

**Pakistan Testing Service  
Jr. Engineer (Power) (Electrical) WAPDA 2018**

1.	Which kind of motor is used in fan?	Capacitor motor	
2.	Variable resistor device with 2 terminals?	Rheostat	
3.	Street Lights are connected in?	Parallel	
4.	Op-amp input impedance?	Infinite	
5.	Inverter Op-amp output impedance?	Zero	
6.	Unit of Resistivity?	Ohm-meter	
7.	When UJT is used for thyristor gate signal, the output of UJT is	Saw tooth wave	
8.	An A.C. Circuit consists of a resistor and a capacitor. To increase the phase angle above $45^\circ$ , the following condition must exist.	$R < X_C$	
9.	Approximately how many milliamperes of current flow through a circuit with a 40 V source and $6.8 \text{ k } \Omega$ of resistance?	5.9 mA	
10.	In a series RC circuit, $12 \text{ V}_{(rms)}$ is measured across the resistor and $15 \text{ V}_{(rms)}$ is measured across the capacitor. The rms source voltage is	19.2 V	
11.	The output of a certain voltage divider is 12 V with no load. When a load is connected, the output voltage	decreases	
12.	The maximum output voltage of a certain low-pass filter is 15 V. The output voltage at the critical frequency is	10.60 V	
13.	A 20 kHz pulse waveform consists of pulses that are $15 \mu\text{s}$ wide. The duty cycle	is 30%	
14.	Liquids are generally used as insulating materials up to voltage stresses of about	50 kV/cm	
15.	Vacuum insulation is used in all of the following EXCEPT	EHT of color TV	
16.	The electrical breakdown strength of insulating materials depends on	(A) nature of applied voltage (B) imperfections in dielectric material (C) pressure, temperature and humidity (D) all of the above. ✓	
17.	Transformers contribute to radio interference due to	(A) corona discharges in air (B) internal or partial discharges in insulation (C) sparking	

		(D) any of the above ✓	
18.	Insulators for high voltage applications are tested for	(A) power frequency tests (B) impulse tests (C) both (A) and (B) above (D) none of the above. ✓	
19.	All of the following dielectric materials are preferred for high frequency applications EXCEPT	Butyl rubber	
20.	Polar dielectrics are normally used for	dc and power frequencies	
21.	Which of the following is a polar dielectric ?	Nylon	
22.	The impurity in liquid dielectric which has significant effect in reducing the breakdown strength, is	moisture	
23.	A good dielectric should have all the following properties EXCEPT	high dielectric loss	
24.	The variety of paper used for insulation purpose is	craft paper	
25.	Corona effect can be identified by	faint violet glow	
26.	Van de Graaff generators are useful for	Very high voltage and low current applications	
27.	A Tesla coil is a	high frequency resonant transformer	
28.	The total power in a circuit is 12W. Each of the four equal-value series resistors making up the circuit dissipates	3W	
29.	If a 24V and a 6V battery are series opposing, the total voltage is	18V	
30.	When one of three series resistors is removed from a circuit and the circuit is reconnected, the current	Increases	
31.	A certain series circuit consists of a 1/8 W resistor, a 1/4 W resistor, and a 1/2 W resistor. The total resistance is 1200 Ω. If each resistor is operating in the circuit at its maximum power dissipation, total current flow is	27 mA ✓	
32.	A string of five series resistors is connected across a 6 V battery. Zero voltage is measured across all resistors except R <sub>3</sub> . The voltage across R <sub>3</sub> is	6 V ✓	
33.	In a certain series resonant circuit, V <sub>C</sub> = 125 V, V <sub>L</sub> = 125 V, and V <sub>R</sub> = 40 V. The value of the source voltage is	40 V	
34.	In a uniform electric field, field lines and equipotentials	Are orthogonal	
35.	If the dc bus voltage V <sub>d</sub> = 300V, the power consumed by 3-phase load is	3.0kW	

36.	Electromotive force is provided by:	An electric Supply Source	
37.	The output of a 2 input NAND gate with high at both the inputs will be	Low	
38.	The primary transformer of a power transformer should always be	Fused	
39.	In a series RC circuit, 12 V(rms) is measured across the resistor and 15 V(rms) is measured across the capacitor. The rms source voltage is	19.2V	
40.	When the frequency of the voltage applied to a series RC circuit is decreased, the impedance	Increases	
41.	A given power supply is capable of providing 6 A for 3.5 h. Its ampere-hour rating is	21 Ah	
42.	Three hundred joules of energy are consumed in 15 s. The power is	20 W	
43.	How much continuous current can be drawn from a 60 Ah battery for 14 h?	4.28 A	
44.	If 750 $\mu$ A is flowing through 11 k of resistance, what is the voltage drop across the resistor?	8.25 V	
45.	A resistor is connected across a 50 V source. What is the current in the resistor if the color code is red, orange, orange, silver?	2.2 mA	
46.	Approximately how many milliamperes of current flow through a circuit with a 40 V source and 6.8 k of resistance?	5.9 mA	
47.	Four amperes of current are measured through a 24 $\Omega$ resistor connected across a voltage source. How much voltage does the source produce?	96 V	
48.	The number $3.2 \times 10^{-5}$ A expressed using a metric prefix is	32 $\mu$ A	
49.	A certain transformer has 400 turns in the primary winding and 2,000 turns in the secondary winding. The turns ratio is	5	
50.	The primary winding of a transformer has 110 V ac across it. What is the secondary voltage if the turns ratio is 8?	880	
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52.	In a certain loaded transformer, the secondary voltage is one-fourth the primary voltage. The secondary current is	four times the primary current	
53.	In a certain transformer, the input power to the primary is 120 W. If 8.5 W are lost to the winding resistance, what is the output power to the load, neglecting any other issues?	111.5 W	
54.	In a series RL circuit, 12 V rms is measured across the resistor, and 14 V rms is measured across the inductor. The peak value of the source voltage is	26V	
55.	In applying the superposition theorem,	the sources are considered one at a time with all others replaced by their internal impedance	

56.	In order to get maximum power transfer from a capacitive source, the load must	have an impedance that is the complex conjugate of the source impedance	
57.	Which relation is not correct of the followings?	$1J = N/m$	
58.	The winding resistance of a coil can be increased by	increasing the number of turns or using thinner wire	
59.	The inductance of an iron-core coil decreases if	the number of turns is decreased	
60.	When the current through an inductor is cut in half, the amount of energy stored in the electromagnetic field	Is quartered	
61.	A 5 mH, a 4.3 mH, and a 0.6 mH inductor are connected in parallel. The total inductance is	Less than 0.6mH	
62.	When the current through an inductor decreases, the amount of energy stored in the electromagnetic field	Decreases	
63.	When the speed at which a conductor is moved through a magnetic field is increased, the induced voltage	Increases	
64.	The induced voltage across a coil with 250 turns that is located in a magnetic field that is changing at a rate of 8 Wb/s is	2000V	
65.	If the cross-sectional area of a magnetic field increases, but the flux remains the same, the flux density	Decreases	
66.	.When the current through the coil of an electromagnet reverses, the	direction of the magnetic field reverses	
67.	A coil of wire is placed in a changing magnetic field. If the number of turns in the coil is decreased, the voltage induced across the coil will	decrease	
68.	The unit for reluctance is	At/Wb	
69.	There is 900 mA of current through a wire with 40 turns. What is the reluctance of the circuit if the flux is 400 Wb?	90,000 At/Wb	
70.	A 15 V source is connected across a 12 resistor. How much energy is used in three minutes?	0.938 Wh	
71.	If you used 600 W of power for 60 h, you have used	36 kWh	
72.	A 6 V battery is connected to a 300 load. Under these conditions, it is rated at 40 Ah. How long can it supply current to the load?	2,000 h	
73.	The rms value of load phase voltage is	141.4V	
74.	The angular velocity of <b>geostationary</b> satellite is _____ angular velocity of earth	Equal to	
75.	The three basic electrical quantities are	Resistance, Voltage and Current	

76.	The book 'A Farewell to Arms' was written by	Ernest Hemingway	
77.	The "Man and Superman" is written by	George Bernard Shaw	
78.	The mother of Holy Prophet(P.B.U.H) is <b>buried</b> in	Abwa (near Madina)	
79.	They felt humiliated when they realized that they _____ cheated	Had been	
80.	The Holy book "Old Testament" is called	The Torait	
81.	The parallel combination of a 470 $\Omega$ resistor and a 1.5 k $\Omega$ resistor is in series with the parallel combination of five 1 k $\Omega$ resistors. The source voltage is 50 V. The percentage of the load current through any single 1 k $\Omega$ resistor is	20%	
82.	A half watt is equal to how many watts?	500mW	
83.	A 68 $\Omega$ resistor is connected across the terminals of a 3V battery. The power dissipation of resistor is	132mW	
84.	Conductance is the reciprocal of	Resistance	
85.	For a given wire wound core, an increase in current through the coil	Increases the flux density	
86.	What kVA rating for a transformer is required that must handle a maximum load current of 8A with a secondary voltage of 2kV?	16 kVA	