

NHPC JE

Previous Year Paper

Electrical

5 April 2022 (Shift 2)



NHPC Limited
(A Government of India Enterprise)
★ Mini-Ratna Category-I PSU
India's Premier Hydro Power Utility



Participant ID	
Participant Name	
Test Center Name	
Test Date	05/04/2022
Test Time :	2:00 PM - 5:00 PM
Subject	Junior Engineer (Electrical)

Section : General Awareness

Q.1 Article 233A inserted by the _____ Amendment Act validated the appointments of and judgements etc. delivered by certain district judges.

Ans ☒ A. Fortieth

☒ B. Fiftieth

☒ C. Twentieth

☒ D. Thirtieth

Question ID : 1034359411

Status : Answered

Q.2 The Kabir Granthavali is associated with the Dadupanth in _____.

- Ans ☐ A. Madhya Pradesh
- ☐ B. Gujarat
- ☒ C. Rajasthan
- ☐ D. Uttar Pradesh

Question ID : 1034359402

Status : Answered

Q.3 Which of the following countries topped the medal table at the Winter Olympics held in Beijing in 2022?

- Ans ☐ A. Germany
- ☐ B. India
- ☒ C. Norway
- ☐ D. China

Question ID : 1034359414

Status : Answered

Q.4 In which of the following years was the Protection of Human Rights Act, 1993 amended?

- Ans ☒ A. 2019
- ☐ B. 2018
- ☐ C. 2020
- ☐ D. 2021

Question ID : 1034359413

Status : Not Answered

Chosen Option : --

Q.5 Who among the following was appointed as the new National e-Governance Division Chief in February 2022?

- Ans ☒ A. Nitin Paranjpe
☒ B. Rakesh Sharma
☒ C. Sanjeev Sanyal
☒ D. Abhishek Singh

Question ID : 1034359407

Status : Answered

Q.6 Hemananda Biswal, who passed away in February 2022, was the first tribal chief minister of which of the following states?

- Ans ☒ A. Odisha
☒ B. Mizoram
☒ C. Assam
☒ D. Nagaland

Question ID : 1034359408

Status : Not Answered

Chosen Option : --

Q.7 The Government of India Act, 1935 separated Burma from India and two new provinces of _____ and Sind were created.

- Ans ☒ A. Delhi
☒ B. Orissa
☒ C. Punjab
☒ D. Assam

Question ID : 1034359412

Status : Not Answered

Chosen Option : --

Q.8 Who among the following won the gold medal in the 55 kg weight category at Singapore Weightlifting International 2022?

Ans ☒ A. Mirabai Chanu

☐ B. Elly Cassandra

☐ C. Tori Gallegos

☐ D. Jessica Sewastenko

Question ID : 1034359415

Status : Not Answered

Chosen Option : --

Q.9 At the end of which year did the Congress held its annual session at Lahore and passed the resolution of Purna Swaraj?

Ans ☐ A. 1925

☐ B. 1921

☐ C. 1923

☒ D. 1929

Question ID : 1034359404

Status : Answered

Q.10 In which of the following states is the Karma dance NOT performed?

Ans ☐ A. Odisha

☐ B. Chhattisgarh

☐ C. Madhya Pradesh

☒ D. Andhra Pradesh

Question ID : 1034359388

Status : Not Answered

Chosen Option : --

Q.11 Which of the following crops is NOT included by the Government of India for the Minimum Support Price as of September 2021?

- Ans ☒ A. Cotton
- ☒ B. Wheat
- ☒ C. Chickpea
- ☒ D. Ragi

Question ID : 1034359393
Status : Answered

Q.12 Which of the following Articles of the Constitution of India lays down that India shall be a Union of States?

- Ans ☒ A. Article 2
- ☒ B. Article 3
- ☒ C. Article 1
- ☒ D. Article 4

Question ID : 1034359410
Status : Not Answered
Chosen Option : --

Q.13 Who among the following players won the ESPN Cricinfo 'Test Batting' award 2021?

- Ans ☒ A. Kyle Jamieson
- ☒ B. Ollie Robinson
- ☒ C. Rishabh Pant
- ☒ D. Kane Williamson

Question ID : 1034359416
Status : Answered

Q.14 In which of the following states is Dulhadev temple located?

- Ans ☒ A. Uttar Pradesh
- ☒ B. Bihar
- ☒ C. Rajasthan
- ☒ D. Madhya Pradesh

Question ID : 1034359390

Status : Answered

Q.15 As per Census 2011, approximately how much percentage of the population of India is below 14 years of age?

- Ans ☒ A. 29.5%
- ☒ B. 34.4%
- ☒ C. 53.2%
- ☒ D. 47.6%

Question ID : 1034359400

Status : Not Answered

Chosen Option : --

Q.16 Who among the following was a freedom fighter and a Gandhian social worker felicitated with the Padma Shri Award in 2022 by the Government of India?

- Ans ☒ A. Sucheta Kripalani
- ☒ B. Shakuntala Choudhary
- ☒ C. Kanaklata Barua
- ☒ D. Aruna Asaf Ali

Question ID : 1034359406

Status : Answered

Q.17 Approximately how much percentage of Earth's surface is covered with oceans?

Ans ☒ A. 58%

☒ B. 84%

☒ C. 71%

☒ D. 67%

Question ID : 1034359401

Status : Answered

Q.18 Which of the following chemical is used in formation of ice cream?

Ans ☒ A. Magnesium Bromate

☒ B. Calcium Carbonate

☒ C. Sodium Chloride

☒ D. Potassium Bicarbonate

Question ID : 1034359397

Status : Answered

Q.19 As per Budget 2022-23, States will be allowed a fiscal deficit of _____ of Gross State Domestic Product.

Ans ☒ A. 4%

☒ B. 15%

☒ C. 8%

☒ D. 12%

Question ID : 1034359394

Status : Not Answered

Chosen Option : --

Q.20 A Green strategic partnership was established between India and _____ in September 2020 with the aim of promoting cooperation in green technologies and the management of natural resources such as groundwater.

Ans ☒ A. Netherlands

☒ B. Denmark

☒ C. Sweden

☒ D. Norway

Question ID : 1034359396

Status : Not Answered

Chosen Option : --

Q.21 Who among the following won the FIFA Club World Cup 2021 final?

Ans ☒ A. Liverpool

☒ B. Palmeiras

☒ C. Chelsea

☒ D. Manchester United

Question ID : 1034359417

Status : Answered

Q.22 India has how many neighbouring countries?

Ans ☒ A. Nine

☒ B. Seven

☒ C. Six

☒ D. Eight

Question ID : 1034359399

Status : Answered

Q.23 Who among the following was the first Indian musician to have performed at the United Nations General Assembly in 1966?

- Ans ☒ A. Lata Mangeshkar
- ☒ B. Annapurna Devi
- ☒ C. MS Subbulakshmi
- ☒ D. KS Chithra

Question ID : 1034359389

Status : Not Answered

Chosen Option : --

Q.24 Who authored the book titled 'A History of Sriniketan: Rabindranath Tagore's Pioneering Work in Rural Construction'?

- Ans ☒ A. Sagarika Ghosh
- ☒ B. Uma Das Gupta
- ☒ C. Priyam Gandhi Mody
- ☒ D. Navdeep Singh Gill

Question ID : 1034359409

Status : Not Answered

Chosen Option : --

Q.25 The old alluvial soil has a higher concentration of _____ than the new alluvial soil.

- Ans ☒ A. lava flows
- ☒ B. sand particles
- ☒ C. kanker nodules
- ☒ D. small bricks

Question ID : 1034359398

Status : Answered

Q.26 The first gold coins were issued around the first century CE by the _____.

Ans ☒ A. Cheras

☒ B. Kushanas

☒ C. Guptas

☒ D. Cholas

Question ID : 1034359405

Status : Answered

Q.27 Which festival is celebrated by the Nyishi tribe of the Indian state of Arunachal Pradesh to welcome all the deities on earth and seek their blessings?

Ans ☒ A. Solung

☒ B. Nyokum

☒ C. Losar

☒ D. Mopin

Question ID : 1034359391

Status : Answered

Q.28 The Raja of Burdwan was _____ during the imposition of the Permanent Settlement.

Ans ☒ A. Mehtab Chand

☒ B. Bijay Chand Mahtab

☒ C. Tejchand

☒ D. Uday Chand Mahtab

Question ID : 1034359403

Status : Not Answered

Chosen Option : --

Q.29 What do you understand by liberalisation in the context of the Indian Economy?

- Ans ☒ A. Increasing the money supply in the economy
- ☒ B. Nationalisation of public financial institutions
- ☒ C. Relaxing unnecessary government control from the market and economic institutions
- ☒ D. A citizen-centric economic structure that maximises welfare

Question ID : 1034359392

Status : Not Answered

Chosen Option : --

Q.30 Which of the following places became the 100th 'Har Ghar Jal' district in Himachal Pradesh in February 2022?

- Ans ☒ A. Chamba
- ☒ B. Hamirpur
- ☒ C. Kinnaur
- ☒ D. Kangra

Question ID : 1034359395

Status : Answered

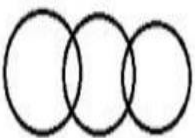
Section : Reasoning

Q.1 Select the Venn diagram that best represents the relationship between the following classes.

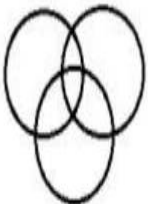
Natural numbers , Irrational numbers, Real numbers

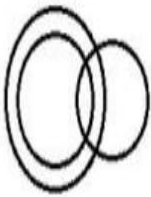
Ans

- X A.


- ✓ B.


- X C.


- X D.



Question ID : 1034359439
Status : Answered

Q.2 In a certain code language, THURSDAY is written as ZBETSVIU. How will DAUGHTER be written in that language?

- Ans

X A. RFTIHUAE
- X B. RETHGUAD
- ✓ C. SFUIHVBE
- X D. USFHIVAE

Question ID : 1034359427
Status : Answered

Q.3 Select the option that is related to the third word in the same way as the second word is related to the first word.

Russia : Moscow :: Norway : _____.

Ans ☒ A. Nairobi

☒ B. Ottawa

☒ C. Oslo

☒ D. Madrid

Question ID : 1034359425

Status : Answered

Q.4 In a family of six persons with two couples, D is the sister of E and daughter of F. G's mother H is the wife of E and the daughter-in-law of J. E's sister's mother is married to F. How is F related to J?

Ans ☒ A. Wife

☒ B. Father-in-law

☒ C. Husband

☒ D. Brother-in-law

Question ID : 1034359429

Status : Answered

Q.6 Consider the given statement and decide which of the given assumptions is/are implicit in the statement.

Statement:

Unless a student scores more than 95% in Standard XII examination, it is less likely that she/he would be admitted to the Robbins College.

Assumptions:

I. The admission of students scoring above 95% is almost guaranteed to the Robbins College.

II. It is difficult to get admission in the Robbins College.

III. Bright students prefer to be admitted into the Robbins College.

Ans  A. Both I and II are implicit.

 B. I, II and III are implicit.

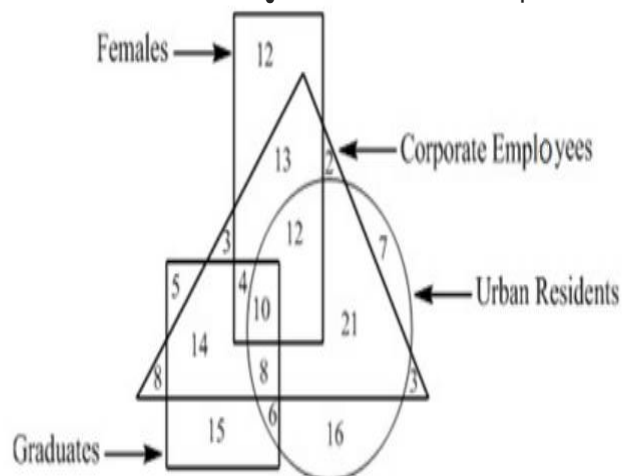
 C. Both II and III are implicit.

 D. Both I and III are implicit.

Question ID : 1034359433

Status : Answered

Q.7 In the following diagram, the different shapes indicate different categories of persons and the numbers in different segments shows the number of persons.



How many graduate corporate employees are either females or urban residents but NOT both?

- Ans ☒ A. 24
- ☒ B. 12
- ☒ C. 14
- ☒ D. 8

Question ID : 1034359440
Status : Answered

Q.8 Aditya started from his tuition point, walks 17 m towards the north to reach the bakery then takes a right turn and walks 12 m to reach the bookstall after that he takes right turn again, walks 27 m and stops at his apartment. Roshan also starts from the same tuition point, walks 18 m towards the south to reach the library, then takes a left turn and walks 18 m before stopping at his apartment. What is the shortest distance between Roshan's apartment and Aditya's apartment?

- Ans ☒ A. 10 m
- ☒ B. 15 m
- ☒ C. 8 m
- ☒ D. 12 m

Question ID : 1034359443
Status : Answered

Q.9 Identify the number that does NOT belong to the following series.
1, 6, 10, 20, 47, 159, 741.

Ans  A. 741

 B. 20

 C. 159

 D. 47

Question ID : 1034359436

Status : Not Answered

Chosen Option : --

Q.10 Identify the letter-cluster that does NOT belong to the following series.
LTCQ, PPFN, TLIK, XHLI, BDOE, FZRB

Ans  A. FZRB

 B. XHLI

 C. BDOE

 D. TLIK

Question ID : 1034359419

Status : Answered

Q.11 Select the correct option that indicates the arrangement of the given words in the order in which they appear in an English dictionary.

1. Umbrella
2. Unconditional
3. Ubiquitous
4. Unfortunate
5. University

Ans  A. 3, 1, 2, 4, 5

 B. 3, 2, 1, 5, 4

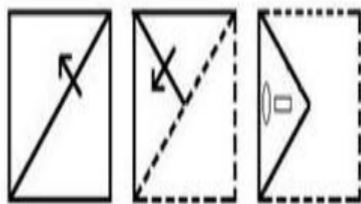
 C. 3, 2, 4, 5, 1

 D. 3, 1, 4, 2, 5

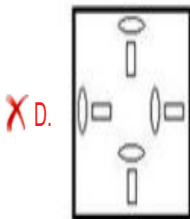
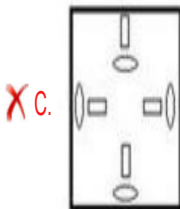
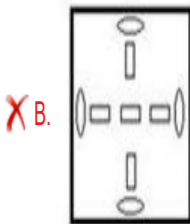
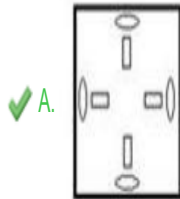
Question ID : 1034359420

Status : Answered

Q.12 The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown in the following figures. How would this paper look when unfolded?



Ans



Question ID : 1034359446

Status : Answered

Q.13 Eight persons, designated alphabetically from A to H, are sitting around a square table. Two persons are sitting on each side of the table, and all are facing the centre. B is facing H, who is to the left of D. C is facing G who is sitting adjacent to E. A is facing F who is to the immediate right of C. Who are the two persons between C and D?

Ans ☒ A. F and H

☐ B. A and H

☐ C. E and F

☐ D. B and F

Question ID : 1034359431

Status : Answered

Q.14 Select the correct mirror image of the given combination when the mirror is placed at line PQ as shown.

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Q

Ans ☒ A. NOITACITION

☐ B. NOITAOITON

☐ C. NOITACITION

☐ D. NOITAOITON

Question ID : 1034359447

Status : Answered

Q.15 Four letter-clusters pairs have been given, out of which three are alike in some manner and one is different. Select the one that is different.

Ans ☒ A. POUR : QLFO

☒ B. STEM : LGVR

☒ C. RAIN : MZRQ

☒ D. MOST : SHLL

Question ID : 1034359422

Status : Answered

Q.16 Select the option in which the words share the same relationship as that shared by the given pair of words.

Ans ☒ A. Enormous : Mammoth

☒ B. Deceit : Sincerity

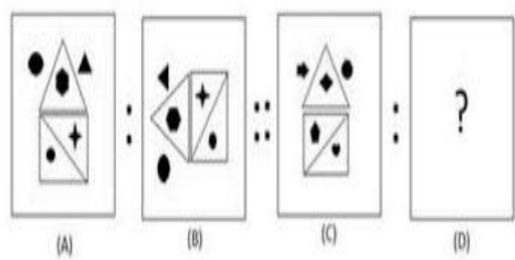
☒ C. Adversity : Prosperity

☒ D. Concede : Reject

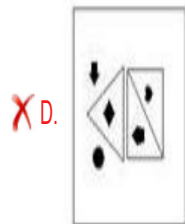
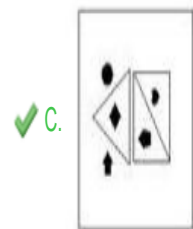
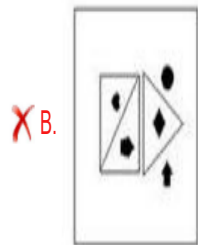
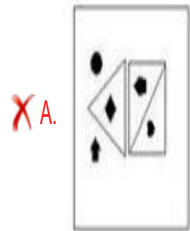
Question ID : 1034359426

Status : Answered

Q.17 Select the option that is related to figure C in the same way as figure B is related to figure A.



Ans



Q.18 Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.
DOVE, GLYB, JIBY, MFEV, ?

Ans ☒ A. PCHS

☒ B. PHIY

☒ C. JCHY

☒ D. PIHY

Question ID : 1034359418

Status : Answered

Q.19 Select the option that is related to the third term in the same way as the second term is related to the first term.
TRIP : IPRT :: MELT : _____

Ans ☒ A. ELMT

☒ B. TELM

☒ C. TLME

☒ D. ELTM

Question ID : 1034359424

Status : Answered

Q.20 Four number triads have been given, out of which three are alike in some manner and one is different. Select the one that is different.

Ans ☒ A. (9, 5, 125)

☒ B. (5, 3, 45)

☒ C. (3, 7, 63)

☒ D. (7, 5, 105)

Question ID : 1034359437

Status : Answered

Q.21 Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some colonies are villages.

Some villages are cities.

Conclusions:

I. No city is a colony.

II. All villages are colonies.

III. Some cities are colonies.

- Ans**
- ☒ A. Only conclusion II follows.
 - ☒ B. Conclusions I, II and III follow.
 - ☒ C. Only conclusion I follows.
 - ☒ D. Either conclusion I or III follows.

Question ID : 1034359432

Status : Answered

Q.22 Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some islands are countries.

All states are islands.

All countries are peninsulas.

Conclusions:

I. Some states are countries.

II. Some peninsulas are islands

III. No state is a peninsula.

- Ans**
- ☒ A. Only conclusion II follows.
 - ☒ B. Both conclusions I and II follow.
 - ☒ C. Only conclusion I follows.
 - ☒ D. Both conclusions II and III follow.

Question ID : 1034359434

Status : Answered

Q.23 Select the number from among the given options that can replace the question mark (?) in the following series.
17, 18, 27, 52, 101, 182, ?

Ans  A. 303

 B. 305

 C. 350

 D. 330

Question ID : 1034359435

Status : Answered

Q.24 Select the word-pair in which the two words share a different relationship from that shared by the two words in the rest of the word-pairs.

Ans  A. Conchology : Mountains

 B. Pathology : Diseases

 C. Seismology : Earthquakes

 D. Entomology : Insects

Question ID : 1034359423

Status : Answered

Q.25 Archana starts from her home and walks 36 m towards the east to reach the Bus stop. From the bus stop she takes a left turn and walks 20 m to reach the parking area and then she takes right turn and walks 24 m to reach the garden and again she takes right turn and walks 26 m and again takes right turn and reaches the temple. If it is given that her house is north of where she ends her journey, then what is the distance between her house and temple?

- Ans  A. 3 m
-  B. 4 m
-  C. 5 m
-  D. 6 m

Question ID : 1034359442

Status : Not Answered

Chosen Option : --

Q.26 Four words have been given, out of which three are alike in some manner and one is different. Select the one that is different.

- Ans  A. Litchi
-  B. Jasmine
-  C. Hibiscus
-  D. Daffodils

Question ID : 1034359421

Status : Answered

Q.27 Mr. Vipin Chakravarthi, sports trainer of a high school has to select three students out of six shortlisted students, Ankit, Kavya, Rahul, Rupali, Pavani and Sanchit, to represent the school in interschool (under 16) sports competition. Ankit, Rahul and Sanchit are boys and Kavya, Pavani and Rupali are girls. There are following conditions for the selection of the students:
(i) There should be at least one boy and one girl in the team.
(ii) If Ankit is selected, Rahul cannot be selected.
(iii) Neither Sanchit nor Pavani can be selected unless the other is also selected.
(iv) If Kavya is selected, Rupali must also be selected and vice versa.
Which of the following teams meet the required conditions?

Ans ☒ **A. Sanchit, Pavani and Ankit**

☐ **B. Rahul, Kavya and Pavani**

☐ **C. Ankit, Pavani and Rupali**

☐ **D. Sanchit, Kavya and Pavani**

Question ID : 1034359430

Status : Answered

Q.28 A shopping mall has 8 branches in a city. Branch B7 is 5 km north of Branch B5. Branch B2 is 8 km east of Branch B7. Branch B3 is 8 km west of Branch B8. Branch B2 is 14 km north of Branch B8. Branch B4 is 6 km west of Branch B6. Branch B1 is 5 km north of Branch B4. Branch B5 is 12 km east of Branch B1. What is the direction of branch B4 with respect to branch B7?

Ans ☐ **A. South-east**

☐ **B. South**

☒ **C. South-west**

☐ **D. North**

Question ID : 1034359441

Status : Answered

Q.29 In a certain code language, 'CONSIDER' is coded as '387'. How will 'FRICTION' be coded in that language?

Ans  A. 366

 B. 356

 C. 336

 D. 346

Question ID : 1034359428

Status : Answered

Q.30 Select the option that is related to the fourth number in the same way as the first number is related to the second number and fifth number is related to sixth number.

12 : 576 :: ? : 1944 :: 6 : 72

Ans  A. 16

 B. 20

 C. 14

 D. 18

Question ID : 1034359438

Status : Answered

Section : General Engineering

Q.1 Apart from chromium, stainless steels have _____ as their major alloying element.

Ans  A. radium

 B. molybdenum

 C. nickel

 D. manganese

Question ID : 1034359477

Status : Not Answered

Chosen Option : --

Q.2 In magnetic circuits, the unit of specific reluctance is _____.

- Ans
- ☒ A. Wb/m^2
 - ☒ B. henry/metre
 - ☒ C. metre/henry
 - ☒ D. Wb/A

Question ID : 1034359460

Status : Answered

Q.3 Consider the following statements with respect to the variation of viscosity of fluids with temperature and identify the correct option.

Statement A: The viscosity of liquids decreases with the increase of temperature.

Statement B: The viscosity of gases decreases with the increase of temperature.

- Ans
- ☒ A. Statement A is correct and B is incorrect.
 - ☒ B. Statement B is correct and A is incorrect.
 - ☒ C. Both the statements are correct.
 - ☒ D. Both the statements are incorrect.

Question ID : 1034359452

Status : Not Answered

Chosen Option : --

Q.4 Which of the following is the type of soil that has been deposited from suspension in running water?

- Ans
- ☒ A. Alluvial soil
 - ☒ B. Lacustrine soil
 - ☒ C. Colluvial soil
 - ☒ D. Glacial soil

Question ID : 1034359451

Status : Answered

Q.5 Capillary tubes and throttling valves are types of _____.

- Ans ☒ A. evaporation devices
- ☒ B. heat generation devices
- ☒ C. expansion devices
- ☒ D. leakage restriction devices

Question ID : 1034359472

Status : Answered

Q.6 Which of the following is NOT an example of a discharge lamp?

- Ans ☒ A. Neon-gas lamp
- ☒ B. Mercury vapour lamp
- ☒ C. Fluorescent lamp
- ☒ D. Tungsten filament lamp

Question ID : 1034359466

Status : Answered

Q.7 For a power plant, the ratio of the maximum generator demand to the generator capacity is called _____.

- Ans ☒ A. load factor
- ☒ B. demand factor
- ☒ C. diversity factor
- ☒ D. utilization factor

Question ID : 1034359465

Status : Answered

Q.8 Which of the following methods of irrigation results in less evaporation losses?

- Ans ☒ A. Flooding by contour laterals
- ☒ B. Free flooding from field channels method
- ☒ C. Furrow method
- ☒ D. Zigzag method

Question ID : 1034359453

Status : Not Answered

Chosen Option : --

Q.9 The study pertaining to the physical sciences of the body at rest or in motion subjected to the action of forces is known as ____.

- Ans ☒ A. engineering mechanics
- ☒ B. engineering graphics
- ☒ C. engineering analysis
- ☒ D. engineering experimentation

Question ID : 1034359468

Status : Not Answered

Chosen Option : --

Q.10 Which of the following I beam sections is heavy in weight for the same depth of beam?

- Ans ☒ A. ISHB
- ☒ B. ISTB
- ☒ C. ISMB
- ☒ D. ISNB

Question ID : 1034359457

Status : Not Answered

Chosen Option : --

Q.11 The COP of a Carnot heat pump working between 27°C and 327°C is _____.

Ans ☒ A. 1.0

☒ B. 2.0

☒ C. 1.5

☒ D. 0.5

Question ID : 1034359473

Status : Not Answered

Chosen Option : --

Q.12 An alternating current is given by the expression $i(t) = 60 \sin 314t$. Calculate the frequency.

Ans ☒ A. 25 Hz

☒ B. 50 Hz

☒ C. 100 Hz

☒ D. 500 Hz

Question ID : 1034359461

Status : Not Answered

Chosen Option : --

Q.13 For $v_1(t) = 50 \sin (\omega t + 10^\circ)$ and $v_2(t) = 20 \sin (\omega t + 50^\circ)$, which of the following statements is true?

Ans ☒ A. V_1 leads V_2

☒ B. V_2 and V_1 are in phase

☒ C. V_2 leads V_1

☒ D. V_2 lags V_1

Question ID : 1034359462

Status : Not Answered

Chosen Option : --

Q.14 In a diffuser of nozzle, kinetic energy is converted into _____ energy.

Ans ☒ A. pressure

☒ B. stagnant

☒ C. flow

☒ D. potential

Question ID : 1034359474

Status : Not Answered

Chosen Option : --

Q.15 Which of the following material CANNOT be used as an insulator?

Ans ☒ A. Glass

☒ B. Mica

☒ C. Copper

☒ D. Rubber

Question ID : 1034359458

Status : Not Answered

Chosen Option : --

Q.16 Which of the following statements is NOT correct with respect to properties of building stones?

Ans ☒ A. Fine grained stones with homogeneous distribution look attractive, and hence they are used for carving.

☒ B. Indian standard code recommends a minimum crushing strength of 1.5 N/mm^2 for all building stones.

☒ C. Generally denser stones are stronger in nature.

☒ D. Marble and granite give good appearance when polished

Question ID : 1034359448

Status : Not Answered

Chosen Option : --

Q.17 Which of the following is the correct unit of measurement for the following item of work: 'brick work in foundation and plinth'?

- Ans ☒ A. Numbers
- ☒ B. Cubic metre
- ☒ C. Running metre
- ☒ D. Square metre

Question ID : 1034359449

Status : Not Answered

Chosen Option : --

Q.18 As per IS 10500:2012 (drinking water specifications), the permissible limit for the colour in the absence of alternate source is _____.

- Ans ☒ A. 50 Hazen units
- ☒ B. 15 Hazen units
- ☒ C. 5 Hazen units
- ☒ D. 25 Hazen units

Question ID : 1034359455

Status : Not Answered

Chosen Option : --

Q.19 _____ is the cross-sectional element of a highway that provides lateral confinement to the granular base course of a flexible pavement, which is provided between the pavement edge and the shoulder.

- Ans ☒ A. Camber
- ☒ B. Carriage way
- ☒ C. Guard rail
- ☒ D. Kerb

Question ID : 1034359454

Status : Not Answered

Chosen Option : --

Q.20 A $100\ \Omega$ resistor and a $25\ \Omega$ resistor are connected in parallel. What will be the effective resistance of the parallel connection?

- Ans
- ☒ A. $12.5\ \Omega$
 - ☒ B. $125\ \Omega$
 - ☒ C. $25\ \Omega$
 - ☒ D. $20\ \Omega$

Question ID : 1034359459

Status : Not Answered

Chosen Option : --

Q.21 What is the use of open cross staff in chain surveying?

- Ans
- ☒ A. To find the direction of a line with respect to true north
 - ☒ B. To find the reduced level (RL) at the required point on a chain line
 - ☒ C. To set out offset lines at right angles to a chain line
 - ☒ D. To set out points of equal elevation on a chain line

Question ID : 1034359450

Status : Not Answered

Chosen Option : --

Q.22 A 100:5 current transformer is used in conjunction with a 5 A ammeter. If the later reads 3.5 A, find the line current.

- Ans
- ☒ A. 70 A
 - ☒ B. 1.75 A
 - ☒ C. 0.175 A
 - ☒ D. 7 A

Question ID : 1034359464

Status : Not Answered

Chosen Option : --

Q.23 Which of the following is NOT a valid advantage of moving iron instruments?

Ans ☒ A. Uniform scale

☒ B. Can be used for AC as well as DC measurements

☒ C. Low cost

☒ D. High operating torque

Question ID : 1034359463

Status : Not Answered

Chosen Option : --

Q.24 Which of the following is NOT a mode of heat transfer?

Ans ☒ A. Vibration

☒ B. Radiation

☒ C. Conduction

☒ D. Convection

Question ID : 1034359475

Status : Not Answered

Chosen Option : --

Q.25 The direction of the natural process is defined by ____.

Ans ☒ A. third law of thermodynamics

☒ B. zeroth law of thermodynamics

☒ C. second law of thermodynamics

☒ D. first law of thermodynamics

Question ID : 1034359471

Status : Not Answered

Chosen Option : --

Q.26 For a BJT with common base connection, the emitter current is 1 mA. If the emitter circuit is open, the collector current is 50 μ A. Find the total collector current, if $\alpha = 0.92$.

- Ans ☒ A. 0.87 mA
- ☒ B. 1.05 mA
- ☒ C. 0.97 mA
- ☒ D. 0.92 mA

Question ID : 1034359467

Status : Not Answered

Chosen Option : --

Q.27 Which of the following types of concrete exhibits better toughness property and can be used in structures subjected to fatigue loads?

- Ans ☒ A. Light weight concrete
- ☒ B. Self-compacting concrete.
- ☒ C. Fibre reinforced concrete
- ☒ D. Plain cement concrete

Question ID : 1034359456

Status : Not Answered

Chosen Option : --

Q.28 Which of the following is NOT a type of blade orientation of impeller?

- Ans ☒ A. Circular
- ☒ B. Forward curved
- ☒ C. Radial
- ☒ D. Backward curved

Question ID : 1034359476

Status : Not Answered

Chosen Option : --

Q.29 Which of the following is NOT true pertaining to pure substances?

- Ans ☒ A. The substances have fixed boiling and melting points.
- ☒ B. A pure substance usually does not participate in a chemical reaction to form predictable products.
- ☒ C. Pure substances are mostly homogeneous in nature containing only one type of atom or molecule.
- ☒ D. These substances mainly have a constant or uniform composition throughout.

Question ID : 1034359469

Status : Not Answered

Chosen Option : --

Q.30 Which of the following is NOT an energy transport mechanism?

- Ans ☒ A. Mass flow
- ☒ B. Work
- ☒ C. Heat
- ☒ D. Fluid pressure

Question ID : 1034359470

Status : Not Answered

Chosen Option : --

Section : Domain Knowledge

Q.1 Which of the following is NOT observed in a permanent-split single-phase capacitor motor?

- Ans ☒ A. Squirrel-cage rotor
- ☒ B. High power factor
- ☒ C. Centrifugal switch
- ☒ D. Starting winding

Question ID : 1034359527

Status : Answered

Q.2 For a common emitter configuration of BJT, the DC load line is the plot of:

Ans ☒ A. $I_C - V_{CE}$

☒ B. $V_{BE} - I_B$

☒ C. $V_{BE} - I_C$

☒ D. $I_B - I_C$

Question ID : 1034359578

Status : Answered

Q.3 The owner of every overhead line shall ensure that the minimum factors of safety for metal support is _____.

Ans ☒ A. 2.5

☒ B. 3

☒ C. 1.5

☒ D. 2

Question ID : 1034359555

Status : Answered

Q.4 Identify whether the given statements related to the common collector configuration of BJT are true or false.

1. Voltage gain is less than unity.

2. Input resistance is very low.

Ans ☒ A. 1-true, 2-false

☒ B. 1-true, 2-true

☒ C. 1-false, 2-false

☒ D. 1-false, 2-true

Question ID : 1034359577

Status : Answered

Q.5 Which of the following parts is NOT found in a steam power plant?

- Ans ☒ A. Air-preheater
- ☒ B. Economiser
- ☒ C. Heavy water reactor
- ☒ D. Superheater

Question ID : 1034359539

Status : Answered

Q.6 The maximum demand on a power station is 25 MW. If the load factor is 60% and the plant capacity factor is 50%, calculate the reserve capacity of the plant.

- Ans ☒ A. 15 MW
- ☒ B. 30 MW
- ☒ C. 5 MW
- ☒ D. 25 MW

Question ID : 1034359549

Status : Answered

Q.7 Which of the following is NOT a suitable material for the heating element in resistance heating?

- Ans ☒ A. Silver
- ☒ B. Nichrome
- ☒ C. Tungsten
- ☒ D. Silicon carbide

Question ID : 1034359561

Status : Answered

Q.8 Which of the following statements related to DC shunt motor is INCORRECT?

- Ans ☒ A. The torque-armature current is a straight line.
- ☒ B. The torque is inversely proportional to the current.
- ☒ C. It is not suitable for heavy duty starting.
- ☒ D. The torque is zero for zero armature current.

Question ID : 1034359572

Status : Answered

Q.9 In a synchronous machine, if the coil is full-pitched, the two sides of the coil are _____ electrical degree apart.

- Ans ☒ A. 30
- ☒ B. 45
- ☒ C. 180
- ☒ D. 90

Question ID : 1034359530

Status : Answered

Q.10 In a three-phase supply, $V_{bn} = 110 \angle 30^\circ \text{ V}$. Assuming a positive sequence, find V_{cn} .

- Ans ☒ A. $110 \angle -90^\circ \text{ V}$
- ☒ B. $110 \angle -30^\circ \text{ V}$
- ☒ C. $110 \angle 150^\circ \text{ V}$
- ☒ D. $110 \angle 120^\circ \text{ V}$

Question ID : 1034359502

Status : Not Answered

Chosen Option : --

Q.11 When a delta network is converted into an equivalent star network, all three resistors are found to have the same value as $330\ \Omega$. What will be the value of the three resistors in the delta network?

- Ans
- ☒ A. $110\ \Omega$, $110\ \Omega$, $110\ \Omega$
 - ☒ B. $330\ \Omega$, $330\ \Omega$, $330\ \Omega$
 - ☒ C. $990\ \Omega$, $990\ \Omega$, $990\ \Omega$
 - ☒ D. $220\ \Omega$, $220\ \Omega$, $220\ \Omega$

Question ID : 1034359487

Status : Answered

Q.12 For the same output, a single-phase induction motor is about _____ than a corresponding three-phase induction motor.

- Ans
- ☒ A. 30% smaller
 - ☒ B. 3% smaller
 - ☒ C. 30% larger
 - ☒ D. 3% larger

Question ID : 1034359525

Status : Answered

Q.13 Which of the following gauges is used for calibration of other gauges in vacuum measurement?

- Ans
- ☒ A. Ionisation gauge
 - ☒ B. McLeod gauge
 - ☒ C. Thermocouple gauge
 - ☒ D. Pirani gauge

Question ID : 1034359584

Status : Answered

Q.14 Which of the following CANNOT be used for power factor improvement?

Ans ☒ A. Synchronous condenser

☒ B. Phase advancer

☒ C. Inductor bank

☒ D. Static capacitor

Question ID : 1034359542

Status : Answered

Q.15 Identify whether the given statements are true or false.

1. The Merz-Price calculating current principle is more suitable for generators than transformers.

2. The differential protection scheme for longer lines is very cheap.

Ans ☒ A. 1-True, 2-False

☒ B. 1-True, 2-True

☒ C. 1-False, 2-False

☒ D. 1-False, 2-True

Question ID : 1034359553

Status : Answered

Q.16 In which of the following aspects is DC welding more advantageous than AC welding?

Ans ☒ A. Arc stability

☒ B. Power consumption

☒ C. Efficiency

☒ D. Cost

Question ID : 1034359563

Status : Answered

Q.17 In which of the following aspects are transistors superior to vacuum tubes?

- Ans
- ☒ A. Input impedance
 - ☒ B. Power dissipation
 - ☒ C. Temperature dependence
 - ☒ D. Voltage gain

Question ID : 1034359579

Status : Not Answered

Chosen Option : --

Q.18 In case of PT, if the load on the secondary side increases, then:

- Ans
- ☒ A. both the ratio error and the phase angle increase
 - ☒ B. the ratio error decreases but the phase angle increases
 - ☒ C. both the ratio error and the phase angle decrease
 - ☒ D. the ratio error increases but the phase angle decreases

Question ID : 1034359512

Status : Answered

Q.19 The following diodes are operated in reverse biased condition, EXCEPT _____.

- Ans
- ☒ A. Tunnel diode
 - ☒ B. Zener diode
 - ☒ C. Photo diode
 - ☒ D. Varactor diode

Question ID : 1034359573

Status : Answered

Q.20 A steel ring with a 5 cm^2 cross-sectional area is wound uniformly with 600 turns of wire carrying a current of 300 mA. Find the MMF.

- Ans ☒ A. 1800 AT
☒ B. 200 AT
☒ C. 180 AT
☒ D. 1500 AT

Question ID : 1034359493

Status : Answered

Q.21 In a DC machine, an 8-pole lap connected armature has 960 conductors, a flux of 40 mWb per pole and a speed of 400 rpm. Determine the EMF generated.

- Ans ☒ A. 256 V
☒ B. 128 V
☒ C. 64 V
☒ D. 512 V

Question ID : 1034359523

Status : Answered

Q.22 Identify whether the given statements are true or false.

1. In a Y-connected load, the line current and phase current are equal.
2. In a balanced three-phase circuit, the total instantaneous power is equal to the average power.

- Ans ☒ A. 1-true, 2-false
☒ B. 1-false, 2-false
☒ C. 1-true, 2-true
☒ D. 1-false, 2-true

Question ID : 1034359505

Status : Answered

Q.23 For a power plant, the value of diversity factor will always be _____.

- Ans
- ☒ A. negative
 - ☒ B. zero
 - ☒ C. between zero and unity
 - ☒ D. greater than unity

Question ID : 1034359540

Status : Answered

Q.24 In circuit breakers, which of the following methods is a NOT a correct method of increasing arc resistance?

- Ans
- ☒ A. Shortening the arc
 - ☒ B. Cooling the arc
 - ☒ C. Reducing the cross-section of the arc
 - ☒ D. Splitting the arc

Question ID : 1034359547

Status : Answered

Q.25 In case of a star delta starter used for induction motors, the starting torque is _____.

- Ans
- ☒ A. half of the final torque
 - ☒ B. one-third of the final torque
 - ☒ C. three times the final torque
 - ☒ D. twice the final torque

Question ID : 1034359524

Status : Answered

Q.26 As per the IE 1956, a clear space of not less than _____ in width shall be provided in front of a switchboard.

Ans ☒ A. 1 m

☐ B. 4 m

☐ C. 2 m

☐ D. 3 m

Question ID : 1034359554

Status : Answered

Q.27 In alternators, in case of zero power factor leading loads, the armature reaction is _____.

Ans ☒ A. wholly magnetising

☐ B. unpredictable

☐ C. distortional

☐ D. wholly demagnetising

Question ID : 1034359531

Status : Answered

Q.28 Which of the following is NOT a valid method for speed control of a universal motor?

Ans ☐ A. Resistance method

☒ B. Shaded pole mechanism

☐ C. Tapping-field method

☐ D. Centrifugal mechanism

Question ID : 1034359529

Status : Answered

Q.29 The skin effect is most dominantly observed in _____.

- Ans ☒ A. induction heating
- ☒ B. resistance heating
- ☒ C. dielectric heating
- ☒ D. infrared heating

Question ID : 1034359562

Status : Answered

Q.30 When a star-delta starter is used to start a three-phase motor, how many circuit conductors are required between the starter and motor?

- Ans ☒ A. 4
- ☒ B. 3
- ☒ C. 2
- ☒ D. 6

Question ID : 1034359558

Status : Answered

Q.31 As per IE rules, the maximum fluctuation in the 50 Hz supply frequency must be within _____.

- Ans ☒ A. $\pm 3\%$
- ☒ B. $\pm 5\%$
- ☒ C. $\pm 1\%$
- ☒ D. $\pm 2\%$

Question ID : 1034359556

Status : Answered

Q.32 Which of the following statements related to dynamometer type wattmeter is INCORRECT?

- Ans ☒ A. The pressure coil is a moving coil.
- ☒ B. Air friction damping is used.
- ☒ C. It can be used only for AC circuits.
- ☒ D. Both the coils are air cored.

Question ID : 1034359508

Status : Answered

Q.33 A ring-shaped core with a cross-sectional area of 2 cm^2 has a flux density of 5 T. Find the flux in the core.

- Ans ☒ A. 0.001 Wb
- ☒ B. 10 Wb
- ☒ C. 0.01 Wb
- ☒ D. 1 Wb

Question ID : 1034359492

Status : Answered

Q.34 The output impedance of the AF oscillators and RF oscillators are usually _____ and _____, respectively.

- Ans ☒ A. 600Ω , 50Ω
- ☒ B. 500Ω , 100Ω
- ☒ C. 100Ω , 500Ω
- ☒ D. 50Ω , 600Ω

Question ID : 1034359513

Status : Answered

Q.35 Find the value of β for a BJT having $\alpha = 0.99$.

Ans ☒ A. 99

☒ B. 0.99

☒ C. 9.0

☒ D. 9.9

Question ID : 1034359576

Status : Answered

Q.36 Which of the following materials has a positive temperature coefficient of resistance?

Ans ☒ A. Manganin

☒ B. Silicon

☒ C. Mica

☒ D. Germanium

Question ID : 1034359479

Status : Answered

Q.37 A three-phase motor draws 5.6 kW power when subjected to the apparent power of 7000 W. Find the power factor.

Ans ☒ A. 0.6

☒ B. 0.9

☒ C. 0.7

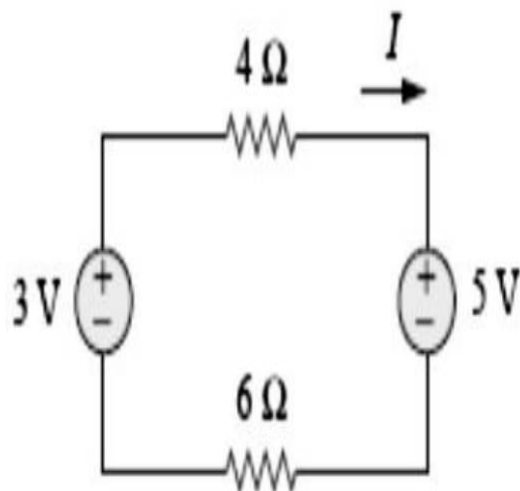
☒ D. 0.8

Question ID : 1034359503

Status : Not Answered

Chosen Option : --

Q.38 Find the current I in the given circuit:



- Ans
- ☒ A. 0.2 A
 - ☒ B. -0.8 A
 - ☒ C. -0.2 A
 - ☒ D. 0.8 A

Question ID : 1034359485

Status : Answered

Q.39 A 250 V lamp has a total flux of 2500 lumens and it takes a current of 500 mA. Find lumens per watt.

- Ans
- ☒ A. 15
 - ☒ B. 10
 - ☒ C. 30
 - ☒ D. 20

Question ID : 1034359571

Status : Answered

Q.40 To reduce the loading error of the voltmeter to less than 1%, the resistance of the voltmeter should be at least _____ as large as the resistance of the path across which the voltage is being measured.

- Ans ☒ A. 10 times
- ☒ B. 100 times
- ☒ C. 1000 times
- ☒ D. 20 times

Question ID : 1034359511

Status : Answered

Q.41 What should be the value of the slip (s) for an induction machine to act as an electric brake?

- Ans ☒ A. $s > 1$
- ☒ B. $s < 0$
- ☒ C. $s = 0$
- ☒ D. $0 < s < 1$

Question ID : 1034359520

Status : Answered

Q.42 Among the given options, Ohm's law is applicable for _____ only.

- Ans ☒ A. germanium
- ☒ B. copper
- ☒ C. silicon
- ☒ D. silicon carbide

Question ID : 1034359478

Status : Answered

Q.43 Rothert's MMF method is used for finding the voltage regulation of:

- Ans
- ☒ A. DC generator
 - ☒ B. transformer
 - ☒ C. induction motor
 - ☒ D. alternator

Question ID : 1034359533

Status : Answered

Q.44 What will be the peak value of the sinusoidal voltage if the RMS value of the signal is 100 V?

- Ans
- ☒ A. 200 V
 - ☒ B. 141.2 V
 - ☒ C. 100 V
 - ☒ D. 70.71 V

Question ID : 1034359499

Status : Answered

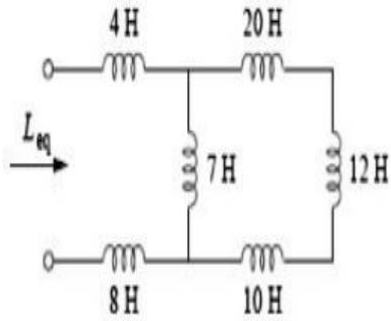
Q.45 The colour code used for the pipelines for electrical services and ventilation ducts is _____.

- Ans
- ☒ A. silver
 - ☒ B. black
 - ☒ C. orange
 - ☒ D. green

Question ID : 1034359557

Status : Answered

Q.46 Find the value of L_{eq} in the given circuit:



Ans ☒ A. 18 H

☒ B. 24 H

☒ C. 12 H

☒ D. 6 H

Question ID : 1034359483

Status : Answered

Q.47 In circuit breakers, the ratio of the making capacity to the symmetrical breaking capacity is approximately ____.

Ans ☒ A. 1.55

☒ B. 2.55

☒ C. 3.55

☒ D. 4.55

Question ID : 1034359550

Status : Answered

Q.48 Which of the following is NOT a unit of pressure measurement?

- Ans ☒ A. Pascal
- ☒ B. Newton
- ☒ C. Torr
- ☒ D. Bar

Question ID : 1034359582

Status : Answered

Q.49 In DC machines, copper losses take place in:

- Ans ☒ A. armature conductors and series field winding
- ☒ B. armature conductors and shunt field winding
- ☒ C. armature conductors
- ☒ D. armature conductors, series field winding and shunt field winding

Question ID : 1034359516

Status : Answered

Q.50 Between two mutually coupled coils, if the mutual inductance is maximum, then the value of the coefficient of coupling between the coils is:

- Ans ☒ A. 0
- ☒ B. 0.5
- ☒ C. 1.0
- ☒ D. 0.75

Question ID : 1034359495

Status : Not Answered

Chosen Option : --

Q.51 Bulk oil circuit breakers are advantageous over low oil circuit breakers if compared on the basis of the:

- Ans ☒ A. quantity of oil required
- ☒ B. space requirement
- ☒ C. degree of carbonisation
- ☒ D. risk of fire

Question ID : 1034359548

Status : Answered

Q.52 In DC motors, which of the following types of braking is called plugging?

- Ans ☒ A. Rheostatic braking
- ☒ B. Friction braking
- ☒ C. Reverse current braking
- ☒ D. Regenerative braking

Question ID : 1034359522

Status : Not Answered

Chosen Option : --

Q.53 1000 Torr = _____

- Ans ☒ A. 1 Micron
- ☒ B. 100 mm of Hg
- ☒ C. 10 mm of Hg
- ☒ D. 1000 mm of Hg

Question ID : 1034359583

Status : Not Answered

Chosen Option : --

Q.54 Which of the following connections in a three-phase transformer is known as the Scott connection?

Ans ☒ A. Y-Y connection

☒ B. V-V connection

☒ C. T-T connection

☒ D. Δ - Δ connection

Question ID : 1034359519

Status : Not Answered

Chosen Option : --

Q.55 What is the upward and downward lighting distribution in the semi-indirect type of lighting arrangement?

Ans ☒ A. 60-90% upwards, 10-40% downwards

☒ B. 90-100% upwards, 0-10% downwards

☒ C. 10-40% upwards, 60-90% downwards

☒ D. 0-10% upwards, 90-100% downwards

Question ID : 1034359559

Status : Not Answered

Chosen Option : --

Q.56 Universal motors of sizes 0.25 HP or less are suitable for ____.

Ans ☒ A. pressing machine

☒ B. elevators

☒ C. cranes

☒ D. electric hand drills

Question ID : 1034359568

Status : Not Answered

Chosen Option : --

Q.57 Which of the following is NOT a valid advantage of a AC transmission system over a DC transmission system?

- Ans ☒ A. Power can be generated at high voltages.
- ☒ B. Voltages can be stepped up or stepped down with ease and efficiency.
- ☒ C. Copper requirement is lesser than the DC line.
- ☒ D. Maintenance of AC substation is easy and cheaper.

Question ID : 1034359528

Status : Not Answered

Chosen Option : --

Q.58 The capacitor start capacitor run motor is NOT suitable for_____.

- Ans ☒ A. pumps
- ☒ B. compressors
- ☒ C. hair driers
- ☒ D. conveyors

Question ID : 1034359526

Status : Not Answered

Chosen Option : --

Q.59 The maximum demand on a power station is 100 MW. If the annual load factor is 50%, calculate the total energy generated in a year.

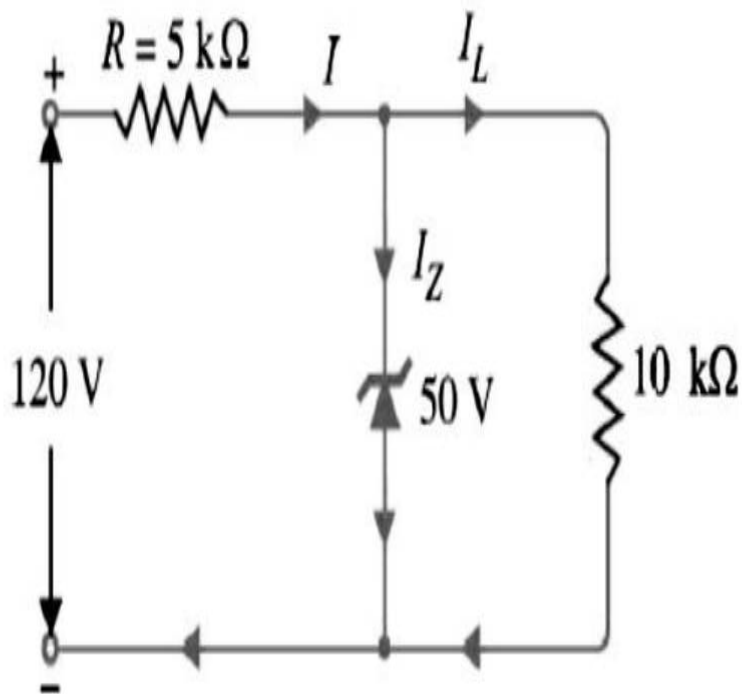
- Ans ☒ A. 4380×10^4 kWh
- ☒ B. 4380×10^6 kWh
- ☒ C. 4380×10^3 kWh
- ☒ D. 4380×10^5 kWh

Question ID : 1034359541

Status : Not Answered

Chosen Option : --

Q.60 For the given circuit, find the voltage drop across the $5\text{ k}\Omega$ resistance:



- Ans
- ☒ A. 50 V
 - ☒ B. 70 V
 - ☒ C. 80 V
 - ☒ D. 120 V

Question ID : 1034359574

Status : Not Answered

Chosen Option : --

Q.61 Among the following, the relative permeability of _____ material is the maximum.

- Ans
- ☒ A. diamagnetic
 - ☒ B. ferromagnetic
 - ☒ C. paramagnetic
 - ☒ D. non-magnetic

Question ID : 1034359491

Status : Not Answered

Chosen Option : --

Q.62 An alternating voltage is given by the expression $v(t) = 100 \sin 314t$. Calculate the time period.

- Ans ☒ A. 100 mS
☒ B. 20 mS
☒ C. 10 mS
☒ D. 40 mS

Question ID : 1034359498

Status : Not Answered

Chosen Option : --

Q.63 Which of the following is a variable area type flowmeter?

- Ans ☒ A. Venturimeter
☒ B. Orifice meter
☒ C. Rotameter
☒ D. Electromagnetic flowmeter

Question ID : 1034359586

Status : Not Answered

Chosen Option : --

Q.64 In which of the following pairs of networks are the networks mentioned the same?

- Ans ☒ A. Y-Network and Δ -Network
☒ B. Y-Network and T-Network
☒ C. T-Network and Δ -Network
☒ D. Y-Network and π -Network

Question ID : 1034359486

Status : Not Answered

Chosen Option : --

Q.65 The intensity of the trace on the screen of a cathode ray oscilloscope can be controlled by varying the voltage on the:

- Ans ☒ A. focusing anode
- ☒ B. grid
- ☒ C. horizontal deflection plates
- ☒ D. vertical deflection plates

Question ID : 1034359507

Status : Not Answered

Chosen Option : --

Q.66 Which of the following draughts does NOT require the use of a fan?

- Ans ☒ A. Balanced draught
- ☒ B. Natural draught
- ☒ C. Induced draught
- ☒ D. Forced draught

Question ID : 1034359538

Status : Not Answered

Chosen Option : --

Q.67 A relay is connected to a 400/5 current transformer and set at 150%. With a primary fault current of 2400 A, the plug-setting multiplier is:

- Ans ☒ A. 3
- ☒ B. 6
- ☒ C. 4
- ☒ D. 5

Question ID : 1034359551

Status : Not Answered

Chosen Option : --

Q.68 In magnetic circuits, the ratio of magnetomotive force (MMF) to reluctance is known as _____.

- Ans ☒ A. flux
- ☒ B. flux density
- ☒ C. permeance
- ☒ D. specific reluctance

Question ID : 1034359490

Status : Not Answered

Chosen Option : --

Q.69 The polarity of the voltage induced in the generation mode of the DC machine is given by _____.

- Ans ☒ A. Lenz's law
- ☒ B. Fleming's right-hand rule
- ☒ C. Faraday's law
- ☒ D. Kirchhoff's law

Question ID : 1034359515

Status : Not Answered

Chosen Option : --

Q.70 Two coils having self-inductances of 9 H and 4 H, respectively, are coupled in such a way that the coefficient of coupling is 0.5. Find the mutual inductance.

- Ans ☒ A. 3 H
- ☒ B. 6 H
- ☒ C. 18 H
- ☒ D. 12 H

Question ID : 1034359497

Status : Not Answered

Chosen Option : --

Q.71 In alternators, the synchronous reactance is nothing but _____.

- Ans
- ☒ A. the armature resistance only
 - ☒ B. the armature reactance only
 - ☒ C. the leakage reactance only
 - ☒ D. the combination of leakage reactance and armature reactance

Question ID : 1034359532

Status : Not Answered

Chosen Option : --

Q.72 A conductor of length 50 cm moves in a uniform magnetic field of density 1.1 T at a velocity of 30 m/s. Calculate the induced voltage in the conductor when the direction of motion is perpendicular to the field.

- Ans
- ☒ A. 16.5 V
 - ☒ B. 0 V
 - ☒ C. 1.65 V
 - ☒ D. 165 V

Question ID : 1034359496

Status : Not Answered

Chosen Option : --

Q.73 Which of the following is a desirable property of the insulating materials used in cables?

- Ans
- ☒ A. Low mechanical strength
 - ☒ B. Low resistance
 - ☒ C. Low dielectric strength
 - ☒ D. Non-hygroscopic

Question ID : 1034359544

Status : Not Answered

Chosen Option : --

Q.74 Which of the following bridges is also used in an oscillator?

Ans ☒ A. Schering bridge

☒ B. Wien's bridge

☒ C. Hay's bridge

☒ D. Maxwell's bridge

Question ID : 1034359510

Status : Not Answered

Chosen Option : --

Q.75 A series RLC circuit has $R = 50 \Omega$, $X_C = 30 \Omega$ and $X_L = 40 \Omega$. The impedance of the circuit is:

Ans ☒ A. $50 - j 70 \Omega$

☒ B. $50 - j 10 \Omega$

☒ C. $50 + j 70 \Omega$

☒ D. $50 + j 10 \Omega$

Question ID : 1034359501

Status : Not Answered

Chosen Option : --

Q.76 Which of the following is NOT a characteristic of a slip ring induction motor?

Ans ☒ A. High starting torque

☒ B. High efficiency

☒ C. High cost

☒ D. High maintenance

Question ID : 1034359517

Status : Not Answered

Chosen Option : --

Q.77 Identify whether the given statements related to alternators are true or false.

1. Pitch factor is always less than unity.
2. The efficiency of an alternator always increases with the power.

Ans ☒ A. 1-true, 2-true

☒ B. 1-false, 2-true

☒ C. 1-true, 2-false

☒ D. 1-false, 2-false

Question ID : 1034359535

Status : Not Answered

Chosen Option : --

Q.78 How much energy does a 100 W electric bulb consume in two hours?

Ans ☒ A. 72 kJ

☒ B. 720 kJ

☒ C. 36 kJ

☒ D. 360 kJ

Question ID : 1034359480

Status : Not Answered

Chosen Option : --

Q.79 A 25 kVA transformer has 50 turns on the secondary winding and 500 turns on the primary winding. Find the voltage transformation ratio.

Ans ☒ A. 0.9

☒ B. 0.1

☒ C. 1.0

☒ D. 0.5

Question ID : 1034359518

Status : Not Answered

Chosen Option : --

Q.80 To dry the fresh layer of paint on a large surface, _____ is used.

- Ans ☒ A. induction heating
- ☒ B. dielectric heating
- ☒ C. infrared heating
- ☒ D. resistance heating

Question ID : 1034359560

Status : Not Answered

Chosen Option : --

Q.81 Induction heating CANNOT be used for _____.

- Ans ☒ A. surface hardening
- ☒ B. annealing
- ☒ C. preheating of plastic preforms
- ☒ D. sterilisation of surgical instruments

Question ID : 1034359564

Status : Not Answered

Chosen Option : --

Q.82 Which of the following is NOT a correct method of speed control of DC motor?

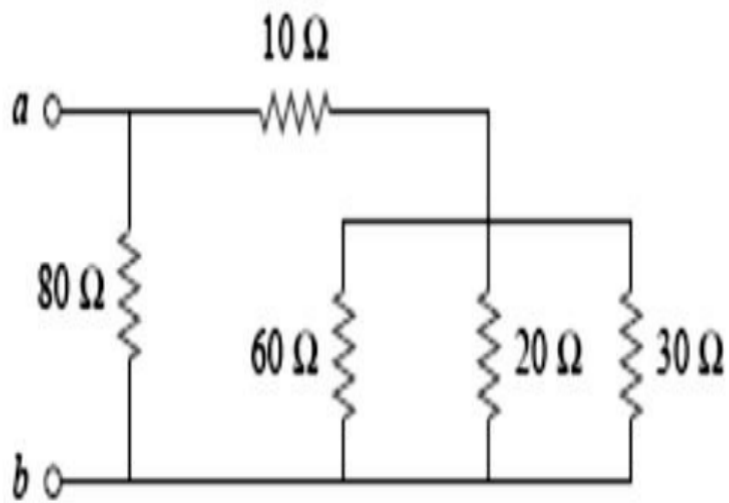
- Ans ☒ A. Voltage control
- ☒ B. Field control
- ☒ C. Slip power recovery control
- ☒ D. Rheostatic control

Question ID : 1034359570

Status : Not Answered

Chosen Option : --

Q.83 Find the value of R_{eq} in the given network:



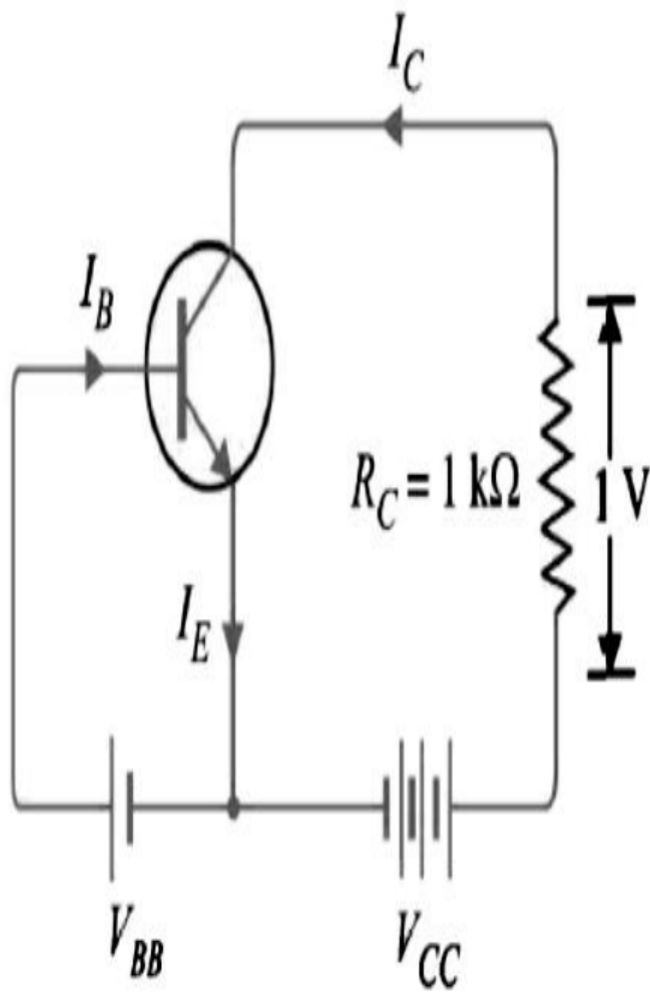
- Ans
- ☒ A. $20\ \Omega$
 - ☒ B. $24\ \Omega$
 - ☒ C. $16\ \Omega$
 - ☒ D. $12\ \Omega$

Question ID : 1034359489

Status : Not Answered

Chosen Option : --

Q.84 For the given circuit, find the base current I_B if given that $\beta = 50$.



- Ans ☒ A. 2 mA
☒ B. 20 mA
☒ C. 0.02 mA
☒ D. 0.2 mA

Question ID : 1034359580

Status : Not Answered

Chosen Option : --

Q.85 Which of the following statements related to JFET is INCORRECT?

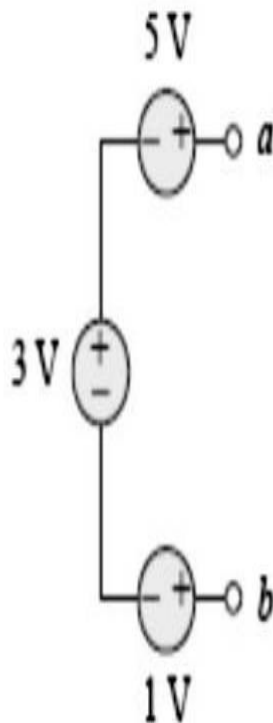
- Ans ☒ A. It has a high input impedance.
- ☒ B. It generates large noise as compared to BJT.
- ☒ C. It is a three-terminal voltage controlled device.
- ☒ D. It is also called unipolar transistor.

Question ID : 1034359581

Status : Not Answered

Chosen Option : --

Q.86 Find the voltage V_{ab} in the given circuit:



- Ans ☒ A. 1V
- ☒ B. 3V
- ☒ C. 7V
- ☒ D. 9V

Question ID : 1034359484

Status : Not Answered

Chosen Option : --

Q.87 Head flowmeters measure the fluid flow based on the _____.

- Ans
- ☒ A. Stokes' law
 - ☒ B. Doppler effect
 - ☒ C. Electromagnetic induction principle
 - ☒ D. Bernoulli's theorem

Question ID : 1034359587

Status : Not Answered

Chosen Option : --

Q.88 A current charging a dielectric material accumulates a charge of 24 C in 6 seconds.
Find the current.

- Ans
- ☒ A. 4 A
 - ☒ B. 0.25 A
 - ☒ C. 2 A
 - ☒ D. 6 A

Question ID : 1034359481

Status : Not Answered

Chosen Option : --

Q.89 In electromagnetic induction, the expression for induced voltage is based on _____.

- Ans
- ☒ A. Ohm's law and Faraday's law
 - ☒ B. Faraday's law and Kirchhoff's law
 - ☒ C. Faraday's law and Lenz's law
 - ☒ D. Kirchhoff's law and Lenz's law

Question ID : 1034359494

Status : Not Answered

Chosen Option : --

Q.90 Which of the following diodes is a four-layer diode?

- Ans ☒ A. Light emitting diode
- ☒ B. Photo diode
- ☒ C. Zener diode
- ☒ D. Shockley diode

Question ID : 1034359575

Status : Not Answered

Chosen Option : --

Q.91 Which of the following tariffs is a three-part tariff?

- Ans ☒ A. Straight meter rate
- ☒ B. Hopkinson demand rate
- ☒ C. Doherty rate
- ☒ D. Block meter rate

Question ID : 1034359537

Status : Not Answered

Chosen Option : --

Q.92 Identify whether the given statements are true or false.

1. The two most commonly used schemes for bus bar protection are differential protection and fault bus protection.
2. The most important stator winding fault of an alternator is earth fault.

- Ans ☒ A. 1-false, 2-false
- ☒ B. 1-false, 2-true
- ☒ C. 1-true, 2-true
- ☒ D. 1-true, 2-false

Question ID : 1034359552

Status : Not Answered

Chosen Option : --

Q.93 A cathode ray oscilloscope CANNOT be used for the measurement of:

- Ans ☒ A. phase
☒ B. amplitude
☒ C. frequency
☒ D. energy

Question ID : 1034359506

Status : Not Answered

Chosen Option : --

Q.94 Which of the following parameters CANNOT be expressed in Siemens?

- Ans ☒ A. Conductance
☒ B. Reactance
☒ C. Admittance
☒ D. Susceptance

Question ID : 1034359500

Status : Not Answered

Chosen Option : --

Q.95 Fluorescent lamps give the best performance at _____ temperature.

- Ans ☒ A. 95°C - 100°C
☒ B. 0°C - 5°C
☒ C. 75°C - 80°C
☒ D. 20°C - 25°C

Question ID : 1034359565

Status : Not Answered

Chosen Option : --

Q.96 Which of the following is NOT found in a hydroelectric power plant?

Ans ☒ A. Surge tank

☒ B. Boiler

☒ C. Penstock

☒ D. Spillway

Question ID : 1034359536

Status : Not Answered

Chosen Option : --

Q.97 An energy source forces a constant current of 2 A for 10 s to flow through a light bulb. If 2.3 kJ is given off in the form of light and heat energy, calculate the voltage drop across the bulb.

Ans ☒ A. 75 V

☒ B. 230 V

☒ C. 115 V

☒ D. 460 V

Question ID : 1034359482

Status : Not Answered

Chosen Option : --

Q.98 Which part of the electric drive selects the motoring or braking mode of operation of the motor?

Ans ☒ A. Source

☒ B. Load

☒ C. Motor

☒ D. Power modulator

Question ID : 1034359566

Status : Not Answered

Chosen Option : --

Q.99 In a Δ - Δ system, a phase voltage of 100 V produces a line voltage of:

Ans ☒ A. 100 V

☒ B. 71 V

☒ C. 141 V

☒ D. 173 V

Question ID : 1034359504

Status : Not Answered

Chosen Option : --

Q.100 If a periodic signal displayed on the cathode ray oscilloscope screen has a distance of 4 cm between the beginning and the end of a cycle, and if the Time/Div. control is set to 1 ms/div., calculate the frequency of the waveform.

Ans ☒ A. 1000 Hz

☒ B. 400 Hz

☒ C. 250 Hz

☒ D. 100 Hz

Question ID : 1034359514

Status : Not Answered

Chosen Option : --

Q.101 If a stationary alternator is connected to a live bus bar, then _____.

Ans ☒ A. it will disturb the generated EMF of other alternators connected in parallel

☒ B. it will reduce the bus bar voltage momentarily

☒ C. it will get short-circuited

☒ D. it will run as a synchronous motor

Question ID : 1034359534

Status : Not Answered

Chosen Option : --

Q.102 A single-phase half wave converter DC drive can be operated in:

- Ans ☒ A. forwarding motoring mode only
- ☐ B. forward braking mode only
- ☐ C. forward motoring and forward braking mode
- ☐ D. reverse motoring mode only

Question ID : 1034359569

Status : Not Answered

Chosen Option : --

Q.103 In a CGS system, the kinematic viscosity is expressed in _____.

- Ans ☒ A. stokes
- ☐ B. poise
- ☐ C. newton per square metre
- ☐ D. pounds per square inches

Question ID : 1034359585

Status : Not Answered

Chosen Option : --

Q.104 Which of the following bridges is frequency sensitive?

- Ans ☐ A. De-Sauty bridge
- ☐ B. Schering bridge
- ☒ C. Wien's bridge
- ☐ D. Maxwell's bridge

Question ID : 1034359509

Status : Not Answered

Chosen Option : --

Q.105 If the EMF in the stator of an 8-pole induction motor has a frequency of 50 Hz and that in the rotor has 1.5 Hz, find the slip.

Ans ☒ A. 1.5%

☒ B. 3%

☒ C. 2%

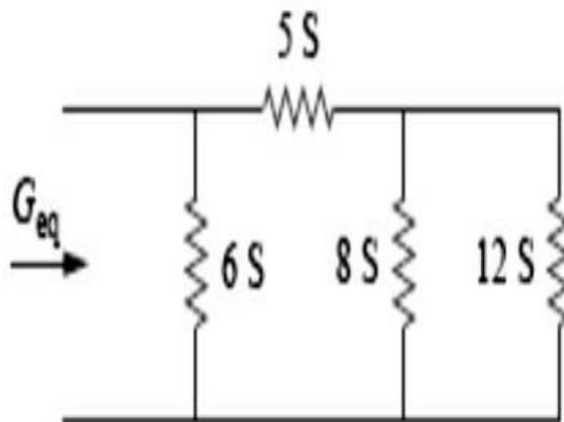
☒ D. 6%

Question ID : 1034359521

Status : Not Answered

Chosen Option : --

Q.106 Find the value of G_{eq} in the given network:



Ans ☒ A. 10 S

☒ B. 12 S

☒ C. 4 S

☒ D. 6 S

Question ID : 1034359488

Status : Not Answered

Chosen Option : --

Q.107 Which of the following is NOT a valid advantage of oil-filled cables?

- Ans ☒ A. Formation of voids and ionisation are avoided
- ☒ B. Higher temperature range
- ☒ C. Higher dielectric strength
- ☒ D. Low cost

Question ID : 1034359543

Status : Not Answered

Chosen Option : --

Q.108 In a single-phase DC drive the power modulator will be _____.

- Ans ☒ A. a controlled rectifier
- ☒ B. a cycloconverter
- ☒ C. an inverter
- ☒ D. a transformer

Question ID : 1034359567

Status : Not Answered

Chosen Option : --

Q.109 _____ can be used for higher voltages ranging from 66 kV to 230 kV.

- Ans ☒ A. Belted cables
- ☒ B. H-type cables
- ☒ C. Oil filled cables
- ☒ D. S.L. type cables

Question ID : 1034359545

Status : Not Answered

Chosen Option : --

Q.110 The process of achieving uniform electrostatic stress in the dielectric of cables is known as _____ of cables.

Ans  A. grading

 B. derating

 C. serving

 D. scaling

Question ID : 1034359546

Status : Not Answered

Chosen Option : --