

A.P - ECET-EEE-2015**D**

1. Fundamentally converter is a circuit which
(1) converts ac to dc only
(2) converts dc to ac only
(3) converts dc to ac vice versa
(4) converts the frequency change into change
2. In dc choppers the wave forms for input and output voltages are respectively
(1) discontinuous and continuous
(2) continuous and discontinuous
(3) both continuous
(4) both discontinuous
3. In 3 phase full converter three SCRs pertaining to one group are fired at an interval of
(1) 30 degrees
(2) 60 degrees
(3) 90 degrees
(4) 120 degrees
4. A freewheeling diode is placed across the dc load
(1) to prevent reversal of load voltage
(2) to prevent transfer of load current away from the source
(3) to allow the current towards source
(4) to protect the switch
5. A single phase fully controlled converter is a
(1) single quadrant converter
(2) two quadrant converter
(3) four quadrant converter
(4) all quadrant operated converter
6. In class AB amplifier the out put current flows for
(1) fully cycle
(2) more than half cycle
(3) less than half cycle
(4) half cycle
7. The voltage of CB amplifier configuration has phase shift of
(1) 180 degrees
(2) 90 degrees
(3) 360 degrees
(4) 270 degrees
8. The phase difference between input and output voltages of an oscillator is
(1) 180 degrees
(2) 360 degrees
(3) 90 degrees
(4) 270 degrees
9. Which of the following circuit used as voltage to frequency converter
(1) schmitt trigger
(2) astable multivibrator
(3) bistable multivibrator
(4) monostable multivibrator

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10. A reverse biased PN junction has
(1) a very narrow depletion layer
(2) a net hole current
(3) a net electron current
(4) almost zero current
11. Hall effect can be used to measure
(1) magnetic field intensity
(2) electric field intensity
(3) hole current
(4) carrier concentration
12. The resistance of a reverse biased diode is
(1) zero
(2) low
(3) negative
(4) infinite
13. The base of the hexa decimal number system is
(1) 2
(2) 8
(3) 10
(4) 16
14. The octal equivalent of the decimal number 568 is
(1) 1070
(2) 238
(3) 568
(4) 1000
15. Which of the following groups constitute basic logic gates
(1) NOR, NAND
(2) XOR, XNOR
(3) AND, OR
(4) AND, OR, NOT
16. The OR gate in positive logic is equivalent to which of the following gates in negative
(1) AND
(2) OR
(3) NAND
(4) NOT
17. Number of flags of 8051 architecture is
(1) 5
(2) 8
(3) 2
(4) 4
18. The timer of 8051 can be operated in one of the modes
(1) 2
(2) 4
(3) 6
(4) 3
19. In 8051 serial data transfer takes place in one of the following modes
(1) 2
(2) 3
(3) 4
(4) 1
-

20. The vectored address of a serial interrupt is
(1) 003 H (2) 0013H
(3) 0023 H (4) 0008 H
21. A 8 pole lap wound dc generator is supplying 295 A to load .The field current of the generator is 5A. The current per parallel path is
(1) 300 A (2) 37.5 A
(3) 150 A (4) 100 A
22. If the field circuit resistance of a dc shunt generator exceeds its critical value, the generator
(1) fails to build up (2) builds up very high voltage
(3) exceed its current capacity (4) produces high power
23. The field winding of a self excited dc generator is excited by
(1) dc (2) ac
(3) both by dc and ac (4) its own current
24. The voltage regulation of a dc generator is good at full load implies that the generator is
(1) shunt connected (2) differentially compounded
(3) cumulatively compounded (4) series connected
25. If the supply voltage to dc machine is 230 volts, then the back emf for maximum power developed is
(1) 115 volts (2) 200 volts
(3) 230 volts (4) 460 volts
26. For a given dc motor the speed depends upon
(1) flux only (2) applied voltage
(3) back emf alone (4) back emf and flux
27. A dc shunt motor is running at 1200 rpm when excited with 220 v dc. Neglecting the losses and saturation the speed of motor when connected to 175 volts dc supply
(1) 750 rpm (2) 900 rpm
(3) 1000 rpm (4) 1200 rpm
28. A dc series motor develops a torque of 20 Nm at 3 A load current. If the current is increased to 6 A, the developed torque will be
(1) 10 Nm (2) 20 Nm
(3) 80 Nm (4) 40 Nm
29. The basic function of transformer is to change
(1) the level of voltage (2) the power level
(3) the power factor (4) the frequency
30. Transformer action requires
(1) constant magnetic flux (2) increasing magnetic flux
(3) alternation flux (4) alternating electric flux

31. Full load voltage regulation of transformer is zero when the power factor of load is near
(1) unity and leading (2) zero and leading
(3) zero and lagging (4) unity and lagging
32. In the transformer circuit mode the core loss is represented as
(1) series resistance (2) series inductance
(3) shunt resistance (4) shunt inductance
33. When the load varies on the secondary side of transformer one of following value will follow the variation of load
(1) core flux
(2) copper losses
(3) iron losses
(4) magnetization component of no load current
34. Open circuit test on a transformer is performed with
(1) rated voltage (2) rated current
(3) direct current (4) high frequency supply
35. The efficiency of two identical transformers under load conditions can be determined by
(1) back to back test (2) open circuit test
(3) short circuit test (4) high frequency test
36. The number of poles in turbo alternator is
(1) 2 (2) 6
(3) 8 (4) 10
37. The effect of leading power factor on the voltage regulation of an alternator is
(1) increasing (2) decreasing
(3) constant (4) oscillating in nature
38. Which one of the following methods would give higher than actual value of regulation of alternator
(1) ZPF method (2) MMF method
(3) EMF method (4) ASA method
39. The armature current of a synchronous motor on no load
(1) leads the applied voltage by 90 degrees
(2) lag behind the applied voltage by 90 degrees
(3) is in phase with applied voltage
(4) zero
40. In a synchronous motor damper windings are used to
(1) help in starting
(2) run it as an induction motor
(3) help in starting as a motor and to reduce hunting
(4) increase efficiency

41. If the field of a synchronous motor is under-excited the power factor will be
(1) lagging (2) leading
(3) unity (4) more than unity
42. The rotor of a 3 phase wound rotor induction motor is provided with
(1) single phase winding (2) three phase winding
(3) copper bars placed in rotor slots (4) short circuit end rings
43. In an induction motor if the air gap is increased
(1) its speed will reduce (2) its efficiency will improve
(3) its power factor will reduce (4) its break down torque will reduce
44. The operation of induction motor is based on
(1) lenz's law (2) amperes law
(3) principle of mutual induction (4) principle of self induction
45. The supply voltage of an induction motor is reduced by 10%. By what percentage approximately will the maximum torque decrease
(1) 50% (2) 10%
(3) 20% (4) 40%
46. In double revolving field theory of single phase induction motor the slip of the forward motions is "s", then the slip of the back ward motion is
(1) 2s (2) s
(3) 2-s (4) s-2
47. A 6 pole 50 Hz single phase induction motor runs at a speed of 900 rpm. The frequency of current in the rotor will be
(1) 5 Hz (2) 5 Hz 55 Hz
(3) 5 Hz 95 Hz (4) 55 Hz 95 Hz
48. In a moving coil ammeter the scale on the dial is
(1) cramped at the beginning (2) cramped at the end
(3) cramped in the middle (4) uniform throughout
49. Damping torque in instrument is not generally produced
(1) pneumatically (2) electro magnetically
(3) electro statically (4) by fluid action
50. In flux meters the following method is used for deflecting torque
(1) magnetic effect (2) heating effect
(3) induction effect (4) hall effect

51. 132 kV AC can be measured by
(1) moving iron type voltmeter (2) moving coil type voltmeter
(3) electrostatic type voltmeter (4) induction type voltmeter
52. In a 3 phase system the voltages are
(1) 30 degrees apart (2) 40 degrees apart
(3) 90 degrees apart (4) 120 degrees apart
53. In the measurement of 3 phase power by two watt meter method, if the two wattmeter reading are equal and positive, the power factor of the circuit is
(1) 0.8 lagging (2) 0.8 leading
(3) zero (4) unity
54. A series RLC circuit draws current at leading power factor at
(1) resonant frequency (2) below resonant frequency
(3) above resonant frequency (4) at all frequencies
55. In an AC circuit the current and voltages are out phase by 90 degrees. The ammeter reads 2 A and voltmeter reads 1000 V. The power consumed is
(1) 200 w (2) 1000 w
(3) 500 w (4) zero
56. A low power factor of the circuit means that it will
(1) draw more active power (2) draw less current
(3) draw more reactive power (4) cause less voltage drop in the circuit
57. Thevenin's voltage of a circuit is equal to
(1) voltage between open circuited terminal
(2) supply voltage
(3) out put voltage
(4) voltage across any network
58. Three resistors of each with R ohms are connected in star. The equivalent resistance in delta connection is
(1) $R/3$ (2) $3R$
(3) $R/2$ (4) $9R$
59. The mutual inductance between two unity coupled coils of 9H is
(1) 3 H (2) 2 H
(3) 36 H (4) 6 H
60. Two electric lamps 50 w, 250 V each are connected in series across 250 V supply. The power consumed by the combination is
(1) 25 w (2) 50 w
(3) 100 w (4) 250 w
-

61. Which of the following material has highest dielectric strength
(1) air (2) mica
(3) paper (4) glass
62. If the three capacitors of 5F, 10F and 15F are connected in parallel across a supply mains, the equivalent capacitance is
(1) 5 F (2) 10 F
(3) 15 F (4) 30 F
63. The electrodes are completely immersed in
(1) paste (2) electron light
(3) electrolyte (4) pure water
64. Steam is generated in
(1) boiler (2) condenser
(3) economiser (4) super heater
65. Reheat cycle in steam power plant is used to
(1) utilize heat of fuel gasses (2) increase thermal efficiency
(3) improve condenser performance (4) reduce loss of heat
66. The overall efficiency of thermal power plants is low due to the low efficiency of
(1) boiler (2) alternator
(3) steam turbine and condenser (4) non-salient pole rotor
67. In hydel power plant the area behind the dam is called
(1) catchment area (2) power house
(3) surge tank (4) tail race
68. Load factor of a power station is generally
(1) equal to unity (2) less than unity
(3) more than unity (4) zero
69. The preferred relay for the protection of medium transmission line is
(1) directional relay (2) buchholz relay
(3) impedance relay (4) reactance relay
70. Buchholz relay is operated by
(1) eddy current (2) gas pressure
(3) elector magnetic induction (4) electro static induction
71. The shape of the disc in an induction relay
(1) circular (2) spiral
(3) elliptical (4) square
72. Which of the following faults is termed as symmetrical fault
(1) single phase to ground (2) line to line
(3) double line to ground (4) three phase short circuit
-

73. Directional over current relay is used for the protection of
(1) long line (2) transformer
(3) ring main distributor (4) radial distributor line
74. Which of the following motor is used in traction
(1) DC shunt motor (2) DC series motor
(3) AC 3 phase motor (4) AC single phase capacitor start motor
75. For 25 kV single phase traction system power supply frequency is
(1) 50 Hz (2) 120 Hz
(3) 62 Hz (4) 25 Hz
76. Quadrilateral speed-time curve pertains to which of the following services
(1) main line service (2) urban service
(3) sub-urban service (4) urban and sub-urban service
77. Longer coasting period for a train results in
(1) higher acceleration (2) higher retardation
(3) low specific energy consumption (4) higher scheduled speed
78. For train lighting the generator used is
(1) series (2) shunt
(3) rosenberg (4) synchronous
79. The total energy input per tonne kilometer of the train is called as
(1) energy consumption (2) specific energy consumption
(3) coefficient of adhesion (4) tractive effort
80. In overhead construction of railways the contact wire is supported by
(1) catenary wire (2) short wire
(3) long wire (4) span wire
81. The variation of voltage in trolley wire is minimized by
(1) voltage amplifier (2) booster
(3) current amplifier (4) feeder
82. Which of the following accessory is used to make or break a electrical circuit.
(1) holer (2) switch
(3) fuse (4) socket
83. In incandescent lamps the filament is made of
(1) gold (2) silver
(3) tungsten (4) iron
84. The transformer should be located at
(1) town centre (2) at the end of the town
(3) load centre (4) any where

85. In a 3-pin socket the bigger terminal is connected to
(1) switch (2) phase
(3) earth (4) neutral
86. The capacitive effect is negligible in following type of transmission line
(1) short lines (2) medium lines
(3) both short and medium lines (4) long lines
87. For a given transmission line with the leading power factor load the voltage regulation is
(1) positive (2) negative
(3) zero (4) unity
88. The process of achieving uniformity in the dielectric stress in the cables
(1) capacitive grading (2) intersheath grading
(3) core grading (4) grading
89. The minimum j voltage at which corona occurs is called
(1) visual critical voltage (2) critical disruptive voltage
(3) corona voltage (4) skin voltage
90. The string efficiency of the insulators can be increased by
(1) guard band (2) guard ring
(3) guard sheet (4) increasing the no. of insulators
91. The surge impedance of 100 Km long underground cable is 40 ohms. For a 50 Km length, the surge impedance will be
(1) 50 ohms (2) 40 ohms
(3) 100 ohms (4) 25 ohms
92. The reactance of a generator is given as 0.1 per unit at the base voltage of 20 kV and 400 MVA. The per unit value of the reactance on the base on 10 kV and 100 MVA is
(1) 0.1 (2) 0.8
(3) 0.4 (4) 0.2
93. Generally pin type insulators are not used beyond the voltage
(1) 100 kV (2) 220 kV
(3) 22 kV (4) 66 kV
94. The reflection coefficient of an open circuited transmission line is
(1) 1.0 (2) 0.5
(3) 2.5 (4) zero
95. Which device automatically interrupts the supply in the event of severe fault
(1) earthing switch (2) series reactor
(3) isolator (4) circuit breaker
96. The number of P-N junctions in a thyristor is
(1) 1 (2) 2
(3) 3 (4) 4

97. Which one of the following is a bidirectional controlled switch
- (1) thyristor (2) triac
(3) GTO (4) diac
98. Once SCR starts conducting a forward current its gate loses control over
- (1) anode voltage only (2) anode current only
(3) anode voltage and current (4) anode voltage and time
99. In a thyristor anode current is made up of
- (1) electrons only (2) electrons or holes
(3) electrons and holes (4) holes only
100. An uncontrolled rectifier implies a rectifier
- (1) in which all elements are thyristors
(2) in which all elements are diodes
(3) in which all elements are both thyristors and diodes
(4) in which all elements are resistances

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11) 4	12) 4	13) 4	14) 1	15) 4	16) 1	17) 4	18) 2	19) 3	20) 3
21) 2	22) 1	23) 4	24) 3	25) 1	26) 4	27) 4	28) 3	29) 1	30) 3
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