ELECTRICAL

1.

For testing appliances, the wattage of test lamp should be

(A)
very low

(B)
low

(C)
high

(D)
any value

Ans: “high”

2.

Sparking occurs when a load is switched off because the circuit has high

(A)
resistance

(B)
inductance

(C)
capacitance

(D)
Impedance

Ans: “inductance”

3.

Conductance : mho ::

(A)
resistance : ohm

(B)
capacitance : henry

(C)
inductance : farad

(D)
lumen : steradian

Ans: “resistance : ohm”

4.

Which of the following type of circuits in electrical engineering cannot be analyzed using Ohm’s law?

(A)
Unilateral

(B)
Bilateral

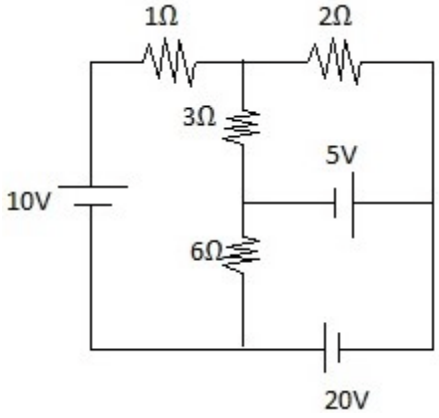
(C)
Linear

(D)
Conductors

Ans: “Unilateral”

5.

Find the current flowing through 5Ω resistor in the given circuit.



(A)
0.57A

(B)
0.64A

(C)
0.78A

(D)
0.89A

Ans: “0.78A”

6.

Source transformation technique is mainly based on _____ law.

(A)
Newton’s

(B)
Kirchhoff’s

(C)
Ohm’s

(D)

Einstein’s

Ans: “Ohm’s”

7.

A sine wave has a frequency of 50 Hz. Its angular frequency is _____ radian/second

(A)
100 n

(B)
50 jt

(C)
25 JT

(D)
5 n

Ans: “100 n”

8.

The primary and secondary of a transformer are _____ coupled but _____ connected

(A)
magnetically, not electrically

(B)
electrically, not magnetically

(C)
magnetically, also magnetically

(D)
electrically, also electrically

Ans: “magnetically, not electrically”

9.

Why are the DC motors preferred for traction applications?

(A)
Torque and speed are inversely proportional to armature current

(B)
Torque is proportional to armature current

(C)
Torque is proportional to square root of armature current

(D)
The speed is inversely proportional to the torque and the torque is proportional to square of armature current

Ans: “The speed is inversely proportional to the torque and the torque is proportional to square of armature current”

10.

Spacing between the brushes for a 4-pole machine in terms of commutator segments for 12 conductor segments is _____

(A)
48

(B)
3

(C)
2

(D)

6

Ans: “3”

11.

Speed-torque characteristic of PMDC motors is

(A)
Starting from zero increasing continuously

(B)
Starting from some positive value and remaining constant

(C)
Starting from some positive value and decreasing exponentially

(D)
Starting from some positive value and decreasing on straight line

Ans: “Starting from some positive value and decreasing on straight line”

12.

The method which can be used for the speed control of induction motor from stator side is

(A)
V / f control

(B)
Current control

(C)

Capacitance control

(D)
Voltage control

Ans: “V / f control”

13.

A 3-phase induction motor runs at almost 1000 rpm at no load and 950 rpm at full load when supplied with power from a 50 Hz, 3-phase supply. What is the corresponding speed of the rotor field with respect to the rotor?

(A)
30 revolution per minute

(B)
40 revolution per minute

(C)
60 revolution per minute

(D)
50 revolution per minute

Ans: “50 revolution per minute”

14.

Damper winding is provided in a polyphaser synchronous motor in order to

(A)
dampen out noise of the machine

(B)
prevent hunting

(C)
provide starting torque

(D)
provide a cylindrical structure to reduce wind friction

Ans: “prevent hunting”

15.

A salient pole synchronous motor is running with normal excitation. If excitation is reduced to zero

(A)
it becomes an induction motor

(B)
it becomes a reluctance motor

(C)
it remains a synchronous motor

(D)
the motor would stop

Ans: “it becomes a reluctance motor”

16.

Voltage regulation in the power system is _____

(A)
dip in voltage at sending end

(B)
rise in voltage at sending end

(C)

rise in voltage at receiving end

(D)
dip in voltage at receiving end

Ans: “rise in voltage at receiving end”

17.
Transmission line connects

(A)
Generating station to a switching station/step-down transformer station.

(B)
Step-down transformer station to service transformer banks.

(C)
Distribution transformer to consumer premises.

(D)
Service points to consumer premises.

Ans: “Generating station to a switching station/step-down transformer station.”

18.

Which of the following is most suitable fuel for thermal power plant?

(A)
Bituminous coal

(B)
Lignite coal

(C)
Anthracite coal

(D)
Peat coal

Ans: “Bituminous coal”

19.
Single line diagram does not represents:

(A)
Ratings of machines

(B)
Neutral wire of transmission lines

(C)
Delta connection of transformer winding

(D)
Star connection of transformer winding

Ans: “Neutral wire of transmission lines”

20.

The operating voltage of supertension cables is up to

(A)
3.3 kV

(B)
6.6 kV

(C)
11 kV

(D)
33 kV

Ans: “33 kV”

21.

The load factor is _____

(A)
always less than unity

(B)
less than or greater than 1

(C)
always greater than 1

(D)
less than zero

Ans: “always less than unity”

22.

The principle behind the influence of the power lines on the telephone lines is

(A)
Faraday’s laws

(B)
Mutual inductance

(C)
Self inductance

(D)
Kirchoff’s law

Ans: “Faraday’s laws”

23.

The material generally used for armor of high voltage cables is

(A)
aluminium

(B)
steel

(C)
brass

(D)
copper

Ans: “steel”

24

Which of the following country generate all their electricity using renewable energy?

(A)
Iceland

(B)
England

(C)
USA

(D)
China

Ans: “Iceland”

25

Renwable energy often displaces conventional fuel in which of the following area

(A)
space heating,transportation & electricity generation

(B)
Hydro mill

(C)
Thermal station

(D)
Atomic station

Ans: “space heating,transportation & electricity generation”

26

Which of the following is used as fuel for transportation

(A)
ethanol

(B)
aldehyde

(C)
ketone

(D)
phenol

Ans: “ethanol”

27

Biodiesel is produced from oils or fats using

(A)
fermentation

(B)
transesterification

(C)
distillation

(D)
Filteration

Ans: “transesterification”

28

Photovoltaic cell converts solar energy into

(A)
heat energy

(B)
electric energy

(C)
mechanical energy

(D)
chemical energy

Ans: “electric energy”

29

In which of the following region winds are stronger and constant

(A)
deserts

(B)

offshore

(C)
low altitudes sites

(D)
High attitude sites

Ans: “offshore”

30.

Which of the following semiconductor is mostly used to construct electronic circuits?

(A)
Silicon

(B)
Germanium

(C)
Selenium

(D)
Tin

Ans: “Silicon”

31.

A bistable multivibrator is a

(A)
Free running oscillator.

(B)
Triggered oscillator.

(C)
Saw tooth wave generator.

(D)
Crystal oscillator.

Ans: “Triggered oscillator.”

32.

Transistor is a

(A)
Current controlled current device.

(B)
Current controlled voltage device.

(C)
Voltage controlled current device.

(D)
Voltage controlled voltage device.

Ans: “Current controlled voltage device.”

33.

The doped region in a transistor are _____

(A)
Emitter and Collector

(B)
Emitter and Base

(C)

Collector and Base

(D)
Emitter, Collector and Base

Ans: “Emitter, Collector and Base”

34.

The base of a transistor is …….. doped

(A)
heavily

(B)
moderately

(C)
lightly

(D)
normally

Ans: “lightly”

35.

The symbol represent gate is

(A)
AND

(B)
OR

(C)

NOT

(D)
NAND

Ans: “OR”

36.

FET is a device which has

(A)
high input impedance and is current-controlled

(B)
low input impedance and is voltage-controlled

(C)
high input impedance and is voltage-controlled

(D)
low input impedance and is current-controlled

Ans: “high input impedance and is voltage-controlled”

37.

In FET, the current flow is mainly due to

(A)
majority carriers

(B)
minority carriers

(C)
majority carriers and minority carriers

(D)

Holes

Ans: “minority carriers”

38.

FET is a _____ controlled device.

(A)
voltage

(B)
current

(C)
resistance

(D)
impedance

Ans: “voltage”

39.

A thyristor (SCR) is a

(A)
P-N-P device

(B)
N-P-N device

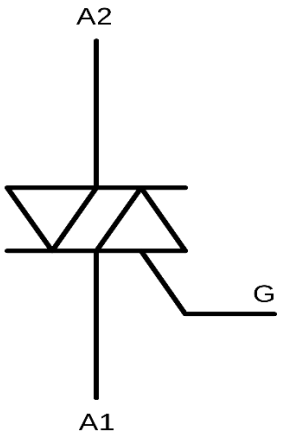
(C)
P-N-P-N device

(D)
P-N device

Ans: “P-N-P-N device”

40.

The image to the right is of a



(A)
Diac

(B)
Thyristor

(C)
Triac

(D)
Zener diode

Ans: “Triac”

GENERAL INTELLIGENCE AND REASONING

41.

Merchant' is related to 'Trade' in the same way as 'Doctor' is related to:

(A)
Medicine

(B)
Prescription

(C)
Healing

(D)
Examination

Ans: “Examination”

42.

'Fish’ is related to 'Pisciculture' in the same way as 'Bees' is related to:

(A)
Horticulture

(B)
Apiculture

(C)
Sericulture

(D)
Viticulture

Ans: “Apiculture”

43.

Out of the four options given below, three are of a kind while one does not belong to the group. Choose the one which is unlike the others.

(A)
Circle: arc

(B)
TV: Screen

(C)
Book: Cover

(D)
Laptop : Charger

Ans: “Laptop : Charger”

44.

Tuberculosis : Lungs : : Cataract : ?

(A)
Ear

(B)
Throat

(C)
Skin

(D)
Eye

Ans: “Eye”

45.

In a certain code, WORKABLE is written as VOYZPILD, how will BLUNDERS be written in same code?

(A)
CMVOEST

(B)
TSEOVMC

(C)
YOFMWVIH

(D)
HIVWMFOY

Ans: "HIVWMFOY"

46.

Read the following information carefully and answer the questions, which follow :

'A – B' means 'A is father of B'

'A + B' means 'A is daughter of B'

'A ÷ B' means 'A is son of B'

'A × B' means 'A is wife of B'

Which of the following means P is grandson of S ?

(A)
P + Q – S

(B)
P ÷ Q × S

(C)
P ÷ Q + S

(D)
P × Q ÷ S

Ans: “P ÷ Q + S”

47.
Read the following information carefully and answer the questions, which follow :

‘A – B’ means ‘A is father of B’

‘A + B’ means ‘A is daughter of B’

‘A ÷ B’ means ‘A is son of B’

‘A × B’ means ‘A is wife of B’
How is P related to T in the expression ‘P + S – T’ ?

(A)
Sister

(B)
Wife

(C)
Son

(D)
Daughter

Ans: “Sister”

48.
Read the following information carefully and answer the questions, which follow :

‘A – B’ means ‘A is father of B’

‘A + B’ means ‘A is daughter of B’

‘A ÷ B’ means ‘A is son of B’

‘A × B’ means ‘A is wife of B’

In the expression ‘P + Q × T’ how is T related to P ?

(A)

Mother

(B)
Father

(C)
Son

(D)
Brother

Ans: “Father”

49.
Read the following information carefully and answer the questions, which follow :

‘A – B’ means ‘A is father of B’

‘A + B’ means ‘A is daughter of B’

‘A ÷ B’ means ‘A is son of B’

‘A × B’ means ‘A is wife of B’

In the expression ‘P × Q – T’ how is T related to P ?

(A)
Daughter

(B)
Sister

(C)

Mother

(D)
Can’t be determined

Ans: “Can’t be determined”

50.

There is sufficient food for 116 men for25 days. After 21 days, 100 men leave the place. For how many days will the rest of the food last for the rest of me men?

(A)
19 days

(B)
24 days

(C)
29 days

(D)
15 days

Ans: “29 days”

GENERAL AWARENESS

51.

Which among the following is not a power of RBI?

(A)
inspection of banks

(B)
Nationalization of Banks

(C)
Call of returns

(D)
Control the lending policies of the banks

Ans: “Nationalization of Banks”

52.

In which year the original concept of Goods and Services Tax (GST) in the present form had come to India in a formal manner?

(A)
2000

(B)
2002

(C)
2004

(D)
2006

Ans: “2004”

53.

What is the full form for IFSC Code?

(A)
Indian Financial System Code

(B)
Indian Financial Security Code

(C)

International Financial System Code

(D)
International Financial Security Code

Ans: “Indian Financial System Code”

54.

What is Willow Blister?

(A)
A Plant

(B)
Fungus

(C)
Bacteria

(D)
A Bat

Ans: “Fungus”

55.

Which Indian state/UT launched the ‘Ladli Bahina Scheme’?

(A)
Maharashtra

(B)
Madhya Pradesh

(C)
Gujarat

(D)
Odisha

Ans: “Madhya Pradesh”

56.

Which company has signed MoU to make Rolls-Royce marine engines?

(A)
HAL

(B)
GRSE

(C)
BEML

(D)
Mazagon Dock

Ans: “GRSE”

57.

Which Indian organisation carried out the maiden flight test of ‘Autonomous flying wing technology demonstrator’?

(A)
DRDO

(B)
NSIL

(C)
Dhruva Airspace

(D)
Pixxel Space

Ans: “DRDO”

58.

Andaman & Nicobar Islands come under the jurisdiction of which High Court?

(A)
Calcutta

(B)
Orisaa

(C)
Madras

(D)
Andhra Pradesh

Ans: “Calcutta”

59.

Which of the following is the highest peak in Andaman and Nicobar Islands?

(A)
Mount Diavolo

(B)
Saddle Peak

(C)
Mount Thuiller

(D)
Mount Koyale

Ans: “Saddle Peak”

60.

Which organisation manufacturers Tejas Mark-2 Fighter Jets?

(A)
DRDO

(B)
BEL

(C)
HAL

(D)
BDL

Ans: “HAL”

MECHANICAL

61.
When the body is completely or partially immersed in a fluid, how much its weight be distributed for it to be in stable equilibrium.

(A)
Is independent of weight distribution
(B)
Around the lower part
(C)
Around the upper part
(D)
Around the middle part

Ans: “Around the lower part”

62.
Which among the following which is not an efficiency of turbine?

(A)
Mechanical efficiency
(B)
Volumetric efficiency
(C)

Hydraulic efficiency
(D)
Electrical efficiency

Ans: “Electrical efficiency”

63.
What is the maximum working pressure of Cochran boiler?

(A)
8 bar
(B)
10 bar
(C)
15 bar
(D)
20 bar

Ans: “15 bar”

64.
Small amount of gasoline is added to alcohol to _____

a)
reduce the emission
b)
to increase the power output
c)
to increase the efficiency
d)
to improve cold weather starting

Ans: “to improve cold weather starting”

65.
Which of the following is not the part of three jaw chuck?

(A)
chuck key
(B)

crown wheel
(C)
back plate
(D)
shaft chunk key

Ans: “shaft chunk key”

66.
Cutting T-slots can be performed more effectively by _____ milling machine.

(A)
horizontal
(B)
vertical
(C)
series
(D)
Parallel

Ans: “vertical”

67.
Which of the following part of slotting machine hold and supports the work piece?

(A)
Base
(B)
Column
(C)
Cross rail
(D)
Table

Ans: “Table”

68.
Upper floor is also known as _____

(A)
Basement floor
(B)
Suspended floor
(C)
Supported floor
(D)
Rigid floor

Ans: “Suspended floor”

69.

Scaffolding has to be done, if the height of structure is above _____

(A)
1.2
(B)
1.4
(C)
1.5
(D)
1.8

Ans: “1.5”

70.
What is the expression for modulus of rigidity in terms of modulus of elasticity and the Poisson’s ratio?

(A)
$G = 3E / 2(1 + \mu)$
(B)
$G = 5E / (1 + \mu)$
(C)
$G = E / 2(1 + \mu)$
(D)
$G = E/ (1 + 2\mu)$

Ans: “$G = E / 2(1 + \mu)$”

MECHANICAL

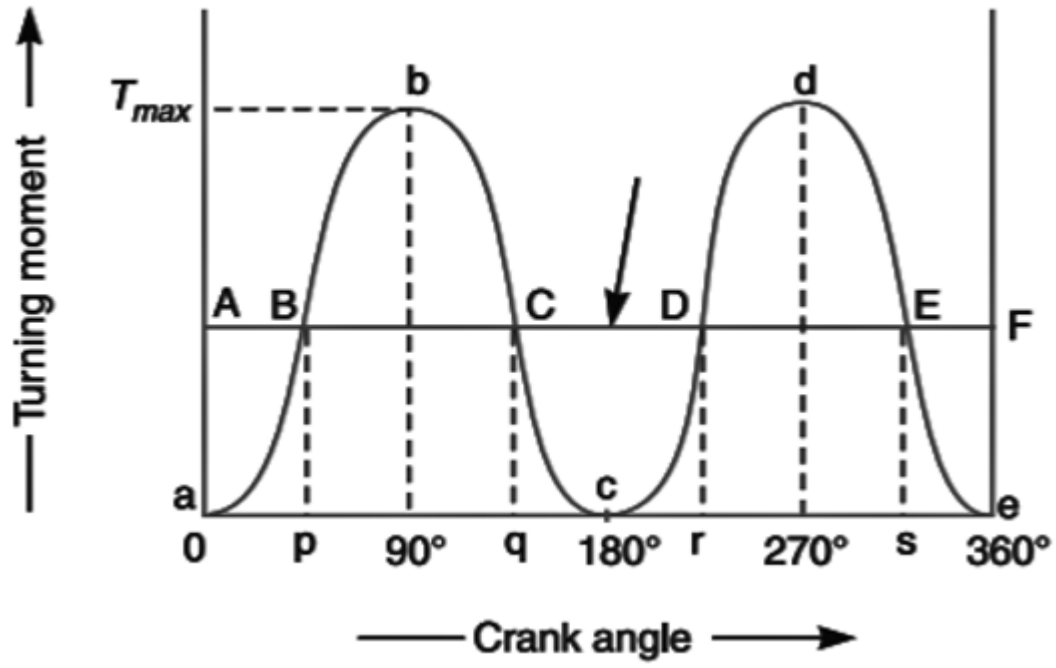
71.
_____ mechanism is a crossed four bar chain mechanism in early steam engines to guide the piston rod in a cylinder to have an approximate straight-line motion.

(A)
Chebychev’s
(B)
Watt’s
(C)
Peaucellier’s
(D)
Grasshopper

Ans: “Watt’s”

72.

In the figure given below, the areas BbC, CcD represent _____



(A)
Power generated
(B)
Power lost
(C)
Fluctuation of energy
(D)
Change in momentum

Ans: "Fluctuation of energy"

73.
Determine the couple moment acting on the triangular plane shown.

(A)
1600Nm
b)
100Nm
c)
2600Nm
d)
600Nm

Ans: “2600Nm”

74.
I am using an infinitesimally small element of fluid moving along with the flow as my model. What is the acceleration of this model in x-direction?

a)
ax=DV$^{\rightarrow}$ Dt
b)
ax=∂V$^{\rightarrow}$ ∂t
c)
ax=DuDt
d)
ax=∂u∂t

Ans: “ax=DuDt”

75.

Why is the term ‘Cabriolet’ used for a car?

a)
Because of non-foldable roof
b)
Because of foldable roof
c)
Because it is a coupe
d)
Because it has Higher ground clearance

Ans: “Because of foldable roof”

76.

The aircraft fly based on which principle _____

a)
Newton’s third law
b)
Conservation of mass
c)
Bernoulli’s principle
d)
Gravity
Ans: “Bernoulli’s principle”

77.

Which is the most accurate gasoline injection system?

a)
direct injection
b)
port injection
c)
throttle body injection
d)
manifold injection

Ans: “port injection”

78.

The ignition timings and thermal load on the engine affect the knock limit of _____ engine.

a)
SI
b)
CI
c)

SI & CI
d)
BI

Ans: “SI”

79.

In which type of fuel given below, risk of fire hazard is greatest?

a)
Solid fuel
b)
Gaseous fuel
c)
Liquid fuel
d)
Peat

Ans: “Gaseous fuel”

80.

What happens when liquid fuels evaporate?

a)
It increases its calorific value
b)
It reduces the impurities present in it
c)
It increases the ash content present in it
d)
It makes losses and leakages in the container

Ans: “It makes losses and leakages in the container”

81.

Which engine can run on dual fuel with little engine modification?

a)
Diesel engine
b)
Petrol engine
c)
IC engine
d)
External combustion engine

Ans: “Diesel engine”

82.

In order to mix air and petrol in the required proportion and to supply it to the engine during suction stroke, then _____ is employed.

a)
fuel pump
b)
injector
c)
carburettor
d)
fuel tank

Ans: “carburetor”

83.

The viscosity of petroleum oil for hydraulic lifts is _____

a)
High
b)
Low
c)
Moderate
d)
Very high

Ans: “Low”

84.

Probability of the event that might occur X Severity of the event if it occurs =

(A)
Accident
(B)
Hazard
(C)
Risk
(D)
Low Risk

Ans: “Risk”

85.

Which is not a part of 5R’s of buying?

a.
Right Left Quality
b.
Left Quantity
c.
Right Quality
d.
Right Source

Ans: “Right Source”

86.

Bin card is used in

A.
Administrative wing
B.
Workshop

C.
Foundry shop
D.
Stores

Ans: “Stores”

87.

Which of the following alloying element is added as a degasser?

a)
Silicon
b)
Sulphur
c)
Nickel
d)
Titanium

Ans: “Titanium”

88.

Transformation in eutectoid steels is named as _____

a)
Austenitizing
b)
Carburizing
c)
Decarburizing
d)
Nitriding

Ans: “Austenitizing”

89.
For very hard metals _____ ball is used in Brinell test.

a)
Hardened steel
b)
Alloyed steel
c)
Tungsten carbide
d)
Diamond

Ans: “Tungsten carbide”

90.

Addition of _____ increases the mechanical properties of a tin-lead solder.

a)
Bismuth
b)
Tellurium
c)
Antimony
d)
Molybdenum

Ans: “Antimony”

91.

In plasma arc welding the gas is?

a)
Ionized
b)
Heated
c)
Magnetized
d)
Vaporized

Ans: “Ionized”

92.

Which of the following is not a type of diffusion welding?

a)
Gas-pressure welding
b)
Vacuum fusion welding
c)
Eutectic fusion bonding
d)
Eutectoid fusion welding

Ans: “Eutectoid fusion welding”

93.

The maximum temperature in TIG welding is

(A)
6700 °C
(B)
6500 °C
(C)
6000 °C
(D)
4000 °C

Ans: “6000 °C “

94.
Which of the following metal transfer method(s) is often limited to flat and horizontal welding positions

(A)
Globular
(B)
Short-circuiting

(C)
Spray
(D)
Cold metal transfer

Ans: “Spray”

95.

The example of successfully constrained motion is a

a)
motion of an S.I engine valve
b)
motion of the shaft in between a foot-step cylinder
c)
piston reciprocating outside an engine cylinder
d)
motion of the shaft between a foot-step bearing

Ans: “motion of the shaft between a foot-step bearing”

96.

Which of the following is the key difference between a simple VAR and Electrolux
refrigerator?

a)
Working mechanism
b)
Generator
c)
Absorber
d)
Liquid pump

Ans: “Liquid pump”

97.

What is the temperature at which air can be brought to saturation state adiabatically?

a)
Thermodynamic WBT
b)
Thermodynamic DBT
c)
Thermodynamic DPT
d)
DPT

Ans: “Thermodynamic WBT”

98.

Which of the following is not necessary to find normal module of helical gear?

a)
Number of teeth
b)
Pitch diameter
c)
Helix angle
d)
Tooth thickness

Ans: “Tooth thickness”

99.

In an experiment, it is found that the experimental value is very close to actual value, hence the experimental value can be called _____

a)
Accurate
b)
Precise
c)

Suitable
d)
Mean

Ans: “Accurate”

100.
Which is the only standard in the ISO 9000 family to which organizations can certify?

a)
ISO 9000
b)
ISO 9001
c)
ISO 14000
d)
ISO 9004

Ans: “ISO 9001”