in	underground cable?			
	A Protect the cable from moistureB Protect the cable from mechanC Protect metallic sheath against					
	D Protect armouring from atmosph					
5	Which cable laying method is used	in (generating station?			
	A In ducts	•	Racks in air			
	C Along buildings	D	Direct in ground			
6	What is the effect of electric curren	t or	neon lamp?			
	A Heating effect	В	Magnetic effect			
	C Chemical effect	D	Gas ionization effect			
7	Which electrical device is the coars	se e	excess current protection?			
	A Cartridge fuses	В	Rewirable fuses			
	C Miniature Circuit Breaker (MCB) D High Repturing Capacity (HRC) Fuses					
8		,	the length of conductor in over head			
	lines?	J	S			
	A Scarfed joint	В	Aerial tap joint			
	C Britannia "T" joint	D	Western Union joint			
9	Which type of soldering flux is used	l for	soldering aluminum conductors?			
	A Tallow	В	Ker-al-lite			
	C Zinc chloride	D	Sal ammonia rosin			

16

	Α	Tin content reduced	В	Lead content reduced
	С	Prevent slug formation	D	Uneven flowing in joints
11	Wł	nich method of cable laying is sui	tab	le for congested areas?
	Α	Racks in air	В	Duct pipes
	С	Along buildings	D	Direct in ground
12		nich part of the underground cable rrosion?	is p	protecting the metallic sheath against
	Α	Serving	В	Bedding
	С	Armouring	D	Lead sheath
13		ny the soldering iron must be k dering?	ept	into a stand that not in use while
	Α	It prevents burns and fire	В	To control the excessive heat
	С	To save the time of soldering pr		
	D	To save the operator from elect	ric	shock
14	Wł	nich type of wire joint is found in	the	junction box?
	Α	Aerial tap joint	В	Plain tap joint
	С	Rat tail joint	D	Married joint
15	Wł	nat is the use of Britannia 'T' joint	?	
	Α	Extending the length of the line	s	
	В	Inside and outside wiring installa	atio	า
	С	Mechanical stress not required of	on c	conductor
	D	Tapping the service connection f	rom	overhead lines
16	Wł	nich type of soldering method is u	ised	d for servicing and repairing work?
	Α	Dip soldering		
	В	Soldering with a flame		
	С	Soldering with soldering gun		
	D	Soldering with a soldering iron		
		Floatrician (NSOF) aval 5) OB : Sam 4 M	~4 2	· Wire lainte Soldering II C Cables 47

10 What is the effect on molten solder due to repeated melting?

- 17 What is the use of dipsoldering method?
 - A Soft soldering B Piping and cable soldering work
 - C Soldering miniature components on PCB
 - D Soldering sensitive electric components
- 18 Which insultaing material is used as hot pouring compound for making joints in under ground cable?
 - A Polyamine hardener B Cast resin compound
 - C Bituminous compound D Epoxy cast resin compound
- 19 What is the purpose of bedding insulation of U.G. cable?
 - A Protect the cable from mechanical injury
 - B Protect the cable from moisture and gases
 - C Protect armouring from atmospheric condition
 - D Protect the metallic sheath against corrosion
- 20 Which test is conducted to locate the faults in U.G. cables?
 - A Loop test B External growler test
 - C Break down voltage test D Insulation resistance test
- 21 Which type of joint is used in over head lines for high tensile strength?
 - A Scarfed joint B Britannia 'T' joint
 - C Western union joint D Britannia straight joint
- 22 What is the reading of the micrometer?



A 5.05 mm

B 5.00 mm

C 4.55 mm

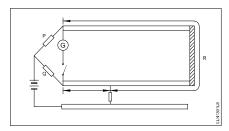
18

D 4.05 mm

23	WI	Which method of soldering is used for repairing the vehicle body?				
	Α	Dip soldering	В	Soldering with flame		
		Soldering with soldering iron	D	Soldering with soldering gun		
		3		3 33		
24 What is the advantage of stranded conductor over solid condu				ductor over solid conductor?		
	Α	Cost is less	В	More flexible		
	С	Less voltage drop	D	More insulation resistance		
25	25 What is the current capacity of the 16 Amp. Cable, if it is protecte coarse excess current protection?					
	Α	11 A	В	13 A		
	С	15 A	D	18 A		
26	6 What is the disadvantage of solid conductor compared to stranded conductor					
	Α	Less rigidity	В	Less flexibility		
	С	Low melting point	D	Low mechanical strength		
27	7 What is the cause for cold solder defect in soldering?					
	Α	Excessive heating	В	Insufficient heating		
	С	Incorrect use of solder	D	High wattage soldering iron		
28	8 Which is the example for coarse excess current protection?					
	Α	MCB	В	MCCB		
	С	H.R.C fuses	D	Rewireable type fuse unit		
29	WI	Which conductors are used for distribution lines?				
	Α	Insulated conductors	В	Insulated solid condutors		
	С	Bare conductors	D	Two core cable		

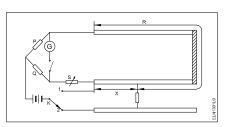
Level 3

1 Which type of fault of U.G Cable can be located by this loop test?



A Ground fault

- B Short circuit fault
- C Open circuit fault
- D Weak insulation fault
- 2 What will happen to PVC insulation in cable carries excess current continuously for long period?
 - A Voltage drop increases
- B Voltage drop decreases
- C Insulation resistance increases D Insulation resistance decreases
- 3 What is the fault of U.G cable identified in the circuit?



A Ground fault

- B Short circuit fault
- C Open circuit fault
- D Weak insulation fault
- 4 What happens to the voltmeter if it is connected as an ammeter?
 - A Low reading

- B No deflection
- C Meter burns out
- D Overshoot deflection

Module - 4 : Basic Electrical Practice

Level 1

1 How many electrons are there in the third cell of the copper atom?

A 8

B 13

C 18

D 29

2 Which law states that in closed electric circuit, the applied voltage is equal to the sum of the voltage drops?

A Ohm's law

B Laws of resistance

C Kirchhoff's first law

D Kirchhoff's second law

3 What is the formula for the equivalent resistance (R_T) of the three resistors R_1 , $R_2 \& R_3$ are connected in parallel circuit?

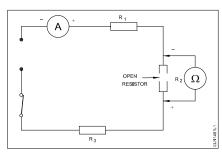
A
$$R_{T} = R_{1} + R_{2} + R_{3}$$

B
$$R_T = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$$

$$R_T = \frac{1}{R_1 + R_2 + R_3}$$

$$R_T = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}}$$

4 What is the reading of ohmmeter across opened 'R2' resistor?



- A Indicate zero reading
- B Indicate infinite resistance
- C Total resistance value of the circuit
- D Value of sum of the resistance of R_1 and R_3 only

5 What is the name of the resistor?

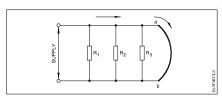


- A Metal film resistor
- B Wire wound resistor
- C Carbon film resistor
- D Carbon composition resistor
- 6 What electrical quantities are related in Ohm's law?
 - A Current, resistance and power B Current, voltage and resistivity
 - C Current, voltage and resistance
 - D Voltage, resistance and current density
- 7 What is the unit of resistivity?
 - A ohm/cm

B ohm / cm²

C ohm - metre

- D ohm/metre
- 8 What is the effect of the circuit, if 'ab' points are shorted?



- A Circuit resistance will be zero
- B Same current will flow in all branches
- C Supply voltage will exist in each branch
- D Total circuit current is equal to each branch circuit current
- 9 What is the formula for Quantity of electricity (Q)?
 - A Current x Time
- B Voltage x Current
- C Current x Resistance
- D Voltage x Resistance
- 10 What is the unit of conductance?
 - A Mho

B Ohm

C Ohm-m

D Ohm/m

- 22
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11	ance in Ohm per degree centigrade						
	Α	Temperature effect	В	Laws of temperature			
	С	Temperature constant	D	Temperature co-efficient			
12	2 What is the S.I unit of specific resistance?						
	Α	Ohm/cm	В	Ohm/metre ²			
	С	Ohm-metre	D	Micro ohm/cm ²			
13	Wł	Which formula is used to calculate the power of a DC circuit?					
	Α	Voltage x time	В	Current x voltage			
	С	Current x resistance	D	Voltage x resistance			
14	4 What is the specific resistance value of copper conductor?						
	Α	1.72 Ohm/cm ³	В	1.72 Micro ohm			
	С	1.72 Micro ohm/cm ³	D	1.72 Micro ohm/m			
Level 2							
1	Wł	Which is the semiconductor material?					
	Α	Eureka	В	Ebonite			
	С	Manganin	D	Germanium			
2		nat is the indication of neon pol pply?	arit	y indicator used for checking A.C.			
		Both electrodes will glow Both electrodes will be flickerin		Only one electrode will glow			
	D	One electrode will glow and another	ther	will be flickering			
3	Ca	Calculate the electrical energy in unit consumed by 500W lamp for 5 hours.					
		"	Р	1.0 unit			
	Α	0.5 unit	В	1.0 uriit			

4 What is the value of hot resistance of a bulb rated as 100W/250V?

A 31.25 ohm

B 62.50 ohm

C 312.50 ohm

D 625.00 ohm

5 Calculate the total power of the circuit of two lamps rated as 200W/240V are connected in series across 240V supply?

A 50 W

B 100 W

C 200 W

D 400 W

6 What is the change of resistance value of the conductor as it diameter is doubled?

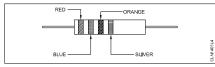
A Increases to two times

B Decreases to four times

C Decrease to half of the value

D No change in value of resistance

7 Calculate the resistance value of the resistor by colour coding method.



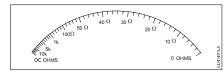
A $23 \times 10^3 \Omega \pm 5\%$

B $26 \times 10^3 \Omega \pm 10\%$

C $32 \times 10^4 \Omega \pm 10\%$

D $37 \times 10^4 \Omega \pm 5\%$

8 Why the ohmmeter is graduated with non-linear scale?



- A Voltage is directly proportional to resistance
- B Current is inversely proportional to resistance
- C Resistance is inversely proportional to the square of current
- D Voltage is directly proportional to the square of the current
- 9 Which material is having negative temperature co-efficient property?

A Mica

B Eureka

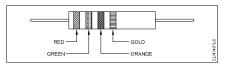
C Copper

D Manganin

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- 10 What is the effect of the parallel circuit with one branch opened?
 - A Current will remain same
 - B Whole circuit will not function
 - C No current will flow in that branch
 - D Voltage drop increase in the opened branch
- 11 Which type of resistor is used for Arc quenching protection in circuit breakers?
 - A Varistors B Sensistors
 - C Thermistors D Light Dependent Resistor (LDR)
- 12 Calculate the value of resistance by colour coding method?



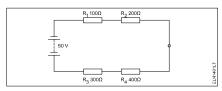
- A $22 \times 10^3 \pm 10\%$
- B 23 x 10⁴ ± 10%
- C $25 \times 10^3 \pm 5\%$
- D $36 \times 10^4 \pm 5\%$
- 13 Which is the application of series circuit?
 - A Voltmeter connection
- B Lighting circuits in home
- C Shunt resistor in ammeter
- D Multiplier resistor of a voltmeter
- 14 What is the effect on opened resistor in series circuit?
 - A No effect in opened resistor
 - B Full circuit current will flow in opened resistor
 - C Total supply voltage will appear across the opened resistor
 - D No voltage will appear across the opened resistor
- 15 What is the name of the resistor if its resistance value increase with increase in temperature?
 - A Varistors

B Senistors

C Thermistors

D Light Dependent Resistor (LDR)

- 16 Which type of meter is used to test the polarity of battery?
 - A Moving iron ammeter
- B Moving coil voltmeter
- C Moving iron voltmeter
- D Dynamo meter type wattmeter
- 17 What is the voltage drop in resistor 'R2' in the series circuit?

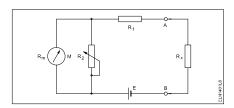


A 5 volt

B 10 volt

C 15 volt

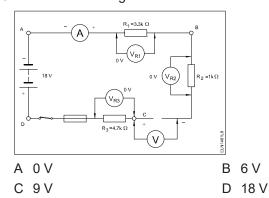
- D 20 volt
- 18 Which is the application of series circuit?
 - A Fuse in circuit
- **B** Voltmeter connection
- C Electrical lamp in homes
- D Shunt resistor in ammeter
- 19 Which method is used for measuring 1 Ohm to 100K Ohm range resistance?
 - A Substitution method
- B Kelvin bridge method
- C Wheat stone bridge method
- D Voltmeter and ammeter method
- 20 What is the purpose of the shunt resistor 'R₂' used in series type Ohm meter circuit?



- A To limit the current in the circuit
- B To increase the value of meter resistance
- C To adjust the zero position of the pointer
- D To prevent the excess current in the circuit

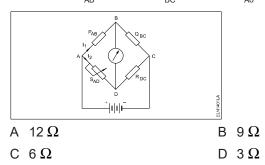
21	WI	Which electrical quantity affects the heat generated in a conductor?					
	Α	Voltage	В	Square of the current			
	С	Square of the resistance	D	Current passed through it			
22	22 What is the change in value of resistance of the conductor, if its cr section area is doubled?						
	Α	No change	В	Decreases 2 times			
	С	Increases 2 times	D	Decreases 4 times			
23		nat is the resistance of Light Depe ht is increased?	nde	ent Resistor (LDR), if the intensity of			
	Α	Increases	В	Decreases			
	С	Remains same	D	Becomes infinity			
24 Calculate the hot resistance of 200W / 250V rated lamp?				250V rated lamp?			
	Α	31.25Ω	В	62.5 Ω			
	С	312.5Ω	D	625Ω			
25 What is the value of resistance in an open circuit?				pen circuit?			
	Α	Zero	В	Low			
	С	High	D	Infinity			
26 Which resistor the lowest current flows in a parallel circuit having of 50Ω , 220Ω , 450 and $560~\Omega$ connected with supply?							
	Α	50 Ω	В	220Ω			
	С	450Ω	D	560Ω			
27	WI	nich is inversely proportional to th	e re	esistance of a conductor?			
	Α	Length	В	Resistivity			
	С	Temperature	D	Area of cross section			

28 What is the reading of the voltmeter 'V'?

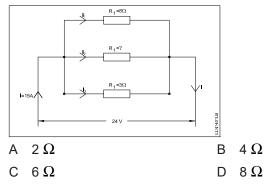


Level 3

1 Calculate the value of unknown resistance 'R $_{DC}$ ' in the Wheatstone bridge network, If P $_{AB}$ = 500 Ω , Q $_{BC}$ = 300 Ω , S $_{Ao}$ = 15 Ω ,at balanced condition.?

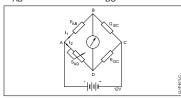


2 Calculate the value of resistance 'R₂' in the parallel circuit.



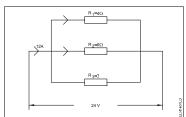
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3 Calculate the unknown resistance " R_{DC} " in the Wheatstone bridge circuit, if P_{AB} =400 ohms, Q_{BC} =200 ohms and S_{AD} =12ohms at balanced condition.



- A 4Ω
- C 8Ω

- B $6\,\Omega$
- D 12 Ω
- 4 Calculate the resistance value in R_3 resistor.

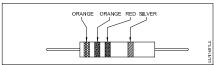


A 4 Ohm

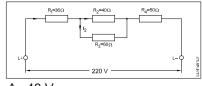
B 6 Ohm

C 8 Ohm

- D 12 Ohm
- 5 What is the value of resistance of the resistor?



- A 330 ± 5% Ohm
- B 3300 ± 10% Ohm
- C 33000 ± 5 % Ohm
- D 330000 ± 10% Ohm
- 6 Calculate the voltage drop across the resistor 'R4' in the circuit?



A 48 V

B 72 V

C 80 V

D 100 V

Electrician Semester - 1

Module - 5: Magnetism Capacitors

Level 1

1 What is the unit of capacitance?

A Mho

B Henry

C Farad

D Coulomb

2 What is the unit of permeance?

A Ampere - turns

B Weber/Ampere turns

C Ampere turns/Weber

D Weber/Square metre

3 Which rule is applied to find the direction of magnetic field in a solenoid coil?

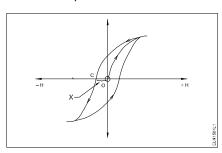
A Cork screw rule

B Right hand palm rule

C Flemings left hand rule

D Flemings right hand rule

4 What is the part marked as 'X' in B.H curve?



A Coercivity

B Saturation point

C Magnetizing force

D Residual magnetism

5 What is the unit of Reluctance?

A Weber/metre²

B Weber/metre

C Ampere turns / Weber

D Ampere turns / metre²

6 Which defines the flux density is always lagging behind the magnetising force?

A Hysterisis

B Magnetic intensity

C Magnetic induction

D Residual magnetism

7 What is the S.I unit of Flux density?

A Tesla

B Weber

C Weber/metre

D Ampere-turns

8 What is the unit of Magneto Motive Force (MMF)?

A Ampere / M²

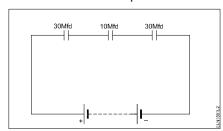
B Ampere - Metre

C Ampere - turns

D Ampere / turns

Level 2

1 Calculate the total capacitance value in the circuit.



A 0.16 µF

B 6µF

C 30 µF

D 70 µF

2 What is the capacitance value of a capacitor that requires 0.5 coulomb to charge to 35 volt?

A 0.014 F

B 0.025 F

C 0.14 F

D 0.25 F

3 Which is the diamagnetic substance?

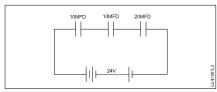
A Air

Steel

C Water

D Platinum

- 4 Which factor affects the polarity of the electromagnet?
 - A Length of the coil
- B Direction of current
- C Strength of current
- D Strength of the magnetic field
- 5 What is the total inductance if 3 inductors (L_1 , L_2 and L_3) are connected in
 - A $L_T = L_1 \times L_2 \times L_3$
- B $L_T = L_1 + L_2 + L_3$
- C $L_T = \frac{1}{L_1} + \frac{1}{L_2} + \frac{1}{L_3}$ D $L_T = \frac{1}{L_1 + L_2 + L_3}$
- 6 Calculate the total value of capacitance of series capacitor circuit.



A 4µfd

B 10µfd

C 15µfd

- D 40µfd
- 7 Which material is the paramagnetic substance?
 - A Cleat wiring

B Copper

C Bismuth

- D Graphite
- 8 What is the similar term in magnetic circuit for "conductance" in electrical circuit??
 - A Reluctivity

B Permeance

C Reluctance

- D Permeability
- 9 Which is the correct expression of capacitance 'C' if the electric charge is 'Q' and the voltage is 'V'?
 - $A C = \frac{Q}{V}$

 $\mathsf{B} \quad C = \frac{V}{Q}$

C C = VQ

D $C = \sqrt{VQ}$

10	Wł	nat is the effect on surrounding m	eta	l placed in a magnetic field?
	Α	Hysteresis	В	Skin effect
	С	Eddy current	D	Dielectric stress
11	Wł	nich device the air capacitors are	use	ed?
	Α	TV tuner	В	Oscillator
	С	Loudspeaker	D	Radio receiver
12	Wł	nich is the diamagnetic substance	e?	
	Α	Wood	В	Nickel
	С	Platinum	D	Manganese
13	Wł	nat indicates the shape of a BH co	urve	e (Hysteresis loop) of material?
	Α	Reluctance of the material	В	Field intensity of the substance
	С	Magnetic properties of the mater	ial	
	D	Pulling power of the magnetic	ateı	rial
14	Wł	nich electrical quantity is directly	pro	portional to the eddy current?
	Α	Voltage	В	Current
	С	Frequency	D	Resistance
15	Wł	nich is the cause for changing the	P	ermeability?
	Α	Length	В	Flux density
	С	Field intensity	D	Magneto motive force
16	Wł	nich type of capacitor is used for	spa	ace electronics?
	Α	Plastic film type	В	Ceramic disc type
	С	Electrolytic-Aluminum type	D	Electrolytic-Tantalum type
17	Wł	nat is the effect of the electrolytic	ca	pacitor, if open circuit fault occurs?
	Α	It will not function	В	It will burst at once
	С	It will become leaky	D	It will function normally

18	8 What will be the change in value of capacitance if the distance of the plates are decreased in the capacitor?				
	Α	Becomes zero	В	Remains same	
	С	Decreases	D	Increases	
19	9 Which property of magnet is illustrated?				
		S. Bereille	ELN1501L4		
	Α	Directive property	В	Induction property	
	С	Saturation property	D	Poles existing property	
20	W	hich is a paramagnetic substance	e?		
	Α	Air	В	Steel	
	С	Glass	D	Water	
21		hich method of magnetization in magnent magnets?	s u	sed to make commercial purpose	
	Α	Induction method	В	Single touch method	
	С	Double touch method	D	Divided touch method	
22	W	hat is the effect of inductance if the	dis	stance between the turns increases?	
	Α	Increases	В	Decreases	
	С	Becomes zero	D	Remains same	
23	3 What is the function of dielectric insulator in capacitor? A Increases the strength of capacitance B Prevents any current flow between plates C Protects from short circuit between the plates D Helps to hold the charge in capacitor for long period				

24	WI	nich factor is determining the valu	ie o	f capacitance in capacitor?				
	Α	Area of the plates	В	Shape of the plates				
	С	Material of the plates	D	Thickness of the plates				
25	WI	nich type of capacitors are used i	n R	F coupling circuit?				
	Α	Tantalum	В	Monolithic				
	С	Electrolytic	D	Metalized poly propylene				
Le	vel	3						
1	Нс	ow the value of capacitance can be	e de	ecreased?				
	Α	Increasing the plate area						
		Increasing the resistance of the	plat	tes				
	С	C Increasing the distance between the plates						
	D	Using high dielectric constant material						
2 What precaution to be taken before connecting the different voltage capacitors in series?			necting the different voltage rating					
	Α	All the capacitors must be same	ma	nufacturer				
	В	Each capacitors voltage drop must be less than its voltage rating						
		Total capacitors value must be le Break down voltage of each cap		than the lowest value of capacitor or must be same				
3	Нс	ow can you increase the pulling st	ren	gth of an electromagnet?				
	A increase the field intensity							
	B Reduce the current in the coil							
	C Reduce the number of turns in the coil							
	D	Increase the B-H curve of the ma	ater	ial				
4		nat will happen, if the polarized el nnected?	ect	rolytic capacitor is reversely				
	Α	No effect on the capacitor	В	Explode due to excessive heat				
	С	Current is reduced in the circuit						
	D	Value of capacitance will be incre	eas	ed				

Module - 6: AC Circuits

Level 1

1 What is the unit of susceptance?

A Mho

B Ohm

C Henry

D Farad

2 What is the formula to find 3 phase Reactive power (P,) if the line voltage is 'V₁' and line current is 'I₁'?

A $P_r = V_L I_L$ C $P_r = \sqrt{3} V_I I_I \sin \theta$

B $P_r = 3 V_L I_L Cos\theta$ D $P_r = \sqrt{3} V_L I_L Cos\theta$

3 What is the formula for Reactive Power (P,) in an AC circuit?

A $P_r = VI$

 $C P_r = VI \cos\theta$

B $P_r = \sqrt{2} \text{ VI}$ D $P_r = \text{VI sin } \theta$

4 What is the phase displacement in a single phase AC circuit?

A 90°

120°

C 180°

D 270°

5 What is the formula to calculate the impedence (Z) of the R.L.C series circuit, if the inductive reactance (X_1) is less than capacitive recatance (X_2) ?

A
$$Z = R^2 + \sqrt{X_L^2 + X_C^2}$$

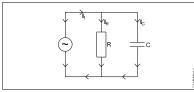
B
$$Z = \sqrt{R^2 + (X_1 - X_2)^2}$$

A
$$Z = R^2 + \sqrt{X_L^2 + X_C^2}$$

B $Z = \sqrt{R^2 + (X_L - X_C)^2}$
C $Z = \sqrt{R^2 + (X_L^2 - X_C)^2}$
D $Z = \sqrt{R^2 + (X_C - X_L)^2}$

D
$$Z = \sqrt{R^2 + (X_C - X_L)^2}$$

6 What is the formula to calculate the line current (I₁) of this single phase R - C parallel circuit?



$$A I_L = I_R - I_C$$

$$\mathsf{B} \quad \mathsf{I}_L \!=\! \mathsf{I}_R + \mathsf{I}_C$$

36 C
$$I_L = I_R^2 + I_C^2$$

D
$$I_L = \sqrt{I_R^2 + I_C^2}$$

7 What is the formula to calculate the three phase active power (P) if the line voltage (V,) and line current is I, and phase angle is 'q'?

A P =
$$V_L I_L \sin \theta$$

B P =
$$3 V_{l} I_{l} \cos \theta$$

C P =
$$\sqrt{3}$$
 V, I, Sin θ

D P =
$$\sqrt{3}$$
 V, I, Cos θ

8 What is the formula for form factor(K_i)?

$$\mathsf{A} \quad K_f = \frac{Average \, value}{RMS \, value}$$

$$\mathsf{B} \quad K_f = \frac{RMS \, value}{Average \, value}$$

$$C K_f = \frac{Maximum \, value}{Average \, value}$$

$$D K_f = \frac{RMS \, value}{Maximum \, value}$$

$$K_f = \frac{RMS \, value}{Maximum \, value}$$

9 Which electrical term is defined as the total opposition to current in AC parallel circuit?

A Resistance

B Impedance

C Admittance

D Susceptance

10 What is the form factor (K,) for sinusoidal AC?

A 1.00

B 1.11

C 2.22

D 4.44

11 What is the reciprocal of inductance in AC parallel circuit?

A Reactance

B Admittance

C Conductance

D Susceptance

12 Which formula is used to calculate Form factor (K,)?

A
$$K_f = \frac{\text{Effective value}}{\text{Average value}}$$

B
$$K_f = \frac{\text{Average value}}{\text{Effective value}}$$

$$C \quad K_{f} = \frac{\text{Effective value}}{\text{Maximum value}}$$

D
$$K_f = \frac{\text{Average value}}{\text{Maximum value}}$$

13 Which formula is used to calculate the impedance (z) of a RLC series circu	cuit?
---	-------

A
$$Z=R^2+(x_L \sim x_c)$$

A
$$Z=R^2+(x_L \sim x_c)^2$$
 B $Z=\sqrt{R+(x_L \sim x_c)}$

C
$$Z = \sqrt{R^2 + (x_{\perp} \sim x_{\odot})}$$
 D $Z = \sqrt{R^2 + (x_{\perp} \sim x_{\odot})^2}$

D
$$Z = \sqrt{R^2 + (x_1 - x_2)^2}$$

14 What is the phase displacement between phases in a 3 phase circuit?

A 90°

B 120°

C 180°

D 360°

Level 2

- 1 What is the main cause for below 0.5 lagging power factor in 3 phase system?
 - A Due to fluctuation of voltage
 - B True power due to resistive load
 - C Reactive power due to more inductive load
 - D Reactive power due to more capacitive load
- 2 What is the current in neutral conductor in 3 phase unbalanced load in star connected system?
 - A No current will flow
 - B The algebraic sum of current in 3 phases
 - C The algebraic sum of current in 2 phases only
 - D Lesser than the lowest current in any one of the phases
- 3 What will be the readings of two watt meters (W, & W,) in 3 phase power measurement, if the power factor is zero?
 - A W₁ & W₂ both are positive reading
 - B W₁ is Positive and W₂ is negative reading
 - C W₁ is equal to W₂ but with opposite signs
 - D Zero W₁ is Positive reading, and W₂ is negative reading
- 4 What is the maximum value of voltage for 240 volt RMS?
 - A 240V

B 415V

C 339.5V

D 376.8V

5 What is the condition for resonance in RLC series circuit? (Inductive reactance = ${}^{\prime}X_{c}{}^{\prime}$)

 $A X_L > X_C$

B $X_L < X_C$

 $C X_1 = X_C$

D $X_1 > \sqrt{2}X_C$

6 What is the relation between the line voltage (V_L) and phase voltage (V_p) in star connected system?

A $V_L = \sqrt{3} V_P$

 $BV_L = 3V_P$

 $C V_1 = V_D / \sqrt{3}$

 $D V_{1} = V_{p} / 3$

7 What is the power factor in a 3 phase power measurement of two wattmeters showing equal readings?

A 0

B 1

C 0.5

D 0.8

8 What is the relation between the line current (I_L) and phase current (I_P) in delta connected system?

 $A \quad I_L = I_P$

 $B I_L = 3 I_P$

 $C I_1 = \sqrt{3} I_2$

D $I_{1} = I_{1} / \sqrt{3}$

9 What is the purpose of phase sequence meter?

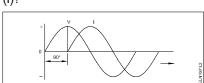
A To control the speed of 3 phase motor

B To protect motor against short circuit fault

 $\,\,{\rm C}\,\,$ To indicate the incorrect phase sequence of 3 phase

D To ensure the correct phase sequence of 3 phase system

10 Which AC circuit contains the phase relation between voltage (V) and current (I)?



A Pure resistive circuit

B Resistance and inductance circuit

- C Resistance and capacitance circuit
- D Resistance, inductance and capacitance circuit

11 In a 3 phase system, if the active power is 4 KW and the apparent power is 5 KVA, calculate the reactive power?

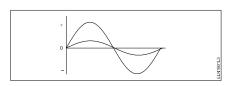
A 1 KVAR

B 2 KVAR

C 3 KVAR

D 4 KVAR

- 12 In which condition resonance will occur in R-L-C series circuit?
 - A Inductive reactance (X,) is zero
 - B Inductive reactance (X_i) is equal to capacitive reactance (X_c)
 - C Inductive reactance (X_L) is greater than capacitive reactance (X_C)
 - D Inductive reactance (X₁) is less than capacitive reactance (X₂)
- 13 What relationship is illustrated in between the current and voltage?



- A Current and voltage are "in phase"
- B Current and voltage are in out of phase
- C Current lags behind the voltage
- D Current leads ahead of the voltage
- 14 Calculate the total power by two wattmeter (W₁ & W₂) method, if one of the wattmeter (W₂) reading is taken after reversing.

A W₁ x 2

B W₁ only

 $C W_1 - W_2$

 $D W_1 + W_2$

- 15 Which 3 phase system, the artificial neutral is required to measure the phase voltage?
 - A 3 wire star connected system
 - B 3 phase 4 wire star connected system
 - C 3 wire delta connected system
 - D 4 wire delta connected system

- 16 What is the line voltage in 3 phase system if the phase voltage is 240V?
 - A 380 Volt

B 400 Volt

C 415 Volt

- D 440 Volt
- 17 Which condition is called as resonance RLC circuit?
 - A $X_L > X_C$

 $B X_C > X_L$

 $C X_1 = X_C$

- D R < X
- 18 Which quantity is rotating at a constant angular velocity?
 - A Scalar quantity
- B Vector quantity
- C Phasor quantity
- D Algebric quantity

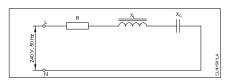
Level 3

- 1 What is the resistance of the inductive coil takes 5A current across 240V, 50Hz supply at 0.8 power factor?
 - A 48 Ω

B 42.5Ω

C 38.4Ω

- D 26.6Ω
- 2 How the resonance frequency (f_r) can be increased in A.C series circuit?
 - A Increasing the inductance value
 - B Reducing the capacitance value
 - C Increasing the capacitance value
 - D Increasing the value of resistance
- 3 Calculate the apparent power in KVA of 3 phase 415V, 50 Hz, star system, if the line current (I_1) is 16A at 0.8 power factor.



A 15.2 KVA

B 11.5 KVA

C 9.2 KVA

D 5.3 KVA

4	Calculate the impedance of the circuit R = 5Ω , $X_L = 36\Omega$ and $X_C = 24\Omega$.				
	Α	69 Ω	В	3 65 Ω	
	С	13 Ω	D	Ο 12 Ω	
5		alculate the line current of the 3 ph ad of 3000 watt at 0.8 power facto		se 415V 50 Hz supply for the balanced is connected in star.	
	Α	8.5 A	В	3 5.2 A	
	С	4.5 A	D	O 3.4 A	
6		alculate the power factor of coil hav 5A, at 240V/ 50Hz AC supply.	ing	ng resistance of 24 Ω , draws the curren	
	Α	0.8	В	3 0.6	
	С	0.5	D	0.3	
7	Calculate the power factor of R.L.C circuit having resistance (R) = 15Ω , resultant reactance (X) = 20Ω connected across $240V$ /50Hz AC supply?				
	Α	0.5	В	3 0.6	
	С	0.7	D	0.8	
8	Calculate the value admittance (Y) of the RLC parallel circuit connected across 240volts/50Hz AC supply and 8 Amp. Current is passed through it?				
	Α	3.33 Mho	В	3 0.33 Mho	
	С	0.033 Mho	D	0.003 Mho	
9	How the low power factor (P.F) can be improved in AC circuits?				
	Α	By connecting resistors in series	S		
	B By connecting capacitors in series				
	С	By connecting inductors in serie	s		
	D	By connecting capacitors in para	alle	lel	
10	O Calculate the apparent power of a star connected 3 phase load, if it is connected across 3 phase 415volt/50Hz supply at 0.8 p.f and the phase current is 10 Amps.				
	Α	12.45 KVA	В	3 57.50 KVA	
	С	3.320 KVA	D	7.188 KVA	
42	Electrician (NSQF Level-5) QB : Sem-1 - Mod-6 : AC Circuits				

11	What is the P.F if one of the wattmeters reading is zero and the other reads total power in 2 wattmeter method of 3 phase power measurement?			
	A 0.5	B Zero		
	C Unity	D Below 0.5		
12	12 How will you obtain positive reading in the wattmeter reads negative reading during 3- phase two wattmeter method?			
	A By interchanging the connections of input terminals			
	B By disconnecting the connection of current coil in meter			
	C By reversing the connection of pressure coil in meter			
	D By reversing the pressure coil and current coil connection in meter			
13	13 What is the power factor if one of the wattmeter gives negative reading in two wattmeter method of 3 phase power measurement?			
	A 0	B 0.5		
	C Unity	D Less than 0.5		

Module - 1 : Cells and Batteries

Level 1

1 Which law secondary cell works?

A Lenz's law

B Joule's law

C Faradays laws of electrolysis

D Faradays laws of electromagnetic induction

2 What is the formula to calculate the Mass deposited during electrolysis?

A M = it gm

B M = zit gm

C $M = \frac{it}{z}gm$

D $M = \frac{z}{it}gm$

3 How the capacity of batteries is specified?

A Volt

B Watt

C Volt Ampere

D Ampere hour

4 What is the unit of electric charge?

A Volt

B Watt

C Ampere

D Coulomb

5 What is the output voltage of lithium cell?

A 1.2 V

B 1.5 V

C 1.8 V

D 2.5 V

6 What is the formula for Faraday's first law of electrolysis?

A $M = \frac{Z}{it}$

B M = Zit

 $C M = \frac{it}{7}$

D $M = \frac{Zt}{i}$

7	What is the Electro Chemical Equiv	alent (ECE) of silver?
	A 0.001182 mg/coloumb	B 0.01182 mg/coloumb
	C 0.1182 mg/coloumb	D 1.1182 mg/coloumb
8	What does the letter 'Z' indicate in	the formula M = Zit ?
	A Time in seconds	B E.C.E of electrolyte
	C Amount of current in Amp	D Mass deposited in grams
9	What is the Electro Chemical Equiv	ralent (ECE) of copper?
	A 0.329 mg / coulomb	B 0.329 g / coulomb
	C 1.1182 mg / coulomb	D 1.1182 g / coulomb
Le	evel 2	
1	Which device converts sunlight into	electrical energy?
-	A Photo voltaic cell	B Liquid crystal diode
	C Light emitting diode	D Light dependent resistor
2	What is the method of charging if duration at higher rate?	the battery is to be charged for short
	A Initial charge	B Boost charge
	C Trickle charge	D Freshening charge
3	Which electrolyte used in carbon z	inc dry cells?
	A Dilute sulphuric acid	B Ammonium chloride
	C Potassium hydroxide	D Concentrated hydrochloric acid
4	Which effect causes by passing ele	ectric current in liquids?
	A Heating	B Lighting
	C Magnetic	D Chemical
5	Which material is used to make ne	gative plates in lead acid battery?
	A Lead dioxide	B Sponge lead
	C Lead peroxide	D Lead sulphate

6	Α	hich cell is most often used in dig Voltaic Mercury		watches? Lithium Silver oxide
7	Α	hat is the function of fine selector Selection of current rating Selection of voltage range	sw B D	Selection of charging time
8	A C	hat purpose the hydrometer is use Determine the AH capacity Assess the discharge level of ba Determine the specific gravity of	B tter	Assess the battery voltage level
9	WI	hich is used as an electrolyte in le	ead	acid battery?
		Hydrochloric acid Potassium hydroxide	B D	Ammonium chloride Diluted sulphuric acid
10	WI	hat is the total voltage of the circu	ıit?	
		+ 1-5V + 1-5V + 1-5V + 1-5V - 1-5V		
	Α	1.5 Volt	В	6.0 Volt
	С	7.5 Volt	D	9.0 Volt
11		hat is the outcome at the positive ad acid battery during charging?	pla	ate, after the chemical reaction in
	Α	Sponge lead(Pb)	В	Lead peroxide(PbO ₂)
	С	Lead sulphate(PbSO ₄)	D	Lead sulphate + water
12	WI	hich method the battery is charge	d a	t low current for long period?
	Α	Rectifier method	В	Trickle charging method
	С	Constant current method	D	Constant potential method
46		Electrician (NSQF Level-5) QB : Se	em-2	2 - Mod-1 : Cells and Batteries

- 13 Which material is used as cathode (-ve) electrode in silver oxide battery?
 - A Zinc

B Copper

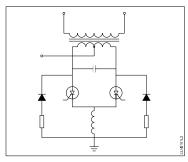
C Carbon

- D Silver oxide
- 14 What is the outcome of the chemical reaction that takes place in negative plate of lead acid battery during discharging?
 - A Sponge lead(Pb)
- B Lead peroxide(PbO₂)
- C Lead sulphate(PbSO₄)
- D Lead sulphate + water
- 15 What is the purpose of separator in lead acid battery?
 - A To provide a path for electrolyte
 - B To hold the positive and negative plate firmly
 - C To avoid short in between the positive and negative plates
 - D To keep positive and negative plate in a sequence array
- 16 Which instrument is used to measure the specific gravity of electrolyte in lead acid battery?
 - A Barometer

B Hydrometer

C Anima meter

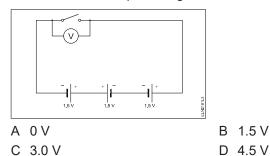
- D High rate discharge tester
- 17 Which type of inverter circuit?



A Driven inverter

- B SCR used inverter
- C Single transistor inverter
- D Two winding transformer inverter

18 What is the total output voltage of the circuit?



- 19 Which is used as a positive electrode in a dry cell?
 - A Zinc B Carbon C Copper D Lithium
- 20 Which apparatus is used to check the charging condition of voltage in battery?
 - A Voltmeter B Multimeter
 - C Hydrometer D High rate discharge tester
- 21 Which part is losing electron during electrolysis?
 - A Cathode B Anode C Electrolyte D Seperator

Level 3

- 1 What is the name of defect that bending of plates in secondary cells?
 - A Buckling B Local action
 C Partial short D Hard sulphation
- 2 Which technique is used to control the corrosion of a metal surface?
 - A Anodic protection B Cathodic protection
 C Electrolytic protection D Electrostatic protection
- 3 What is the effect if one cell is connected with reverse polarity in a parallel combination circuit?
 - A Voltage become zero B Become open circuit
 - C Will get short circuited D No effect will function normally

4	What is the effect on output power with respect to temperature in solar cells?		
	A No effect on change in tempera B Increases with increase in temp C Decreases with increase in tem D Decreases with decrease in tem	perature perature	
5	Why the vent plug is kept open dur	ring charging of a battery?	
	A To escape the gas freelyC To check the level of electrolyteD To check the colour changes in		
	_		
6	How the hard sulphation defect in	•	
	A Changing with new electrolyteC Recharging the battery for a lor	B Replacing with new electrodes	
	D Recharging the battery for shor	-	
7	What is the effect of buckling defe	ect in a lead acid battery?	
	A Bending of the electrodesC Making short between the electD Increasing the internal resistance		
8	What happens to the terminal volta	age of a cell if load increases?	
	A Increases	B Decreases	
	C Falls to zero	D Remains same	
9	How local action defect is prevented	ed in voltaic cell?	
	A By connecting cells in series	B By using a depolarizing agent	
	C By connecting cells in parallel	D By amalgamating the zinc plate	
10	Which is the cause for buckling de	efect in lead acid battery?	
	A Overcharging or over discharging	_	
	B Charging with low rate for short		
	C Formation of sediments fallingD Battery is kept in discharged co	•	
	Flortrician (NSOF) eval-5) OR: Som-2 - Mod-1: Calls and Ratteries 49		

Electrician Semester - 2

Module - 2 : Basic Wiring Practice

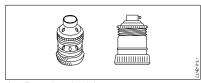
Level 1

- 1 How the conduit pipes are specified?
 - A Length in metre
- B Wall thickness in mm
- C Inner diameter in mm
- D Outer diameter in mm
- 2 What is the fusing factor for rewireable fuse?
 - A 1.1

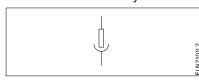
B 1.4

C 2.1

- D 2.5
- 3 What is the name of electrical accessory?



- A Bracket holder
- B Edison screw type holder
- C Angle swivel lamp holder
- D Goliath Edison screw lamp holde
- 4 What is the name of symbol used in wiring circuit?

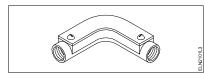


A Link

B Fuse

C Pull switch

- D Plug and socket
- 5 What is the name of the conduit accessory?



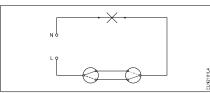
A Solid bend

- B Solid elbow
- C Inspection Bend
- D Inspection elbow

6 How many two way switches with intermediate switch are used to control one lamp from three different places?

С 3 D 4

7 What is the name of the diagram?



A Installation plan

B Layout diagram

C Wiring diagram

D Circuit diagram

8 What is the fusing factor for high repturing capacity fuses (HRC)?

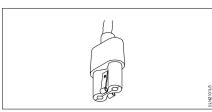
A 1.0

B 1.1

C 1.4

D 1.7

9 What is the name of the accessory used in electrical appliances?

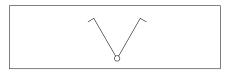


A 2 Pin plug

B Three pin plug

C Iron connector with direct entry D Flat connector with side entry

10 What is the name of the accessory symbol?



A Bell push switch

B Two way switch

One way switch two poles

D Multi position switch single pole

11 What is the name of the four insulated conductors group
--

- A Pair B Core C Quad D Layer
- 12 How many two way switches are required in godown wiring circuit to control four lamps?

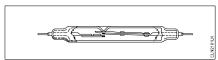
B 3

D 5

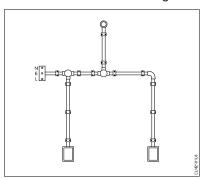
- A 2 C 4
- 13 What is the symbol indicates?



- A Table fan B Ceiling fan
- C Bracket fan D Exhaust fan
- 14 What is the name of the relay?



- A Impulse relay
- B Dry reed relay
- C Electromagnetic relay
- D Mercury wetted contact relay
- 15 What is the name of the diagram?



A Layout plan

- B Wiring diagram
- C Installation plan
- D Schematic diagram
- 52 Electrician (NSQF Level-5) QB : Sem-2 Mod-2 : Basic Wiring Practice

- 16 What is the term for the time taken by a fuse to interrupt the circuit in fault?
 - A Time factor

B Fusing factor

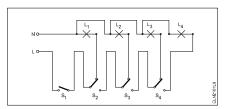
C Cut-off factor

- D Fusing current
- 17 What is the maximum PVC conduit size to make safe cold bending?
 - A 12 mm

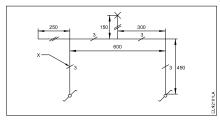
B 19 mm

C 25 mm

- D 50 mm
- 18 What is the name of the lighting circuit?



- A Tunnel lighting wiring
- 3 Corridor lighting wiring
- C Godown lighting wiring
- D Staircase lighting wiring
- 19 What is the expansion of MCB?
 - A Minute Control Breaker
- B Miniature Circuit Breaker
- C Minimum Current Breaker
- D Maximum Current Breaker
- 20 What does the symbol marked 'X' indicate?



- A Number of wires run on the limb
- B Number of switches to be connected
- C Number of battern (or) pipe to be fixed
- D Number of clamps (or) clips to be fixed

21 What is the minimum size of aluminum earth continuity conductor used in single phase domestic wiring as per BIS? A 3.5 Sq.mm B 3 Sq.mm C 2.5 Sq.mm D 1.5 Sq.mm 22 What is the name of wiring method? B Looping back method A Joint box method C Loop in method using 3 plate ceiling rose D Loop in method using 2 plate ceiling rose 23 What is length of thread on rigid conduits as per BIS? A 9mm - 20mm B 11mm - 27mm D 15mm - 30mm C 13mm - 25mm 24 How many link clips are packed in cardboard boxes as per BIS rules? A 50 clips B 75 clips C 100 clips D 150 clips 25 What is the expansion of ECC? A Earth Conductor Continuity **B** Earth Continuity Conductor C Earth Carrying Conductor D Earth Continuity Cable 26 Which type of lamp holder is used for the lamps above 300 watts? A Edison screw holder B Goliath screw holder C Angle holder D Brachet holder

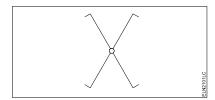
B American Wire GradeD American Wire Guard

27 What is the expansion of AWG?A American Wire Gauge

C American Wire Group

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28 What is the name of BIS symbol?

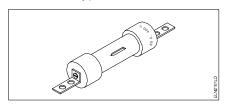


A Lamp

- B Two way switch
- C Intermediate switch
- D Multi position switch

Level 2

- 1 What is the purpose of underwriter's knot for pendent holder connection?
 - A Avoid loose connections
 - B Increase mechanical strength
 - C Prevent excessive cap cover pressure
 - D Reduce the strain from the terminals of accessories
- 2 What is the type of fuse?



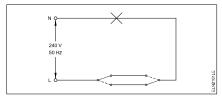
- A Knife edge cartridge fuse
- B High rupturing capacity fuse
- C Ferrule contact cartridge fuse
- D Diazed screw type cartridge fuse
- 3 Which type of load is protected by the L-series MCB?
 - A Motors

B Geyser

C Hand tools

D Air conditioner

4 Which type of switch is used in the circuit?



- A One way switch
- B Two way switch
- C Intermediate switch
- D Multiposition switch
- 5 What is the advantage of concealed wiring?
 - A Easy to maintain
- B Less voltage drop
- C High insulation resistance
- D Protection against moisture
- 6 Which type of relay can be operated at both A.C and D.C?
 - A Ferred relay

B Thermal relav

C Impulse relay

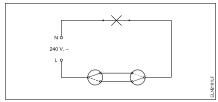
- D Dry reed relay
- 7 What is the purpose of the flexible cords in domestic wiring?
 - A Concealed wiring
- B Permanent connection
- C Run cable through holes in ceiling
- D Connection for transportable appliances
- 8 Which type of circuit breaker is used above 100 A current rating?
 - A Miniature Circuit Breaker (MCB)
 - B Earth Leakage Circuit Breaker (ELCB)
 - C Moulded Case Circuit Breaker (MCCB)
 - D Residual Current Circuit Breaker (RCCB)
- 9 What is the purpose of tin coating on copper fuse wire?
 - A Withstand high temperature
- B Increase the fusing factor
- C Prevent oxidation of copper wire D Increase the mechanical strength
- 10 Why tree system of wiring most suitable for multistoryed building?
 - A Easy load balancing
- B Constant voltage distribution
- C Offers minimum voltage drop
- D Easy in fault finding with many fuses

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11	Which is used as a filler material for fixing screw hole on ceiling?			ing screw hole on ceiling?
	Α	Paper	В	Nylon
		Cement	D	Poly vinyl chloride
12	WI	here the Iron Clad Double Pole (I	CD	P) main switch is used?
		Large industrial installations		Control main or branch circuits
		Single phase domestic installating. Three phase power circuit installating.		
13	WI	hich electrical accessory belongs	to g	eneral classification of accessories?
	Α	Fuse	В	Ceiling roses
	С	Intermediate switch	D	Pendent lamp holder
14	WI	hich is the application of DC serie	es N	MCB?
	Α	AC motor	В	DC motor
	С	Locomotives	D	Air conditioners
15	WI	hich place the Tree system of wir	ing	is most suitable?
	Α	Godown wiring	В	Industrial wiring
	С	Domestic wiring	D	Multi storied building
16		hy separate wiring is recommend ring?	ded	for home theatre wiring and power
	Α	Avoid electrical fire	В	Reduce power loss
	С	Avoid electrical interference	D	Maintain voltage level constant
17	WI	hat is the tool used to bend cond	uits	?
	Α	Hickey	В	Coupler
	С	Pipe vice	D	Bench vice
18	WI	hat is the purpose of ELCB?		
	Α	Detects the fault in circuit	В	Monitors the residual current
	С	Protects the equipment from over	er lo	pad
	D	Protects from short circuit fault		

	19 What is the purpose of the fuse cut out provided at the incoming power supply?		
Α	A To ensure the line is not over loaded		
В	To maintain the stabilised supply	/ VC	oltage
С	To protect the circuit from the lea	aka	ge current
D	To protect the human beings fro	m e	electric shock
20 W	hat is the use of die stock set?		
Α	Cut external threads on square	oipe	9
В	Cut internal threads on cylindric	al p	ipe
С	Cut external threads on cylindric	alp	pipe
D	Cut internal threads on rectangu	lar	pipe
21 W	hich classification of accessory t	he (ceiling rose is classified?
Α	Outlet accessories	В	Safety accessories
С	Holding accessories	D	General accessories
22 What is the purpose of the circuit diagram in wiring installation?			
Α	To show the physical position of	ac	cessories
В	To estimate the various accessor	orie	s in the circuit
С	To inform the reader quickly wha	at fo	or the circuit is designed
D	To show the schematic connect	ion	of the circuit for a specific task
23 Which electrical equipment is provided with 'L' series MCB?			I with 'L' series MCB?
Α	General lighting	В	Motors
С	Air conditioner	D	Halogen lamp
24 Why the looping-back (loop in) method is preferred in domestic wiring installation?			
Α	Easy to identify the faults		
В	No separate joints are used		
С	More number of tappings can be	tal	ken
D	More number of sub-circuits car) be	made
58	Electrician (NSQF Level-5) QB : Se	m-2	- Mod-2 : Basic Wiring Practice

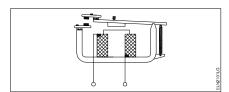
25 What is the type of wiring?



- A Staircase wiring
- C Hostel wiring

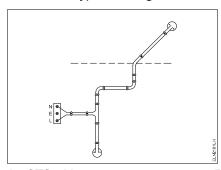
- B Godown wiring
- D Tunnel wiring

26 What is the type of relay?



- A Impulse relay
- C Latching relay
- B Dry reed relay
- D Electromagnetic relay

27 What is the type of wiring?



A CTS wiring

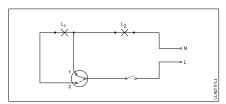
- B Cleat wiring
- C PVC conduit wiring
- D PVC casing and capping wiring
- 28 Which type of conduit used for gas tight explosive installation?
 - A Flexible conduits
- B Rigid steel conduits
- C Rigid non-metallic conduits
- D Flexible non-metallic conduits

- 29 What is the function of circuit breaker?
 - A Making contact at normal condition
 - B Making contact at abnormal condition
 - C Breaking automatically at abnormal condition
 - D Physical breaking contact at abnormal condition
- 30 What is the function of bimetallic strip in MCB?
 - A Over load protection
- B Short circuit protection
- C Over voltage protection
- D Earth leakage protection
- 31 What protection offered by residual current circuit breaker?
 - A Protection from shock
- B Protection from over load
- C Protection from short circuit
- D Protection from leakage current
- 32 Which wiring is suitable for temporary installations?
 - A Cleat wiring

- B Concealed wiring
- C PVC conduit wiring
- D Metal conduit wiring
- 33 Where the phase conductor is looped in looping system of wiring?
 - A Switch box

60

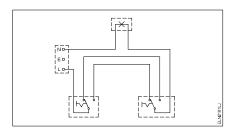
- B Junction box
- C Distribution box
- D Socket connection
- 34 What is the application of the wiring circuit?



- A Two lamps dim operation only
- B Two lamps controlled by one switch
- C Two lamps controlled by two switches
- D One lamp bright and two lamp dim operation

	35 What is the reason for home theatre wiring not to run along with power wiring?			
P	A Avoid leakage current in home theatre wiring			
Е	B Control temperature in home the	atro	e wiring	
C	C Avoid electrical interference in audio, video system			
	Reduce the power consumption	in p	power supplies	
	36 What will happen to the value of earth resistance if length of the earth pipe is increased?			
P	A Remain same	В	Increases	
C	Decreases	D	Infinity	
37 V	37 Which types of accessories are used to operate a portable appliance?			
P	Safety accessories	В	Holding accessories	
C	C Outlet accessories	D	Controlling accessories	
38 Which insulation is necessary for proper function and basic protection?				
A	Double insulation	В	Functional insulation	
C	Reinforced insulation	D	Supplementary insulation	
39 Which type of accessories of fuse is comes under?				
A	Controlling accessories	В	Holding accessories	
C	Safety accessories	D	Outlet accessories	
40 Which type MCBs suitable for halogen lamps?				
A	\ 'L' series MCBs	В	'G' series MCBs	
	C 'DC' series MCBs	D	'L' and 'G' series MCBs	

41 What is the type of diagram?



- A Wiring diagram
- B Circuit diagram
- C Installation plan
- D Layout diagram

Level 3

- 1 What is the effect of low current rated cable used to connect higher current load?
 - A Voltage drop increases
- B Load current increases
- C Voltage drop decreases
- D Cable damage due to heat
- 2 Calculate the earth fault loop impedance, if the ELCB tripping current is 30 mA?
 - A 166 Ω

B 1666Ω

C 16.66Ω

D 16666 Ω

Electrician Semester - 2

Module - 3: Wiring Installation and Earthing

Level 1

1	What is the minimum size of Copper	earth	continuity	conductor	used	in
	single phase domestic wiring as per B	IS?				

A 3 Sq.mm B 3.5 Sq.mm C 2.5 Sq.mm D 1.5 Sq.mm

2 What is the formula to find voltage drop of a A.C single phase wiring circuit?

A Voltage drop = IR volt B Voltage drop = I^2R volt C Voltage drop = I/R volt D Voltage drop=I/R/2 volt

3 What is the maximum permissible load for a power sub circuit as per I.E rules?

A 800 Watt B 1500 Watt C 2000 Watt D 3000 Watt

4 What is the permissible leakage current in domestic wiring installation?

A 1/5 x Full load current

B 1/50 x Full load current

C 1/500 x Full load current

D 1/5000 x Full load current

5 Which formula is used to calculate the diversity factor?

 $\mbox{A} \quad \mbox{Diversity factor} = \frac{\mbox{Maximum load}}{\mbox{Installed load}}$

B Diversity factor = Installed load
Maximum load

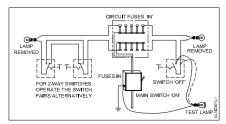
C Diversity factor = $\frac{\text{Minimum actual load}}{\text{Installed load}}$

 $D \quad \text{Diversity factor} = \frac{\text{Installed load}}{\text{Minimum actual load}}$

- 6 Which principle the earth resistance tester works?
 - A Self induction B Mutual induction
 - C Fall of potential method D Fleming's left hand rule

Level 2

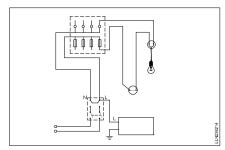
- 1 Which method is used to reduce earth resistance value in a existing earth?
 - A Increasing the length of electrode
 - B Keeping wet condition in earth pits always
 - C Adding more sand and charcoal in earth pits
 - D Increasing the diameter of earth electrode
- 2 Why A.C is required to measure the earth resistance by using earth resistance tester?
 - A Regulate the current B Increase the voltage drop
 - C Decrease the voltage drop D Avoid electrolytic emf interference
- 3 Which location the service connection supply leads to be connected at consumer main board?
 - A IC cut out B Main switch
 - C Energy meter D Distribution board
- 4 What is the type of test in domestic wiring installation?



- A Polarity test
- B Continuity (or) open circuit test
- C Insulation resistance test between conductors
- D Insulation resistance test between conductors and earth
- 64 Electrician (NSQF Level-5) QB: Sem-2 Mod-3: Wiring Installation and Earthing

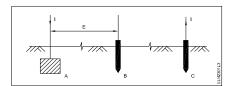
- 5 Which instrument is used to test new domestic wiring installation?

 A Multimeter B Megger
 C Shunt type ohmmeter D Series type ohmmeter
- 6 What is the type of test in the wiring installation?



- A Polarity test B Open circuit test
- C Insulation resistance test between conductors
- D Insulation resistance test between conductors and earth
- 7 Where system earthing is done?
 - A Generating station B Electroplating installation
 C Small industrial installation D Domestic wiring installation
- 8 What is the test to be carried out by using megger?
 - A Polarity test B Insulation resistance test
 - C Earth electrode resistance test D Earth conductor continuity test
- 9 What is the reason of lamp glowing dim and motor running slow in a domestic wiring circuit?
 - A Open circuit in the neutral line
 - B Short circuit between conductors
 - C High value series resistance fault
 - D Open circuit in the earth conductor
- 10 Which wiring installation the System earthing is to be done?
 - A Substations B Godown wiring
 C Domestic wiring D Commercial wiring

11 Which method of earth resistance measurement is illustrated?



A Fall of current

- B Fall of potential
- C Current dividing
- D Potential dividing
- 12 What is the function of current reverser in earth resistance tester?
 - A Converts A.C. into D.C
- B Reverses the polarity of D.C
- C Changes D.C. supply into A.C supply
- D Reverses the direction of rotation of the generator
- 13 What is the advantage of stranded conductor over solid conductor?
 - A Cost is less

- B More flexible
- C Less voltage drop
- D More insulation resistance
- 14 What is the reason for supplying AC to the electrodes for measuring earth resistance?
 - A Provide electrostatic shield
- B Protect the coils in the meter
- C Reduce the value of current in the meter
- D Avoid the effect of electrolytic emf interference
- 15 Why the pointer is not stable at zero on the scale as the megger is not in use?
 - A It is not having controlling Torque
 - B Provided with air friction damping
 - C The deflecting torque is directly proportional to the current
 - D The deflecting torque is directly proportional to the square of the current
- 16 Which is proportional for the deflection of ohmmeter needle in earth resistance tester?
 - A Current in current coil
- B Current in potential coil
- C Speed of the handle rotation
- D Ratio of the current in two coils

17	WI	Why system earthing is different in utilization than equipment earthing?				
	B C	It protects human only It protects from all circuit faults It is associated with current carrying conductors				
40		D It is connected to the non current carryin metal work				
18		hat is the effect if a person received				
		No sensation	В	Painful shock		
	С	Heart convulsions	D	Become unconscious		
19	Which electrical equipment 'L' series type MCB's are used?					
	Α	Oven	В	Locomotives		
	С	AC motors	D	Air conditioners		
20	WI	nat is the megger reading in a dea	at is the megger reading in a dead short wiring installation?			
	Α	0 ΜΩ	В	1 ΜΩ		
	С	500 M Ω	D	Infinity		
21	WI	nat is the advantage of crimping?				
	Α	Gives neat appearance	В	Reduce load current		
	С	Avoid loose connections	D	Easy to replace		
Le	Level 3					
1	Но	How to control harmonic distortions in neutral connections as per IE rule?				
		Earthing through impedance		Providing by plate earthing		
	С	Increasing conductor size	D	Providing parallel earthing		
2	Нс	How the earth resistance can be reduced?				
	Α	Providing double earthing				
	В					
	С	C Increasing the length of the electrodes				
	D	D Decreasing the length of the electrodes				

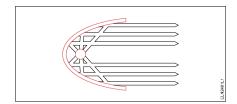
Electrician Semester - 2

Module - 4 : Illumination

Level 1

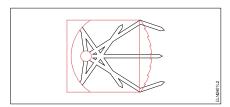
LGYGI I				
1	What is the S.I unit of luminous intensity?			
	Α	Lux	В	Lumen
	С	Candela	D	Steradian
2	What is the working temperature of filament lamp?			
	Α	1500°C	В	1800°C
	С	2000°C	D	2300°C
3	Which term refers that the flow of light into a plane surface?			
	Α	Lumen	В	Illuminance
	С	Luminous flux	D	Luminous intensity
What is the term refers luminous flux given by light source per unit s angle?			given by light source per unit solid	
	Α	Lumen	В	Candela
	С	Illuminance	D	Luminous intensity
5	WI	What is the unit of luminous flux?		
	Α	Lux	В	Lumen
	С	Candela	D	Lumen/m ²
6	What is the unit of luminous efficiency?			
	Α	Lux	В	Lumen
	С	Lumen/m ²	D	Lumen/watt

7 What is the name of the reflector?



- A Mirror type
- C Parabolic type
- B Soft light type
- D Dispersive type

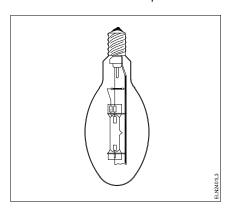
8 What is the name of light?



- A Spot light
- C Flood light

- B Bulk light
- D Flash light

9 What is the name of lamp?



- A MAT type MV lamp
- C MB type HPMV lamp
- B HP metal halide lamp
- D MA type HPMV lamp

Level 2

1 Which material is coated in tungsten electrode of a fluorescent tube lamp?

A Silver oxide B Phosphor powder

C Fluorescent powder D Barium and stroatium oxide

2 Which position MB type high pressure mercury vapour lamps are operated?

A Vertical B Inclined

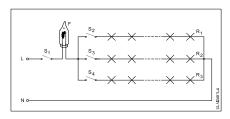
C Horizontal D Any position

3 What is the function of leak transformer in high pressure sodium vapour lamp circuit?

A Reduce the starting current B Reduce the working voltage

C Increase the working voltage D Ignite the high voltage initially

4 What is the current carrying capacity of flasher, if the current is 100 mA in each row?



A 50 mA B 100 mA C 200 mA D 300 mA

5 What is the purpose of ignitor in high pressure sodium vapour lamp circuit?

A Decreases the starting current B Increases the running voltage

C Decreases the running current

D Generates high voltage pulse at starting

6 Which type of light fitting design has free from glare?

A Semi direct type B Semi indirect type

C Direct lighting type D Indirect lighting type

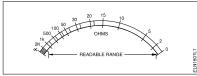
7		Why the outer tube of a high pressure metal halide lamp made of bord silicate glass?				
	С	Increase the lighting effect Withstand atmospheric pressure	9	Withstand heavy temperature		
	D	Reduce the ultra violet radiation	fror	n lamp		
8	W	hat is the main advantage of coile	ed c	oil lamp?		
	Α	High melting point	В	Higher light output		
	С	Low operating voltage	D	Low power consumption		
9	W	hich device provides ignition volta	age	and act as choke in a HPSV lamp?		
	Α	Arc tube	В	Sodium vapour		
	С	Leak transformer	D	High pressure aluminium oxide		
10	W	hich type of lighting system is use	ed f	d for flood and industrial lighting?		
	Α	Direct lighting	В	Indirect lighting		
	С	Semi-direct lighting	D	Semi-indirect lighting		
11	W	hich is the cold cathode lamp?				
	Α	Halogen lamp	В	Neon sign lamp		
	С	Fluorescent lamp	D	Mercury vapour lamp		
Le	vel	3				
1	Нс	ow stroboscopic effect in industria	al tw	vin tube light fitting is reduced?		
	A Connecting capacitor parallel to supply					
	В	B Connecting capacitor in series with supply				
	С	Connecting capacitor in series v	vith	one tube light		
	D	Connecting two capacitors in se	ries	s to each tube light		
2	Нс	ow the rate of evaporation in a vac	uur	m bulb is reduced?		
		Filling inert gas	В	Producing arc in bulb		
	С	Reducing filament resistance	D	Increasing filament resistance		

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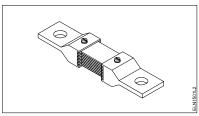
Module - 5 : Measuring Instruments

Level 1

1 What is the name of the scale?



- A Linear scale
- C Extended scale
- B Coarse scaleD Non-linear scale
- 2 What is the name of the shunt resistance material?

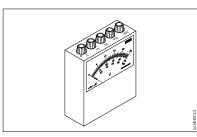


A Copper

B Eureka

C Nichrome

- D Manganin
- 3 Which electrical effect that the single phase energy meter works?
 - A Heating effect
- B Induction effect
- C Chemical effect
- D Electrostatic effect
- 4 What is the name of meter?



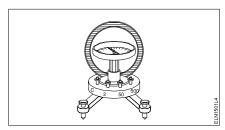
- A AC multirange ammeter
- B DC multirange voltmeter
- 72 C AC and DC multirange ammeter
- D AC and DC multirange voltmeter

- 5 What is the unit of sensitivity in instruments?
 - A Volt / ohm

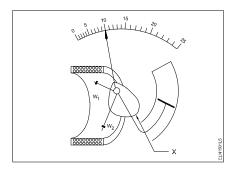
B Ohm/volt

C Ohm. metre

- D Ohm / metre
- 6 What is the name of the instrument?



- A Absolute instrument
- B Indicating instrument
- C Recording instrument
- D Integrating instrument
- 7 Name the name of instrument.



- A Attraction type moving iron
- B Repulsion type moving iron
- C Permanent magnet moving coil D Dynamo meter type moving coil
- 8 Which is an absolute instrument?
 - A Ammeter

B Volt meter

C Energy meter

- D Tangent galvanometer
- 9 Which quantity is measured by an electro dynamic type instrument?
 - A Power

B Current

C Voltage

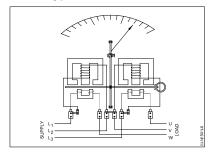
- D Resistance
- Electrician (NSQF Level-5) QB: Sem-2 Mod-5: Measuring Instruments

Level 2

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1 Which force is required to move the pointer from zero position in a instrument?			nter from zero position in an indicating		
	A Controlling force	В	Deflecting force		
	C Air friction damping	D	Eddy current damping		
2	Which is the position to use the ins	strun	nent provided with gravity control?		
	A Any position	В	Vertical position		
	C Inclined position	D	Horizontal position		
3	Which instrument is used to meastance value accurately?	ure	one ohm and below one ohm resis-		
	A Megohm meter	В	Multimeter (analog)		
	C Shunt type ohm meter	D	Series type ohm meter		
4	What is the purpose of the 3rd termeter?	min	al provided in a advanced megohm		
	A Get higher ohmic values		Pass the excess voltage to ground		
	C Pass the excess current to gro				
	D Get accurate readings without	oscil	llation		
5	What is the reason for the moving	coil ı	meter having uniform scale?		
	A Deflecting torque is directly proportional to the current				
	B Deflecting torque is inversely proportional to the currentC Deflecting torque is inversely proportional to the square of the current				
	• .	•	ional to the square of the current		
6	What is the purpose of variable resistor connected across shunt type of meter?				
	A Avoid draining of battery				
	B Minimize the error in reading				
	C Adjust the current to safe value				
	D Adjust the pointer to zero adjust	stme	nt		

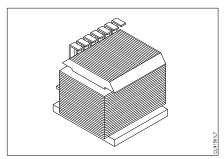
- 7 Which material is used to make control spring in measuring instruments?
 - A Steel B Silver
 - C Tinned copper D Phosphor bronze
- 8 Which is the position to use the instrument provided with spring control?
 - A Any position B Vertical position only
 - C Inclined position only D Horizontal position only
- 9 Which instrument is an example of an integrating instrument?
 - A AC voltmeter B DC voltmeter
 - C Energy meter D Tangent galvanometer
- 10 Why the scale of the moving iron instrument is having un-uniform scale?
 - A Deflecting force is directly proportional to the Current
 - B Deflecting force is inversely proportional to the Current
 - C Deflection of force is directly proportional to the square of the Current
 - D Deflection force is inversely proportional to the square of the Current
- 11 Which type of wattmeter?



- A Three element 4 wire wattmeter
- B Two element 3 phase wattmeter
- C Three element 3 phase wattmeter
- D Three phase two element with C.T & P.T
- 12 Which type of instrument is used with air friction damping?
 - A Moving coil instrument B Moving iron instrument
 - C Induction type instrument D Dynamo meter type instrument

Electrician (NSQF Level-5) QB: Sem-2 - Mod-5: Measuring Instruments

- 13 Which type of energy meter works with netural connection?
 - A Three phase two element
 - B Three phase three element
 - C Single phase single element
 - D Three phase two element with CT& PT
- 14 What is the type of frequency meter?



A Weston type

- B Ratio meter type
- C Electro dynamic type
- D Mechanical resonance type
- 15 Why damping force is required in a moving coil instrument?
 - A Makes the needle movement faster
 - B Helps the deflecting force to act fast
 - C Brings the needle to its zero position
 - D Arrests the needle without oscillations
- 16 What is the function of soft iron core in a moving coil instrument?
 - A Strengthens the deflection force
 - B Controls the needle's movement
 - C Provides meter with maximum sensitivity
 - D Provide uniform distribution of magnetic flux in air gap
- 17 Which parameter is the cause for loading effect on measuring instruments?
 - A Low accuracy
- B High sensitivity
- C Low sensitivity
- D Low influence error

18	Which meter is used to measure revolution per minute of a motor?			
	Α	Tachometer	В	Energy meter
	С	Ampere hour meter	D	Centre zero ammeter
19	Нс	ow to identify the moving iron type	ins	strument?
	Α	No terminal marking	В	Terminal marked (+) only
	С	One terminal coloured red	D	Terminal marked (+) and (-)
20	WI	hich force produces movement of	ро	inter in an indicating instrument?
	Α	Damping force	В	Deflecting force
	С	Repulsion force	D	Controlling force
21	WI	hat is the function of integrating ir	str	ument?
	Α	Displays the quantity	В	Indicates the quantity
	С	Registers the quantity	D	Measures the quantity
22	WI	hich position an instrument using	fluid	d friction damping reads accurately?
	Α	Any position	В	Vertical position
	С	Inclined position	D	Horizontal position
Le	vel	3		
1	WI	hich error is caused by the incorre	ect	position of instrument reading?
	Α	Device error	В	Human error
	С	Influence error	D	Switching error
2	WI	hich error if the energy meter disc	ro	tating continuously on no load?
	Α	Speed error	В	Phase error
	С	Friction error	D	Creeping error
3	WI	hat is the effect on CT if its secor	ıda	ry is kept open?
	Α	CT primary burns out	В	Volt ampere capacity reduces
	С	Volt ampere capacity increases		
	D	CT secondary winding burns out		

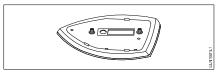
4 How the creeping error is controlled in energy meter?			energy meter?			
	Α	By reducing rated voltage				
	В	By increasing the inductive load				
	С	By adjusting the brake magnet p	os	ition		
	D	By drilling two holes diametrical	ly c	pposite on disc		
5	W	hich source of measuring error is	cau	used by the effect of magnetic fields?		
	Α	Device error	В	Human error		
	С	Influence error	D	Switching error		
6	W	hy two straight holes are provided	l in	the aluminium disc in energy meter?		
	Α	To reduce the disc weight	В	For power factor correction		
	С	To prevent the flux leakage	D	To arrest the creeping error		
7 How to achieve maximum accuracy in measurement usin instrument?		y in measurement using analog				
	Α	Keep low input impedance	В	Keep high input impedance		
	С	Use short connecting leads	D	Provide correct damping system		
8		alculate the value of shunt resistar A meter and meter resistance 30		required to measure 10 mA with one ?		
	Α	3 Ω	В	30 Ω		
	С	030	D	300 O		

Electrician Semester - 2

Module - 6 : Domestic Appliances

Level 1

1 What is the name of the part of electric iron?



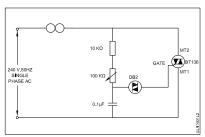
A Sole plate

- B Pressure plate
- C Mica insulation
- D Asbestos sheet
- 2 Which formula is used to calculate the heat generated as per Joules law?
 - A Heat generated = IRT / J cal
- B Heat generated = I^2RT/J cal
- C Heat generated = IR²T / J cal
- D Heat generated = $(IR)^2 T / J cal$
- 3 What is the magnetron tube filament voltage used in microwave oven?
 - A 1.5 V A.C

B 2.0 V A.C

C 3.0 V A.C

- D 3.2 V A.C
- 4 What is the name of the circuit?



- A Electronic fan regulator
- B Electronic voltage multiplier
- C Electronic voltage stabilizer
- D Electronic triggering circuit of SCR

Level 2

- 1 Which material is used to make heating element?
 - A Silver

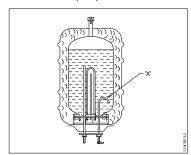
B Copper

C Nichrome

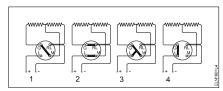
D Aluminium

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- 2 What is the function of stirrer motor in microwave oven?
 - A Draws cooling air inside
- B Spreads the heat uniformly
- C Exhausts the hot air outside
- D Revolves and reflects the electromagnetic energy
- 3 What is the purpose of U bend marked as 'X' in geyser?



- A Prevents draining of water
- B Avoids the forming of scales
- C Reduces the pressure of outlet pipe
- D Restricts the air locking inside the tank
- 4 Which type of AC single phase motor is used in food mixer?
 - A Universal motor
- B Repulsion motor
- C Split phase motor
- D Shaded pole motor
- 5 Which is the position for maximum output of the heater?



A Position 1

B Position 2

C Position 3

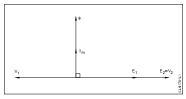
- D Position 4
- 6 Calculate the heat generated in a electric heater of 1000 watt, 240 volt, worked for 5 minutes?
 - A 70.5 Kilo calories
- B 71.0 Kilo calories
- C 71.6 Kilo calories
- D 72.1 Kilo calories

7		What is the purpose of protection grooves at various places in a heater base plate?				
	С	Radiate the heat properly Place the vessels firmly on heate Protect the heating element from	er p			
8	Wł	nat is the purpose of sole plate in	ele	ectric kettle?		
	С	Acts as a balancing weight Protect the kettle base from dam Keep the element in close conta	nag			
9	Wł	nat is the function of neutral path	in A	AC supply system for appliances?		
		Provides current return path Reduces voltage drop in wiring		Provides voltage level constant Maintains load current constant		
10	Wł	nat is the function of magnetron tu	be	in a microwave oven?		
	B C	Amplifies the microwave signal Changes the polarity every half of Oscillate and produce cooking from Converts microwave energy to e	equ	uency		
11	Wł	nich type of motor is used in the v	vet	grinder?		
	С	Universal motor Capacitor start induction run moto Capacitor start capacitor run moto		Repulsion motor		
Le	Level 3					
1	Wł	nat is the fault in a food mixer if it	rur	ns intermittently?		
		Worn out brushes Defective commutator		Armature coil open Field winding partially short		
2	2 What is the defect in a single phase pump motor if it runs with slow spee			mp motor if it runs with slow speed?		
		Defective capacitor Short in starting winding	B D	Open starting winding Dielectric stress		
		Electrician (NSQF Level-5) QB : Sei	n-2 -	- Mod-6 : Domestic Appliances 81		

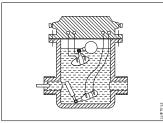
Module - 7: Transformer

Level 1

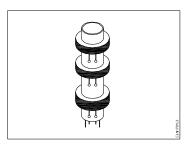
1 What is the relationship between primary voltage (E_1, V_1) and secondary voltage (E_2, V_2) in a ideal transformer?



- A $E_1 = V_1$ and $E_2 = V_2$
- C $E_1 < V_1 \text{ and } E_2 < V_2$
- B $E_1 > V_1 \text{ and } E_2 > V_2$ D $E_1 = V_2 \text{ and } E_2 = V_1$
- 2 What is the name of the part in power transformer?



- A Breather
- C Explosion vent
- B Tap charger
- D Buchholz relay
- 3 What is the name of transformer?



- A Air core transformer
- C Ring core transformer
- B Iron core transformer
- D Ferrite core transformer

4 What is the name of transformer?

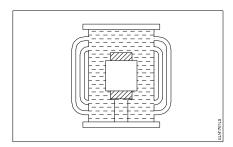
PRIMARY SECONDARY	SECONDARY	_		
	Z 1		, , , , , , , , , , , , , , , , , , , ,	ELN1701L4

- A Auto transformer B Core type transformer
- C Shell type transformer D Audio frequency transformer
- 5 What is the composition of steel and silicon steel in transformer core?
 - A Steel 97% and silicon 3% B Steel 95% and silicon 5%
 - C Steel 93% and silicon 7% D Steel 90% and silicon 10%

Level 2

- 1 Which type of transformer is used for high frequency application?
 - A Ring core transformer B Ferrite core transformer
 - C Silicon steel core transformer D Grain oriented core transformer
- 2 What is the function of conservator in transformer?
 - A Prevents the moisture entry
 - B Transfers the heat to atmosphere
 - C Allows to release internal pressure
 - D Allows expansion of oil level due to load variation
- 3 Which loss of transformer is determined by short circuit test?
 - A Copper loss B Windage loss
 - C Hysteresis loss D Eddy current loss
- 4 What is the purpose of using laminated core in transformer?
 - A Reduce copper loss B Reduce hysteresis loss
 - C Reduce mechanical loss D Reduce eddy current loss

5 What is the cooling method of transformer?



- A Oil natural cooling
- B Oil natural air forced cooling
- C Oil forced air forced cooling
- D Oil natural water forced cooling
- 6 What is the condition for obtaining maximum efficiency from transformer?
 - A Copper loss > Iron loss
- B Copper loss < Iron loss
- C Copper loss = Iron loss
- D Copper loss =Eddy current loss
- 7 What is the function of top float switch of buchholz relay in transformer?
 - A Activate in moisture presence
 - B Activate at overloading condition
 - C Activate at open circuit condition
 - D Activate at high temperature condition
- 8 Why the core of current transformer is having low reactance and low core losses?
 - A To minimise the burden

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- B To maintain constant output
- C To prevent high static shield
- D To minimise the error in reading
- 9 Why the load is disconnected before the OFF load tap changing operation?
 - A To disconnect the tappings from neutral point
 - B To disconnect the moving contact of the diverter
 - C To avoid heavy sparking at the contact points
 - D To provide an electrical isolation for the windings

10	0 Which condition is absolutely essential for parallel operation of two formers?			I for parallel operation of two trans-		
	Α	Nature of load	В	Type of cooling		
	С	Phase sequence	D	Class of insulation used		
11	Wł	nich transformer is used to measu	ıre	high voltage installations?		
	Α	Pulse transformers	В	Ignition transformers		
	С	Potential transformers	D	Constant voltage transformers		
12	Wł	nich power loss is assessed by o	per	-circuit test on transformer?		
	Α	Hysteresis loss only	В	Eddy current loss only		
	С	Copper loss	D	Core loss		
13	Wł	nich is determined by the crackle	tes	t of transformer oil?		
	Α	Acidity	В	Moisture		
	С	Viscosity	D	Dielectric strength		
14	Wł	nich material is used to make core	e of	power transformer?		
	Α	Soft iron	В	Rolled steel		
	С	Copper alloy	D	Cold rolled grain oriented		
15	Wł	nat is the purpose of providing exp	olos	sion vent in a power transformer?		
	Α	Air releasing	В	Heat releasing		
	С	Pressure releasing	D	Moisture releasing		
16	6 What is the function of buchholz relay in power transformer?			n power transformer?		
	A Protection from high temperature					
	В	B Protection from moisture entering in oil				
	С	Protection from pressure loading	j in	tank		
	D	Protection from both overloading	ı an	d short circuit		
17 Why primary of potential transformer is wound with thin wire and large number of turns?		ound with thin wire and large number				
	Α	To offer high inductance	В	To obtain required voltage ratio		
	С	To regulate the primary current	D	To stabilise input and output voltage		
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18	Why distribution transformers are normally connected as primary in del and secondary in star?			mally connected as primary in delta
		To avoid over loading To reduce transformer losses	В	To maintain constant voltage
		To easy distribution of 3 phase 4	l wi	re system
19	WI	nich type of emf is induced in an i	dea	al two winding transformer?
	Α	Self induced emf	В	Mutually induced emf
	С	Statically induced emf	D	Dynamically induced emf
20	Нс	ow to determine copper loss in a t	an	sformer?
	Α	Ratio test	В	Impulse test
	С	Short circuit test	D	Open circuit test
21	WI	ny ferrite core is used in radio rec	eive	ers?
	Α	To reduce the constant losses	В	To reduce electric interference
		To increase the quality of sound		
	D	To increase the efficiency of rece	eive	ers
22	WI	nat is the advantage of stepped co	ore a	arrangement in larger transformers?
	Α	Minimizes copper use	В	Reduces hysteresis loss
	С	Reduces eddy current loss	D	Reduces the space for core
23	3 Which material is used in breather to prevent moisture entering in the transformer oil?			
	Α	Silica gel	В	Sodium chloride
	С	Ammonium chloride	D	Charcoal and salt mixture
24	24 What is the disadvantage of auto transformer?			
	Α	More losses	В	Heavier in weight
		Poor voltage regulation		
D Cannot isolate the secondary winding				

25	5 Which cooling method is used in pole mounting distribution transformer?		
	A Air natural	B Oil natural air blast	
	C Oil forced air forced	D Oil natural air natural	
26	What is the purpose of tap changing	g in power transformers?	
	A Maintain primary voltage consta	ant	
	B Change voltage ratio in distribut	iion	
	C Maintain secondary voltage cor		
	D Load the transformer for maxim	um efficiency	
Le	evel 3		
1	Calculate the voltage regulation in load voltage is 240 volt and full load	percentage of the transformer if the no d voltage is 220 volt?	
	A 7.20%	B 8.30%	
	C 8.71%	D 9.09%	
2	How the error in reading of a poten	tial transformer can be reduced?	
	A Using thin laminated core	B Providing long magnetic path	
	C Using high flux density material	I	
	D Providing good quality core mat	erial	
3	Which construction technique is us formers?	sed to reduce copper loss in larger trans-	
	A Use of laminated core	B By reducing core thickness	
	C By using grain oriented core	D Use stepped core arrangement	
4	How does the moisture is controlled	in breather fitted on power transformers?	
	A Using silica gel	B Using transformer oil	
	C Using sodium chloride	D Using ammonium jelly	

Semester - 1 : Keys

Module - 1 : Safety Practice and Hand Tools

Level 1	Level 2	Level 3
1 D	1 B	1 D
2 D	2 A	
3 D	3 C	
4 A	4 C	
5 C	5 A	
6 B	6 C	
7 D	7 D	
8 D	8 B	
9 D	9 C	
10 D	10 B	
	11 D	
	12 B	
	13 C	
	14 D	
	15 D	
	16 B	
	17 D	

Module - 2 : Basic Workshop Practice (Allied Trade)

Level 1	Level 2	Level 3
1 A	1 A	1 A
2 B	2 B	2 D
3 B	3 B	3 C
4 A	4 B	
5 B	5 D	
6 B	6 B	
7 A	7 C	
8 B	8 B	
9 A	9 C	
10 D	10 A	
11 B	11 D	
	12 D	
	13 D	
88	14 A	

15	Α
16	В
17	С
18	В
19	С

Module - 3 : Wire - Joints, Soldering, U.G. Cables

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Level 1	Level 2	Level 3
1 D 2 B 3 A 4 C 5 A 6 D 7 D 8 A 9 C 10 D 11 C 12 C 13 B 14 C 15 B 16 C 17 B 18 C 19 D	1 C 2 D 3 A 4 D 5 B 6 D 7 B 8 D 9 B 10 A 11 B 12 B 13 A 14 C 15 D 16 C 17 C 18 C 19 D 20 A 21 C 22 C 23 B 24 B 25 B 26 B 27 B 28 D 29 C	1 B 2 D 3 B 4 A

Module - 4: Basic Electrical Practice

Level 1	Level 2	Level 3
1 C 2 D 3 D 4 B 5 B 6 C 7 C 8 A 9 A 10 A 11 D 12 C 13 B 14 C	1 D 2 A 3 D 4 D 5 B 6 B 7 B 8 B 9 A 10 C 11 A 12 C 13 D 14 C 15 B 16 B 17 B 18 A 19 C 20 C 21 B 22 B 23 B 24 C 25 D 26 D 27 D 28 D	1 B 2 C 3 B 4 D 5 B 6 D

Module - 5: Magnetism Capacitors

	Lev	el 1	Lev	vel 2	Lev	el 3
	1	С	1	В	1	С
	2	В	2	Α	2	В
	3	В	3	С	3	Α
	4	Α	4	В	4	В
	5	С	5	В		
90	6	Α	6	D		

7 A		7	В	
8 C		8	В	
		9	Α	
		10	С	
		11	D	
		12	Α	
		13	С	
		14	С	
		15	В	
		16	D	
		17	Α	
		18	D	
		19	Α	
		20	Α	
		21	Α	
		22	Α	
		23	В	
		24	Α	
		25	В	

Module - 6 : AC Circuits

Level 1	Level 2	Level 3
1 A 2 C 3 D 4 A 5 D 6 D 7 D 8 B 9 C 10 B 11 D 12 A 13 D 14 B	1 C 2 D 3 C 4 C 5 C 6 A 7 B 8 C 9 D 10 B 11 C 12 B 13 A 14 C 15 C 16 C	1 C 2 B 3 B 4 C 5 B 6 C 7 B 8 C 9 D 10 D 11 A 12 C 13 D
	18 C	

Semester - 2 : Keys

Module - 1 : Cells and Batteries

Level 1	Level 2	Level 3
1 C 2 B 3 D	1 A 2 B 3 B	1 A 2 B 3 C
4 D	4 D	4 D
5 D 6 B	5 B 6 C	5 A 6 C
7 D 8 B	7 A 8 D	7 A 8 B
9 A	9 D	9 D
	10 A 11 B	10 A
	12 B	
	13 A 14 C	
	15 C 16 B	
	17 B	
	18 D 19 B	
	20 D	
	21 B	

Module - 2 : Basic Wiring Practice

Level 1	Level 2	Level 3
1 D	1 D	1 D
2 B	2 B	2 B
3 B	3 B	
4 D	4 B	
5 C	5 D	
6 B	6 C	
7 D	7 D	
8 B	8 C	
9 C	9 C	
10 D	10 D	
92 11 C	11 B	

12	В		12	С	
13	В		13	В	
14	В		14	С	
15	С		15	D C	
16	С		16	С	
17	C C		17	Ā	
18	С		18	В	
19	В		19	Α	
20	Α		20	С	
21	C B		21	D	
22	В		22	D	
23	В		23	Α	
24	С		24	В	
25	В		25	Α	
26	В		26	D	
27	Α		27	В	
28	С		28	B C	
			29	С	
			30	Α	
			31	Α	
			32	Α	
			33	D	
			34	D	
			35	С	
			36	С	
			37	C C	
			38	В	
			39	B C	
			40	В	
			41	Α	

Module - 3 : Wiring Installation and Earthing

Level 1	Level 2	Level 3
1 D	1 B	1 A
2 A	2 D	2 A
3 D	3 C	
4 D	4 A	
5 C	5 B	
6 C	6 D	
	7 A	93

	8	В	
	9	С	
	10	Α	
	11	В	
	12	С	
	13	В	
	14	D	
	15	Α	
	16	D	
	17	С	
	18	В	
	19	Α	
	20	Α	
	21	С	
-			

Module - 4 : Illumination

Level 1	Level 2	Level 3
1 C 2 D 3 B 4 D 5 B 6 D 7 C 8 A	1 D 2 D 3 D 4 D 5 D 6 B 7 D 8 B	1 C 2 A
9 D	9 C 10 A 11 B	

Module - 5: Measuring Instruments

Level 1	Level 2	Level 3
1 D	1 B	1 A
2 D	2 B	2 D
3 B	3 C	3 D
4 B	4 D	4 D
5 B	5 A	5 C
6 A	6 D	6 D
7 A	7 D	7 B
8 D	8 A	8 A

9	Α		9	С	
			10	С	
			11	В	
			12	В	
			13	С	
			14	D	
			15	D	
			16	D	
			17	С	
			18	Α	
			19	Α	
			20	В	
			21	С	
			22	В	

Module - 6 : Domestic Appliances

Level 1	Level 2	Level 3
1 A 2 B 3 D 4 A	1 C 2 D 3 A 4 A 5 B 6 C 7 B 8 D 9 A 10 C 11 C	1 A 2 A

Module - 7: Transformer

Level 1	Level 2	Level 3
1 A	1 B	1 D
2 D	2 D	2 D
3 A	3 A	3 D
4 B	4 D	4 A
5 C	5 A	
	6 C	
	7 B	
	8 D	95

_	_	
9	С	
10	С	
11	С	
12	D	
13	В	
14	D	
15	C	
16	Ď	
17	Ā	
18	D	
19	В	
20	C	
21	A	
22	A	
23	Α	
24	D	
25	D	
26	В	