

FE/F.Y.B.Tech. (All Branches) (Part-I) (Sem-I&II) Oct./Nov. 2021 Examination
BASIC ELECTRICAL ENGINEERING (CBCS)
Sub. Code: 71812/59178

Day and Date: Thursday, 24-03-2022

Total Marks: 50

Time: 11.00 am to 12.00 pm

Answer Key

		Correct Option
Q. 1)	As per Ohm's law, the mathematical proportionality is -	
	A) $V \propto I$	B) $I \propto 1/R$
	C) $R \propto 1/I$	D) All of the above
Q. 2)	The S.I. unit of Electrical Power is -	
	A) Henry	B) Coulomb
	C) Watt	D) Watt-hour
Q. 3)	Which of the following circuit elements will oppose the change in circuit current?	
	A) Capacitance	B) Inductance
	C) Resistance	D) All of these
Q. 4)	Two resistances 8 ohm & 4 ohm are connected in series across a battery of 12 volt. Then power dissipated in 8 ohm resistance is -	
	A) 8 Watt	B) 4 Watt
	C) 12 Watt	D) 1 Watt
Q. 5)	The unit of Reluctance in a magnetic circuit is -	
	A) weber	B) Ampere turn/weber
	C) weber/m ²	D) Ampere/meter
Q. 6)	A magnetic fringing effect can be minimized by making -	
	A) Narrow shape of pole face	B) Minimizing number of turns
	C) Maximizing number of turns	D) None of the above
Q. 7)	Relative permeability(μ_r) of air gap is -	
	A) 0.5	B) 1
	C) 2	D) 0.25
Q. 8)	What is MMF?	
	A) Magnetic Machine Force	B) Magneto motive Force
	C) Magnetic Motion Force	D) Magneto motion Force
Q. 9)	In an inductive circuit, when frequency increases then Reactance value -	
	A) Increases	B) Decreases
	C) Remains the same	D) Becomes zero
Q. 10)	Current drawn by the purely capacitive circuit is -	
	A) $I_m \sin wt$	B) $I_m \sin (wt + 90)$
	C) $I_m \sin (wt - 90)$	D) None of the above
Q. 11)	The Average value of Voltage ($V_{avg.}$) in an AC is -	
	A) $V_{avg.} = 0.637 V_m$	B) $V_{avg.} = 0.707 V_m$
	C) $V_{avg.} = 1.11 V_m$	D) $V_{avg.} = 1.141 V_m$

Q. 12)	In RLC series circuit, the Impedance (Z) = Resistance (R), when -		C
	A) $X_L < X_C$	B) $X_L > X_C$	
	C) $X_L = X_C$	D) None of the above	
Q. 13)	In a 3 Phase Star connected circuit		C
	A) $V_L = V_{ph}$	B) $V_L = 3V_{ph}$	
	C) $V_L = \sqrt{3} V_{ph}$	D) None of the above	
Q. 14)	In a delta-connected load, the relation between line voltage and the phase voltage is?		C
	A) Line voltage > Phase voltage	B) Line voltage < Phase voltage	
	C) Line voltage = Phase voltage	D) Line voltage \geq Phase voltage	
Q. 15)	In a balanced three-phase load, each phase has		A
	A) An equal amount of power	B) One-third of total power	
	C) Two-thirds of total power	D) A power equal to $\sqrt{3} V_L I_L$	
Q. 16)	In a three-phase system, the voltages are separated by		C
	A) 45°	B) 90°	
	C) 120°	D) 180°	
Q. 17)	In Pipe Earthing, the material used for the Earth electrode is -		C
	A) Aluminum	B) Steel	
	C) Galvanized Iron	D) Copper	
Q. 18)	Which of the following lamp is used for residential application		D
	A) LED	B) CFL	
	C) Fluorescent Tube	D) All of the above	
Q. 19)	The drawback of HRC fuse is -		D
	A) Replacement after every use	B) Produces heat during fusing	
	C) Costly than rewirable fuse	D) All of the above	
Q. 20)	Which of the following is not a characteristic of LED?		B
	A) Fast action	B) High Warm-up time	
	C) Low operational voltage	D) Long life	
Q. 21)	A transformer converts -		D
	A) AC to DC	B) DC to AC	
	C) Step up or step down DC voltage & current	D) Step up or step down AC voltage & current	
Q. 22)	A step-down transformer decreases.....A) Voltage B) Current C) Power D) Frequency		A
	A) Voltage	B) Current	
	C) Power	D) Frequency	
Q. 23)	The transformation ratio (K) of a transformer is -		D
	A) V_1/V_2	B) N_1/N_2	
	C) I_2/I_1	D) All of the above	
Q. 24)	A transformer, No load primary current (I_0) has two components, magnetizing component and active components. The active component is given by-		A
	A) $I_0 \cos \Phi_0$	B) $I_0 \sin \Phi_0$	
	C) $I_0 \cot \Phi_0$	D) $I_0 \tan \Phi_0$	
Q. 25)	A 10KVA, 3300/210 V, 50 Hz single phase transformer has 500 turns on the secondary winding and is supplied from 210 V. Assuming an ideal transformer, the Maximum value of flux in the core is -		B
	A) 1.89 wb	B) 29.7 wb	
	C) 2.97 wb	D) 18.9 wb	