

## PROVISIONAL ANSWER KEY

Question 163/2023/OL

Paper Code:

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Exam: Materials Manager

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Department Kerala State cooperative Coir Marketing Federation Ltd

Question1:-The Econometric model of forecasting in management is

A:-Exponential smoothing

B:-Regression analysis

C:-Opinion polls

D:-Sales force composite

Correct Answer:- Option-B

Question2:-Which of the following is not correct?

A:-Fulkerson's rule - Project Network

B:-N-W Corner rule - Assignment problem

C:-Johnson's rule - Scheduling

D:-Simplex Method - Linear programming

Correct Answer:- Option-B

Question3:-Calculate the total wage earned by the worker using Halsey plan :

Minimum Guaranteed wage - Rs. 200/hour

Time allowed for the job - 10 hours

Time taken by the employee - 8 hours

Percentage bonus is 50%

A:-Rs. 1,600

B:-Rs. 1,740

C:-Rs. 1,800

D:-Rs. 2,000

Correct Answer:- Option-C

Question4:-An aisle in a plant layout is

A:-Area ear marked for traffic inside the shop

B:-Area meant for preventive maintenance

C:-Area meant for electrical cables

D:-Area ear marked for drainage

Correct Answer:- Option-A

Question5:-C-Chart generally follows

A:-Binomial distribution

B:-Normal distribution

C:-Poisson distribution

D:-None of these

Correct Answer:- Option-C

Question6:-If the lower control limit has a negative value in P-chart, it is taken as

A:-Zero

B:-Unity

C:-Infinity

D:-Positive

Correct Answer:- Option-A

Question7:-The basic procedure for method study doesnot include

A:-Record

B:-Examine

C:-Develop

D:-Eliminate

Correct Answer:- Option-D

Question8:-Observed time of an element is 0.30 minute, pace rating is 75% and the sum of all secondary adjustment for job complexity is 30%. The normal time is

A:-0.47 minutes

B:-0.16 minutes

C:-0.29 minutes

D:-0.43 minute

Correct Answer:- Option-C

Question9:-For a project network, optimistic time, most likely time and pessimistic time are 8, 10 and 14 respectively. The expected time ( $t_E$ ) is

A:-8.17

B:-14.2

C:-6.5

D:-10.3

Correct Answer:- Option-D

Question10:-If the unit ordering cost is thrice the initial, EOQ will change to

A:-9 times

B:-1.73 times

C:-1.41 times

D:-1/3 times

Correct Answer:- Option-B

Question11:-The solid solution of carbon in  $\gamma$ -iron is known as

A:-Austenite

B:- $\alpha$ -Ferrite

C:-Cementite

D:- $\delta$ - Ferrite

Correct Answer:- Option-A

Question12:-Which one of the following statements about heat treatment is correct?

- (i) Heat treatment softens the metal
- (ii) Heat treatment refines the grain structure
- (iii) Heat treatment relieves internal stresses
- (iv) Heat treatment decreases the wear resistance

A:-(i), (ii) , (iii) and (iv)

B:-(i), (ii) and (iii) only

C:-(i) and (ii) only

D:-(i) and (iii) only

Correct Answer:- Option-B

Question13:-The property of a metal, when it is subjected to high temperature for a long period of time is known as

A:-Fatigue

B:-Resilience

C:-Toughness

D:-Creep

Correct Answer:- Option-D

Question14:-Auto collimator is used for measuring

A:-Flatness

B:-Angular difference

C:-Straightness

D:-Surface finish

Correct Answer:- Option-B

Question15:-Oxidising flame in gas welding is used for welding

A:-Brass and Bronze

B:-Alloy steels

C:-Cast iron

D:-Copper

Correct Answer:- Option-A

Question16:-Consider the following statements :

- (i) Cutting speed affects the tool life

- (ii) Tool geometry does not affect the tool life
  - (iii) Feed and depth of cut affects the tool life
- Which of the statements given above are correct?

- A:-(i) and (ii) only
- B:-(i) and (iii) only
- C:-(ii) and (iii) only
- D:-(i), (ii) and (iii) only

Correct Answer:- Option-B

Question17:-The Lathe accessory which is used for holding bored parts for machining their outside surface on lathe is

- A:-Face plate
- B:-Angle plate
- C:-Mandrel
- D:-Lathe carrier or dogs

Correct Answer:- Option-C

Question18:-A milling operation in which a pair of side milling cutters is used for machining two parallel vertical surface of a workpiece simultaneously is known as

- A:-Gang milling
- B:-Straddle milling
- C:-Face milling
- D:-Slab milling

Correct Answer:- Option-B

Question19:-Consider the following operations :

- (i) Boring
- (ii) Counter sinking
- (iii) Broaching
- (iv) Tapping

Which of the operations given above can be performed on a drilling machine?

- A:-(i), (ii) and (iv) only
- B:-(i) and (ii) only
- C:-(i), (ii) and (iii) only
- D:-(iii) and (iv) only

Correct Answer:- Option-A

Question20:-Consider the following systems :

- (i) Tool systems
- (ii) Planning systems
- (iii) Transporting systems
- (iv) Handling systems

Which of the systems given above is/are the component of flexible manufacturing systems

- A:-(i) and (ii) only

B:-(ii) and (iii) only

C:-(i) and (iii) only

D:-(i), (ii), (iii) and (iv)

Correct Answer:- Option-D

Question21:-In an inverted U tube manometer, the density of the manometric fluid in comparison with the density of fluid whose pressure difference is to be found out

A:-is lighter

B:-is denser

C:-has same density

D:-doesn't depend on the density

Correct Answer:- Option-A

Question22:-In a hydraulic jack the pistons have an area of  $0.8\text{cm}^2$  and  $0.04\text{m}^2$ . The specific gravity of hydraulic oil used is 0.87. If a car weighing 1000 kg is to be lifted up find out the force to be applied

A:-29.6 N

B:-19.6 N

C:-9.6 N

D:-39.6 N

Correct Answer:- Option-B

Question23:-The velocity along the centreline of a nozzle of length L is given by

$$u = 2t\left(1 - \frac{x}{L}\right)^2$$

Where u is the velocity in m/s, t is time in seconds and x is the distance in meters from the nozzle inlet. If the length of nozzle is 0.5 m, the acceleration when t=1 second and x = 0.1 is

A:-1.62 m/s<sup>2</sup>

B:--5.83 m/s<sup>2</sup>

C:--4.21 m/s<sup>2</sup>

D:-5.83 m/s<sup>2</sup>

Correct Answer:- Option-C

Question24:-The two-dimensional velocity field is given by  $\vec{V} = x^2\vec{i} + (-2xy - 2)\vec{j}$ . The vorticity is

A:-(2y)k

B:-(4y)k

C:-(-2y)k

D:-(-4y)k

Correct Answer:- Option-C

Question25:-A pitot-static tube records

A:-Static pressure and dynamic pressure

B:-Static pressure and stagnation pressure

C:-Dynamic pressure and stagnation pressure

D:-Static pressure only

Correct Answer:- Option-B

Question26:-A jet of water 60 mm diameter and velocity 20 m/s strikes a symmetrically curved fixed vane at the centre. After impingement the jet gets deflected through  $150^\circ$  by the vane. Find the force excited by the jet on the vane if the surface of the vane is smooth

A:-2110 N

B:-1605 N

C:--151 N

D:--979 N

Correct Answer:- Option-A

Question27:-A Pelton wheel is designed to operate under a head of 625 m and develop 6 MW while running at 200 rpm. The unit speed of the turbine is

A:-4898

B:-8

C:-0.32

D:-0.57

Correct Answer:- Option-B

Question28:-Following are different statements related to draft tube. Which among them is/are correct?

(i) It decreases the pressure at the runner exit to a value less than atmosphere pressure

(ii) It recovers a portion of exit kinetic energy to tail race

(iii) It increases the pressure at the runner exit to prevent recirculation

(iv) It does not recover any portion of exit kinetic energy

A:-Only (i)

B:-Both (i) and (ii)

C:-Only (iii)

D:-Both (iii) and (iv)

Correct Answer:- Option-B

Question29:-A centrifugal pump is designed to discharge  $0.25 \text{ m}^3/\text{s}$  against a head of 16 m while running at 900 rpm. The specific speed of the pump is

A:-112.5

B:-28.12

C:-14.06

D:-56.25

Correct Answer:- Option-D

Question30:-A double acting reciprocating pump runs at 120 rpm. The suction pipe has a diameter of 100 mm has an air vessel fitted to its suction side. The diameter of cylinder and stroke are 150 mm and 450 mm respectively. If piston is driven with Simple Harmonic Motion, the rate of flow into the air vessel when the crank makes  $60^\circ$  with the inner dead centre is

A:- $0.011 \text{ m}^3 / \text{s}$

B:- $0.007 \text{ m}^3 / \text{s}$

C:- $0.019 \text{ m}^3 / \text{s}$

D:- $0 \text{ m}^3 / \text{s}$

Correct Answer:- Option-A

Question31:-According to Lami's Theorem

A:-Three forces acting at a point will be in equilibrium

B:-Each forces acting at appoint can be represented by a triangle each side being proportional to force

C:-If three forces acting upon a particle are represented in magnitude and direction by the sides of the triangle taken in the order they will be in equilibrium

D:-If three forces acting at a point are in equilibrium, each force is proportional to the sine of the angle between the other two

Correct Answer:- Option-D

Question32:-A body is subjected to a direct tensile stress of 600 MPa in one plane accompanied by simple shear stress of 400 MPa. The maximum shear stress will be

A:-100 MPa

B:-500 MPa

C:-250 MPa

D:-250 MPa

Correct Answer:- Option-B

Question33:-A column of length 'L' with one end fixed and other end hinged may be considered equivalent to a column of length \_\_\_\_\_ with both ends hinged.

A:-L

B:-L/2

C:- $L/\sqrt{2}$

D:-L/8

Correct Answer:- Option-C

Question34:-The slope of the stress-strain curve in the elastic deformation region is

A:-Elastic modulus

B:-Plastic modulus

C:-Poisson's ratio

D:-None of the mentioned

Correct Answer:- Option-A

Question35:-A cantilever is subjected to point load at the free end. The maximum tensile form of bending stress on the beam acts at

- A:-Top most point of the beam at the fixed end
- B:-Neutral axis of the beam at the fixed end
- C:-Bottom most point of the beam at the fixed end
- D:-Top most point of the beam at the free end

Correct Answer:- Option-A

Question36:-Which among the following materials does not exhibit distinct endurance limit?

- A:-Mild steel
- B:-Titanium
- C:-Stainless steel
- D:-Aluminium

Correct Answer:- Option-D

Question37:-Two mating spur gears have 30 and 90 teeth respectively. The pinon rotates at 900 rpm and transmit torque of 15 Nm. The torque transmitted by gear is

- A:-30 Nm
- B:-15 Nm
- C:-45 Nm
- D:-12 Nm

Correct Answer:- Option-C

Question38:-A screw thread is specified by

- A:-Pitch diameter
- B:-Nominal diameter
- C:-Minor diameter
- D:-Root diameter

Correct Answer:- Option-B

Question39:-The longitudinal joint in boilers is used to get the required

- A:-Efficiency of the boiler
- B:-Length of the boiler
- C:-Diameter of the boiler
- D:-Length and diameter of boiler

Correct Answer:- Option-C

Question40:-Bull engine is an inversion of

- A:-Single slider crank chain
- B:-Double slider crank chain
- C:-Triple slider crank chain



D:-Four bar chain

Correct Answer:- Option-A

Question41:-Which of the following performance test is conducted on I.C. engine for estimating indicated power of a Multi-cylinder engines?

A:-Retardation test

B:-Heat balance test

C:-Morse test

D:-None of the above

Correct Answer:- Option-A

Question42:-Which of the following does not related to SI engines?

A:-Carburetor

B:-Spark plug

C:-Fuel injector

D:-Ignition coil

Correct Answer:- Option-C

Question43:-If the reflectivity and transmissivity of a body is zero, then it is referred as

A:-Black body

B:-White body

C:-Grey body

D:-Opaque body

Correct Answer:- Option-A

Question44:-Which of the following engine performance parameter is the criterion of economic power production?

A:-Total fuel consumption

B:-Specific fuel consumption

C:-Brake power

D:-Indicated power

Correct Answer:- Option-B

Question45:-The ratio of brake power to indicated power of an I.C. engine is

A:-Thermal efficiency

B:-Volumetric efficiency

C:-Relative efficiency

D:-Mechanical efficiency

Correct Answer:- Option-D

Question46:-The ratio of momentum diffusivity to thermal diffusivity is

A:-Prandtl number

B:-Reynolds number

C:-Nusselt number

D:-Grashof number

Correct Answer:- Option-A

Question47:-Lumped system analysis is reasonably applicable when the value of Biot number is less than

A:-0.1

B:-1

C:-10

D:-0.01

Correct Answer:- Option-A

Question48:-Which of the following is true if the value of Nusselt Number is unity?

A:-Heat transfer is through conduction only

B:-Heat transfer is through convection only

C:-Absence of heat transfer

D:-None of the mentioned

Correct Answer:- Option-A

Question49:-Which of the following heat transfer process involve the internal heat generation?

A:-Nuclear fission

B:-Curing of concrete

C:-Joule heating

D:-All the above

Correct Answer:- Option-D

Question50:-Value of relative humidity for the saturated air is

A:-0%

B:-100%

C:-1%

D:-Any of the above

Correct Answer:- Option-B

Question51:-Find the resistance of the coil which takes a current of  $5\sqrt{60}^\circ$  A (lag) from the 100V, 50 Hz supply.

A:-5 $\Omega$

B:-10 $\Omega$

C:-20 $\Omega$

D:-60 $\Omega$

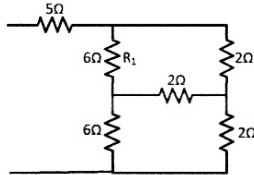
Correct Answer:- Option-B

Question52:-For a series RLC circuit, the power factor at the lower half power frequency is

- A:-0.5 lagging
- B:-0.707 lagging
- C:-0.5 leading
- D:-0.707 leading

Correct Answer:- Option-D

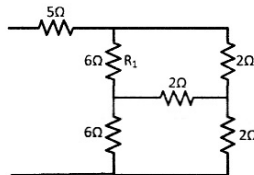
Question53:-If the voltage across the capacitor in the circuit shown is  $(2 - e^{-2t})$ V, the source voltage  $V_s$  in volts is



- A:-5
- B:- $2 - e^{-2t}$
- C:- $2e^{-2t}$
- D:-2

Correct Answer:- Option-A

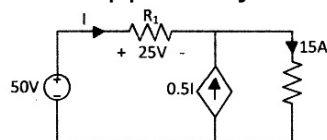
Question54:-Consider the portion of a circuit shown in figure with 80W power loss in  $5\Omega$  resistance, then the power loss in  $R_1$  resistance is



- A:-6W
- B:-12W
- C:-3W
- D:-40W

Correct Answer:- Option-A

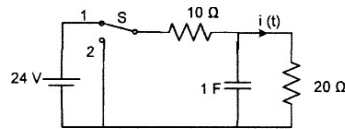
Question55:-The power supplied by 50V source is



- A:-250W
- B:-125W
- C:-500W
- D:-150W

Correct Answer:- Option-C

Question56:-The circuit is in steady state at switch position 1. The switch is moved to position 2 at  $t = 0$ . The current  $i(t)$  in the circuit at  $t = 0 +$  is



A:-0.2A

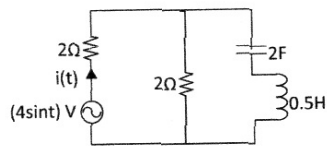
B:-0.8A

C:-1.2A

D:-2.4A

Correct Answer:- Option-B

Question57:-The r.m.s. value of the current  $i(t)$  in the circuit shown below is



A:- $\sqrt{2}$ A

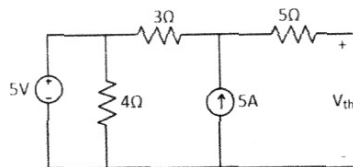
B:- $2\sqrt{2}$ A

C:-2A

D:- $(1/\sqrt{2})$ A

Correct Answer:- Option-A

Question58:-For the network shown below, the Thevenin equivalent voltage,  $V_{th}$  is



A:-5V

B:-25V

C:-15V

D:-20V

Correct Answer:- Option-D

Question59:-If a purely resistive load has to be connected to an AC voltage source with internal impedance of  $(8+j6)\Omega$  in order to extract maximum power out of the source, the value of load resistance in  $\Omega$  should be

A:-8

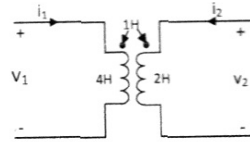
B:-6

C:-10

D:-14

Correct Answer:- Option-C

Question60:-For the circuit given  $i_1 = 2\sin(t)$  and  $i_2 = 0$ . The value of  $V_2$  is



A:  $-8\cos(t)$

B:  $-2\cos(t)$

C:  $-2\cos(t)$

D:  $-\cos(t)$

Correct Answer:- Option-B

Question61:-The purpose of equalizer rings in a lap winding DC machine is to

A:-Improve commutation

B:-Reduce armature reaction

C:-Reduce harmonics

D:-Prevent the flow of circulating current through brushes

Correct Answer:- Option-D

Question62:-If  $W_i$  is the iron loss and  $W_c$  is the copper loss of a transformer, the maximum efficiency of the transformer occurs at

A:  $-W_i = W_c$

B:  $-W_i = 2W_c$

C:  $-W_i = 0.5W_c$

D:  $-W_i = 1.5W_c$

Correct Answer:- Option-A

Question63:-A shunt generator delivers 500 A at 250 V and the resistance of shunt field and armature are 50 ohm and 0.01 ohm respectively. The generated emf is

A:-250V

B:-255 V

C:-255.05 V

D:-None of the above

Correct Answer:- Option-C

Question64:-A 20 KVA, 2000/200V single phase transformer has core loss of 300 W and copper loss of 400 W at full load. The total losses at half full load will be

A:-400 W

B:-300 W

C:-200 W

D:-None of the above

Correct Answer:- Option-A

Question65:-A 4 pole three phase induction motor operates from 440 V, 50 Hz supply. At 4% slip, the speed of the motor is

- A:-1500 rpm
- B:-1400 rpm
- C:-1440 rpm
- D:-None of the above

Correct Answer:- Option-C

Question66:-The rotor resistance and leakage reactance of an induction motor is  $R_2$  and  $X_2$  respectively. If the stator impedance is neglected, the maximum torque of an induction motor occurs at a slip of

- A:-Slip =  $R_2 / X_2$
- B:-Slip = 0
- C:-Slip = 1
- D:-None of the above

Correct Answer:- Option-A

Question67:-During blocked rotor test on induction motor, the power drawn by the motor is mainly for

- A:-Copper loss and core loss
- B:-Copper loss
- C:-Core loss
- D:-None of the above

Correct Answer:- Option-B

Question68:-A synchronous motor can be used as a synchronous condenser at

- A:-Over excited
- B:-Under excited
- C:-Both (1) and (2)
- D:-None of the above

Correct Answer:- Option-A

Question69:-Prime mover for a salient pole synchronous generator is

- A:-Steam turbine
- B:-Hydro turbine
- C:-(1) or (2)
- D:-None of the above

Correct Answer:- Option-B

Question70:-The maximum power output of a synchronous generator having synchronous reactance of X, generated emf E and terminal voltage V is

- A:-EV/X

B:- $V^2 / X$

C:- $E^2 / X$

D:-None of the above

Correct Answer:- Option-A

Question71:-Identify the true statement from the following with respect to distance relays

A:-Mho relay is more appropriate for protection of short transmission lines

B:-Impedance relay is more appropriate for protection of medium transmission lines

C:-Reactance relay is more appropriate for protection of long transmission lines

D:-Mho relay is highly affected due to power swings

Correct Answer:- Option-B

Question72:-An IDMT relay has a current setting of 150%. The relay is connected in the circuit through a CT having ratio 400/5. If the fault current in relay coil is 4800, Obtain the plug setting multiplier

A:-2

B:-4

C:-8

D:-16

Correct Answer:- Option-C

Question73:-The synchronous reactance of a 4000 MVA, 10 kV synchronous generator is 0.1 p.u. Determine the synchronous reactance on the base values of 1000 MVA, 20 kV.

A:-0.01 25 p.u

B:- $6.25 \times 10^{-3}$  p.u.

C:-0.1 p.u.

D:-None of the above

Correct Answer:- Option-B

Question74:-Consider the following statements

(1) Ferranti effect on long overhead lines is experienced when it is at full load at unity power factor

(2) Bundled conductors are employed to improve the mechanical stability of the transmission line

(3) Skin effect lessens the effective area of cross-section of the conductor and hence increases its effective resistance

(4) The proximity effect is lesser for stranded conductors than solid conductors

Which of the statements are correct?

A:-1, 2 and 3

B:-2 and 3

C:-3 and 4

D:-All of the above

Correct Answer:- Option-C

Question75:-Power loss due to corona does not depend on

A:-Diameter of the conductor

B:-Height of the conductor

C:-Spacing between conductors

D:-Line voltage

Correct Answer:- Option-B

Question76:-In symmetrical components, the operator 'a' rotates the vector through \_\_\_\_\_ in the \_\_\_\_\_ direction.

A:-90°, clockwise

B:-90°, anti-clockwise

C:-120°, clockwise

D:-120°, anti-clockwise

Correct Answer:- Option-D

Question77:-The various power system faults are

1. Single Line to Ground fault (LG)
2. Line to Line fault (LL)
3. Double line to Ground fault (LLG) and
4. Three phase faults (LLL/LLLG)

If these faults are arranged in the order of increasing severity is

A:-1, 2, 3, 4

B:-3, 4, 1, 2

C:-4, 3, 2, 1

D:-4, 3, 1, 2

Correct Answer:- Option-A

Question78:-If A represents value of steady state stability limit and B represents value of transient stability limit, which one of the following expression is true?

A:- $A > B$

B:- $A = B$

C:- $A < B$

D:- $A + B = 1$

Correct Answer:- Option-A

Question79:-A three phase OHT line has its conductors horizontally spaced with spacing equal to  $d$  between adjacent conductors. If the conductors of the line are re-arranged to form an equilateral triangle of sides equal to  $d$ ; then

A:-Average capacitance as well as average inductance will increase

B:-Average capacitance will decrease but the average inductance will increase



C:-Average capacitance will increase but the average inductance will decrease

D:-Average capacitance as well as average inductance will decrease

Correct Answer:- Option-C

Question80:-In a three unit insulator, the voltage stress across at the bottom most unit is found to be 33.33 kV. Given that the string efficiency is 66.66%. Evaluate the total voltage across the whole unit.

A:-50.0 kV

B:-11.11 kV

C:-33.33 kV

D:-66.66 kV

Correct Answer:- Option-D

Question81:-The maximum percentage error in the sum of two voltage measurements when  $V_1 = 75V \pm 1\%$  and  $V_2 = 50V \pm 5\%$  is

A:-1.8%

B:-2.6%

C:-3.2%

D:-2.2%

Correct Answer:- Option-B

Question82:-A moving coil of a meter has 200 turns, and a length and depth of 10 mm and 20 mm respectively. It is positioned in a uniform radial flux density of 300 mT. The coil carries a current of 60 mA. The torque on the coil is

A:-520  $\mu\text{Nm}$

B:-620  $\mu\text{Nm}$

C:-720  $\mu\text{Nm}$

D:-820  $\mu\text{Nm}$

Correct Answer:- Option-C

Question83:-The inductance of a certain moving iron ammeter is expressed as  $L = 3 + 6\theta - \theta^2 \mu\text{H}$ . The control spring torque is  $3 \times 10^{-6} \text{Nm/radian}$ . The deflection in radians for a current of 3A is

A:-5.33

B:-2.73

C:-3.73

D:-3.33

Correct Answer:- Option-A

Question84:-Ratio of readings of two wattmeter connected to measure power in a balanced 3-phase load is 2:1 and the load is inductive. The power factor of load is

A:-0.6 lag

B:-0.707 lag

C:-0.866 lag

D:-0.8 lag

Correct Answer:- Option-C

Question85:-Assertion (A) : It is always desirable to take the reading of an indicating instrument very close to the full scale reading

Reason (R) : Accuracy of an indicating instrument is maximum at the full scale deflection and error increases as reading comes closer to the beginning of the scale

A:-A is true but R is false

B:-A is false but R is true

C:-Both A and R are true and R is the correct explanation of A

D:-Both A and R are true but R is NOT the correct explanation of A

Correct Answer:- Option-C

Question86:-The coil of a moving iron instrument has a resistance of 500 ohm and inductance of 1H. It reads 200 V when a 200 V DC is applied. Its series resistance is 1000 ohms its reading when fed by 200 V, 50 Hz AC will almost be

A:-196 V

B:-192 V

C:-202 V

D:-204 V

Correct Answer:- Option-A

Question87:-Assertion (A) : A low power factor wattmeter has special constructional features to ensure accurate measurement

Reason (R) : Extension of wattmeter range in DC circuit can be easily done by using current and potential transformer

A:-A is true but R is false

B:-A is false but R is true

C:-Both A and R are true and R is the correct explanation of A

D:-Both A and R are true but R is not the correct explanation of A

Correct Answer:- Option-A

Question88:-To the 'y' input of a CRO a signal defined by  $10\sin(100t)$  is applied. To the 'x' input a signal  $10\cos(100t)$  is fed. The gain for both x-channel and y-channel is the same. The screen shows

A:-sinusoidal waveform

B:-Circle

C:-Ellipse

D:-Straight line

Correct Answer:- Option-B

Question89:-The meter constant of a single phase 240V induction watt-hour meter

is 800 revolutions per KWh. The speed in rpm of the meter disc for a current of 20 Amperes and 0.8 p.f. lagging will be

A:-47.6

B:-57.6

C:-41.2

D:-51.2

Correct Answer:- Option-D

Question90:-Two holes are drilled at the opposite sides of the spindle in the disc of energy meter to

A:-increase ventilation

B:-increase its braking torque

C:-increase its deflecting torque

D:-eliminate creeping at no load

Correct Answer:- Option-D

Question91:-What type of transducer is an LVDT?

A:-Resistive

B:-Capacitive

C:-Inductive

D:-Optical

Correct Answer:- Option-C

Question92:-A LVDT has a stroke length of  $\pm 100$ mm and produces a resolution of 25mV/mm when moved. Determine the output voltage when the core is moved 120 mm from its null position.

A:-3.0 V

B:-4.0 V

C:-2.5 V

D:-5.0 V

Correct Answer:- Option-A

Question93:-The instrument which is used to measure the specific gravity to battery electrolyte?

A:-Hygrometer

B:-Hydrometer

C:-Barometer

D:-Anemometer

Correct Answer:- Option-B

Question94:-Which transducer is used for measurement of magnetic field?

A:-Inductive

B:-LVDT

C:-Hygrometer

D:-Hall effect

Correct Answer:- Option-D

Question95:-A trickle charger for a storage battery assists in

A:-Maintain proper electrolyte level

B:-Increase its reverse capacity

C:-Prevent sulphation

D:-Keep it fresh and fully charged

Correct Answer:- Option-D

Question96:-As per recommendation of ISI the maximum load that can be connected in one sub circuit is

A:-800 watts

B:-1000 watts

C:-1600 watts

D:-500 watts

Correct Answer:- Option-A

Question97:-What is the minimum required length of pipe in a pipe electrode earthing system?

A:-5.0m

B:-1.5m

C:-2.0m

D:-2.5m

Correct Answer:- Option-D

Question98:-The luminous intensity of 200 W unidirectional bulb is 150 candela. The total luminous flux emitted from the bulb is

A:- $600\pi$  lumen

B:-600 lumen

C:- $300\pi$  lumen

D:-300 lumen

Correct Answer:- Option-A

Question99:-What is the average illumination in a room with an area of  $5 \times 5m$ , illuminated by four numbers of 100-W lamps with a luminous efficiency of 80 lumens/W and a coefficient of utilization of 0.65?

A:-264 lux

B:-100 lux

C:-832 lux

D:-524 lux

Correct Answer:- Option-C

Question100:-Which lamp emits nearly monochromatic light

A:-Sodium vapour lamp

B:-Incandescent lamps

C:-LED lamps

D:-Halogen lamps

Correct Answer:- Option-A