

NHPC JE

Previous Year Paper

Mechanical

6 April 2022 (Shift 1)



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	06/04/2022
Test Time :	9:00 AM - 12:00 PM
Subject	Junior Engineer (Mechanical)

Section : General Awareness

Q.1 Who among the following were Chairman of the Drafting Committee and President of the Constituent Assembly, respectively?

- Ans ☒ A. Rajendra Prasad and Motilal Nehru
- ☒ B. Sarojini Naidu and Rajendra Prasad
- ☒ C. BR Ambedkar and Rajendra Prasad
- ☒ D. Motilal Nehru and BR Ambedkar

Question ID : 1034358213

Status : Answered

Q.2 Who was elected the president of the Indian National Congress of the Allahabad session 1888?

- Ans ☒ A. Dadabhai Naoroji
- ☒ B. Pherozeshah Mehta
- ☒ C. George Yule
- ☒ D. Badruddin Tyabji

Question ID : 1034358205

Status : Answered

Q.3 Who was chosen as Player of the Tournament in ICC Men's T20 World Cup 2021?

- Ans ☒ A. Rohit Sharma
- ☒ B. David Warner
- ☒ C. Asif Ali
- ☒ D. Mitchell Marsh

Question ID : 1034358215

Status : Answered

Q.4 Which Prashasti (Pillar Inscription) was composed in Sanskrit by Harisena who was the court poet of Samudragupta?

- Ans ☒ A. Kahaum pillar inscription
- ☒ B. Prayag pillar inscription
- ☒ C. Bhitari pillar inscription
- ☒ D. Junagarh pillar inscription

Question ID : 1034358202

Status : Answered

Q.5 According to the economic survey 2021-22 what is the upper limit of the annual turnover of the medium industries according to the definition of MSMEs in the industry and service sector?

- Ans
- ☒ A. ₹100 crores
 - ☒ B. ₹150 crores
 - ☒ C. ₹200 crores
 - ☒ D. ₹250 crores

Question ID : 1034358194

Status : Answered

Q.6 Which of the following books was written by Arjun Subramaniam and Diptendu Choudhury?

- Ans
- ☒ A. Force In Statecraft: An Indian Perspective
 - ☒ B. Cooking to Save your Life
 - ☒ C. Sunrise over Ayodhya
 - ☒ D. India vs UK: The Story of an Unprecedented Diplomatic Win

Question ID : 1034358206

Status : Answered

Q.7 Which part of the Constitution of India lays down the procedure for amendment of the constitution?

- Ans
- ☒ A. Part XX
 - ☒ B. Part XXI
 - ☒ C. Part XIX
 - ☒ D. Part XI

Question ID : 1034358212

Status : Answered

Q.8 What was the absolute increase in the minimum support price of maize from the year 2020-21 to 2021-22?

Ans ☒ A. ₹20

☐ B. ₹46

☐ C. ₹67

☐ D. ₹72

Question ID : 1034358192

Status : Answered

Q.9 In February 2022, who among the following was appointed as Director General of National Institute of Electronics & Information Technology (NIELIT)?

Ans ☒ A. Dr. Madan Mohan Tripathi

☐ B. Dr. Alok Mathur

☐ C. Dr. Niraj Kulshreshtha

☐ D. Dr. Jagdish Prasad

Question ID : 1034358208

Status : Answered

Q.10 Who was appointed the Governor of Bengal in 1764?

Ans ☒ A. Robert Clive

☐ B. Henry Vansittart

☐ C. John Macpherson

☐ D. Warren Hastings

Question ID : 1034358204

Status : Answered

Q.11 Who was appointed as chairperson of the National Bank for Financing Infrastructure and Development (NaBFID) in October 2021?

Ans ☒ A. KV Kamath

☐ B. Arun Chawla

☐ C. Atul Karwal

☐ D. Rajeev Kumar Mishra

Question ID : 1034358207

Status : Answered

Q.12 In which of the following oceans are Persian Gulf and Red Sea located?

Ans ☐ A. Arctic Ocean

☐ B. Atlantic Ocean

☐ C. Pacific Ocean

☒ D. Indian Ocean

Question ID : 1034358201

Status : Answered

Q.13 Which of the following statements is INCORRECT about microorganisms?

Ans ☐ A. Rhizobium helps in fixing nitrogen in leguminous plants.

☐ B. Yeast is helpful for the fermentation of rice idlis and dosa batter.

☐ C. The bacterium, Lactobacillus promotes the formation of curd.

☒ D. Chicken pox is caused by bacteria.

Question ID : 1034358196

Status : Answered

Q.14 Which Article of the Constitution of India is related to the tenure of office of persons serving the Union or a State?

Ans  A. Article 310

 B. Article 322

 C. Article 350

 D. Article 302

Question ID : 1034358210

Status : Answered

Q.15 According to the 'Global Economic Prospects' report released on 11 January 2022 by World Bank what is the expected GDP growth of India in the financial year 2022-23?

Ans  A. 6.9%

 B. 9.8%

 C. 9.4%

 D. 8.7%

Question ID : 1034358193

Status : Answered

Q.16 In which country was the 2021 AIBA World Boxing Championships held?

Ans  A. Laos

 B. Uzbekistan

 C. Qatar

 D. Serbia

Question ID : 1034358216

Status : Answered

Q.17 Which of the following metals has been correctly paired with its maximum prescribed concentration in drinking water in ppm?

- Ans ☐ A. Al – 7.0
- ☐ B. Mn – .07
- ☐ C. Cu – 5.0
- ☒ D. Fe – 0.2

Question ID : 1034358197

Status : Answered

Q.18 Which of the following is NOT an example of a second class lever?

- Ans ☒ A. Fishing rod
- ☐ B. Bottle openers
- ☐ C. Nutcracker
- ☐ D. Staplers

Question ID : 1034358195

Status : Answered

Q.19 In which month does Nagaland celebrate its annual 10-day long Hornbill festival?

- Ans ☐ A. November
- ☒ B. December
- ☐ C. February
- ☐ D. January

Question ID : 1034358190

Status : Answered

Q.20 Who was crowned as Miss Universe at the 70th Miss Universe 2021 pageant held in Eilat, Israel?

Ans ☒ A. Harnaaz Sandhu

☐ B. Ritika Raina

☐ C. Manika Sheokand

☐ D. Karuna Singh

Question ID : 1034358209

Status : Answered

Q.21 Som river, which rises in the Eastern slopes of the Aravalli hills in the Udaipur district of Rajasthan, is a major tributary of:

Ans ☐ A. Narmada

☐ B. Yamuna

☒ C. Mahi

☐ D. Luni

Question ID : 1034358199

Status : Answered

Q.22 According to Census 2011 data, which of the following states has a population density of more than 200?

Ans ☒ A. Gujarat

☐ B. Himachal Pradesh

☐ C. Uttarakhand

☐ D. Chhattisgarh

Question ID : 1034358198

Status : Answered

Q.23 Which Indian state is famous for the Mando folk music?

Ans ☒ A. Goa

☐ B. Bihar

☐ C. Assam

☐ D. Punjab

Question ID : 1034358189

Status : Answered

Q.24 By which Amendment Act was Article 350A inserted in the Constitution of India?

Ans ☐ A. Constitution (Fifteenth Amendment) Act, 1963

☒ B. Constitution (Seventh Amendment) Act, 1956

☐ C. Constitution (Fortieth Amendment) Act, 1976

☐ D. Constitution (Forty-fourth Amendment) Act, 1978

Question ID : 1034358211

Status : Answered

Q.25 Which of the following statements is INCORRECT about alluvial soils?

Ans ☐ A. The new alluvium deposited by floods annually is called 'khadar'.

☒ B. These soils cover about 54% of the total area of the country.

☐ C. They are generally rich in potash but poor in phosphorous.

☐ D. These soils are widespread in the northern plains and the river valleys.

Question ID : 1034358200

Status : Answered

Q.26 Who was the only Indian participant in Judo at Tokyo Olympic 2020?

- Ans ☒ A. Nilakanta Sharma
- ☒ B. Arvind Singh
- ☒ C. Nethra Kumanan
- ☒ D. Sushila Devi Likmabam

Question ID : 1034358214

Status : Answered

Q.27 How many teams are scheduled to play in the 15th Indian Premier League 2022?

- Ans ☒ A. 9
- ☒ B. 10
- ☒ C. 8
- ☒ D. 7

Question ID : 1034358217

Status : Answered

Q.28 Which of the following monuments is situated on Solophok Hill?

- Ans ☒ A. Badrinath Dham
- ☒ B. Jagannath Dham
- ☒ C. Rameshawaram Dham
- ☒ D. Siddheswara Dham

Question ID : 1034358191

Status : Answered

Q.29 In which year was the Sikh leader Banda Bahadur captured by the governor of the Punjab during the reign of Farrukh Siyar?

Ans ☒ A. 1715

☐ B. 1721

☐ C. 1711

☐ D. 1723

Question ID : 1034358203

Status : Answered

Q.30 Which of the following tribal dances mainly belongs to the Bhil tribes of Madhya Pradesh?

Ans ☐ A. Kalbelia

☒ B. Bhagoriya

☐ C. Elelakkardi

☐ D. Dhimsa

Question ID : 1034358188

Status : Answered

Section : Reasoning

Q.1 Identify the number that does NOT belong to the following series.
5, 16, 30, 49, 74, 112, 162, 229

Ans ☐ A. 162

☒ B. 74

☐ C. 229

☐ D. 112

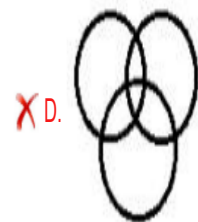
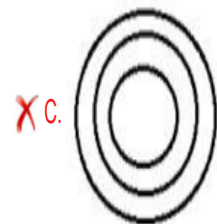
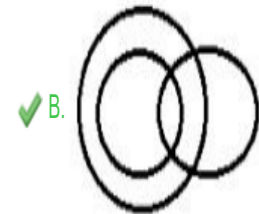
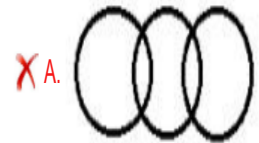
Question ID : 1034358236

Status : Answered

Q.2 Select the Venn diagram that best represents the relationship between the following classes.

Niece, Beauticians, Women

Ans



Question ID : 1034358239

Status : Answered

Q.3 Study the given pattern carefully and select the number from among the given options that can replace the question mark (?) in it.

33	6	54
26	8	36
30	12	?

Ans ☒ A. 26

☒ B. 63

☒ C. 36

☒ D. 62

Question ID : 1034358238

Status : Answered

Q.4 Four number-triads have been given, out of which three are alike in some manner and one is different. Select the number-triad that is different.

Ans ☒ A. (8, 5, 80)

☒ B. (4, 9, 72)

☒ C. (4, 7, 65)

☒ D. (6, 7, 84)

Question ID : 1034358237

Status : Answered

Q.5 Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.
LGHM, NDKQ, PANU, RXQY, ?

Ans  A. TUTC

 B. TUCT

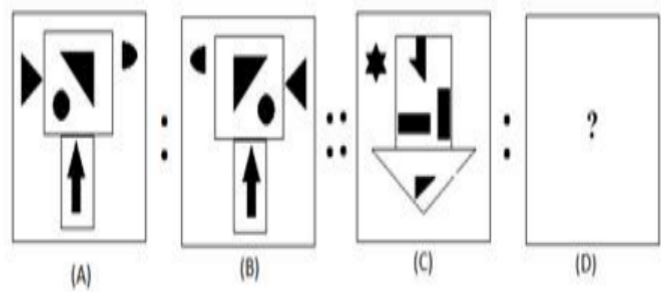
 C. TCTU

 D. TTCU

Question ID : 1034358218

Status : Answered

Q.6 Select the option that is related to figure C in the same way as figure B is related to figure A.



Ans

- ✗ A.
- ✗ B.
- ✗ C.
- ✓ D.

Q.7 Two statements numbered I and II are given. There may be a cause-and-effect relationship between the two statements. These two statements may be the effect of the same cause or independent causes. These statements may be independent causes without having any relationship. Read both the statements and decide which of the following options correctly depicts the relationship between these two statements.

Statements:

I. The Government has said that the elderly are not required to produce a doctor's certificate for the third Covid-19 vaccination dose.

II. In view of the raise in Omicron cases, people should avoid unnecessary travel and gatherings, advises the Central Government.

- Ans
- ☒ A. Both statements I and II are independent causes
 - ☒ B. Statement II is the cause and statement I is its effect
 - ☒ C. Statement I is the cause and statement II is its effect
 - ☒ D. Both statements I and II are effects of common causes

Question ID : 1034358233

Status : Answered

Q.8 Identify the letter-cluster that does NOT belong to the following series.

LBNG, JFLK, HJJO, FNHR, DRFW, BVDA

- Ans
- ☒ A. FNHR
 - ☒ B. HJJO
 - ☒ C. DRFW
 - ☒ D. BVDA

Question ID : 1034358219

Status : Answered

Q.9 In a certain code language, 'MAGNET' is written as 'BLOFUD'. How will 'PRAISE' be written in that language?

Ans ☒ A. QQHBDT

☒ B. SOJZFR

☒ C. SQJBFT

☒ D. OSZJRF

Question ID : 1034358227

Status : Answered

Q.10 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:

All monuments are helipads.

All stoves are helipads.

Some helipads are binoculars.

Conclusions:

I. Some monuments are not stoves.

II. Some binoculars may be stoves is a possibility.

Ans ☒ A. Neither conclusion I nor II follows

☒ B. Only conclusion II follows

☒ C. Both conclusions I and II follow

☒ D. Only conclusion I follows

Question ID : 1034358234

Status : Answered

Q.11 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:

All rhombuses are tangents.

All chords are tangents.

Conclusions:

I. Some rhombuses being chords is a possibility.

II. Some tangents are rhombuses.

- Ans
- ☒ A. Only conclusion II follows
 - ☒ B. Only conclusion I follows
 - ☒ C. Neither conclusion I nor II follows
 - ☒ D. Both conclusions I and II follow

Question ID : 1034358232

Status : Answered

Q.12 Ketan is a cricketer who left his home and faces towards the north. Turning to his right, he walks 45 m. He then turns to his left and walks 50 m to reach the college. Next, he walks 45 m to his right. He then turns to his right again and walks 75 m to reach ground. Finally, he turns to the right and walks 60 m. In which direction is he now from his starting point?

- Ans
- ☒ A. South
 - ☒ B. North-west
 - ☒ C. South-west
 - ☒ D. South-east

Question ID : 1034358242

Status : Answered

Q.13 Five friends are standing in a line facing towards the north. A Lawyer and a Judge are standing at the two extreme ends of the line. A Scientist is standing to the right of a Teacher. A Pharmacist is to the left of the Judge. The Teacher is standing between the Lawyer and the Scientist. Counting from the left, the Scientist is standing at which place?

Ans ☒ A. Third

☐ B. Fifth

☐ C. Fourth

☐ D. First

Question ID : 1034358231

Status : Answered

Q.14 If 'U × V' means 'U is the daughter of V', 'U + V' means 'U is the husband of V', and 'U – V' means 'U is the sister of V', then what does 'W + X – Y × Z' mean?

Ans ☐ A. W is the uncle of Z

☐ B. W is the brother-in-law of Z

☒ C. W is the son-in-law of Z

☐ D. Z is the mother-in-law of W

Question ID : 1034358230

Status : Answered

Q.15 Select the option that is related to the third letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster.

MDSY : QZWU :: DJNY : ?

Ans ☐ A. ZFJU

☐ B. HNRC

☐ C. ZNJC

☒ D. HFRU

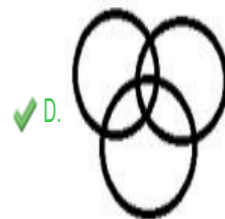
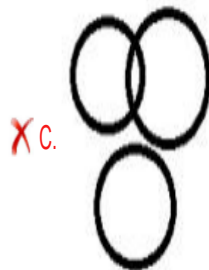
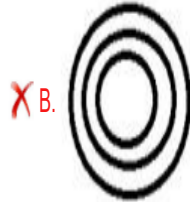
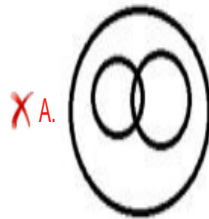
Question ID : 1034358224

Status : Answered

Q.16 Select the Venn diagram that best illustrates the relationship between the following classes.

Painter, Dancer, Swimmer

Ans



Question ID : 1034358240

Status : Answered

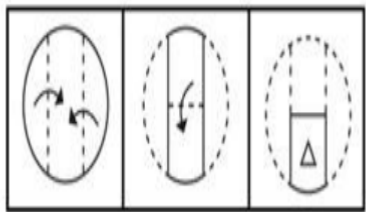
Q.17 Select the option in which the words share the same relationship as that shared by the given pair of words.
Earnest : Solemn

- Ans  A. Radiant : Gloomy
-  B. Lethargy : Vivacity
-  C. Fascinate : Enchant
-  D. Lament : Praise

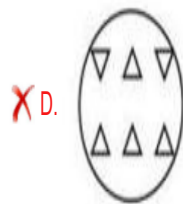
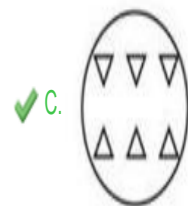
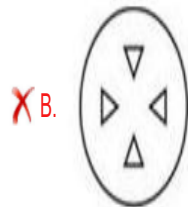
Question ID : 1034358226

Status : Answered

Q.18 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 : 1034358246

Status : Answered

Q.19 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. Beautician : Parlour

 B. Laboratory : Scientist

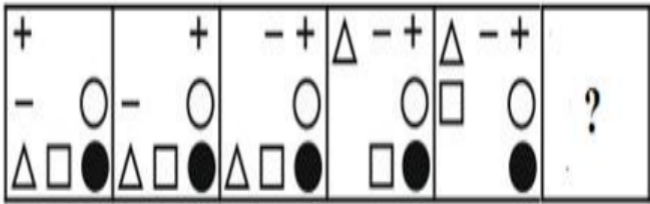
 C. Mechanic : Garage

 D. Gambler : Casino

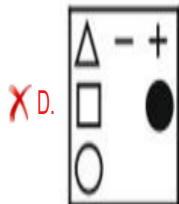
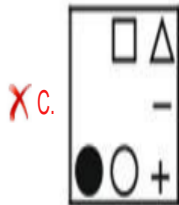
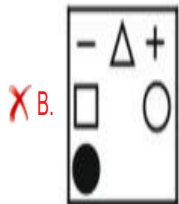
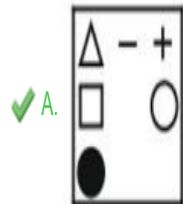
Question ID : 1034358223

Status : Answered

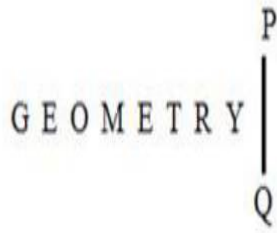
Q.20 Select the figure from among the given options that can replace the question mark (?) in the following series.



Ans



Q.21 Select the correct mirror image of the given combination when the mirror is placed at PQ as shown.



- Ans
- ☒ A. GEOWLEBΛ
 - ☒ B. GEOWELBΛ
 - ☒ C. YЯETMOEG
 - ☒ D. YRTMOEG

Question ID : 1034358247

Status : Answered

Q.22 Select the option that is related to the third word in the same way as the second word is related to the first word.

Robbers : Gang :: Termites : ?

- Ans
- ☒ A. Colony
 - ☒ B. Council
 - ☒ C. Cavalcade
 - ☒ D. Caravan

Question ID : 1034358225

Status : Answered

Q.23 Four words have been given, out of which three are alike in some manner and one is different. Select the word that is different.

- Ans ☒ A. Volt
- ☒ B. Current
- ☒ C. Watt
- ☒ D. Joule

Question ID : 1034358221

Status : Answered

Q.24 Select the number from among the given options that can replace the question mark (?) in the following series.
38, 39, 35, 62, 46, ?

- Ans ☒ A. 172
- ☒ B. 127
- ☒ C. 171
- ☒ D. 117

Question ID : 1034358235

Status : Answered

Q.25 In a certain code language, 'THEORY' is coded as '2192497', and 'BRIGHT' is coded as '259320192'. How will 'SOLUTION' be coded in that language?

- Ans ☒ A. 106332964
- ☒ B. 143529605
- ☒ C. 196332961
- ☒ D. 104352345

Question ID : 1034358228

Status : Answered

Q.26 The railway station is to the east of the university, while my apartment is to the south of the university. The shopping mall is to the north of the railway station. If the distance of the shopping mall from the railway station is equal to the distance of my apartment from the university, in which direction is the shopping mall with respect to my university?

- Ans
- ☐ A. North
 - ☐ B. South-west
 - ☐ C. East
 - ☒ D. North-east

Question ID : 1034358243

Status : Answered

Q.27 Kishore walked 50 m towards the north to reach the library, and then turned left and walked 68 m to reach the post office. He then turned to the south and walked 22 m, and then he took a left turn and walked 44 m to reach the bank. After that he turned right and walked 18 m and finally, he turned left and walked 48 m to reach his college. What is the total distance travelled by Kishore in the south direction during the entire journey?

- Ans
- ☒ A. 40 m
 - ☐ B. 22 m
 - ☐ C. 36 m
 - ☐ D. 48 m

Question ID : 1034358241

Status : Answered

Q.28 In a row of persons, Faisal is 21st from the left and Naveen is 13th from the right.
Rutuja, who is sitting exactly in the middle of Faisal and Naveen, is 8th from the right.
How many persons are sitting in the row?

Ans  A. 24

 B. 22

 C. 27

 D. 23

Question ID : 1034358229

Status : Answered

Q.29 Four letter-clusters pairs have been given, out of which three are alike in some manner
and one is different. Select the letter-cluster pair that is different.

Ans  A. MESH : STFB

 B. TOLD : ZMPX

 C. DIVE : JWJY

 D. GRIP : MKTJ

Question ID : 1034358222

Status : Answered

Q.30 Select the correct option that indicates the arrangement of the given words in the order in which they appear in an English dictionary.

1. Lemon
2. Ladder
3. Lovable
4. Lethargy
5. Largest

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

 B. 2, 5, 1, 4, 3

 C. 5, 2, 1, 4, 3

 D. 5, 2, 3, 1, 4

Question ID : 1034358220

Status : Answered

Section : General Engineering

Q.1 The total unit consumed by the consumer in a day is 240. Calculate the load factor if the maximum demand of the consumer is 20 kW.

Ans  A. 0.6

 B. 0.5

 C. 0.8

 D. 0.45

Question ID : 1034358265

Status : Answered

Q.2 Calculate the energy stored in a coil if the coil carries a current of 10 A and inductance of the coil is 20 mH.

- Ans
- ☒ A. 8 J
 - ☒ B. 2 J
 - ☒ C. 1 J
 - ☒ D. 4 J

Question ID : 1034358260

Status : Answered

Q.3 A 200V CFL lamp has a total flux of 3140 lumens, calculate the mean spherical candle power of the lamp per watt.

- Ans
- ☒ A. 500
 - ☒ B. 125
 - ☒ C. 250
 - ☒ D. 314

Question ID : 1034358266

Status : Answered

Q.4 The statement 'It is impossible to construct a device that operates in a cycle and produces no effect other than the transfer of heat from a lower-temperature body to a higher-temperature body' is known as:

- Ans
- ☒ A. Kelvin-Planck statement of the second law of thermodynamics
 - ☒ B. Zeroth law of thermodynamics
 - ☒ C. The first law of thermodynamics
 - ☒ D. Clausius statement of the second law of thermodynamics

Question ID : 1034358271

Status : Answered

Q.5 With the increment of length and area of a wire separately, the resistance of a wire _____ and _____, respectively.

Ans ☒ A. increases and decreases

☐ B. decreases and decreases

☐ C. decreases and increases

☐ D. increases and increases

Question ID : 1034358258

Status : Answered

Q.6 As per IS 10500:2012 (drinking water specifications), the acceptable limit of pH value for drinking water shall lie in the range of:

Ans ☐ A. 4.5 to 6.5

☐ B. 8.5 to 10.5

☐ C. 2.5 to 4.5

☒ D. 6.5 to 8.5

Question ID : 1034358255

Status : Answered

Q.7 A refrigerator plant works on an ideal vapour-compression refrigeration cycle. The mass flow of refrigerant is 0.035 kg/s and refrigeration effect is 110 kJ/kg. What is the refrigeration capacity of the plant in Tonne of refrigeration (TR)? [Assuming, 1TR = 3.5 kW]

Ans ☐ A. 1.3 TR

☒ B. 1.1 TR

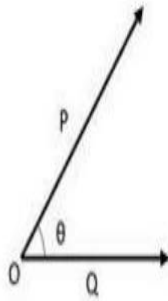
☐ C. 0.9 TR

☐ D. 1.5 TR

Question ID : 1034358272

Status : Answered

Q.8 Two forces (magnitude P and Q) are acting at a point 'O' in a plane and inclined to each other at an angle of (as shown in figure). The magnitude of the resultant (R) of the forces is given by:



Ans

✓ A. $R = \sqrt{P^2 + Q^2 + 2PQ \cos \theta}$

✗ B. $R = \sqrt{P^2 + Q^2 - PQ \cos \theta}$

✗ C. $R = \sqrt{P^2 + Q^2 + PQ \cos \theta}$

✗ D. $R = P + Q$

Question ID : 1034358268

Status : Answered

Q.9 Calculate the specific weight of a liquid having a volume of 7 m^3 and weight of 42 kN.

Ans

✓ A. 6 kN/m^3

✗ B. $0.167 \text{ m}^3/\text{kN}$

✗ C. 252 kN-m^3

✗ D. $5.656 \text{ m}^3/\text{kN}$

Question ID : 1034358252

Status : Answered

Q.10 A current waveform has been expressed as $i(t)=3+4\sqrt{2}\sin\omega t$ A. Find out the RMS value of the current waveform.

Ans ☒ A. 6A

☒ B. 5A

☒ C. 4A

☒ D. 8A

Question ID : 1034358262

Status : Answered

Q.11 The property of concrete which reduces the amount of energy required to compact the concrete is called:

Ans ☒ A. Segregation

☒ B. Workability

☒ C. Setting Time

☒ D. Bleeding

Question ID : 1034358256

Status : Answered

Q.12 Which of the following is correct for the vapour compression refrigeration cycle?

Ans ☒ A. The pressure at the inlet of the compressor is greater than the pressure at the outlet of the compressor.

☒ B. Specific enthalpy of the refrigerant increases during the throttling process.

☒ C. The pressure inside the condenser is less than the pressure inside the evaporator.

☒ D. The temperature inside the evaporator is less than the temperature inside the condenser.

Question ID : 1034358273

Status : Answered

Q.13 A rigid tank contains the steam at a pressure of 60 bar and has a specific enthalpy of 2470 kJ/kg. Which of the following is correct for this steam?

[Given: Specific enthalpy of saturated liquid water at 60 bar = 1210 kJ/kg, Specific enthalpy of vaporization of water at 60 bar = 1575 kJ/kg]

Ans ☒ A. Steam is wet with a dryness fraction of 0.8

☐ B. Steam is superheated

☐ C. Steam is wet with a dryness fraction of 0.2

☐ D. Steam is dry saturated

Question ID : 1034358269

Status : Answered

Q.14 The symbol used for 'Rimmed steel' is:

Ans ☐ A. SK

☒ B. R

☐ C. RS

☐ D. K

Question ID : 1034358277

Status : Answered

Q.15 Calculate the equivalent resistance if eight resistances of 80 ohm is connected in parallel.

Ans ☒ A. 10 ohm

☐ B. 640 ohm

☐ C. 80 ohm

☐ D. 8 ohm

Question ID : 1034358259

Status : Answered

Q.16 Dry saturated steam at a pressure of 11 bar enters a convergent-divergent nozzle and leaves at a pressure of 2 bar. The flow is adiabatic and frictionless and neglects the inlet velocity of steam. If the isentropic specific enthalpy drop between inlet and exit is 180 kJ/kg, what will be the exit velocity of steam?

- Ans ☒ A. 300 m/s
☒ B. 400 m/s
☒ C. 600 m/s
☒ D. 500 m/s

Question ID : 1034358274

Status : Answered

Q.17 Calculate the time period of the signal given below:

$$I(t) = 20 \sin(314t + 50)$$

- Ans ☒ A. 30 msec
☒ B. 50 msec
☒ C. 20 msec
☒ D. 10 msec

Question ID : 1034358261

Status : Answered

Q.18 Which of the following types of irrigation methods has optimum level of water supply, less requirement of water when compared to other irrigation methods, and water is conveyed through a system of flexible pipes operating at low pressure?

- Ans ☒ A. Wild flooding
☒ B. Furrow method
☒ C. Drip irrigation
☒ D. Sprinkler irrigation

Question ID : 1034358253

Status : Answered

Q.19 Calculate the secondary voltage in a single phase transformer if the voltage on the primary side is 100V and the turns ratio is 25.

- Ans ☒ A. 1000V
- ☒ B. 25000V
- ☒ C. 2500V
- ☒ D. 12000V

Question ID : 1034358264

Status : Answered

Q.20 Which of the following soil components has particles with the size in the range of 4.75 mm to 80 mm?

- Ans ☒ A. Sand
- ☒ B. Gravel
- ☒ C. Peat
- ☒ D. Boulder

Question ID : 1034358251

Status : Answered

Q.21 What is the value of Poisson's ratio of structural steel within its elastic range?

- Ans ☒ A. 0.3
- ☒ B. 0.4
- ☒ C. 0.1
- ☒ D. 0.01

Question ID : 1034358257

Status : Answered

Q.22 What will be the mass of 2 litres of liquid having the density of 8000 kg/m^3 ?

- Ans
- ☒ A. 0.16 kg
 - ☒ B. 1.6 kg
 - ☒ C. 160 kg
 - ☒ D. 16 kg

Question ID : 1034358275

Status : Answered

Q.23 A Pelton wheel operates under a head of 40 m and develops shaft power of 800 kW which runs at 500 rpm. Assume the overall efficiency of the Pelton turbine as 80%. Find the flow rate of water. [Density of water = 1000 kg/m^3 , Acceleration due to gravity = 10 m/s^2]

- Ans
- ☒ A. $2.0 \text{ m}^3/\text{s}$
 - ☒ B. $2.5 \text{ m}^3/\text{s}$
 - ☒ C. $1.5 \text{ m}^3/\text{s}$
 - ☒ D. $3.0 \text{ m}^3/\text{s}$

Question ID : 1034358276

Status : Answered

Q.24 As per IS 1492, which of the following is NOT the standard length of a metric surveying chain?

- Ans
- ☒ A. 30 m
 - ☒ B. 50 m
 - ☒ C. 20 m
 - ☒ D. 5 m

Question ID : 1034358250

Status : Answered

Q.25 Consider the following statements with respect to the methods of valuation and identify correct option.

Statement A: Rental method of valuation is a suitable method of valuation if the rent is known or probable rent is determined by enquiries. .

Statement B: 'Valuation based on profit' is a type of 'development method of valuation'.

Ans ☒ A. Statement B is correct and A is incorrect.

☒ B. Statement A is correct and B is incorrect.

☒ C. Both the statements are incorrect.

☒ D. Both the statements are correct.

Question ID : 1034358249

Status : Answered

Q.26 Which of the following is the correct reason for providing camber to the road surface?

Ans ☒ A. To drain off the rain water from the road surface

☒ B. To maintain lane discipline

☒ C. To enhance skid resistance

☒ D. To provide even surface

Question ID : 1034358254

Status : Answered

Q.27 Find out the binary equivalent of $(67)_{10}$.

Ans ☒ A. $(1000001)_2$

☒ B. $(1000010)_2$

☒ C. $(1000011)_2$

☒ D. $(1101011)_2$

Question ID : 1034358267

Status : Answered

Q.28 A frictionless piston-cylinder device contains 5 kg of an ideal gas at 100 kPa and 250

K. Gas is now compressed slowly according to the relation $pv^{1.4} = \text{Constant}$, until it reaches a final temperature of 450 K. What will be the work input during this process?

[Gas constant of an ideal gas = 0.3 kJ/kg-K]

Ans ☒ A. 750 kJ

☐ B. 250 kJ

☐ C. 500 kJ

☐ D. 1000 kJ

Question ID : 1034358270

Status : Answered

Q.29 Which of the following instruments is used to measure insulation resistance?

Ans ☐ A. Wheatstone bridge

☐ B. Galvanometer

☒ C. Megger

☐ D. Kelvin Double bridge

Question ID : 1034358263

Status : Answered

Q.30 Which of the following types of stones shows the least water absorption property?

Ans ☒ A. Granite

☐ B. Shale

☐ C. Sandstone

☐ D. Limestone

Question ID : 1034358248

Status : Answered

Q.1 The ratio of change in the internal energy of a substance from 4°C to T and from T to 10°C is 2. What is T?

Ans ☒ A. 8°

☐ B. 5°

☐ C. 7°

☐ D. 6°

Question ID : 1034358307

Status : Answered

Q.2 Which of the following is NOT a type of rotary pump?

Ans ☐ A. Mixed flow pump

☒ B. Impact pump

☐ C. Centrifugal pump

☐ D. Axial flow pump

Question ID : 1034358346

Status : Answered

Q.3 A beam engine works on a _____.

Ans ☒ A. crank and lever mechanism

☐ B. double crank mechanism

☐ C. single slider crank chain

☐ D. double lever mechanism

Question ID : 1034358278

Status : Answered

Q.4 The quantitative statement of entropy principle is denoted by the _____.

- Ans ☒ A. zeroth law of thermodynamics
- ☒ B. 1st law of thermodynamics
- ☒ C. 3rd law of thermodynamics
- ☒ D. 2nd law of thermodynamics

Question ID : 1034358310

Status : Answered

Q.5 For irrotational flow, the Bernoulli constant is _____.

- Ans ☒ A. different everywhere
- ☒ B. constant
- ☒ C. zero
- ☒ D. the same everywhere

Question ID : 1034358338

Status : Answered

Q.6 Soldering fluxes perform which of the following tasks?

- Ans ☒ A. Promote wetting of the faying surfaces
- ☒ B. Decrease soldering time
- ☒ C. Promote oxidation of the surface
- ☒ D. Promote tarnishing of the surface

Question ID : 1034358369

Status : Answered

Q.7 The flow is observed to be laminar till a Reynolds number value of about _____.

- Ans ☒ A. 5000
- ☒ B. 2300
- ☒ C. 7000
- ☒ D. 1000

Question ID : 1034358335

Status : Answered

Q.8 _____ forces are acting on a rope in a tug of war.

- Ans ☒ A. Non-concurrent
- ☒ B. Parallel
- ☒ C. Non-collinear
- ☒ D. Collinear

Question ID : 1034358294

Status : Answered

Q.9 A rod of length 150 cm and of diameter 2.0 cm is subjected to an axial pull of 20 kN. If the modulus of elasticity of the rod material is $2 \times 10^5 \text{ N/mm}^2$, determine the stress developed in the rod.

- Ans ☒ A. 15.25 N/mm^2
- ☒ B. 30.65 N/mm^2
- ☒ C. 63.662 N/mm^2
- ☒ D. 10 N/mm^2

Question ID : 1034358303

Status : Answered

Q.10 _____ is removed from a boiler by the blowdown valve.

- Ans ☒ A. Ash
- ☒ B. Sludge
- ☒ C. Smoke
- ☒ D. Flue gas

Question ID : 1034358322

Status : Answered

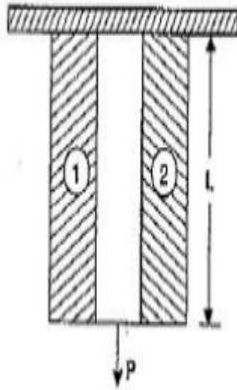
Q.11 Which process uses a molten metal bath for brazing?

- Ans ☒ A. Furnace brazing
- ☒ B. Infrared brazing
- ☒ C. Torch brazing
- ☒ D. Dip brazing

Question ID : 1034358367

Status : Answered

Q.12 During the analysis of bars of composite sections as shown in the given figure. The modular ratio is defined as _____.



- Ans ☒ A. Young modulus of Bar 1 / Young modulus of Bar 2
- ☒ B. Shear modulus of Bar 2 / Shear modulus of Bar 1
- ☒ C. Shear modulus of Bar 1 / Shear modulus of Bar 2
- ☒ D. Young modulus of Bar 2 / Shear modulus of Bar 1

Question ID : 1034358304

Status : Answered

Q.13 Ultrasonic testing is carried out to evaluate _____.

- Ans ☒ A. yield strength
- ☒ B. hardness
- ☒ C. toughness
- ☒ D. cracks in the surface

Question ID : 1034358374

Status : Answered

Q.14 _____ is/are caused due to the release of gases during pouring which consists of small gas cavities.

Ans ☒ A. Pinholes

☒ B. Sand wash

☒ C. Hot tears

☒ D. Sand blow

Question ID : 1034358382

Status : Answered

Q.15 The compression ratio of the diesel engine is in the range of _____.

Ans ☒ A. 16-20

☒ B. 25-40

☒ C. 6-10

☒ D. 1-5

Question ID : 1034358314

Status : Answered

Q.16 Quality of the petrol used is expressed as _____.

Ans ☒ A. octane number

☒ B. petro number

☒ C. cetane number

☒ D. calorific value

Question ID : 1034358316

Status : Answered

Q.17 The entropy of an isolated system _____.

Ans ☒ A. always remains constant

☒ B. can never be zero

☒ C. can never decrease

☒ D. can never increase

Question ID : 1034358311

Status : Answered

Q.18 Governors are used in power plants to directly _____.

Ans ☒ A. reduce carbon emissions

☒ B. decrease the power consumption

☒ C. control the flow of working fluids

☒ D. generate the working fluids

Question ID : 1034358286

Status : Answered

Q.19 Which of the following is NOT a section of the single screw extruder?

Ans ☒ A. Compression section

☒ B. Metering section

☒ C. Feed section

☒ D. Cooling section

Question ID : 1034358385

Status : Answered

Q.20 The weld area formed by the resistance spot welding process is called _____.

- Ans ☒ A. finger
- ☒ B. toe
- ☒ C. leg
- ☒ D. nugget

Question ID : 1034358358

Status : Answered

Q.21 Which of following statements is/are true for manometers?

- I) Manometers are easy to operate.
- II) Manometers do not require frequent calibration.
- III) Manometers are made of steel.

- Ans ☒ A. Only II and III
- ☒ B. Only I and II
- ☒ C. Only I and III
- ☒ D. I, II and III

Question ID : 1034358331

Status : Answered

Q.22 The coefficient of discharge for venturimeters is in the range of _____.

- Ans ☒ A. 0.98 to 0.99
- ☒ B. 0.93 to 0.94
- ☒ C. 0.90 to 0.93
- ☒ D. 0.95 to 0.98

Question ID : 1034358340

Status : Answered

Q.23 In which of the following water tube boilers are water tubes inclined at a certain angle?

Ans ☒ A. Babcock and Wilcox boiler

☒ B. Locomotive boiler

☒ C. Cornish boiler

☒ D. Lancashire boiler

Question ID : 1034358324

Status : Answered

Q.24 Which of the following is NOT a loaded type of governor?

Ans ☒ A. Porter governor

☒ B. Proell governor

☒ C. Pickering governor

☒ D. Watt governor

Question ID : 1034358285

Status : Answered

Q.25 Arrange the processes in increasing order of the strength of their joint.

Ans ☒ A. Brazing – Welding – Soldering

☒ B. Soldering – Brazing – Welding

☒ C. Soldering – Welding – Brazing

☒ D. Brazing – Soldering – Welding

Question ID : 1034358368

Status : Answered

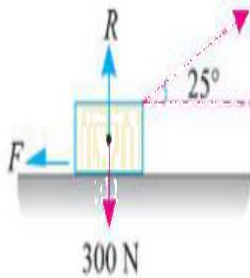
Q.26 Identify the odd one out of the following options.

- Ans ☒ A. Modulus of rigidity
☒ B. Bulk modulus
☒ C. Modulus of elasticity
☒ D. Modulus of viscosity

Question ID : 1034358302

Status : Answered

Q.27 A body of weight 300 N is lying on a rough horizontal plane having a coefficient of friction as 0.3. Find the magnitude of the force which can move the body while acting at an angle of 25° with the horizontal.



- Ans ☒ A. 87.1 N
☒ B. 8.71 N
☒ C. 871 N
☒ D. 0.871 N

Question ID : 1034358300

Status : Answered

Q.28 The addition of CO₂ with shielding gas is applied in the _____ process.

- Ans ☒ A. tungsten inert gas welding
- ☒ B. metal active gas welding
- ☒ C. shielded metal arc welding
- ☒ D. submerged arc welding

Question ID : 1034358365

Status : Answered

Q.29 Identify the defect in the given figure.



- Ans ☒ A. Misrun
- ☒ B. Hot tears
- ☒ C. Cold shut
- ☒ D. Shrinkage cavity

Question ID : 1034358381

Status : Answered

Q.30 Between two concentrated loads, the shear force diagram for any part of the beam, is a _____.

- Ans ☐ A. parabola
- ☐ B. line inclined to axis
- ☐ C. vertical straight line
- ☒ D. horizontal straight line

Question ID : 1034358306

Status : Answered

Q.31 _____ is used to minimise splash and turbulence when metal is flown into a down sprue.

- Ans ☐ A. Runner
- ☒ B. Pouring cup
- ☐ C. Pattern
- ☐ D. Riser

Question ID : 1034358377

Status : Answered

Q.32 Identify the type of fluid machine in the given figure.



- Ans
- ☒ A. Axial flow
 - ☒ B. Inverted flow
 - ☒ C. Radial flow
 - ☒ D. Mixed flow

Question ID : 1034358344

Status : Answered

Q.33 A machine gun of mass 25 kg fires a bullet of mass 30 gram with a velocity of 250 m/s.
Find the velocity with which the machine gun will recoil.

- Ans
- ☒ A. 0.3 m/s
 - ☒ B. 0.6 m/s
 - ☒ C. 0.1 m/s
 - ☒ D. 0.9 m/s

Question ID : 1034358298

Status : Answered

Q.34 _____ is chemically active at soldering temperatures and promotes the wetting action required for successful joining.

- Ans ☒ A. Phosphorous
- ☒ B. Silver
- ☒ C. Tin
- ☒ D. Gold

Question ID : 1034358370

Status : Answered

Q.35 Which of the following is NOT an obstruction type of flow meter?

- Ans ☒ A. Orifice meter
- ☒ B. Nozzle meter
- ☒ C. Venturimeter
- ☒ D. Pitot tube

Question ID : 1034358339

Status : Answered

Q.36 Which of the following elements does NOT form carbides in ferrous steels?

- Ans ☒ A. Cobalt
- ☒ B. Vanadium
- ☒ C. Molybdenum
- ☒ D. Chromium

Question ID : 1034358351

Status : Answered

Q.37 Sensitiveness of the governor is denoted as _____.

If N_1 = Minimum equilibrium speed, N_2 = Maximum equilibrium speed, N = Mean equilibrium speed

Ans ☒ A. $(N_2 - N_1) / (N_2 + N_1)$

☒ B. $(N_2 - N_1) / N$

☒ C. $(N_2 + N_1) / N$

☒ D. $(N_2 + N_1) / (N_2 - N_1)$

Question ID : 1034358287

Status : Answered

Q.38 Identify the odd one out of the following options with respect to the position of the boiler.

Ans ☒ A. Locomotive boiler

☒ B. Cochran boiler

☒ C. Cornish boiler

☒ D. Lancashire boiler

Question ID : 1034358320

Status : Answered

Q.39 Typical heat factor for TIG welding is taken as _____.

Ans ☒ A. 0.3

☒ B. 0.4

☒ C. 0.7

☒ D. 0.2

Question ID : 1034358362

Status : Answered

Q.40 Tap water if used in boilers could directly promote _____.

Ans ☒ A. scaling

☒ B. loss of mechanical property

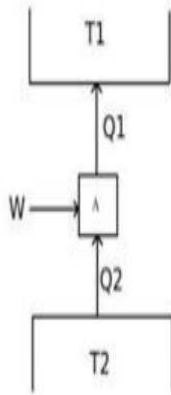
☒ C. loss of hardness

☒ D. corrosion

Question ID : 1034358318

Status : Answered

Q.41 The COP of component given in the figure is _____.



Ans ☒ A. W/Q_2

☒ B. Q_2/W

☒ C. Q_1/W

☒ D. W/Q_1

Question ID : 1034358327

Status : Answered

Q.42 Ideal fluids are _____.

- Ans
- ☒ A. viscous and incompressible
 - ☒ B. non-viscous and incompressible
 - ☒ C. viscous and compressible
 - ☒ D. non-viscous and compressible

Question ID : 1034358328

Status : Answered

Q.43 Which of the following is NOT a type of riveted joint?

- Ans
- ☒ A. Tension riveted joint
 - ☒ B. Solid riveted joint
 - ☒ C. Compression riveted joint
 - ☒ D. Tubular riveted joint

Question ID : 1034358289

Status : Answered

Q.44 The expression $F = \mu A (du/dy)$ denotes _____.

- Ans
- ☒ A. Newton's law of force
 - ☒ B. Newton's law of momentum
 - ☒ C. Newton's law of motion
 - ☒ D. Newton's law of viscosity

Question ID : 1034358329

Status : Answered

Q.45 The area of the turning moment diagram represents the _____.

- Ans
- ☒ A. motion proceeded per revolution
 - ☒ B. work done per revolution
 - ☒ C. energy liberated per revolution
 - ☒ D. energy consumed per revolution

Question ID : 1034358281

Status : Answered

Q.46 For an exothermic reaction the change in enthalpy is _____.

- Ans
- ☒ A. positive
 - ☒ B. neutral
 - ☒ C. negative
 - ☒ D. constant

Question ID : 1034358308

Status : Answered

Q.47 A manometer is generally used to measure _____.

- Ans
- ☒ A. moderate pressure
 - ☒ B. high pressure
 - ☒ C. low pressure
 - ☒ D. atmospheric pressure

Question ID : 1034358330

Status : Answered

Q.48 The sensitivity of simple manometers can be improved by _____.

Ans ☒ A. perpendicular tubes

☒ B. inclined tubes

☒ C. glass bulb

☒ D. inverted tubes

Question ID : 1034358334

Status : Answered

Q.49 Flat pivot bearing is also known as _____.

Ans ☒ A. foot step bearing

☒ B. collar bearing

☒ C. conical bearing

☒ D. truncated bearing

Question ID : 1034358291

Status : Answered

Q.50 Which of following is true for a laminar flow?

Ans ☒ A. $f = 60 / R_e$

☒ B. $f = 66 / R_e$

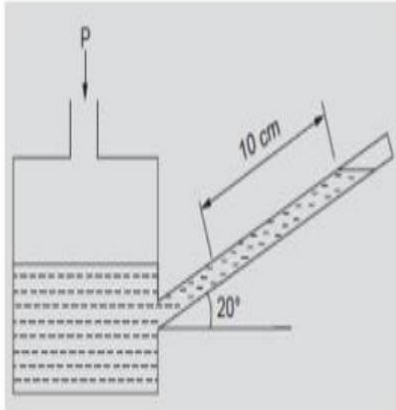
☒ C. $f = 62 / R_e$

☒ D. $f = 64 / R_e$

Question ID : 1034358337

Status : Answered

Q.51 Determine the fluid pressure at a tapping connected with an inclined manometer if the rise in fluid level is 10 cm along the inclined tube above the reservoir level. The tube is inclined at 20° to horizontal as shown in the figure. The density of the manometric fluid is 800 kg/m^3 .



- Ans ☒ A. 0.268 N/m^2
- ☒ B. 268.42 N/m^2
- ☒ C. 2.6842 N/m^2
- ☒ D. 26.842 N/m^2

Question ID : 1034358332

Status : Answered

Q.52 Jet engines employ _____ type of compressor.

- Ans ☒ A. axial flow
- ☒ B. rotary flow
- ☒ C. radial flow
- ☒ D. centrifugal

Question ID : 1034358325

Status : Answered

Q.53 In which of the following heat treatments is the cooling carried out only in the furnace where it is heated?

- Ans ☒ A. Normalizing
- ☒ B. Hardening
- ☒ C. Annealing
- ☒ D. Quenching

Question ID : 1034358352

Status : Answered

Q.54 The smaller version of the Lancashire boiler is the _____.

- Ans ☒ A. Stirling boiler
- ☒ B. Cornish boiler
- ☒ C. Cochran boiler
- ☒ D. thimble boiler

Question ID : 1034358323

Status : Answered

Q.55 The equation $2(\omega_1 - \omega_2) / (\omega_1 + \omega_2)$ represents the _____.

- Ans ☒ A. coefficient of friction for flywheel
- ☒ B. mean speed of the flywheel
- ☒ C. maximum fluctuation
- ☒ D. coefficient of fluctuation of speed

Question ID : 1034358280

Status : Answered

Q.56 Orifices are used to measure _____.

- Ans ☒ A. velocity
- ☒ B. flow rate
- ☒ C. pressure
- ☒ D. density

Question ID : 1034358342

Status : Answered

Q.57 Which of the following techniques is NOT a type of magnetic particle testing method?

- Ans ☒ A. Prod technique
- ☒ B. Plate technique
- ☒ C. Coil technique
- ☒ D. Yoke technique

Question ID : 1034358373

Status : Answered

Q.58 Identify the odd one out of the following options.

- Ans ☒ A. Turbulators
- ☒ B. Pumps
- ☒ C. Baffles
- ☒ D. Retarders

Question ID : 1034358319

Status : Answered

Q.59 _____ occur between the impeller surfaces and the fluid.

- Ans ☒ A. Leakage losses
- ☒ B. Disc friction losses
- ☒ C. Mechanical losses
- ☒ D. Recirculation losses

Question ID : 1034358347

Status : Answered

Q.60 Which cycle consists of two reversible isochores and two reversible adiabatics?

- Ans ☒ A. Air cycle
- ☒ B. Otto cycle
- ☒ C. Diesel cycle
- ☒ D. Compression cycle

Question ID : 1034358313

Status : Answered

Q.61 The angle between the normal to the cam profile and the axis of the follower is called the _____.

- Ans ☒ A. contact angle
- ☒ B. pressure angle
- ☒ C. inclination angle
- ☒ D. origin angle

Question ID : 1034358290

Status : Answered

Q.62 Rivets are specified by their length, _____ head and type.

Ans ☒ A. strength

☒ B. colour

☒ C. diameter

☒ D. weight

Question ID : 1034358288

Status : Answered

Q.63 Which of the following is true for TIG welding with DCEN polarity?

Ans ☒ A. 30% heat is generated at the workpiece

☒ B. 90% heat is generated at the workpiece

☒ C. 10% heat is generated at the workpiece

☒ D. 66% heat is generated at the workpiece

Question ID : 1034358360

Status : Answered

Q.64 The force required to keep unit length of the surface film in equilibrium is called _____.

Ans ☒ A. cohesion force

☒ B. surface tension

☒ C. friction force

☒ D. viscosity force

Question ID : 1034358348

Status : Answered

Q.65 Newton's _____ is also known as the law of inertia.

Ans ☒ A. zeroth law of motion

☒ B. third law of motion

☒ C. first law of motion

☒ D. second law of motion

Question ID : 1034358297

Status : Answered

Q.66 Heavy trucks use the _____ cooling system.

Ans ☒ A. forced-circulation

☒ B. thermosiphon

☒ C. evaporative

☒ D. air

Question ID : 1034358317

Status : Answered

Q.67 The addition of _____ increases the melting point temperature of the tungsten electrode.

Ans ☒ A. thorium

☒ B. copper

☒ C. aluminium

☒ D. iron

Question ID : 1034358361

Status : Answered

Q.68 Which of the following is NOT a type of SMAW process electrode coating?

- Ans
- ☒ A. Rutile
 - ☒ B. Basic
 - ☒ C. Martensitic
 - ☒ D. Acidic

Question ID : 1034358356

Status : Answered

Q.69 Forces meeting at one point but having lines of action, not in one plane are called _____.

- Ans
- ☒ A. coplanar concurrent forces
 - ☒ B. non-coplanar non-concurrent forces
 - ☒ C. coplanar non-concurrent forces
 - ☒ D. non-coplanar concurrent forces

Question ID : 1034358295

Status : Answered

Q.70 Cemented carbides tools are normally manufactured via _____.

- Ans
- ☒ A. powder metallurgy
 - ☒ B. welding
 - ☒ C. forging
 - ☒ D. casting

Question ID : 1034358387

Status : Answered

Q.71 The coefficient of fluctuation for a single cylinder, single acting, four stroke gas engine is _____.

- Ans ☒ A. 0.066
- ☒ B. 0.093
- ☒ C. 1.93
- ☒ D. 0.21

Question ID : 1034358283

Status : Answered

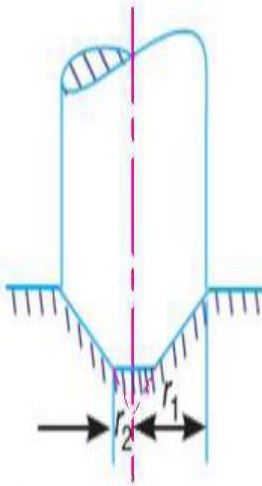
Q.72 Which of the following processes solves the problem of discontinuous filler metal addition of the SMAW process?

- Ans ☒ A. Metal inert gas welding
- ☒ B. Stick welding
- ☒ C. Gas welding process
- ☒ D. Manual metal arc welding process

Question ID : 1034358364

Status : Answered

Q.73 Identify the type of bearing given in the figure.



- Ans ☒ A. Conical pivot bearing
- ☒ B. Trapezoidal pivot bearing
- ☒ C. Flat pivot bearing
- ☒ D. Collar bearing

Question ID : 1034358292

Status : Answered

Q.74 _____ is a virtue by which moulding sand permits escape of gases formed during casting.

- Ans ☒ A. Hardness
- ☒ B. Shock resistance
- ☒ C. Permeability
- ☒ D. Grain size

Question ID : 1034358379

Status : Answered

Q.75 Which of the following is NOT a direct task of flux in a welding arc?

Ans ☒ A. Reduce the welding time

☐ B. Stabilise the arc

☐ C. Provide a protective atmosphere for welding

☐ D. Reduce spattering

Question ID : 1034358354

Status : Answered

Q.76 _____ serves as storage of liquid metal for compensating for the shrinkage during solidification of casting.

Ans ☒ A. Riser

☐ B. Core

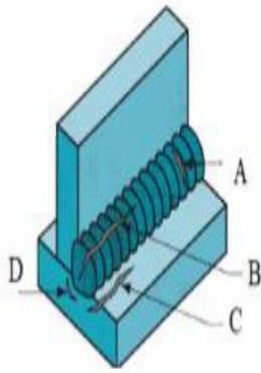
☐ C. Runner

☐ D. Pouring basin

Question ID : 1034358378

Status : Answered

Q.77 Identify the toe crack from the given figure.



- Ans ☒ A. B
☒ B. A
☒ C. C
☒ D. D

Question ID : 1034358372

Status : Answered

Q.78 Which of the following statements is/are correct regarding a flywheel?

- I) Flywheel acts as a reservoir of energy.
- II) Flywheel maintains a constant speed.
- III) Flywheel reduces fluctuation of speed

- Ans ☒ A. II and III
☒ B. I and III
☒ C. I and II
☒ D. Only I

Question ID : 1034358282

Status : Answered

Q.79 A gas tungsten arc-welding operation is performed at a current of 300 A and voltage of 20 V. The power applied in the operation is _____.

- Ans
- ☒ A. 1.5 kW
 - ☒ B. 15 kW
 - ☒ C. 60 kW
 - ☒ D. 6 kW

Question ID : 1034358359

Status : Answered

Q.80 Parting line is between _____.

- Ans
- ☒ A. runner and riser
 - ☒ B. riser and pouring basin
 - ☒ C. flask and runner
 - ☒ D. cope and drag

Question ID : 1034358376

Status : Answered

Q.81 The flow is _____ during the opening of a valve in a pipeline.

- Ans
- ☒ A. laminar
 - ☒ B. uniform
 - ☒ C. unsteady
 - ☒ D. steady

Question ID : 1034358349

Status : Answered

Q.82 A balloon-shaped gas cavity caused by the release of mold gases during pouring is called _____.

- Ans
- ☒ A. pin holes
 - ☒ B. sand wash
 - ☒ C. misrun
 - ☒ D. sand blow

Question ID : 1034358380

Status : Answered

Q.83 The force of friction always acts in a direction _____ to that in which the body tends to move the body.

- Ans
- ☒ A. opposite
 - ☒ B. perpendicular
 - ☒ C. inclined
 - ☒ D. similar

Question ID : 1034358299

Status : Answered

Q.84 The process where the carbon from outside is introduced in the surface of steel by keeping charcoal at higher temperatures is called _____.

- Ans
- ☒ A. nitriding
 - ☒ B. tempering
 - ☒ C. case hardening
 - ☒ D. quenching

Question ID : 1034358353

Status : Answered

Q.85 Which of the following is a property of fluid which makes it suitable to be used in manometers?

- Ans
- ☒ A. Higher surface density
 - ☒ B. High viscosity
 - ☒ C. High co-efficient of thermal expansion
 - ☒ D. Low viscosity

Question ID : 1034358333

Status : Answered

Q.86 The turning moment diagram is also designated as a _____.

- Ans
- ☒ A. lever-effort diagram
 - ☒ B. lever-crank effort diagram
 - ☒ C. crank-lever diagram
 - ☒ D. crank-effort diagram

Question ID : 1034358279

Status : Answered

Q.87 For a refrigeration system, if the work input is 40 kJ/kg and the refrigeration effect produced is 130 kJ/kg of refrigerant flowing, COP is _____.

- Ans
- ☒ A. 3.25
 - ☒ B. 3.50
 - ☒ C. 2.75
 - ☒ D. 3

Question ID : 1034358309

Status : Answered

Q.88 According to _____, when a bullet is fired from a gun, the opposite reaction of the bullet is known as the recoil of gun.

- Ans ☒ A. Newton's first law of motion
- ☒ B. Newton's third law of motion
- ☒ C. Newton's second law of motion
- ☒ D. Newton's zeroth law of motion

Question ID : 1034358296

Status : Answered

Q.89 _____ violates both the statements (Kelvin-Planck and Clausius statements).

- Ans ☒ A. PMM4
- ☒ B. PMM3
- ☒ C. PMM1
- ☒ D. PMM2

Question ID : 1034358312

Status : Answered

Q.90 The line of action of concurrent forces meet at _____.

- Ans ☒ A. a plane
- ☒ B. perpendicular planes
- ☒ C. a single point
- ☒ D. two points

Question ID : 1034358293

Status : Answered

Q.91 A ton of refrigeration or air conditioning is the amount of heat that must be removed from 1 ton (2000 lbm) of water in _____ to freeze it at 32°F at 1 atmosphere pressure.

- Ans ☒ A. 24 hours
- ☒ B. 365 days
- ☒ C. 60 seconds
- ☒ D. 60 minutes

Question ID : 1034358326

Status : Answered

Q.92 _____ provides a clearance between the trailing edge of the tool and the newly generated work surface.

- Ans ☒ A. End cutting edge angle
- ☒ B. Side relief angle
- ☒ C. Side cutting edge angle
- ☒ D. End relief angle

Question ID : 1034358386

Status : Answered

Q.93 If in a double helical gear, the right and left inclinations meet at a common apex and there is no groove in between, the gear is known as _____.

- Ans ☒ A. herringbone gear
- ☒ B. crossed helical gear
- ☒ C. spiral bevel gear
- ☒ D. helical spur gear

Question ID : 1034358284

Status : Answered

Q.94 The probe of ultrasonic flaw detector contains _____.

- Ans
- ☒ A. plastic plugs
 - ☒ B. polystyrene fibers
 - ☒ C. copper balls
 - ☒ D. transducer

Question ID : 1034358375

Status : Answered

Q.95 _____ is a similar type of valve as the steam stop valve used in a boiler.

- Ans
- ☒ A. Junction valve
 - ☒ B. Reverse valve
 - ☒ C. Transient valve
 - ☒ D. Blow valve

Question ID : 1034358321

Status : Answered

Q.96 In a _____ flow, the fluid layers do not mix macroscopically.

- Ans
- ☒ A. constant
 - ☒ B. turbulent
 - ☒ C. steady
 - ☒ D. laminar

Question ID : 1034358336

Status : Answered

Q.97 The definition of the compressible and incompressible fluid is defined according to the changes in _____.

- Ans ☒ A. energy
- ☒ B. density
- ☒ C. temperature
- ☒ D. motion

Question ID : 1034358345

Status : Answered

Q.98 _____ stress is defined as the maximum value of the stress levels which a material can withstand before fracture.

- Ans ☒ A. Working
- ☒ B. Yield
- ☒ C. Ultimate
- ☒ D. Proof

Question ID : 1034358301

Status : Answered

Q.99 Identify the odd one out of the following options.

- Ans ☒ A. Gas metal arc welding
- ☒ B. Submerged arc welding
- ☒ C. Metal inert gas welding
- ☒ D. Metal active gas welding

Question ID : 1034358366

Status : Answered

Q.100 Which of the following is NOT a type of beam?

- Ans ☒ A. Continuum beam
- ☒ B. Continuous beam
- ☒ C. Overhanging beam
- ☒ D. Fixed beam

Question ID : 1034358305

Status : Answered

Q.101 A/An _____ measures the velocity indirectly by measuring the difference between the stagnation and static pressures.

- Ans ☒ A. orifice meter
- ☒ B. breezometer
- ☒ C. pitot tube
- ☒ D. hot wire anemometer

Question ID : 1034358341

Status : Answered

Q.102 Brake power is measured using a Prony brake for a _____ engine.

- Ans ☒ A. low power
- ☒ B. single cylinder
- ☒ C. low speed
- ☒ D. variable speed

Question ID : 1034358315

Status : Answered

Q.103 Shielding is done by _____ in gas welding process.

Ans ☒ A. flux

☒ B. outermost cone of the flame

☒ C. external inert gas

☒ D. innermost cone of the flame

Question ID : 1034358357

Status : Answered

Q.104 Which of the following statements is correct regarding the metal inert gas welding process?

I) Spatter is a problem.

II) Electrode is in the form of a wire.

III) Tungsten inclusion is a rampant defect.

Ans ☒ A. Only I and III

☒ B. Only II and III

☒ C. Only I and II

☒ D. I, II and III

Question ID : 1034358363

Status : Answered

Q.105 What is the maximum efficiency of a series of vertical plates?

Ans ☒ A. 100%

☒ B. 66.67%

☒ C. 33.34%

☒ D. 50%

Question ID : 1034358350

Status : Answered

Q.106 Identify the defect from the given figure.



Ans ☒ A. Undercut

☒ B. Underpass

☒ C. Underfill

☒ D. Overlap

Question ID : 1034358371

Status : Answered

Q.107 Identify the odd one out of the following processes.

Ans ☒ A. Stick welding

☒ B. Shielding metal arc welding

☒ C. Manual metal arc welding

☒ D. Submerged arc welding

Question ID : 1034358355

Status : Answered

Q.108 Identify the odd one out of the following options.

Ans ☒ A. Lost-foam process

☒ B. Evaporative-foam process

☒ C. Lost pattern process

☒ D. Predictive-foam process

Question ID : 1034358384

Status : Answered

Q.109 Compared to venturimeters, orifice meters have _____ head loss.

Ans ☒ A. medium

☒ B. large

☒ C. the same

☒ D. small

Question ID : 1034358343

Status : Answered

Q.110 Which of the following is a permanent mold casting process?

Ans ☒ A. Expanded polystyrene casting process

☒ B. Investment casting process

☒ C. Sand casting process

☒ D. Slush casting process

Question ID : 1034358383

Status : Not Answered

Chosen Option : --