

Booklet Series - A

033/231, 035/233, 041/234, 070/232

PAPER-I

ELECTRICIAN, ELECTROPLATOR, LIFT MECHANIC/LIFT & ESCALATOR MECHANIC, WIREMAN (THEORY & EMPLOYABILITY SKILLS) . SEMESTER-I

TIME: 3 Hrs.

MARKS: 200

Note:-	This paper contains two parts- Part A & Part B.
	Attempt all the questions.

	All questions carry equal marks. This paper carries negative marking 2s answer.	5% marks will be deducted	for each wrong	
Cho	PART-A (T	heory)	(MARKS: 150)	
1	A 2 - L 4	- 1 Co		
1.	A 3 phase, 4 wire system is commonly us a) Primary distribution c) Primary transmission 	b) Secondary distribution d) Secondary transmission	1	
2.	As per IE rules the maximum allowable variation between declared and actual voltage at consumer's premises should be			
	a) ± 6% c) ±5%	b) ±8% d) ± 7%		
3.	The size of conductor in power cables dep			
	a) Operating voltagec) Current to be carried	b) Power factor d) Type of insulation used	I	
4.	Single core cables are usually not provide	d with armouring due to		
	a) Avoid excessive loss in the armourc) Make the cable more hygroscopic	b) Make the cable more fled) None of these	exible	
5.	The safety of electrical appliances and with			
	a) Insulationc) Providing fuse in the electric circuit	b) Earthing d) All of these		
6.	Which of the following is least preferred			
	a) Clayey soilc) Earth mixed with salt and charcoal	b) Dry earth d) None of these		



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7.	The earthing electrodes should be placed within a distance of meter from the building whose installation system is being earthed.				
	a) 4.0	b) 0.5			
	c) 1.5	d) 2.5			
8.	The loop earth wire used shall not be of the	e size less than			
	a) 8 SWG				
	b) 10 SWG c) 20 SWG				
	d) 14 SWG or half of the size of the sub ci	rcuit wire			
9.	In an n-type semiconductor, the concentration of minority carriers mainly depends upon the				
	a) Doping technique	b) Temperature of material			
	c) Number of donor atoms	d) Quality of the intrinsic			
10.	When a normal star league as also trans. I				
10.	When a normal atom looses an electron. It a) A positive ion	b) A negative ion			
	c) Electrically neutral	d) Free to move			
	,				
11.	One of the way to destroy a diode is				
	a) To exceed the current limit in forward				
	b) To apply small voltage in the reverse dc) To dip it in water	irection			
	d) To drop on floor				
	a) to drop on hoor				
12.	The emf induced in a coil due to change of	f flux produced by another coil, is called			
	a) Mutual induced emf	b) M.M.F			
	c) Self induced emf	d) Dynamically induced emf			
13.	A single phase transformer has 600 turns of	on the primary and 80 turns on the secondary. If			
	the primary connected to 3300 volt supply. The secondary voltage will be				
	a) 340 V	b) 540 V			
	c) 440 V	d) 430 V			
14.	Power factor decreases due to				
	a) Inductive load	b) Resistive load			
	c) Capacitive load	d) None of these			



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15.	The insulation resistance between conductor a) 2 Mega-ohm c) 0.5 Mega ohm	rs as per IE rule should not be less than b) 1 Mega ohm d) 1.5 mega ohm			
16.	The size of the continuous earth wire used not be less than	d with cables in domestic installations should			
	 a) 14 SWG b) Half of the installation conductor size c) Both (a) & (b) d) None of these 				
17.	Service fuse is used				
	a) After the energy meter	b) Before the main switch			
	c) Both (a) & (b)	d) None of these			
18. What is the resistance of a lamp which draws 120 mA when connected to battery?		draws 120 mA when connected to a 12.6-V			
	a) 110 Ω	b) 105 Ω			
	c) 120 Ω	d) 115 Ω			
19. Which of the following wires has the greatest cross-sectional area?		st cross-sectional area?			
	a) 9 SWG	b) 14 SWG			
	c) 22 SWG	d) 30 SWG			
20.	What is the unit of measurement for electric	val praggyra or alactromatics force?			
	a) Amps	b) Ohms			
	c) Volts	d) Watts			
21.	Which of the following circuit configurations has the same amount of voltage drop across				
	each of its components?				
	a) Parallel	b) Series-parallel			
	c) Series	d) Combination			
22.	As temperature increases, what happens to the current-carrying ability of wire?				
	a) There is no change	b) The wire can carry more current			
	c) The wire can carry less current	d) The wire can carry no current			



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23.	In a series circuit consisting of 3 resistors of 45Ω each and a 50-V source, what is the approximate amount of heat produced?			
	a) 16.6 W	b) 18.5 W		
	c) 135 W	d) 150 W		
24.	In a two-branch parallel circuit	containing one 30- Ω resistor in each branch and powered		
	from a 10-V source, what is the	total current flowing in the circuit?		
	a) 0.33A	b) 0.67 A		
	c) 0.40 A	d) 0.60 A		
25.	Which of the following determi	nes total power in a series circuit?		
	a) Source voltage times the cur	rent		
	b) Total voltage applied to the			
	 c) Current flowing through a sy 			
	d) Average of the wattage cons	umed by each resistor		
26.	If a register and dealer to the second secon			
20.	If a resistor suddenly decreases in value (resistance decreases), what will happen to the current through the resistor?			
	a) Increases	b) Remains unchanged		
	c) Decreases	d) Fluctuates		
		,		
27.	What is the applied voltage on a	circuit in which 0.5A is flowing and 10 W is generated?		
	a) 2 V	b) 5 V		
	c) 20 V	d) 50 V		
28.	What is the classification of an	AC circuit in which the capacitive reactance is 50 Ω , the		
	inductive reactance is 30Ω and the	the resistance is 100 02		
	a) Resistive			
	c) Capacitive	b) Inductive		
	-, Supuritiv	d) Resonant		
29.	When using a standard multimeter	er to measure AC voltage, what type of measurement		
	will the multimeter indicate?	to totago, what type of measurement		
	a) Peak to peak	b) Peak		
	c) Average	d) rms		

- What happens to current flow in a capacitive circuit when the DC voltage across the 30. capacitor is approximately equal to the source voltage?
 - a) Current flow is optimized
 - b) Little current flows
 - c) Current flow is maximum at the source
 - d) Current flow is maximum at the capacitor

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31.	How many watts are in a) 0.01 milliwatts c) 1.0 milliwatts	100 microwatts?	b) 0.1 milliwatts d) 10 nanowatts	
32.	Which of the following a) To measure difference c) To determine total in	nce of potential	te for a voltmeter? b) To measure currer d) To determine pow	nt flow er output
33.	What should be observ a) rms c) Polarity	ed when connecting	a voltmeter into a DC o b) Resistance d) Power factor	circuit?
34.	The Henry is the unit of a) Reactance c) Resistance	of measurement for w	which of the following p b) Capacitance d) Induction	roperties?
	c) Resistance		d) induction	
35.	Which of the following continuity? a) Wattmeter c) Ohmmeter	ng devices can be	b) Voltmeter d) Wheatstone bridge	ngs of an inductor for
36.	How should a fuse be i a) Parallel to the load c) In any way possible		to insure proper operation b) Series with the load d) At the ground point	d .
37.	of 6 A, what happen changes to 2 Ω ? a) Closes		device (fuse) when the b) No change	to carry a total current he resistance suddenly
	c) Shorts to ground		d) Opens	
38.	A Wire of resistance become a) 0.5R	R has it length and b) R c)	cross-section both dou 2R	d) 4R
39.	The resistance of 200° a) 100Ω	W, 200V lamp is b) 200 Ω	c) 400 Ω	d) 800Ω



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40.	a) Current/potential difference = constant b) Potential difference/current = constant c) Potential difference = current x resistance d) Current = resistance x potential difference				
41.	Which of the following	lowing is one of the fur	nctions performed by a	a diode?	
	a) Filter	b) Amplifier	c) Rectifier	d) Inverter	
42.	static error?			is 112.6V, what will be the	
	a) 0.08V	b) 0.8V	c) 0.6V d)	0.68 V	
43.	A multimeter is u	ised to measure			
	a) Resistance	b) Current	c) Voltage	d) All of these	
				,	
44.	What is the desira a) High output in c) Good frequence	able feature in an electropedance by response	onic amplifier? b) Low input imp d) All of these	edance	
45.	A sinusoidal flux supply frequency a) 220 V	.02 wb (max,) links wi is 50 Hz. The rms valu b) 244.2 V	e of the induced emf i	ormer secondary coil. The n the secondary will be d) 444.2 V	
46.	A conductor of le density 1.5 Wb/m ² a) 60 V	ngth 1 meter moves at with a velocity of 50 b) 75 V	right angles to a unit m/sec. The induced en c) 70 V	form magnetic field of flux of will be d) 65 V	
17.	Which of the follo a) Diode c) Diamond	wing is an ohmic resis	tor? b) Germanium d) Nichrome		
8.	Emf equation of transaction a) 4.44 ф T	ansformer is b) 4.44 фf T	_· с) ф fT	d) 4.44 ft	

A S-1

17/B/C/S-1/4/E

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49.	There are	terminals in a megger.		
	a) 3	b) 4	c) 1	d) 2

50. Function of Black tape is used at joint of two cables _____.

a) Protect from heat b) Protect from moisture

c) Increase the mechanical strength d) None of these
