Teachingninja.in

Latest Govt Job updates

Private Job updates

Free Mock tests available

Visit - teachingninja.in

CSPHCL
JE

Previous Year Paper
(Electrical)
31 May 2018 Shift 1

Teachingninja.in

CHHATTISGARH STATE POWER HOLDING COMPANY LTD.

(A Successor Company of CSEB)

Participant ID:	
Participant Name:	
Test Center Name:	
Test Date:	31/05/2018
Test Time:	9:00 AM - 11:00 AM
Subject:	JUNIOR ENGINEER ELECTRICAL

Section : **General Awareness & Reasoning**

Q.1 As per the Constitution of India, the Chief Election Commissioner shall NOT be removed from his office except in like manner and on the like grounds as a:

Question ID : **7162951100**
Status : **Not Answered**
Chosen Option : **--**

Ans
✗ 1. Judge of the High Court
✗ 2. Member of Lok Sabha
✗ 3. Speaker of the Lok Sabha
✓ 4. Judge of the Supreme Court

Q.2 Which state has launched the 'Rupashree' scheme to support the marriage of poor women?

Question ID : **7162951103**
Status : **Not Answered**
Chosen Option : **--**

Ans
✗ 1. Tripura
✗ 2. Odisha
✗ 3. Karnataka
✓ 4. West Bengal

Q.3 Which country does Antonio Guterres, the United Nations (UN) Secretary General, belong to?

Question ID : **7162951101**
Status : **Not Answered**
Chosen Option : **--**

Ans
✗ 1. Hungary
✓ 2. Portugal
✗ 3. Austria
✗ 4. Poland

Q.4 The noted musician and 2018 Padma Bhushan awardee Arvind Parikh is an exponent of which of the following instruments?

Question ID : **7162951099**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Violin
✗ 2. Guitar
✗ 3. Shehnai
✓ 4. Sitar

Q.5 The 2017 Nobel Peace Prize-winning organisation *International Campaign to Abolish Nuclear Weapons* (ICAN) has its headquarters in which of the following cities?

Question ID : **7162951104**
Status : **Not Answered**
Chosen Option : **--**

Ans
✓ 1. Geneva
✗ 2. London
✗ 3. Chicago

Teachingninja.in

✗ 4. Stockholm

Q.6 In which year did Mahatma Gandhi return from South Africa to India to participate in the struggle for Indian independence?

Question ID : **7162951096**
Status : **Not Answered**
Chosen Option : **--**

Ans
✗ 1. 1920
✗ 2. 1912
✗ 3. 1918
✓ 4. 1915

Q.7 Sanjita Chanu, the weightlifter who won a Gold Medal in the Commonwealth Games 2018, belongs to which of the following states?

Question ID : **7162951105**
Status : **Not Answered**
Chosen Option : **--**

Ans
✗ 1. Assam
✗ 2. Tripura
✓ 3. Manipur
✗ 4. Meghalaya

Q.8 Which state of India has the highest literacy rate?

Question ID : **7162951102**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Tamil Nadu
✓ 2. Kerala
✗ 3. Goa
✗ 4. Maharashtra

Q.9 Which state of India has the largest forest cover in terms of area?

Question ID : **7162951097**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Arunachal Pradesh
✓ 2. Madhya Pradesh
✗ 3. Andhra Pradesh
✗ 4. Odisha

Q.10 What is the rate of interest paid on the bonds issued under the Sovereign Gold Bond Scheme of Reserve Bank of India?

Question ID : **7162951098**
Status : **Not Answered**
Chosen Option : **--**

Ans
✗ 1. 4.00% per annum
✗ 2. 3.00% per annum
✗ 3. 3.50% per annum
✓ 4. 2.50% per annum

Q.11 The ratio between the present ages of Gaurav and Rohit is 4 : 5. If the difference between their ages is 8 years, what will be the sum of their ages after 4 years?

Question ID : **7162951112**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 65 years
✗ 2. 72 years
✓ 3. 80 years
✗ 4. 68 years

Q.12 If 'M ÷ N' means 'M is the father of N'; 'M × N' means 'M is the mother of N'; 'M + N' means 'M is the sister of N'; then how is P related to S in 'P × Q + R ÷ S'?

Question ID : **7162951111**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Father
✓ 2. Grandmother

Teachingninja.in

✗ 3. Mother

✗ 4. Granddaughter

Q.13 Identify the word from the alternatives, which mentions the quality common to the following three words:

Almirah, Table, Bench

Question ID : **7162951107**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. Office

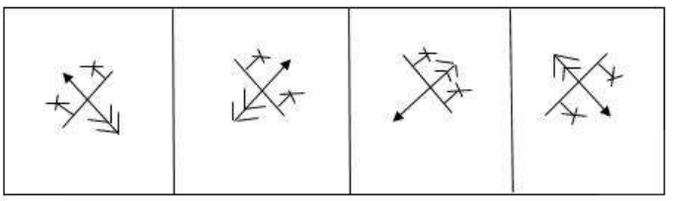
✗ 2. Stool

✓ 3. Furniture

✗ 4. Chair

Q.14 Select the figure which does NOT belong to the group.

Question ID : **7162951108**
Status : **Answered**
Chosen Option : **1**



A B C D

Ans

✓ 1. C

✗ 2. A

✗ 3. B

✗ 4. D

Q.15 Which number does NOT belong to the given series?

0, 6, 24, 60, 118, 210, 336

Question ID : **7162951109**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1. 60

✗ 2. 336

✓ 3. 118

✗ 4. 210

Q.16 Five persons P, Q, R, S and T are standing in a row facing North. 'T' is standing 50 metres left to 'Q'. 'P' is standing 25 metres left to 'R'. 'S' is standing 25 metres right to 'T' and 50 metres right to 'R'. Where is 'R' standing in relation to 'Q'?

Question ID : **7162951110**
Status : **Answered**
Chosen Option : **4**

Ans

✗ 1. 65 metres right

✗ 2. 65 metres left

✗ 3. 75 metres right

✓ 4. 75 metres left

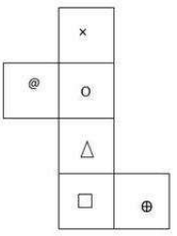
Q.17

Question ID : **7162951115**
Status : **Answered**
Chosen Option : **4**

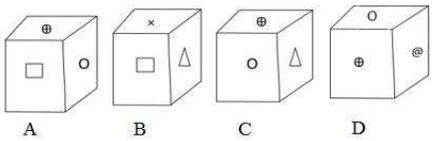
Teachingninja.in

Which of the answer figures can be formed by folding the problem figure given below?

Problem figure:



Answer Figures:



Ans
1. A
2. C ✔
3. B
4. D

Q.18 Select the option that is related to the third term in the same way as the second term is related to the first term.

Wrestling : Arena : : Boxing : ?

Question ID : **7162951106**
Status : **Answered**
Chosen Option : **2**

Ans
1. Court
2. Rink
3. Stadium
4. Ring ✔

Q.19 Among five friends, Naresh is taller than Dinesh and Kunal. Mahesh is taller than Rajeev, but not as tall as Naresh. Dinesh is shorter than Rajeev, but is not the shortest. Who is the tallest among them?

Question ID : **7162951113**
Status : **Answered**
Chosen Option : **1**

Ans
1. Naresh ✔
2. Dinesh
3. Mahesh
4. Kunal

Q.20 Consider the given statements as true and decide which of the conclusions logically follow(s) from the statements.

Statements:
A. All students of my class are honest.
B. Naresh is not honest.

Conclusions:
I. Naresh is not a student of my class.
II. Naresh must try to be honest.

Question ID : **7162951114**
Status : **Answered**
Chosen Option : **2**

Ans
1. Both conclusions I and II follow
2. Only conclusion I follows ✔
3. Only conclusion II follows
4. Neither conclusion I nor II follows

Section : **Discipline**

Q.1 How many cycles are generated in a six-pole alternator in one revolution?

Question ID : **7162951122**
Status : **Answered**
Chosen Option : **1**

Ans
1. 3 ✔
2. 12

Teachingninja.in

✗ 3. 6

✗ 4. 18

Q.2 If x(t) is a continuous signal and 'A' is a constant, then x(At) = ?

Question ID : **7162951180**
Status : **Answered**
Chosen Option : **4**

Ans

✗ 1. Folded version of x(t)

✗ 2. Time scaled version of x(−t)

✗ 3. Amplitude scaled version of x(t)

✓ 4. Time scaled version of x(t)

Q.3 If x(n) is defined as discrete time signal, then $\sum_{n=-\infty}^{\infty}|x(n)|^2 = ?$

Question ID : **7162951184**
Status : **Answered**
Chosen Option : **4**

Ans

✗ 1. $(\text{Energy})^2$ signal

✓ 2. Energy signal

✗ 3. $(\text{Power})^2$ signal

✗ 4. Power signal

Q.4 Which of the following CANNOT be run at no-load?

Question ID : **7162951119**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. DC Shunt Motor

✓ 2. DC Series Motor

✗ 3. Synchronous Motor

✗ 4. Induction Motor

Q.5 For generating a two-phase EMF, the displacement between two phases or windings should be:

Question ID : **7162951193**
Status : **Answered**
Chosen Option : **1**

Ans

✓ 1. 90° elec

✗ 2. 120° elec

✗ 3. 45° elec

✗ 4. 180°elec

Q.6 If α is angle of short pitch in an alternator, then cos(α/2) is:

Question ID : **7162951135**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. Winding factor

✓ 2. Pitch factor

✗ 3. Damping factor

✗ 4. Distribution factor

Q.7 Steady state error is the value of error signal when:

Question ID : **7162951130**
Status : **Answered**
Chosen Option : **1**

Ans

✓ 1. 't' tends to infinity

✗ 2. t = 0+

✗ 3. t = 0

✗ 4. t = 0−

Q.8 The spring that is used in modelling of mechanical translational systems is analogous (Force-voltage analogy) to _____ of electrical systems.

Question ID : **7162951127**

Teachingninja.in

Ans
✗ 1. Inductance
✗ 2. Resistance
✓ 3. Reciprocal to Capacitance
✗ 4. RC Series Circuit

Status : **Answered**
Chosen Option : **3**

Q.9 In a series RLC circuit, if the current at resonance is 10 A, then the current corresponding to half power delivered is:

Ans
✓ 1. 7.07 A
✗ 2. 2.5 A
✗ 3. 10 A
✗ 4. 5 A

Question ID : **7162951187**
Status : **Answered**
Chosen Option : **1**

Q.10 Which of the following is NOT a distance relay?

Ans
✗ 1. Admittance relay
✓ 2. Buchholz relay
✗ 3. Impedance relay
✗ 4. Reactance relay

Question ID : **7162951149**
Status : **Answered**
Chosen Option : **2**

Q.11 Short circuit kVA × Reactance = ?

Ans
✗ 1. Base Impedance
✗ 2. Fault MVA
✗ 3. Base MVA
✓ 4. Base kVA

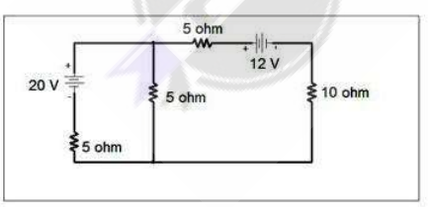
Question ID : **7162951139**
Status : **Answered**
Chosen Option : **4**

Q.12 Which of the following is the most important and most frequently used transistor configuration?

Ans
✗ 1. Common Base
✗ 2. Emitter-Collector
✓ 3. Common Emitter
✗ 4. Common Collector

Question ID : **7162951145**
Status : **Answered**
Chosen Option : **3**

Q.13 Find the Thevenin's equivalent resistance in the given network if $R_L = 10\ \Omega$.



Ans
✗ 1. 3 Ω
✓ 2. 7.5 Ω
✗ 3. 5 Ω
✗ 4. 15 Ω

Question ID : **7162951195**
Status : **Answered**
Chosen Option : **2**

Q.14 Which one of the following is the lowest priority interrupt in the 8086 microprocessor?

Ans
✗ 1. Divide by Zero

Question ID : **7162951144**
Status : **Answered**
Chosen Option : **2**

Teachingninja.in

✔ 2. INTR
✘ 3. Single Step
✘ 4. NMI

Q.15 A dynamometer type instrument indicates _____ value of AC current/voltage to be measured.

Question ID : **7162951167**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. average
✔ 2. RMS
✘ 3. instantaneous
✘ 4. maximum

Q.16 The inertia constant of a 120 MVA, 11 kV water turbine generator is 4. How much energy is stored in the rotor at the synchronous speed?

Question ID : **7162951142**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. 480 MJ
✘ 2. 410 MJ
✘ 3. 30 MJ
✘ 4. 480 kJ

Q.17 If x(t) is a causal signal, then for t < 0:

Question ID : **7162951179**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. $x(t) < 0$
✘ 2. x(t) is not equal to zero
✘ 3. $0 < x(t) < 0$
✔ 4. $x(t) = 0$

Q.18 A three-phase induction motor is supplied with 50 Hz AC supply, and its full load slip is 3%. What is the frequency of the rotor induced EMF?

Question ID : **7162951134**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. 0.155 Hz
✘ 2. 15 Hz
✔ 3. 1.5 Hz
✘ 4. 5 Hz

Q.19 In the two-wattmeter method, if $W_1 = V_L I_L \cos(30° - \varphi)$, $W_2 = V_L I_L \cos(30° + \varphi)$, then reactive power Q = ?

Question ID : **7162951155**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. $0.707(W_1 - W_2)$
✘ 2. $1.732(W_1 + W_2)$
✘ 3. $1.414(W_1 - W_2)$
✔ 4. $1.732(W_1 - W_2)$

Q.20 $\frac{\text{Average Load}}{\text{Maximum Load}} = ?$

Question ID : **7162951136**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. Peak Factor
✘ 2. Diversity Factor
✔ 3. Load Factor
✘ 4. Plant Capacity Factor

Q.21

Teachingninja.in

In load flow studies, |V| and δ are specified at:

Question ID : **7162951140**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Load bus
✓ 2. Slack bus
✗ 3. Generator bus
✗ 4. Additional bus

Q.22 Less current and more voltage is possible with:

Question ID : **7162951124**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. wave wound generator
✗ 2. simplex lap wound generator
✗ 3. open wound generator
✗ 4. duplex lap wound generator

Q.23 If the full load copper loss of a transformer is 400 W, what will be its copper loss at half the full load?

Question ID : **7162951117**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 200 W
✗ 2. 800 W
✓ 3. 100 W
✗ 4. 400 W

Q.24 Which of the following is NOT a frequency dependent loss?

Question ID : **7162951116**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Copper Loss
✗ 2. Iron Loss
✗ 3. Hysteresis Loss
✗ 4. Eddy Current Loss

Q.25 Which of the following motors can convert an electrical signal into an angular displacement of the shaft?

Question ID : **7162951129**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Series Motor
✓ 2. Stepper Motor
✗ 3. Shunt Motor
✗ 4. Three-Phase Induction Motor

Q.26 What is the average value of $a(t) = |Amsinwt|$?

Question ID : **7162951191**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. $\frac{Am}{\pi}$
✓ 2. $\frac{2Am}{\pi}$
✗ 3. $\frac{Am}{2\pi}$
✗ 4. $\frac{Am}{3\pi}$

Q.27 Which of the following is the most popular method for triggering the thyristor?

Question ID : **7162951156**
Status : **Answered**

Ans
✗ 1. Forward Voltage Triggering

Teachingninja.in

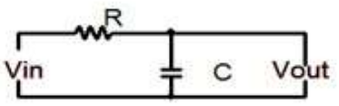
✔ 2. Gate Triggering

✘ 3. Light Triggering

✘ 4. $\frac{dv}{dt}$ Triggering

Chosen Option : **2**

Q.28 What does the below figure represent?



Question ID : **7162951151**
Status : **Answered**
Chosen Option : **4**

Ans

✘ 1. Second order high pass filter

✘ 2. Second order low pass filter

✘ 3. First order high pass filter

✔ 4. First order low pass filter

Q.29 If x(t) and its derivative are Laplace Transformable, then $\lim_{t\to 0} x(t) = \lim_{s\to\infty} sX(s)$ is the statement of:

Question ID : **7162951182**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. Initial value theorem

✘ 2. Final value theorem

✘ 3. Parseval's relation

✘ 4. Convolution theorem

Q.30 A Tangent Galvanometer is a/an:

Question ID : **7162951166**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. Absolute Instrument

✘ 2. Indicating Instrument

✘ 3. Recording Instrument

✘ 4. Integrating Instrument

Q.31 A transfer function model CANNOT be used for the analysis and design of:

Question ID : **7162951133**
Status : **Answered**
Chosen Option : **3**

Ans

✘ 1. linear systems

✘ 2. single-input single-output systems

✔ 3. non-linear systems

✘ 4. time invariant systems

Q.32 How many slip-rings are required for a three-phase squirrel-cage induction motor?

Question ID : **7162951121**
Status : **Answered**
Chosen Option : **4**

Ans

✘ 1. 3

✘ 2. 6

✘ 3. 1

✔ 4. 0

Teachingninja.in

Q.33 _____ is a null-type instrument.

Ans
✗ 1. Voltmeter
✓ 2. Potentiometer
✗ 3. Power factor meter
✗ 4. Wattmeter

Question ID : **7162951174**
Status : **Answered**
Chosen Option : **2**

Q.34 The approximate torque angle corresponding to pull out torque in a practical synchronous motor can be:

Ans
✗ 1. 0°
✗ 2. 45°
✓ 3. 75°
✗ 4. 30°

Question ID : **7162951154**
Status : **Not Answered**
Chosen Option : **--**

Q.35 Which of the following can be used as a Parallel-to-Series converter?

Ans
✗ 1. Decoder
✓ 2. Multiplexer
✗ 3. Demultiplexer
✗ 4. Digital Counter

Question ID : **7162951148**
Status : **Answered**
Chosen Option : **2**

Q.36 $\frac{\sqrt{L/C}}{R}$ is:

Ans
✓ 1. Q-factor of RLC series circuit
✗ 2. Time constant of RLC series circuit
✗ 3. Bandwidth of RLC series circuit
✗ 4. Resonant frequency of RLC series circuit

Question ID : **7162951188**
Status : **Answered**
Chosen Option : **1**

Q.37 Which one of the following is an audio frequency oscillator?

Ans
✗ 1. Hartley
✓ 2. Wien bridge
✗ 3. Colpitts
✗ 4. Crystal

Question ID : **7162951146**
Status : **Not Answered**
Chosen Option : **--**

Q.38 If the discrete time signals $x_1(n) = \{2, 2, 1, 2\}$ and $x_2(n) = \{-2, -1, 3, 2\}$, then $x_1(n) + x_2(n) = ?$

Ans
✓ 1. $\{0, 1, 4, 4\}$
✗ 2. $\{2, 1, 2, 1\}$
✗ 3. $\{0, 1, -2, 0\}$
✗ 4. $\{4, 3, -2, 0\}$

Question ID : **7162951185**
Status : **Answered**
Chosen Option : **1**

Q.39 The CRT screen is coated with phosphor, which absorbs Kinetic Energy of electrons and converts it into light. This process is known as:

Ans
✗ 1. Coalescence
✗ 2. Luminance

Question ID : **7162951172**
Status : **Not Answered**
Chosen Option : **--**

Teachingninja.in

✗ 3. Incandescence

✓ 4. Fluorescence

Q.40 If a load of Z = 10 + j10 is applied across an AC voltage, then the phase difference between voltage and current in the circuit is:

Question ID : **7162951186**
Status : **Answered**
Chosen Option : **4**

Ans

✗ 1. $\frac{\pi}{6}$

✗ 2. $\frac{\pi}{3}$

✗ 3. $\frac{\pi}{2}$

✓ 4. $\frac{\pi}{4}$

Q.41 The gain acquired by the signal when it travels from one node to another is referred to as:

Question ID : **7162951128**
Status : **Answered**
Chosen Option : **1**

Ans

✓ 1. Transmittance

✗ 2. Reluctance

✗ 3. Admittance

✗ 4. Impedance

Q.42 A Programmable Unijunction Transistor (PUT) is an improved version of a/an:

Question ID : **7162951165**
Status : **Answered**
Chosen Option : **1**

Ans

✓ 1. Unijunction Transistor (UJT)

✗ 2. Insulated Gate Bipolar Transistor (IGBT)

✗ 3. Triode for Alternating Current (TRIAC)

✗ 4. Silicon Controlled Rectifiers (SCR)

Q.43 The High Voltage Direct Current (HVDC) link that employs ground return is:

Question ID : **7162951141**
Status : **Answered**
Chosen Option : **3**

Ans

✓ 1. Monopolar

✗ 2. Homopolar

✗ 3. Heteropolar

✗ 4. Bipolar

Q.44 A BCD counter can be constructed using:

Question ID : **7162951147**
Status : **Answered**
Chosen Option : **4**

Ans

✗ 1. D Flip-Flop

✗ 2. 2 JK Flip-Flops

✗ 3. SR Flip-Flop

✓ 4. 4 JK Flip-Flops

Q.45 Which of the following is NOT a frequency domain specification?

Question ID : **7162951131**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1. Resonant Peak

✗ 2. Gain Margin

✗ 3. Phase Margin

Teachingninja.in

✔ 4. Maximum Overshoot

Q.46 In a/an _____, the primary and secondary are magnetically as well as electrically coupled.

Question ID : **7162951125**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. Instrument transformer
✔ 2. Auto transformer
✘ 3. Tap-changing transformer
✘ 4. Step-down transformer

Q.47 Which of the following instruments is designed to measure electrical properties of coils and capacitors, whose principle is based on series resonance?

Question ID : **7162951176**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. Q meter
✘ 2. Potentiometer
✘ 3. Power factor meter
✘ 4. Frequency meter

Q.48 Multiplication of magnitudes can be converted into addition in which of the following?

Question ID : **7162951132**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. Nichols Plot
✘ 2. Nichols Chart
✔ 3. Bode Plot
✘ 4. Nyquist Plot

Q.49 In a three-phase induction motor, if E = Back EMF and f = Supply Frequency, then the air-gap flux can be kept constant by maintaining:

Question ID : **7162951163**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. $\frac{2E}{3f}$ = constant
✔ 2. $\frac{E}{f}$ = constant
✘ 3. Ef = constant
✘ 4. $\frac{3E}{2f}$ = constant

Q.50 Which of the following bridge circuits is used for measurement of capacitance?

Question ID : **7162951175**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. Kelvin double bridge
✔ 2. De Sauty bridge
✘ 3. Wheatstone bridge
✘ 4. Maxwell bridge

Q.51 What is the relation between sampling frequency (F_s), analog frequency (F) and discrete frequency (f)?

Question ID : **7162951183**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. $F = f/F_s$
✘ 2. $f = F_s/F$
✘ 3. $F_s = f/F$
✔ 4. $f = F/F_s$

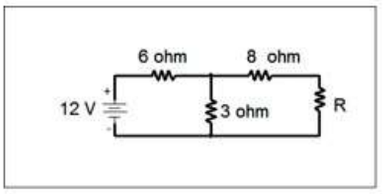
Q.52

Question ID : **7162951152**
Status : **Answered**

Teachingninja.in

Determine the value of R for maximum power transfer to R.

Chosen Option : **3**



Ans
✗ 1. 3 Ω
✗ 2. 15 Ω
✓ 3. 10 Ω
✗ 4. 5 Ω

Q.53 In three impedances, if $18\angle 60°$ ohm are connected in delta, then the three equivalent star impedances would be:

Question ID : **7162951189**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. $6\angle 60°$
✗ 2. $9\angle 30°$
✗ 3. $18\angle 20°$
✗ 4. $6\angle 20°$

Q.54 Shunt capacitors, series capacitors, synchronous capacitors, tap-changing transformers and booster transformers are used for:

Question ID : **7162951138**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Power Factor Control
✗ 2. Current Control
✓ 3. Voltage Control
✗ 4. Loss Control

Q.55 The voltage-to-frequency conversion technique is used in:

Question ID : **7162951173**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Ramp type digital voltmeter
✓ 2. Integrating type digital voltmeter
✗ 3. Successive approximation digital voltmeter
✗ 4. Dual slope type digital voltmeter

Q.56 If the power delivered by a three-phase AC system is $P = \sqrt{3}V_L I_L \cos\phi$, then ϕ is phase difference between:

Question ID : **7162951194**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. phase current and line current
✗ 2. line voltage and corresponding line current
✗ 3. line current and phase voltage
✓ 4. phase voltage and corresponding phase current

Q.57 Back EMF in a DC motor is zero:

Question ID : **7162951118**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. at one-fourth of the full load
✗ 2. at full load
✓ 3. at the moment of starting
✗ 4. at half the full load

Teachingninja.in

Q.58 In both, semi-converter and full converter systems, as the output voltage decreases:

Question ID : **7162951161**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Power Factor increases, Displacement Factor decreases
✗ 2. both Power Factor and Displacement Factor increases
✓ 3. both Power Factor and Displacement Factor decreases
✗ 4. Power Factor decreases, Displacement Factor increases

Q.59 The analog-to-digital converters are employed in:

Question ID : **7162951177**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Digital multimeter
✗ 2. Wattmeter
✗ 3. Voltmeter
✗ 4. Energy meter

Q.60 Determine the even part of signal x(t) = e^{j2t} :

Question ID : **7162951181**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. jCos2t
✗ 2. Sin2t
✓ 3. Cos2t
✗ 4. jSin2t

Q.61 The thermal energy that the Silicon Controlled Rectifier (SCR) can absorb for a short time, before the fault is cleared by the fuse, is measured by:

Question ID : **7162951157**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. Gate power loss rating
✗ 2. $\frac{di}{dt}$ rating
✗ 3. $\frac{dv}{dt}$ rating
✓ 4. I^2t rating

Q.62 A diode whose function is to transfer load current away from the rectifier, whenever the load voltage goes into a reverse state, is called a:

Question ID : **7162951159**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. LED
✗ 2. Zener Diode
✓ 3. Commutating Diode
✗ 4. Tunnel Diode

Q.63 Which one of the following methods measures power in three-phase AC circuits, with both, balanced and unbalanced load?

Question ID : **7162951168**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. 2-Wattmeter Method
✗ 2. 1-Voltmeter Method
✗ 3. 1-Wattmeter Method
✗ 4. 3-Ammeter Method

Q.64

Teachingninja.in

A two-port network is said to be reciprocal if and only if:

Question ID : **7162951192**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. $Z_{12} = Z_{22}$
✓ 2. $Z_{12} = Z_{21}$
✗ 3. $Z_{11} = Z_{12}$
✗ 4. $Z_{11} = Z_{22}$

Q.65 In the Time Ratio Control strategy (constant frequency system) employed in DC Choppers:

Question ID : **7162951160**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Both T_{on} and T are not varied
✗ 2. Both T_{on} and T are varied
✗ 3. T_{on} is kept constant, T is varied
✓ 4. T_{on} is varied, T is kept constant

Q.66 Which of the following inverter/s is suitable for both, single-motor and multi-motor drives?

Question ID : **7162951164**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Both, Current and Voltage Source Inverters
✗ 2. Current Source Inverter
✗ 3. Cycloconverters
✓ 4. Voltage Source Inverter

Q.67 In order to force equal sharing of voltages across the two SCRs (Silicon Controlled Rectifiers) connected in a series, which of the following should be connected across each thyristor?

Question ID : **7162951158**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. External Inductance L
✗ 2. External Capacitance C
✓ 3. External Resistance R
✗ 4. External Series RC Circuit

Q.68 How many poles are present in a single-phase induction motor that normally runs at 1125 RPM on 60 Hz power supply?

Question ID : **7162951123**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 2
✗ 2. 8
✓ 3. 6
✗ 4. 4

Q.69 Which of the following transformers' secondary must always be short circuited?

Question ID : **7162951171**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Power Transformer
✗ 2. Distribution Transformer
✓ 3. Current Transformer
✗ 4. Potential Transformer

Q.70 Which of the following can improve power factor?

Question ID : **7162951153**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Over excited synchronous motor running without a mechanical load
✗ 2. Three-phase induction motor
✗ 3. Alternator

Teachingninja.in

✗ 4. Single-phase induction motor

Q.71 In a two-wattmeter method of three-phase power measurement, the two wattmeters indicate equal readings at:

Question ID : **7162951190**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. $\Phi = 90°$
✗ 2. $\Phi = 60°$
✓ 3. $\Phi = 0°$
✗ 4. $\Phi = 30°$

Q.72 The correct instant for closing the switch which connects an alternator with another alternator can be determined by a/an:

Question ID : **7162951170**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Stroboscope
✗ 2. Gyroscope
✗ 3. Oscilloscope
✓ 4. Synchroscope

Q.73 Which of the following is NOT an Analog-to-Digital Converter?

Question ID : **7162951150**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. R-2R Ladder
✗ 2. Successive Approximation Converter
✗ 3. Counter Type
✗ 4. Dual Slope Converter

Q.74 If A and B are boolean variables, then $(A + B).(A + \bar{B}) = ?$

Question ID : **7162951143**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. A
✗ 2. AB
✗ 3. A + B
✗ 4. B

Q.75 An induction motor has a starting torque of 200 Nm with star-delta starter. What would be the starting torque if it is started by direct switching?

Question ID : **7162951120**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. 600 Nm
✗ 2. 200 Nm
✗ 3. 400 Nm
✗ 4. 100 Nm

Q.76 What is the mathematical model of armature of DC motor in Laplace Domain?

Question ID : **7162951126**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. $V_a(s) + I_a(s) = (R_a + sL_a)\, E_b(s)$
✓ 2. $V_a(s) = (R_a + sL_a) I_a(s) + E_b(s)$
✗ 3. $V_a(s) - I_a(s) = (R_a + sL_a)\, E_b(s)$
✗ 4. $V_a(s) = (R_a + sL_a) E_b(s) + I_a(s)$

Q.77 Which signal is described by $x(t) = At$, for $t \geq 0$

$= 0$, for $t < 0$

Question ID : **7162951178**
Status : **Answered**
Chosen Option : **1**

Ans

Teachingninja.in

✔ 1. Ramp

✘ 2. Impulse

✘ 3. Unit step

✘ 4. Step

Q.78 'Creeping' in energy meters is related to:

Question ID : **7162951169**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. induction type energy meter

✘ 2. dynamometer type wattmeter

✘ 3. MI (Moving Iron) instruments

✘ 4. PMMC (Permanent Magnet Moving Coil) instruments

Q.79 Which of the following does a 'close loop control of DC drives' help achieve?

Question ID : **7162951162**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. The maintenance of constant speed of motor by changing firing angle

✘ 2. The maintenance of constant load on the motor

✘ 3. The maintenance of constant speed and constant firing angle

✘ 4. The maintenance of constant firing angle only

Q.80 Fusing Factor is always:

Question ID : **7162951137**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. Greater than 1

✘ 2. Equal to 2

✘ 3. Less than 1

✘ 4. Equal to 1

Teachingninja.in