

1 ✓ In an A.C. circuit, the voltage across R, L and C are 30 V, 60 V and 20 V respectively. The applied voltage is :

(A) 70 V

✓(B) 50 V

(C) 60 V

(D) 100 V

2 ✓ Leakage fluxes in a transformer may be minimized by :

(A) Avoiding overloads

(B) Keeping magnetizing current minimum

✓(C) Reducing the reluctance of the iron core to minimum

✓(D) Sectionalizing and interleaving the primary and secondary windings

3 ✓ ગુજરાતના પ્રથમ મુખ્યપ્રધાન કોણ હતા ?

(A) સુરેશ મહેતા

(B) છબીલદાસ મહેતા

(C) બળવંતરાય મહેતા

✓(D) જીવરાજ મહેતા

4 ✓ Which of the following will happen if a voltmeter is connected like an ammeter in series to the load ?

(A) There will be almost no current in the circuit.

✓(B) The meter will burn.

(C) The measurement will be too high.

(D) A very high current will flow.

5 એક માળી પાસે નિશ્ચિત સંખ્યામાં ગુલાબના ફૂલ છે. તેમાંથી તે દરેકમાં 9 ગુલાબ બાંધીને કેટલાક હાર બનાવે છે. જો તેણે 10 હાર ઓછા બનાવ્યા હોત, તો દરેકમાં 6 ગુલાબ વધુ બંધાત. તેણે કેટલા હાર બનાવ્યા હશે ?

✓(A) 25

(B) 15

(C) 20

(D) 22

6

Which of the following materials is used for the manufacture of transformer?

- (A) Cast iron
- (B) Cast steel
- ☒ (C) Cold rolled grain oriented steel
- (D) Hot rolled grain oriented steel

7

The terminal voltage of a D.C. shunt generator drops on load because of all of the following except :

- (A) Armature reaction
- (B) Armature resistance drop
- (C) Commutation
- ☒ (D) Field weakening due to armature reaction and armature resistance drop

8

“હેયું જાણો હિમાલય”માં કયો અલંકાર છે ?

- (A) રૂપક
- (B) ઉત્પ્રેક્ષા
- (C) શ્લેષ
- (D) સજ્જવારોપણ

9

Reactance relays are employed for phase faults in :

- ☒ (A) Short lines
- (B) Medium lines
- (C) Long lines
- (D) Any line

10

Give a single word for :

'A place where dead bodies are kept before burial or cremation'.

- (A) Arsenal
- (B) Creche ☒
- (C) Asylum
- (D) A mortuary

✓ 11 Which of the following is provided to protect the cable from moisture ingress, gases and other damaging liquids ?

- (A) Metallic sheath
- (C) Bedding

- ✓ (B) Armouring
- (D) Serving

✓ 12 The roots of the characteristic equations of several systems are given below. Which system is unstable ?

- (A) $-1, -2$
- (B) $(-1 + j), (-1 - j)$
- (C) $2, -1, -3$
- (D) $(-2 + 3j), (-2 - 3j), -2$

✓ 13 સાદી બેટરીની શોધ સૌપ્રથમ કોણે કરી હતી ?

✓ (A) ફેરડેએ

(B) ઓહમે

(C) વોલ્ટાએ

(D) આલ્વા એડિસને

✓ 14 The frequency of carrier in the carrier current pilot scheme is :

- (A) 1 kHz to 10 kHz
- (B) 25 kHz to 50 kHz
- (C) 10 kHz to 25 kHz
- ✓ (D) 50 kHz to 500 kHz

✓ 15 જે છંદની પંક્તિમાં નવ અક્ષર લઘુના અને આઠ અક્ષર ગુરુના જોવા મળે તે કયો છંદ ગણાય?

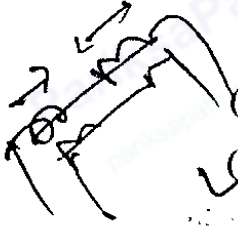
(A) પૃથ્વી

(B) મંદાકાન્તા

(C) સવેયા

(D) શિખરિણી

✓ 16 For the protection of parallel feeders fed from one end, the relays required are :



- (A) Non-directional relays at the source end and directional relays at the load end
- (B) Non-directional relays at the source end and load end
- ✓ (C) Non-directional relays at the load end and directional relays at the source end
- (D) Directional relays at the source end and load end

✓ 17 At series resonance,

- (A) Circuit impedance is maximum
- (B) Circuit current is minimum
- (C) Voltage across L or C is zero
- ✓ (D) Power factor is unity

18 $\sqrt{3}$ અને $\sqrt{27}$ નો ગુણોત્તર મધ્યક = _____

- (A) 9
- (B) 3
- (C) $\sqrt{3}$
- (D) 1

✓ 19 100% string efficiency means :

- (A) Self capacitance is zero
- (B) Self capacitance is maximum
- ✓ (C) Shunt capacitance is zero
- (D) Shunt capacitance is maximum

✓ 20 ગુજરાતનું વેરાવળ બંદર કયા ઉદ્યોગ માટે વિકાસ પામ્યું છે ?

- (A) શીપ બ્રેકિંગ
- (B) કેમિકલ પોર્ટ
- (C) મત્સ્ય ઉદ્યોગ
- (D) ટેક્સટાઈલ ઈન્ડસ્ટ્રી

✓ 21 A bulb of 300 W, 120 V rating when connected to a 120 V, 50 Hz supply will draw a current of

- (A) 2.5 A
(C) 10 A

- (B) 3 A
(D) 5 A

$$W = V \cdot I$$

$$300 = 120 \times I$$

$$\frac{300}{120} = I$$
$$\frac{4 \times 3}{4} = I$$

✓ 22 If the safety factor is doubled, the sag of the line will

- (A) Decrease

- (B) Remain constant

- ✓ (C) Increase

- (D) Become zero

✓ 23 'નાટક ભજવવું' રૂઢિપ્રયોગનો અર્થ દર્શાવો.

- (A) સ્ટેજ પર નાટક ભજવવું

- (B) જડ બની જવું

- (C) નાટકમાં ભાગ લેવો

- ✓ (D) હકીકત છૂપાવવા ઢોંગી રજૂઆત કરવી

✓ 24 The purpose of providing dummy coils in a generator is to

- (A) Enhance flux density.

- (B) Amplify the voltage.

- ✓ (C) Provide mechanical balance to the rotor.

- (D) Reduce eddy currents.

✓ 25 Put proper Question tag :

Everyone stood up, _____ ?

- (A) didn't they

- ✓ (B) did he

- (C) wasn't he

- (D) were they

✓ 26 If the no load voltage of a D.C. generator is 210 V and the rated voltage is 200 V, the voltage regulation is

(A) 2.5%

(C) 10%

✓ (B) 5%

(D) 15%

$$= \frac{210 - 200}{200} \times 100$$
$$= \frac{10}{200} \times 100$$
$$= 5\%$$

✓ 27 If the field winding of a D.C. shunt motor gets opened while the motor is running,

(A) The motor speed will reduce.

(B) The armature current will reduce.

✓ (C) The motor will attain dangerously high speed.

(D) The motor will continue to run at constant speed.

28 જાહેર વિતરણ વ્યવસ્થા હેઠળના કેરોસીનનું ડાયવર્ઝન અટકાવવા માટે મૂકેલ “પાટલોટ પ્રોજેક્ટ ઓફ ડાયરેક્ટ બેનીફીટ ટ્રાન્સફર ઈન કેરોસીન” યોજના હાલમાં કેટલા જિલ્લાઓમાં મૂકવાનું નક્કી કરવામાં આવેલ છે ?

(A) 5

(B) 7

(C) 9

(D) 13

✓ 29 In load flow study, a PV bus is treated as a PQ bus when

(A) Voltage limit is violated.

(B) Active power limit is violated.

(C) Phase angle is high.

✓ (D) Reactive power limit is violated.

✓ 30 સાચી જોડણી દર્શાવો.

(A) રીશેષ

(B) રિસેસ

✓ (C) રિશેષ

(D) રિષેશ

- ✓ 31 An iron cored coil has an inductance of 2 H. If the reluctance of the magnetic circuit is 200 AT/Wb, the number of turns on the coil is
- (A) 100 (B) 400
(C) 50 (D) 20

- ✓ 32 Synchronous motors are usually operated at
- (A) Unity power factor.
(B) Leading power factor.
(C) Lagging power factor.
(D) Zero power factor.

✓ 33 ડીસ્ક ઉપર નકામી ફાઈલો દૂર કરવા માટે કયા ઓપ્શનનો ઉપયોગ કરવામાં આવે છે ?

- (A) CONTROL PANEL (B) MS ACCESS
(C) DISK CLEANUP (D) એકેય નહીં

- ✓ 34 Range of a voltmeter can be extended by connecting a
- (A) Shunt in series.
(B) Shunt in parallel.
(C) Multiplier in series.
(D) Multiplier in parallel.

✓ 35 રિઝર્વ બેન્ક ઓફ ઈન્ડિયા દ્વારા સૌપ્રથમ બહાર પાડેલ જાહેરનામા પ્રમાણે 24 નવેમ્બર, 2016 સુધીમાં એક અઠવાડિયામાં બેન્કના કાઉન્ટર ઉપરથી મહત્તમ કેટલી રકમની ઉપાડ એક બેન્ક ખાતામાંથી કોઈ પણ વ્યક્તિ કરી શકશે ?

- (A) રૂ. 20,000/- (B) રૂ. 10,000/-
(C) રૂ. 2,000/- (D) રૂ. 4,000/-

36

Interpoles are meant for

- (A) Increasing the speed of the motor.
- (B) Decreasing the counter emf.
- (C) Reducing sparking at the commutator.
- (D) Converting armature current to d.c.

37

If the spacing between the conductors increases, the corona effect

- (A) Increases
- (B) Decreases
- (C) Remains the same
- (D) Corona does not depend upon conductor spacing

corona $\propto \frac{1}{d}$

38

નીચેનામાંથી કયા લેખકને ગુજરાતી સાહિત્યનો જ્ઞાનપીઠ એવોર્ડ મળેલ છે ?

- (A) ઉમાશંકર જોષી
- (B) પન્નાલાલ પટેલ
- (C) રાજેન્દ્ર શાહ
- (D) આપેલ તમામ

39

In a 3 phase, 4 wire unbalanced system, the current in the neutral wire is 18 A. The magnitude of the zero sequence current is

- (A) 18 A
- (B) 9 A
- (C) 6 A
- (D) 3 A

40

Give the past tense form of :

To seek

- (A) sake
- (B) sought
- (C) seeked
- (D) seekened

41 Where voltages are high and current to be interrupted is low, the circuit breaker preferred is

(A) Air break

☒ (B) Vacuum

(C) Oil

(D) Air-blast

42 The transient state stability limit is always

☒ (A) Greater than the steady state stability limit.

(B) Smaller than the steady state stability limit.

(C) Equal to the steady state stability limit.

(D) The two are not related.

43 ગોળાની ત્રિજ્યામાં 10% વધારો કરતાં ગોળાના ઘનફળમાં _____% વધારો થાય.

(A) 10

☒ (B) 21

(C) 33.1

(D) 27.1

44 Which relay is more sensitive ? 1 VA or 2 VA ?

☒ (A) 1 VA

(B) 2 VA

(C) Both are equally sensitive

(D) Both are insensitive

45 નીચે આપેલ વાક્ય માટે આપેલ વિકલ્પોમાંથી લેખનરૂઢિ અને ભાષાની દૃષ્ટિએ શુદ્ધ વાક્ય લખો :

ચરણા મૃત પિવાનો અમારે નિયમ છે.

(A) ચરણામૃત પીવાનો અમારે નિયમ છે.

(B) ચરણા-અમૃત અમારે પિવાનો નિયમ છે.

(C) ચરણામૃત અમારે પીવાનો નિયમ છે.

☒ (D) અમારે ચરણામૃત પિવાનો નિયમ છે.

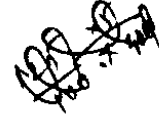
46) An over current relay having a current setting of 125% is connected to a supply circuit through a current transformer of $400/5$. The pick up value of the current is

(A) 0.25 A

(B) 12.5 A

(C) 3.125 A

(D) 25 A



47) The receiving end power factor of a short transmission line changes from lagging to leading. The voltage regulation of the line will

(A) Decrease

(B) Remain unchanged

(C) Increase

(D) Become zero

48) ગુજરાત રાજ્યના ખેડા જિલ્લાને નીચે દર્શાવેલ જિલ્લાઓ પૈકી કયા જિલ્લાની હદ સ્પર્શતી નથી ?

(A) અરવલ્લી

(B) આણંદ

(C) છોટા ઉદેપુર

(D) મહીસાગર

49) If the lagging power factor of the load decreases, the line losses will

(A) Decrease

(B) Increase

(C) First decrease and then increase

(D) Remain same

50) 2001ના ગુજરાતના ભૂકંપમાં કેટલા લોકોએ પોતાનું જીવન ગુમાવ્યું ?

(A) અંદાજે 50,000

(B) અંદાજે 14,000

(C) અંદાજે 80,000

(D) અંદાજે 1,00,000

- 51 The line trap employed in carrier current relaying
- (A) Offers high impedance to 50 Hz power frequency signals.
 - ☒ (B) Offers high impedance to carrier frequency signals.
 - (C) Offers low impedance to 50 Hz power frequency signals.
 - (D) Offers low impedance to carrier frequency signals.

- 52 Transfer function of a system is used to calculate which of the following ?
- (A) The order of the system
 - (B) The output for a given input
 - ☒ (C) The time constant
 - (D) The steady state gain

53 'શ્રદ્ધા' શબ્દની સંધિ છૂટી પાડો.

- (A) શ્રુ + ધા
- (B) શ્રત્ + ધા
- (C) શ્રુત + ધા
- (D) શ્રન્ + ધા

54 Two transformers operating in parallel will share the load depending upon their

- (A) Leakage reactance
- ☒ (B) Per unit impedance
- (C) Efficiencies
- (D) Ratings

55 Select single word for the following phrase :

"One who does not believe in existence of god"

- (A) theist
- (B) atheist
- (C) swindler
- (D) hermit

- ✓ 56 Which method of braking is generally used in elevators ?
- (A) Plugging (B) Regenerative braking
(C) Rheostatic braking (D) Static braking

✓ 57 In D.C. generators, lap winding is used for

- (A) High voltage, high current
(B) Low voltage, high current
(C) High voltage, low current
(D) Low voltage, low current

✓ 58 પ્રકાશની કઈ ઘટના દ્વારા શ્વેતપ્રકાશનું કિરણ સાત ઘટક રંગોમાં છૂટું પડે છે ?

- ✓ (A) વક્રીભવન (B) પરાવર્તન
(C) વિભાજન (D) વ્યતિકરણ

✓ 59 The purpose of the restraining coil in a biased differential relay is

- (A) To reduce CT saturation during fault
(B) To increase the sensitivity of the relay
(C) To match the transformation ratio
(D) To limit the spill current through the relay during heavy external fault

✓ 60 'કાગણામાં વૃક્ષો પરથી સૂરજને ખરતો જોઉં છું.'

ખરતો - કૃદંતનો પ્રકાર જણાવો.

- (A) ભૂતકૃદંત (B) વિધ્યર્થકૃદંત
(C) ભવિષ્યકૃદંત (D) વર્તમાનકૃદંત

61 Power factor of a pure inductor is

- (A) Unity
- (C) Infinity

- (B) Zero
- (D) 0.5

62 In an over current relay, the setting of the earth fault relay is

- (A) More than the phase fault relay
- (B) Less than the phase fault relay
- (C) Equal to the phase fault relay
- (D) The two settings are not related

63

16 બાળકોની સરાસરી ઉંમર 11.3 વર્ષ છે. જો 16.4 વર્ષની ઉંમરવાળો એક બાળક ઉમેરવામાં આવે, તો નવી સરાસરી

- (A) 11.5
- (C) 10.3

- (B) 11.6
- (D) 11.4

64

Transposition of transmission line is done to

- (A) Reduce the line loss
- (B) Reduce the skin effect
- (C) Balance the line voltage drop
- (D) Reduce corona

65

ટેરિલિન કેવા પ્રકારનો પોલિમર છે ?

- (A) પ્લાસ્ટિક
- (C) પોલિએમાઇડ

- (B) પોલિએસ્ટર
- (D) પોલિઇથિન

✓ 66 Which of the following sequence of operations represents the rated operating duty cycle of a circuit breaker ? O-Open, C-Close, CO-Close followed by open, $t=3$ s, $T=3$ minutes

(A) O-t-CO-T-CO

(B) O-CO-t-CO-T-C

✓ (C) O-C-t-OC-T

(D) O-CO-T-CO-T-C

⊙

✓ 67 The function of pole shoes in the case of D.C. machine is to

✓ (A) Spread out the flux to achieve uniform flux density

(B) Reduce the reluctance of the magnetic path

(C) Support the field coil

(D) Discharge all the above mentioned functions

✓ 68 જેમાં માન-આદર કે વિવેક વ્યક્ત થાય તે નિપાતનું પદ કયું ?

(A) હા... હોં

✓ (B) જી

(C) તદ્દન

(D) રે

✓ 69 If a relay fails to operate for a fault within its reach, it is said to

✓ (A) Under reach

✓ (B) Over reach

(C) Reach

(D) Double reach

✓ 70 Arrange the following words in 'Alphabetical order'.

(1) Popular

(2) Population

(3) Populous

(4) Popularity

(B) (3), (4), (2), (1)

(A) (3), (1), (4), (2)

✓ (D) (1), (4), (2), (3)

(C) (2), (1), (4), (3)

71 In the squirrel cage induction motors, the rotor slots are usually given a slight skew to reduce

- (A) Windage losses
- (B) Eddy currents
- (C) Accumulation of dirt and dust
- ☒ (D) Magnetic hum

72 The operating point of a protective current transformer is near the

- (A) Ankle point on the magnetizing curve
- (B) Elbow point on the magnetizing curve
- ☒ (C) Knee point on the magnetizing curve
- (D) Sole point on the magnetizing curve

73 ભારતના કયા શહેરમાં “લોકનાયક જયપ્રકાશ” એરપોર્ટ આવેલ છે ?

- (A) પટણા
- (B) રક્સોલ
- (C) ધનબાદ
- (D) ઈન્ફાલ

74 In the measurement of power by two wattmeter method, when the readings of the two wattmeters are equal, the power factor is

- (A) Zero
- (B) Leading
- (C) Lagging
- ☒ (D) Unity

75 દારુણ વૃષ્ટિ થઈ દિન સાત, થાક્યા હારી વળ્યા વરસાત - રેખાંકિત વિશેષણનો પ્રકાર જણાવો.

- (A) ગુણવાચક
- (B) સંખ્યાવાચક
- (C) વ્યક્તિવાચક
- (D) રંગવાચક

✓ 76 The full load copper loss of a transformer is 1600 W. Its copper loss at half full load will be

- (A) 6400 W (B) 1600 W
(C) 800 W (D) 400 W

✓ 77 Crawling in an induction motor is caused by

- (A) Low voltage supply
(B) High loads
(C) Harmonics developed in the motor
(D) Improper design of the machine

✓ 78 પોર્ટુગીઝો (કિરંગીઓ)એ તે સમયના ગુજરાતના અને હાલના કેન્દ્રશાસિત પ્રદેશ એવા કયા શહેરને પોતાનું મથક બનાવ્યું હતું ?

- (A) માંડવી (B) દીવ
(C) ભાવનગર (D) જામનગર

✓ 79 While conducting short circuit test on a transformer, which side is kept shorted

- (A) High voltage side (B) Primary side
(C) Low voltage side (D) Secondary side

✓ 80 વિદ્યુતપ્રવાહની ઉષ્મીય અસર પર કામ કરતું સાધન કયું છે ?

- (A) વિદ્યુત ઈસ્ત્રી (B) ટ્યૂબલાઈટ
(C) ટી.વી. (D) વિદ્યુત ઘંટડી

- ✓ 81 A gay wire
- (A) Protects conductors against short circuits
 - (B) Provides emergency earth route
 - (C) Provides protection against surges
 - ✓ (D) Supports the pole

- ✓ 82 A change of 4% in the supply voltage of an induction motor will produce a change of approximately
- (A) 4% in the rotor torque
 - (B) 8% in the rotor torque
 - (C) 12% in the rotor torque
 - ✓ (D) 16% in the rotor torque

- ✓ 83 નીચે આપેલ વિભાજિત વાક્યમાંના જે વિભાગમાં ભૂલ હોય તેનો ક્રમાંક જણાવો.
બંનેનો મેળાપ / સમયે તેઓ / પિતા-પુત્ર છે / એવું જાણતા નથી.
- (A) (B) (C) ✓ (D)

- ✓ 84 The power factor of an induction motor under no load conditions will be close to
- ✓ (A) 0.2 lagging
 - (B) 0.2 leading
 - ✓ (C) 0.5 lagging
 - (D) Unity

- 85 Give plural form of : 'grief'
- (A) griefs
 - (B) grieves
 - (C) griefes
 - (D) grief

✓ 86 When a double cage induction motor is started, the current induced in the rotor

- ✓ (A) Flows mostly through the upper cage.
- (B) Flows mostly through the lower cage.
- (C) Is directly proportional to the impedance offered by each cage.
- (D) Is equally divided between the two cages.

✓ 87 Fractional pitch windings are used in D.C. machines to

- (A) Reduce copper losses
- (B) Improve cooling
- (C) Increase the generated emf
- ✓ (D) Reduce sparking

88 ઐતિહાસિક સ્થળ ધુમલી ક્યા જિલ્લામાં આવેલું છે ?

- (A) ભાવનગર
- (B) કચ્છ
- (C) દેવભૂમિ દ્વારકા
- (D) મહીસાગર

✓ 89 The condition for maximum efficiency of a D.C. generator is

- ✓ (A) Eddy current losses= stray losses.
- (B) Eddy current losses=hysteresis losses.
- (C) Copper losses=0.
- ✓ (D) Variable losses=constant losses.

90 “આણીયા” તળપદો શબ્દ છે જેનો અર્થ શું થશે ?

- (A) ભાણિયો
- (B) કાણો માણસ
- (C) ખરીદવું
- (D) આ બાજુ

- 91 To protect the power transformer with star-delta connection against earth and phase faults, the current transformer should have
- (A) Delta-delta connection (B) Star-delta connection
(C) Delta-star connection (D) Star-star connection

- 92 A 1000 W heater is rated to operate at a direct current of 10 A. If the heater is supplied alternating current for producing the same quantity of heat, the value of current should be
- (A) $I_{av}=10A$ (B) $I_{rms}=10A$
(C) $I_{rms}=10\sqrt{2}A$ (D) $I_{peak}=10A$

- 93 નીચેના પૈકી કયો બંધારણીય સુધારો સ્થાનિક સ્વરાજની સંસ્થા (પંચાયતો)ને લગતો છે?
- (A) 56મો સુધારો (B) 73મો સુધારો
(C) 42મો સુધારો (D) 61મો સુધારો

- 94 In 3 stepped distance protection, the reach of the three zones of the relay at the beginning of the first line typically extends into
- (A) 100% of the first line, 50% of the second line and 20% of the third line.
(B) 80% of the first line, 50% of the second line and 10% of the third line.
(C) 80% of the first line, 50% of the second line and 20% of the third line.
(D) 50% of the first line, 50% of the second line and 20% of the third line.

- 95 તાજેતરમાં ઓસ્ટ્રેલિયાના મેલબોર્ન ખાતે રમાઈ ગયેલ હોકી ટીમના ભારતીય કેપ્ટનનું નામ જણાવો.
- (A) કીશન લાલ (B) ધ્યાનચંદ
(C) રૂપિન્દર પાલ (D) પી. આર. શ્રીજેશ

✓ 96 The purpose of a choke in a fluorescent tube is

- (A) To decrease the current
- (B) To increase the current
- (C) To decrease the voltage momentarily
- ✓ (D) To increase the voltage momentarily

✓ 97 30°, 60° and 90° connections are made in a directional relay to render the relay

- (A) Sufficient torque under fault conditions
- (B) Zero torque under fault conditions
- (C) Current grading
- ✓ (D) Time grading

98 સમાનાર્થી શબ્દની ખોટી જોડી શોધો.

- | | |
|--------------------------|---------------------|
| (A) અંગારો - સળગતો કોલસો | (B) અનુકંપા - કરુણા |
| (C) અફળ - સફળ | (D) આકરો - અસહ્ય |

✓ 99 The maximum efficiency of a distribution transformer is

- | | |
|----------------------|----------------------|
| (A) at no load | (B) at 50% full load |
| (C) at 80% full load | (D) at full load |

100 Give Synonym : Rhetoric

- | | |
|--------------------|----------------------|
| (A) Grandiloquence | (B) Interesting talk |
| (C) Magnificent | (D) Quiet |

✓ 101 If the back e.m.f and speed of a D.C. motor are doubled, the torque developed by the motor

- (A) will remain unchanged
- (B) will reduce to one fourth value.
- (C) will increase four folds
- (D) will be doubled.

✓ 102 The steady state stability of the power system can be improved by

- (A) using machines of high impedance.
- (B) connecting transmission lines in series.
- ✓ (C) connecting lines in parallel.
- (D) reducing the excitation of the machines.

✓ 103 રાજ્યપાલ કોઈ અન્ય સંસ્થાનું વેતનવાળું પદ નહીં સ્વીકારે એ જોગવાઈ બંધારણની કઈ કલમમાં કરવામાં આવેલ છે ?

- (A) 156(1)
- (B) 158(2)
- (C) 158(5)
- (D) 157(7)

✓ 104 The type of backup protection scheme widely used in the field is

- (A) Relay backup
- (B) Breaker backup
- ✓ (C) Remote backup
- (D) Auxiliary backup

✓ 105 લેખક શ્રી રઘુવીર ચૌધરીએ તેમની પ્રથમ નવલકથા કઈ સાલમાં પ્રકાશિત કરી ?

- (A) ઈ.સ. 1961
- (B) ઈ.સ. 1962
- (C) ઈ.સ. 1963
- (D) ઈ.સ. 1964

✓ 106 The bridge used for measurement of capacitance is

- (A) Wien's bridge (B) Wheatstone bridge
(C) Schering bridge (D) Hay's bridge

✓ 107 In short circuit calculations, the selected base kVA is equal to

- (A) That of the largest plant
(B) The total plant capacity
(C) Any arbitrary value
(D) Can be any one of (A), (B), (C)

✓ 108 MS Office પેકેજમાં કયા પ્રોગ્રામનો સમાવેશ થાય છે ?

- (A) MS Word (B) MS Excel
(C) MS PowerPoint (D) આપેલ તમામ

✓ 109 At $t = 0+$ with zero initial condition, which of the following acts as a short circuit.

- (A) Inductor (B) Resistor
(C) Capacitor (D) Current source

110 A, B, C બહેનો છે. D એ Eનો ભાઈ છે. E, Bની દિકરી છે. A, D સાથે શું સંબંધ ધરાવે છે ?

- (A) બહેન (B) પિતરાઈ
(C) ભત્રીજી (D) માસી

111 Two fuse wires of the same material have fusing currents of 10 A and 5 A. The 10 A fuse will have

- (A) Smaller diameter
- ☒ (B) Larger diameter
- (C) Same diameter as the 5 A fuse
- (D) Fusing current does not depend on the diameter

112 In order to reduce the voltage surges due to current chopping and capacitive current breaking, we connect

- (A) A resistor across the CB contacts.
- ☒ (B) A capacitor across the CB contacts.
- (C) An inductor across the CB contacts.
- (D) A switch across the CB contacts.

113 “ધરડાં ગાડા વાળે” કહેવતની વિરોધી કહેવત જણાવો.

- (A) મહેતો મારેય નહિ ને ભણાવેય નહિ
- (B) ભસતો ફૂતરો ભાગ્યે જ કરડે
- (C) સાહે બુદ્ધિ નાહે
- (D) પગ જોઈ પાથરણું તાણવું

114 Salient pole type rotors are generally used with prime movers of

- (A) High speed
- ☒ (B) Low speed
- (C) Low and high speed
- (D) Medium speed

115 Give the Verb form of : Danger

- (A) Dangerous
- (B) Dangerously
- (C) Endanger
- (D) Dangeren

✓ 116 In a D.C. motor, if the back e.m.f. is absent

- (A) The motor will burn.
- ✓ (B) The motor will not run at all.
- (C) The motor will run at a very slow speed.
- (D) The motor will run at a very high speed.

✓ 117 D.C. generators are installed near the load centers to reduce

- (A) Iron losses
- ✓ (B) Line losses
- (C) Sparking
- (D) Corona losses

✓ 118 તાજેતરમાં અવસાન પામેલ ક્યુબાના ક્રાંતિકારી આગેવાન અને પૂર્વપ્રમુખનું નામ જણાવો.

- (A) કોલિન્ડા ગ્રેબર
- (B) રાઉલ સ્મીથ
- (C) ફિડેલ કાસ્ટ્રો
- (D) મરિઓના રાજોય

✓ 119 The effect of increase of temperature on overhead lines is to

- (A) Decrease the length but to increase the stress.
- ✓ (B) Decrease the stress but to increase the length.
- (C) Decrease the stress and length.
- (D) Increase the stress and length.

120 નીચે આપેલા શબ્દોમાંથી “રાંકડી” જેવો શબ્દ કયો છે ?

- (A) ફૂકરી
- (B) ચકલી
- (C) ગરીબડી
- (D) કાકડી

✓ 121 Location of the lightning arrester is near the

(A) Generator

✓ (B) Transformer

(C) Bus-bar

(D) Circuit breaker

✓ 122 If the cable length increases, its insulation resistance

✓ (A) Decreases

(B) Remains constant

(C) Increases

(D) Becomes zero

✓ 123 વડનગર તાલુકો ગુજરાત રાજ્યના કયા જિલ્લામાં આવેલ છે ?

(A) પાટણ

(B) સુરેન્દ્રનગર

✓ (C) મહેસાણા

(D) સુરત

✓ 124 For protection of a large squirrel cage induction motor against single phasing, normally

(A) An over current relay is used

(B) A differential relay is used

(C) A directional relay is used

✓ (D) A negative sequence current sensitive relay is used

✓ 125 ખુલ્લામાં શોય કરવાથી નીચેના પૈકી કયા રોગો ફેલાય છે ?

✓ (A) ટાઈફોઈડ અને કોલેરા

✓ (B) હીપેટાઈટીસ

(C) પોલિઓ

(D) ઉપરોક્ત તમામ

- ✓ 126 An ideal voltage source
- (A) Has terminal voltage in proportion to current.
 - (B) Has terminal voltage in proportion to load.
 - ✓ (C) Has zero internal resistance
 - (D) Has open circuit voltage nearly equal to the voltage at full load

- ✓ 127 The arc voltage in a circuit breaker is
- ✓ (A) In phase with the arc current
 - (B) Leading the arc current by 90°
 - (C) Lagging the arc current by 90°
 - (D) Leading the arc current by 180°

128 નીચેના વાક્યમાંથી લીટી દોરેલ શબ્દનો સમાસ ઓળખાવો.

ધર્મબ્રજ સાધુઓ સાચા ધર્મ પરથી લોકોનો વિશ્વાસ ઉઠાડી દે છે.

- (A) ચતુર્થી તત્પુરુષ સમાસ
- (B) પંચમી તત્પુરુષ સમાસ
- (C) ષષ્ઠી તત્પુરુષ સમાસ
- (D) સપ્તમી તત્પુરુષ સમાસ

- ✓ 129 The statutory limit for voltage variation at the consumer's terminal is
- ✓ (A) $\pm 6\%$ of the declared voltage
 - (B) $\pm 2\%$ of the declared voltage
 - (C) $\pm 10\%$ of the declared voltage
 - (D) $\pm 4\%$ of the declared voltage

✓ 130 Join the sentences with a proper conjunction.

He worked hard. He failed.

- (A) He worked hard so he failed.
- ✓ (B) He failed but he works hard
- (C) Though he worked hard, he failed.
- (D) He worked hard and he failed.

✓ 131 The normal frequency rms voltage that appears across the circuit breaker contacts after the final arc extinction is called the

- (A) Supply voltage
✓ (C) Recovery voltage

- (B) Restriking voltage
(D) Breaking voltage

✓ 132 The single phase motor generally used in ceiling fans is

- (A) Capacitor start type
(B) Split phase type
✓ (C) Capacitor start and run type
(D) Permanent capacitor type

✓ 133 વાર્ષિક ઓછામાં ઓછા કેટલા રૂપિયાથી વધુ આવક ધરાવતા કુટુંબો માટે એ.પી.એલ.-2 કાર્ડની યોજના અમલમાં છે ?

- (A) રૂ. 1 લાખથી વધુ
(B) રૂ. 1 લાખ 50 હજારથી વધુ
(C) રૂ. 1 લાખ 20 હજારથી વધુ
(D) રૂ. 1 લાખ 80 હજારથી વધુ

✓ 134 For increase in the line voltage, which of the following does not take place ?

- (A) Increase in span.
(B) Increase in conductor size.
✓ (C) Increase in the tower height
(D) Increase in clearance from the ground.

✓ 135 નીચે આપેલ શબ્દનો વિરુદ્ધાર્થી શબ્દ વિકલ્પમાંથી પસંદ કરો :

વૃદ્ધિ

- (A) સહેલું
(B) વિભક્ત
(C) વધવું
(D) ક્ષય

- 136 Hunting takes place in a synchronous motor when the
- (A) Supply voltage fluctuates. ☒ (B) Load varies.
- (C) Power factor is unity. (D) Motor is under loaded.

- 137 Which of the following is the essential requirement of peak load plant ?
- (A) It should run at high speed
- (B) It should produce high voltage
- (C) It should be small in size
- ☒ (D) It should be capable of starting quickly.

138 નીચેનાં વિધાનોમાંથી કયા સાચાં વિધાનો છે ?

- (1) જિલ્લા આયોજન સમિતિ પેટા સમિતિઓની રચના કરી શકે છે.
- (2) જિલ્લા આયોજન સમિતિએ રાજ્ય સરકારને જિલ્લાની વિકાસ યોજનાનો મુસદ્દો મોકલવાનો હોય છે.
- (3) જિલ્લા આયોજન સમિતિએ ગ્રામ પંચાયતોને માટે વિકાસ યોજનાઓ તૈયાર કરવાની હોય છે.
- (4) જિલ્લા આયોજન સમિતિએ વિકાસ યોજના તૈયાર કરતી વખતે પર્યાવરણનું જતન કેવી રીતે કરવું તે ધ્યાનમાં લેવાનું હોય છે.

ઉપરનામાંથી કયું વિધાન સાચું છે ?

- (A) (1), (2) (B) (3), (4)
- (C) (2), (3) (D) (1), (3)

139 Creeping in energy meters can be prevented by providing

- (A) One hole on the disc.
- ☒ (B) Two holes on opposite sides of the disc.
- (C) Extra voltage coil in the meter.
- (D) Extra current coil in the meter.

140 જો DICTIONARY શબ્દની 1234256789 સંજ્ઞા બને, તો ORDINARY શબ્દની સંજ્ઞા કઈ બને ?

- (A) 59126789 ☒ (B) 58126789
- (C) 57326789 (D) 56126789

✓ 141 If two alternators are running in proper synchronism and the voltage of one machine is suddenly increased,

- (A) Both machines will stop.
- (B) One machine will stop.
- (C) Both machines will continue to run as it is.
- ✓ (D) Synchronizing torque will be produced to restore further synchronism.

✓ 142 Which of the following protection is normally not provided on small distribution transformers ?

- (A) Overfluxing protection
- (B) Directional protection
- (C) Over current protection
- ✓ (D) Buchholz relay

✓ 143 શબ્દસમૂહ માટે એક શબ્દ આપો.

બાળકો તરફનું વહાલ

- (A) પ્રેમ
- (B) અનુરાગ
- (C) વાત્સલ્ય
- (D) હેમ

✓ 144 Which of the following parameter can be neglected for a short transmission line ?

- (A) Resistance
- (B) ✓ Capacitance
- (C) Inductance
- (D) Reactance

✓ 145 Change the degree :

Sleep is not less necessary than food.

- (A) Sleep is at least as necessary as food.
- (B) Sleep is more necessary than food.
- (C) Food is less necessary as sleep.
- (D) None

✓ 146 Scott connections are used to convert :

- (A) Three phase supply to D.C. supply
- ✓ (B) Three phase supply to two phase supply
- (C) Three phase supply to four phase supply
- (D) Three phase supply to single phase supply

✓ 147 In an Inverse Definite Minimum Time (IDMT) type cover current relay, the minimum time feature is achieved because of :

- ✓ (A) Saturation of the magnetic circuit
- (B) Proper mechanical design
- (C) Appropriate time delay element
- (D) Electro magnetic damping

✓ 148 સાર્ક દેશોના સમૂહમાં ભારત, ભુતાન, નેપાળ, પાકિસ્તાન, બાંગ્લાદેશ, અફઘાનિસ્તાન અને શ્રીલંકા ઉપરાંત કયા દેશનો સમાવેશ થાય છે ?

- (A) તજિકિસ્તાન
- (B) યાઈના
- (C) ઉઝબેકિસ્તાન
- (D) માલદિવ્સ

✓ 149 Line which connects the consumer to the distributor is called the :

- (A) Feeder
- (B) Distributor
- ✓ (C) Service mains
- (D) Earth wire

✓ 150 સાહિત્યકાર અને સાહિત્યનું કયું જોડકું ખોટું છે ?

- (A) પ્રેમાનંદ - આખ્યાન
- (B) વલ્લભ ભટ્ટ - ગરબા
- (C) કલાપી - ખંડકાવ્ય
- (D) હાનાલાલ - પદ્યવાર્તા