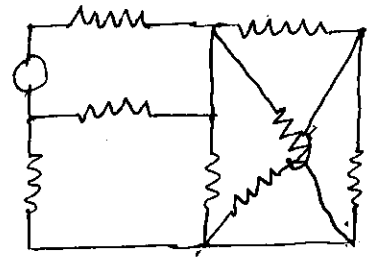


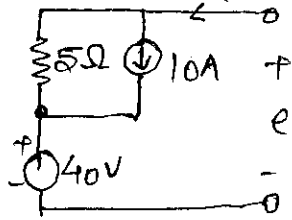
Objective Questions

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Q.1. The no. of mesh currents required in circuit shown
a) 3 b) 4 c) 5 d) 6



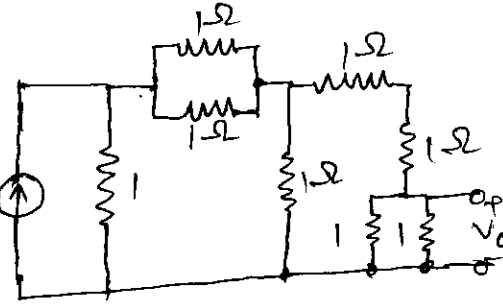
Q.2 The voltage equation for the circuit given below is -



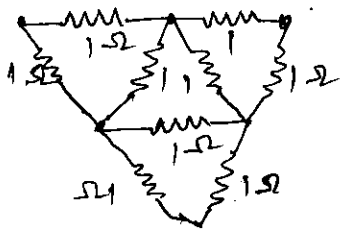
- a) $e = 4.0 + 2iV$
b) $e = 10 + 5iV$
c) $e = -10 + 5iV$
d) $e = -2 + 10iV$

Q.3 The voltage V_0 in the circuit given will be

- a) $11/38V$ b) $20/31V$ c) $18/23V$ d) $40/61V$



Q.4. Three resistance star reduction of the circuit given below is



- a) $5/9$ b) $3/10$
c) $1/2$ d) $1/8$

Q.5. A passive network has

- (a) No emf source (b) no current source (c) Neither emf nor current source (d) None of these

Q.6. In parallel RLC circuit at resonance

- a) Current maximum $pf=0$ b) Current minimum, $pf=1$
c) Current maximum $pf=1$ d) None

Q.7 Susceptance is the reciprocal of

- a) Impedance b) Reactance c) Inductance d) Capacitance

Q.8 In RLC series circuit resonance frequency of 120 KHz and Q factor of 120. Its bandwidth will be -

- (a) 1 Hz (b) 1 KHz (c) 100 KHz (d) 120 KHz

Q.9 To a series circuit RLC a voltage of 10V is applied. If Q of the coil at resonant frequency is 20, the voltage across the inductor at resonant frequency will be -

- a) 200V b) 100V c) 75V d) 50V

Qn. 10. If f_1 and f_2 are half power frequencies and f_0 be resonant frequency the selectivity of RLC series circuit is given by -

- (a) $\frac{f_2 - f_1}{f_0}$ (b) $\frac{f_2 - f_1}{2f_0}$ (c) $\frac{f_2 - f_0}{f_1}$ (d) None

Qn. 11. Essential requirement of measuring instrument is -

- (a) Deflecting torque (b) Controlling torque (c) Damping torque (d) All

Qn. 12. The scale of moving iron instrument is

- (a) Uniform (b) Cramped (c) First uniform then cramped (d) None

Qn. 13. The current in the pressure coil is proportional to.

- a) load current (b) line current (c) supply voltage (d) supply voltage and line current both.

Qn. 14. Two milliammeters with full scale current of 1 mA & 10 mA are connected in parallel and they read 0.5 mA & 2.5 mA respectively. Their internal resistances are in ratio

- a) 1:10 (b) 10:1 (c) 1:5 (d) 5:1

Qn. 15. If in a transformer the secondary turns are doubled and at the same time the primary voltage is reduced by half then secondary voltage will.

- (a) be halved (b) be four times as high (c) not change (d) reduced to quarter

Qn. 16. The no load current of a transformer in terms of full load current is usually.

- a) 1 to 3% (b) 3 to 15% (c) 9 to 12% (d) 12 to 20%

Qn. 17. If D.C. supply is given to a transformer it may

- a) work (b) not work (c) give lower voltage than rated voltage on secondary side (d) burn the winding

Qn. 18. The full load copper loss & iron loss of a transformer are 6400 & 5000 watt respectively. The losses at half load will be.

- (a) 3200W, 2500W (b) 3200W, 5000W (c) 1600W, 1250W (d) 1600, 5000W

Qn. 19. The advantage of putting tapings at the phase ends of transformer is

- a) To obtain fine variation of voltage (b) To operate with ease (c) To reduce w. of burhing. (d) To obtain better regulation

Qn-20 Two transformers operating in parallel will share the load depending upon their
 a) efficiency also b) ratings also c) leakage reactance d) None

Qn-21 Voltage equation for d.c. motor is

- a) $V = E_b + I_a R_a$ b) $V = E_b - I_a R_a$ c) $E_b = V + I_a R_a$ d) $E_b = 0.5 I_a R_a$

Qn-22 Speed of DC motor is

- a) directly proportional to back emf & inversely proportional to flux
 b) inversely proportional to back emf and directly proportional to flux
 c) directly proportional to emf as well as flux
 d) inversely proportional to emf as well as flux

Qn-23 Residual magnetism is essential prerequisite for starting which

Type of d.c. generator

- a) Separately excited b) Shunt c) Series d) All

Qn-24 The residual magnetism of a ^{d.c.} shunt generator can be regained by

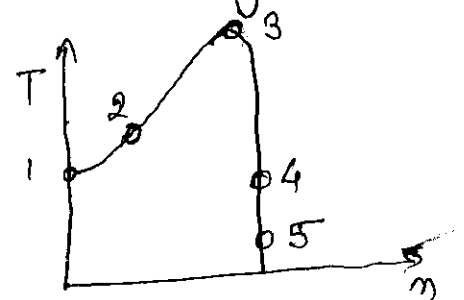
- a) connecting shunt field to a battery (b) running a generator at no load for some time
 c) earthing a shunt field (d) reversing direction of generator

Qn-25 A d.c. shunt motor control preferred for applications when usually wide and very sensitive speed control is required will be -

- (a) Armature control (b) Ward-Leonard control (c) Voltage control
 (d) Flux control

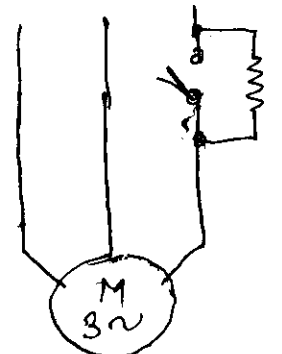
Qn-26 The figure shows characteristic of an induction motor. What is torque 1 called -

- (a) Maximum Torque (b) Starting torque
 (c) Rated Torque (d) Frictional Torque



Qn-27 What is use of circuit shown in diagram

- (a) To reduce starting current to low
 (b) To achieve smooth starting
 (c) To attain higher starting torque
 (d) To attain higher maximum torque



Qu. 28. A three phase induction motor is running at a load of rated torque. What happens when one of the supply mains is interrupted while motor is running?

- (a) Motor stops immediately (b) The motor stops after a few seconds
 (c) The motor keeps running but draws more current
 (d) The motor keeps running and the current drawn does not change

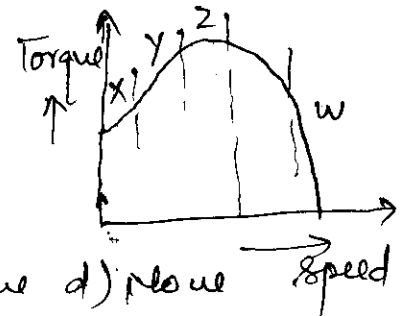
Qu. 29 The direction of rotation of a 3 ϕ induction motor is reversed by

- (a) Interchanging the connection of any 2 phases
 (b) Interchanging the connection of all the 3 phases
 (c) Rewinding the stator
 (d) Adding a capacitor in any phase

Qu. 30 The rotor output is 15 kW and the corresponding slip is 4%. The rotor copper loss is -

- a) 700 W (b) 0.6 kW (c) 650 W (d) 625 W

Qu. 31 In torque/speed characteristics of an induction motor, stable region is - (a) X (b) Y (c) Z (d) W



Qu. 32 When load of an alternator is thrown off, the terminal voltage will -

- a) increase (b) decrease (c) remains same (d) None

Qu. 33 When two alternators are running in parallel, if prime mover of one of the alternators is disconnected the alternator will

- a) stop running (b) run as a synchronous motor (c) run as generator
 d) None

Qu. 34 High speed alternators usually have

- (a) Salient pole rotors (b) cylindrical rotors (c) (a) & (b) Both (d) None

Qu. 35 The rated voltage of alternators used in power stations is usually

- (a) 11 kV (b) 66 kV (c) 132 kV (d) 400 kV