ELECTRICAL ENGINEERING

Questions Shift-II (Memory Based)

1. Voltage limiter and voltage regulator happened in ?

A. Zener diode

B. Varactor diode

C. Tunnel diode

D. PN diode

Ans. Zener Diode

2. What is the Generated EMF formula for DC Generator?

Sol.

$$E_g = \frac{PZ \phi N}{60 A} \quad \text{volts}$$

- P number of poles of the machine
- φ Flux per pole in Weber.
- Z Total number of armature conductors.
- N Speed of armature in revolution per minute (r.p.m).
- A number of parallel paths in the armature winding.

3. The relation between voltage and current as given $v(t)=i^2(t)$: the nature of system will be?

- A. Nonlinear time invariant
- B. linear time invariant
- C. linear time variant
- D. nonlinear time variant

Sol. Nonlinear and time invariant

4. What is the SI unit of current?

Sol. Ampere

5. What will be the coefficient of coupling if M = 3H and L1 = 18H and L2 = 2H?

Sol. $M = K\sqrt{L_1L_2}$

$$K = \frac{M}{\sqrt{L_1 L_2}}$$

Coefficient of coupling (k) = $3/\sqrt{18}$ *2 = 0.5

- 6. What is the possible Formula of maximum mutual inductance?
 - A. √L1xL2
 - B. √L1+L2
 - C. L1xL2
 - D. L1+L2

Sol.

Sol. $M = K\sqrt{L_1L_2}$ it will be max if Coefficient of coupling (k) = 1.

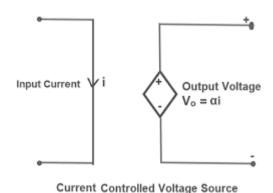
So,
$$M = \sqrt{L1xL2}$$

Option A is correct.

7. What is formula for Voltage regulation of the transmission line?

Sol. Voltage Regulation in
$$\% = \frac{V_{NL} - V_{FL}}{V_{FL}} \times 100$$

- 8. What will be the speed of the rotor for 3% slip if number of pole is 6 and supply frequency is 50 Hz?
- Sol. Ns = 120f/p = 120*50/6 = 1000RPMspeed of rotor Nr = Ns(1-s) = 1000(1-0.03) = 970RPM
- 9. What is the Symbol of current control voltage source?



- 10. Stroboscopic effect does not come in
 - A. Mercury vapour lamp
 - B. Sodium vapour lamp
 - C. Incandescent bulb
 - D. Fluorescent bulb
- Sol. Incandescent Bulb

11.	Out of the following which is not an insulator?
	A. Diamond
	B. Rubber
	C. Polystyrene
	D. Gold
Ans.	D
Sol.	Gold is not insulator but conductor.
12.	Which capacitor have high voltage rating?
	Paper
	Electrolytic
Ans.	Electrolytic capacitor
13.	Which is analogous to Resistivity in magnetic circuit?
Sol.	Magnetic reluctivity is analogous to Resistivity
14.	For which of the following, Voltage proportional to rate of change of current?
14.	A. Inductor
	B. Capacitor
	C. Both
	D. None
Ans.	Inductor
15.	Which of the following is not in diode
	A. Anode
	B. Cathode
	C. Depletion layer
	D. Gate
Ans.	Gate is not present in diodes.
16.	In two wattmeter method when one wattmeter gives positive value and another gives negative
	value then what is the power factor?
Sol.	power factors will be less than 0.5.
17.	If one wattmeter shows 1000W and the other shows 500W then total power would be?
Sol.	1000+ 500 = 1500 Watt

18. What is the Size of the GI earthing electrode?	
Sol. The GI Earthing Clamp/ Strip (C- Clamp Type) is to be of 50mm width, 6mm	n thickness &
flange length of 65 mm in each side.	
19. Which law states that the line integral of magnetic flux intensity equals to th	e current enclosed?
Sol. Faraday's Law of Induction	
20. If synchronous machine operates at lagging p.f then armature reaction would	d be
magnetising	
demagnetising	
cross magnetising	
Ans. demagnetising	

GENERAL AWARENESS

1. Sol.	Which scientist invented the Microwave ? Percy Spencer & Hall
2. Sol.	X rays is discovered by? Wilhelm Roentgen
3.	Who is the 1st speaker of Loksabha?
Sol.	Ganesh Vasudev Mavalankar (27 November 1888 – 27 February 1956)
4. Sol.	Who is the Time person in the year of 2020 ? Kamala Harris
5. Sol.	In which year the Chauri chaura act came? The Chauri Chaura incident took place on 4 February 1922 in Chauri Chaura
6.	G20 Summit business and peace award A. mukesh ambani B. ratan tata C. narayana murthi D. asim premji
Ans.	В
7.	Shaheen-Xi military exercise happened between? A. Pakistan and China B. China and India C. India and Bangladesh
Ans.	A
8. Ans.	Haldibari-chilahati rail link reopened after 55 years, This rail link is in which country? A. Bangladesh B. Myanmar C. Nepal D. Bhutan A

9.	World's longest tunnel has been inaugurated in which of the following state?
	A. Himachal pradesh
	B. Arunachal pradesh
	C. Assam
	D. None
Ans.	A
Sol.	The Atal Tunnel, at 9.02 km is the longest highway tunnel in the world, connects Manali to Lahaul-Spiti Valley and will ensure movement throughout the year
10.	Which instrument is used to measure the wind?
Sol.	The anemometer counts the number of rotations, which is used to calculate wind speed
11.	If sound: echo:: light:
Sol.	Reflection
12.	Which of the following national park is in Goa?
Sol.	The Bhagwan Mahaveer Sanctuary is the biggest wildlife sanctuary in Goa and is located in
	Sanguem taluka
13.	In India, volcanoes are active in which region?
Sol.	The Barren Island volcano, India's only active volcano, in the Andaman and Nicobar Islands
14.	Citrus fruits like lemon, orange juice etc. contain which of the following vitamin?
	A. Vitamin K
	B. Vitamin C
	C. Vitamin B
Δ	D. Vitamin A
Ans.	B
15.	Largest FDI came from which country
	A. UK
	B. Singapore
	C. mauritius
Ans.	В
16.	is the investment which comes in one country business by any other country
Ans.	FDI

17.	Amino acids in maximum are present in which of the following?
	A. Carbohydrates
	B. Fats
	C. Proteins
Sol.	Proteins
18.	If iran: rial :: japan:
Ans.	yen
19.	Who was the first Lok Sabha speaker?
Sol.	Ganesh Vasudev Mavalankar (27 November 1888 - 27 February 1956) popularly known as
	Dadasaheb was an independence activist, the President (from 1946 to 1947) of the Central
	Legislative Assembly, then Speaker of the Constituent Assembly of India, and later the first
	Speaker of the Lok Sabha, the lower house of the india
20.	Condemn: Approve: : Obstruct
	Hinder
	aid
Ans.	Aid
