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Participant ID	
Participant Name	
Test Center Name	
Test Date	29/10/2025
Test Time	2:00 PM - 5:00 PM
Subject	Junior Engineer Mechanical

*@Notification on Pg 9
Telegram Channel*

Section : General

- ✓
- ✗
- ✗
- ✗



Q.2 What was India's rank in the Global Innovation Index 2024?

Ans ✗ 1. 25th

✗ 2. 50th

✗ 3. 32nd

✓ 4. 39th

Question ID : 441009151799

Option 1 ID : 441009602362

Option 2 ID : 441009602360

Option 3 ID : 441009602359

Option 4 ID : 441009602361

Status : Answered

Chosen Option : 4

Q.3 Which revolutionary leader was associated with the assassination attempt on British official Kingsford in 1908?

Ans ✗ 1. Ashwini Kumar Dutt

✗ 2. Aurobindo Ghosh

✓ 3. Khudiram Bose

✗ 4. Rajnarayan Bose

Question ID : 44100980402

Option 1 ID : 441009319391

Option 2 ID : 441009319390

Option 3 ID : 441009319389

Option 4 ID : 441009319388

Status : Answered

Chosen Option : 3

Q.4 According to the Economic Survey 2024-25, how much did government health expenditure increase as a share of total health expenditure between FY15 and FY22?

Ans ✗ 1. 30.5% to 45.2%

✗ 2. 25.0% to 40.5%

✓ 3. 29.0% to 48.0%

✗ 4. 15.0% to 25.0%

Question ID : 441009114268

Option 1 ID : 441009454534

Option 2 ID : 441009454535

Option 3 ID : 441009454537

Option 4 ID : 441009454536

Status : Answered

Chosen Option : 4

Q.5 The 42nd Amendment of the Constitution of India was enacted in which year?

Ans 1. 1976
 2. 1946
 3. 1972
 4. 1990

Question ID : 44100996104
Option 1 ID : 441009382449
Option 2 ID : 441009382448
Option 3 ID : 441009382447
Option 4 ID : 441009382446
Status : Answered
Chosen Option : 3

Q.6 Which party emerged as the second largest in the 2024 Jammu and Kashmir Assembly elections?

Ans 1. National Conference
 2. People's Democratic Party
 3. Indian National Congress
 4. Bharatiya Janata Party

Question ID : 441009151814
Option 1 ID : 441009602419
Option 2 ID : 441009602422
Option 3 ID : 441009602420
Option 4 ID : 441009602421
Status : Answered
Chosen Option : 2

Q.7 Which constitutional amendments aimed to restore democratic principles and safeguard fundamental rights?

Ans 1. 40th (1978)
 2. 44th (1978)
 3. 54th (1978)
 4. 64th (1978)

Question ID : 44100996099
Option 1 ID : 441009382427
Option 2 ID : 441009382428
Option 3 ID : 441009382426
Option 4 ID : 441009382429
Status : Answered
Chosen Option : 2

Q.8 Which site is known for rock-cut architecture and Buddhist murals from the 2nd century BCE?

Ans 1. Badami Temple
 2. Virupaksha Temple
 3. Chennakeshava Temple
 4. Ajanta Caves

Question ID : 44100980711

Option 1 ID : 441009320610

Option 2 ID : 441009320611

Option 3 ID : 441009320613

Option 4 ID : 441009320612

Status : Answered

Chosen Option : 4

Q.9 Announced in 2025, which type of engine is ISRO developing for the Next Generation Launch Vehicle (NGLV)?

Ans 1. Solid-Powered Engine
 2. Liquid Propellant Engine
 3. Hybrid Rocket Engine
 4. LOX-Methane Engine

Question ID : 441009151786

Option 1 ID : 441009602309

Option 2 ID : 441009602307

Option 3 ID : 441009602308

Option 4 ID : 441009602310

Status : Answered

Chosen Option : 2

Q.10 What is an oasis in the Thar Desert?

Ans 1. A fertile area with water
 2. A desert storm
 3. A dry river bed
 4. A large sand dune

Question ID : 44100996451

Option 1 ID : 441009383859

Option 2 ID : 441009383857

Option 3 ID : 441009383856

Option 4 ID : 441009383858

Status : Answered

Chosen Option : 4

Q.11 Which dynasty emerged as a dominant power in Northern India after the decline of the Gupta Empire?

Ans 1. Chalukyas
 2. Pallavas
 3. Pushyabhus
 4. Mauryans

Question ID : 44100980319

Option 1 ID : 441009319062

Option 2 ID : 441009319061

Option 3 ID : 441009319063

Option 4 ID : 441009319060

Status : Answered

Chosen Option : 1

Q.12 When was Shahid Bhagat Singh hanged?

Ans 1. 1925
 2. 1922
 3. 1931
 4. 1932

Question ID : 44100980354

Option 1 ID : 441009319200

Option 2 ID : 441009319203

Option 3 ID : 441009319201

Option 4 ID : 441009319202

Status : Answered

Chosen Option : 3

Q.13 Which Five-Year Plan of Government of India was terminated one year before its scheduled completion due to economic instability?

Ans 1. Eight Five-Year Plan
 2. Second Five-Year Plan
 3. Third Five-Year Plan
 4. Fifth Five-Year Plan

Question ID : 44100998826

Option 1 ID : 441009393405

Option 2 ID : 441009393404

Option 3 ID : 441009393406

Option 4 ID : 441009393403

Status : Answered

Chosen Option : 4

Q.14 What was the approximate total budget allocated to the Ministry of Youth Affairs and Sports in 2025?

Ans 1. ₹5,232 crore
 2. ₹4,200 crore
 3. ₹3,794 crore
 4. ₹2,534 crore

Question ID : 441009131653

Option 1 ID : 441009523201

Option 2 ID : 441009523200

Option 3 ID : 441009523199

Option 4 ID : 441009523198

Status : Answered

Chosen Option : 1

Q.15 What was the purpose of Operation Brahma in March 2025?

Ans 1. Diplomatic mission
 2. Military exercise
 3. Earthquake relief assistance to Myanmar
 4. Trade agreement between India and Myanmar

Question ID : 441009151797

Option 1 ID : 441009602353

Option 2 ID : 441009602351

Option 3 ID : 441009602354

Option 4 ID : 441009602352

Status : Answered

Chosen Option : 3

Q.16 As per the Economic Survey 2024-25, what was the estimated growth rate of the industrial sector in FY25?

Ans 1. 15.1%
 2. 6.2%
 3. 3.5%
 4. 9.8%

Question ID : 441009114257

Option 1 ID : 441009454497

Option 2 ID : 441009454495

Option 3 ID : 441009454494

Option 4 ID : 441009454496

Status : Answered

Chosen Option : 1

Q.17 The region in the Great Indian Plains where rivers deposit new fertile soil annually is known as:

Ans 1. Terai
 2. Bhabar
 3. Banger
 4. Khadar

Question ID : 44100996454
Option 1 ID : 441009383871
Option 2 ID : 441009383870
Option 3 ID : 441009383869
Option 4 ID : 441009383868

Status : Answered

Chosen Option : 1

Q.18 Who wrote the book 'The New Icon: Savarkar and the Facts', released in 2025?

Ans 1. Arun Shourie
 2. Vikram Sampath
 3. Rajiv Malhotra
 4. Anirban Ganguly

Question ID : 441009114324
Option 1 ID : 441009454753
Option 2 ID : 441009454752
Option 3 ID : 441009454750
Option 4 ID : 441009454751

Status : Answered

Chosen Option : 2

Q.19 Which article of the Directive Principles of the State Policy states that it is the duty of the State to secure Uniform Civil Code for the citizens throughout the country?

Ans 1. Article 44
 2. Article 40
 3. Article 42
 4. Article 34

Question ID : 44100996085
Option 1 ID : 441009382358
Option 2 ID : 441009382360
Option 3 ID : 441009382359
Option 4 ID : 441009382361

Status : Answered

Chosen Option : 1

Q.20 Where were the National Games, 2025, held?

Ans 1. Himachal Pradesh
 2. Rajasthan
 3. Uttarakhand
 4. Madhya Pradesh

Question ID : 441009119298
Option 1 ID : 441009474312
Option 2 ID : 441009474314
Option 3 ID : 441009474311
Option 4 ID : 441009474313
Status : Answered
Chosen Option : 2

Q.21 Which of the following are used as a common salt in food?

Ans 1. Sodium bicarbonate
 2. Sodium chloride
 3. Potassium sulphate
 4. Magnesium sulphate

Question ID : 44100988704
Option 1 ID : 441009352817
Option 2 ID : 441009352815
Option 3 ID : 441009352818
Option 4 ID : 441009352816
Status : Answered
Chosen Option : 2

Q.22 In which classical dance form does the dancer depict stories from Ramayana and Mahabharata through elaborate facial expressions and hand gestures?

Ans 1. Odissi
 2. Bharatnatyam
 3. Kathak
 4. Kathakali

Question ID : 44100980724
Option 1 ID : 441009320663
Option 2 ID : 441009320662
Option 3 ID : 441009320665
Option 4 ID : 441009320664
Status : Answered
Chosen Option : 2

Q.23 The Golden Quadrilateral project in India is primarily related to which sector?

Ans 1. Seaports
 2. Railways
 3. Airports
 4. Highways

Question ID : 44100998797
Option 1 ID : 441009393290
Option 2 ID : 441009393287
Option 3 ID : 441009393289
Option 4 ID : 441009393288
Status : Answered
Chosen Option : 4

Q.24 When was the Steel Authority of India Limited set up for the industrial development in India?

Ans 1. 1987
 2. 1990
 3. 1973
 4. 1946

Question ID : 44100998811
Option 1 ID : 441009393344
Option 2 ID : 441009393346
Option 3 ID : 441009393343
Option 4 ID : 441009393345
Status : Answered
Chosen Option : 4

Q.25 Which freedom fighter led the famous Bardoli Satyagraha against the Britishers?

Ans 1. Sardar Vallabhbhai Patel
 2. Subhas Chandra Bose
 3. Mahatma Gandhi
 4. Motilal Nehru

Question ID : 44100980357
Option 1 ID : 441009319214
Option 2 ID : 441009319213
Option 3 ID : 441009319215
Option 4 ID : 441009319212
Status : Answered
Chosen Option : 1

Q.26 What is the primary objective of the Dx-EDGE initiative launched in 2025?

Ans 1. To regulate e-commerce businesses
 2. To promote foreign investments in India
 3. To empower MSMEs with digital tools and knowledge
 4. To provide financial subsidies to large corporations

Question ID : 441009119317
Option 1 ID : 441009474390
Option 2 ID : 441009474389
Option 3 ID : 441009474388
Option 4 ID : 441009474387

Status : Answered
Chosen Option : 3

Q.27 Bibek Debroy, awarded with Padma Bhushan, 2025, was known for his contributions in which field?

Ans 1. Politics
 2. Economics
 3. Literature
 4. Sports

Question ID : 441009131650
Option 1 ID : 441009523186
Option 2 ID : 441009523189
Option 3 ID : 441009523188
Option 4 ID : 441009523187

Status : Answered
Chosen Option : 3

Q.28 Who was honoured with the Best Actor in a Leading Role award at the 70th National Film Awards in 2024?

Ans 1. Rishab Shetty
 2. Allu Arjun
 3. Vicky Kaushal
 4. Ayushmann Khurana

Question ID : 441009114331
Option 1 ID : 441009454783
Option 2 ID : 441009454784
Option 3 ID : 441009454785
Option 4 ID : 441009454782

Status : Answered
Chosen Option : 2

Q.29 Which of the following is India's first national park?

Ans 1. Jim Corbett National Park
 2. Gir National Park
 3. Sundarbans National Park
 4. Kaziranga National Park

Question ID : 44100996398
Option 1 ID : 441009383639
Option 2 ID : 441009383636
Option 3 ID : 441009383637
Option 4 ID : 441009383638
Status : Answered
Chosen Option : 3

Q.30 Among the given options, which of the following States of India has the least number of MPs in the Rajya Sabha?

Ans 1. Himachal Pradesh
 2. Rajasthan
 3. Madhya Pradesh
 4. Haryana

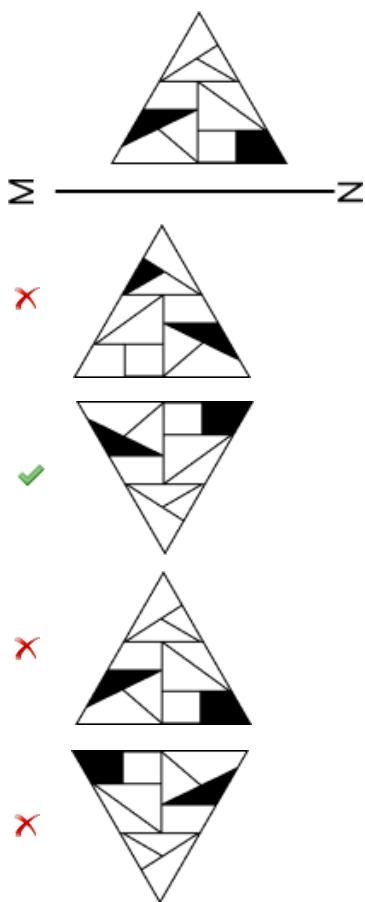
Question ID : 44100996153
Option 1 ID : 441009382649
Option 2 ID : 441009382648
Option 3 ID : 441009382646
Option 4 ID : 441009382647
Status : Answered
Chosen Option : 1

Section : Reasoning

✓
✗
✗
✗

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Q.4 A, B, C, D, E, F and G are sitting around a circular table, facing the centre of the table. B sits third to the right of A. G sits to the immediate left of A. E sits second to the right of G. F sits to the immediate right of D. Who sits second to the left of C?

Ans 1. F

2. D

3. G

4. A

Question ID : 441009755584

Option 1 ID : 44100929/6351

Option 2 ID : 44100929/6332

Option 3 ID : 44100929/6330

Option 4 ID : 44100929/6329

Status : Answered

Chosen Option : 4

Q.5 If 'A' stands for ' $\frac{1}{2}$ ', 'B' stands for 'x', 'C' stands for '4' and 'D' stands for ' $\frac{1}{4}$ ', then what will come in place of the question mark (?) in the following equation?

$23 D 40 A 8 C 12 B 5 = ?$

Ans 1. 77

2. 76

3. 75

4. 78

Question ID : 441009551801

Option 1 ID : 4410092162520

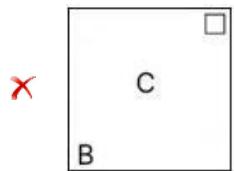
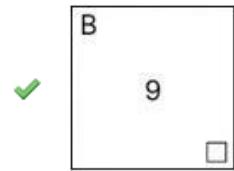
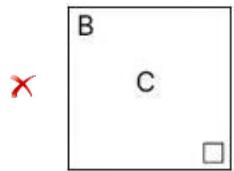
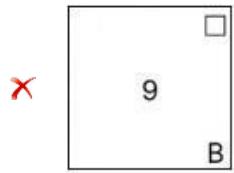
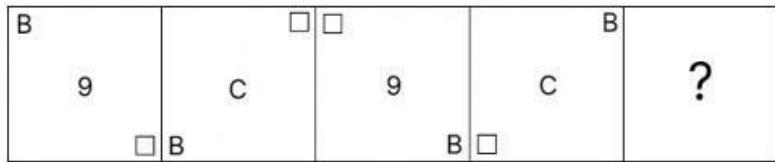
Option 2 ID : 4410092162519

Option 3 ID : 4410092162518

Option 4 ID : 4410092162521

Status : Answered

Chosen Option : 4



Q.7 Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?
YJN 5, WHL 13, UFJ 21, SDH 29, ?

Ans 1. QBF 37
 2. PAE 35
 3. QBG 39
 4. RBE 37

Question ID : 4410091313658

Option 1 ID : 4410095186332

Option 2 ID : 4410095186334

Option 3 ID : 4410095186333

Option 4 ID : 4410095186331

Status : Answered

Chosen Option : 1

Q.8 In a certain code language,

'A + B' means 'A is the mother of B',
'A - B' means 'A is the brother of B',
'A x B' means 'A is the wife of B' and
'A ÷ B' means 'A is the father of B'.

How is P related to T if $P \times Q \div R + S = T$?

Ans 1. Mother's Sister
 2. Father's Mother
 3. Mother's Mother
 4. Father's Sister

Question ID : 4410091313795

Option 1 ID : 4410095186880

Option 2 ID : 4410095186881

Option 3 ID : 4410095186879

Option 4 ID : 4410095186882

Status : Answered

Chosen Option : 3

Q.9 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans 1. DU-ZA

2. SJ-OM

3. RI-NL

4. ZQ-VT

Question ID : 4410091313779

Option 1 ID : 4410095186815

Option 2 ID : 4410095186818

Option 3 ID : 4410095186816

Option 4 ID : 4410095186817

Status : Answered

Chosen Option : 1

Q.10 C, D, E, F, G, H and I live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on, till the topmost floor is numbered 6. H lives on an odd numbered floor but not on floor number 5. Only two people live between C and D. F lives immediately below E. D lives on an even numbered floor. Only three people live between E and G. On which floor does F live?

Ans 1. Floor number 3

2. Floor number 4

3. Floor number 5

4. Floor number 2

Question ID : 4410091313665

Option 1 ID : 4410095186360

Option 2 ID : 4410095186361

Option 3 ID : 4410095186359

Option 4 ID : 4410095186362

Status : Answered

Chosen Option : 3

Q.11 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans 1. YH-GN

2. LU-TY

3. JS-RY

4. UD-CJ

Question ID : 4410091313764

Option 1 ID : 4410095186/58

Option 2 ID : 4410095186/55

Option 3 ID : 4410095186/56

Option 4 ID : 4410095186/57

Status : Answered

Chosen Option : 2

Q.12 In a certain code language, 'CATS' is coded as '3571' and 'TURN' is coded as '2438'. What is the code for 'T' in that language?

Ans 1. 7

2. 3

3. 2

4. 8

Question ID : 441009755632

Option 1 ID : 44100929/6523

Option 2 ID : 44100929/6521

Option 3 ID : 44100929/6522

Option 4 ID : 44100929/6524

Status : Answered

Chosen Option : 2

Q.13 Refer to the given number, symbol series and answer the question that follows. Counting to be done from left to right only. All numbers are single-digit numbers. (Left) @ 5 % © € 7 @ @ @ 5 4 1 © \$ & 1 8 @ £ @ 8 6 (Right)
How many such numbers are there, each of which is immediately preceded by a symbol and also immediately followed by a symbol?

Ans 1. 1

2. 2

3. 3

4. 4

Question ID : 441009793695

Option 1 ID : 4410093128781

Option 2 ID : 4410093128779

Option 3 ID : 4410093128780

Option 4 ID : 4410093128782

Status : Answered

Chosen Option : 2

Q.14 What will come in place of the question mark (?) in the following equation if '+' and '-' are interchanged and 'x' and '÷' are interchanged?

$$104 \div 9 + 999 \times 9 - 2 = ?$$

Ans 1. 823
 2. 826
 3. 827
 4. 825

Question ID : 4410091312804

Option 1 ID : 4410095182921

Option 2 ID : 4410095182923

Option 3 ID : 4410095182924

Option 4 ID : 4410095182922

Status : Answered

Chosen Option : 3

Q.15 Refer to the given letter and symbol series and answer the question that follows.
Counting to be done from left to right only.

(Left) A P % ^ S T # P U M % P T M L J Z U # P S T L H & G # Z P % (Right)

If all the 'P's and '#'s are dropped from the above series, which is the eighth term from the left in the new series thus formed? [17494](#)

Ans 1. U
 2. M
 3. %
 4. &

Question ID : 441009771530

Option 1 ID : 4410093040114

Option 2 ID : 4410093040115

Option 3 ID : 4410093040113

Option 4 ID : 4410093040116

Status : Answered

Chosen Option : 3

Q.16 E, F, M, N, U and Y live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on, till the topmost floor is numbered 6. Only three people live below U. Only two people live between U and N. Only E lives between U and M. F lives immediately below U. How many people live between Y and E?

Ans 1. Four

2. Three

3. Two

4. One

Question ID : 4410091313776

Option 1 ID : 4410095186803

Option 2 ID : 4410095186804

Option 3 ID : 4410095186805

Option 4 ID : 4410095186806

Status : Answered

Chosen Option : 3

Q.17 Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number result(s) in the second number. Similarly, certain mathematical operation(s) on the second number result(s) in the third number and so on. Which of the given options follows the same set of operations as in the given sets?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 - Operations on 13 such as adding to/subtracting from/multiplying with 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

10-12-14-28;

11-13-15-30

Ans 1. 20-22-24-96

2. 10-12-16-36

3. 15-17-19-38

4. 6-8-12-24

Question ID : 4410091312748

Option 1 ID : 4410095182697

Option 2 ID : 4410095182698

Option 3 ID : 4410095182700

Option 4 ID : 4410095182699

Status : Answered

Chosen Option : 3

Q.18 Which of the given letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of :: ?

: PNL :: BZX : %

Ans 1. # = NLJ , % = DAA

2. # = NLI , % = CAY

3. # = NNL , % = DBZ

4. # = NLJ , % = DBZ

Question ID : 441009759059

Option 1 ID : 4410092990230

Option 2 ID : 4410092990232

Option 3 ID : 4410092990231

Option 4 ID : 4410092990229

Status : Answered

Chosen Option : 4

Q.19 FING is related to OPTJ in a certain way based on the English alphabetical order. In the same way, PKLS is related to YRRV. To which of the following options is QFDB related, following the same logic?

Ans 1. ZJEM

2. ZMJE

3. ZMEJ

4. ZJME

Question ID : 4410091313830

Option 1 ID : 4410095187022

Option 2 ID : 4410095187019

Option 3 ID : 4410095187020

Option 4 ID : 4410095187021

Status : Answered

Chosen Option : 2

Q.20 In a certain code language,

'A + B' means 'A is the mother of B',
'A - B' means 'A is the brother of B',
'A x B' means 'A is the wife of B' and
'A ÷ B' means 'A is the father of B'.

How is P related to T if 'P ÷ Q x R - S + T'?

Ans 1. Mother's brother's wife's father
 2. Mother's brother's wife's brother
 3. Father's brother's wife's father
 4. Father's brother's wife's brother

Question ID : 4410091313793

Option 1 ID : 4410095186871

Option 2 ID : 4410095186872

Option 3 ID : 4410095186873

Option 4 ID : 4410095186874

Status : Answered

Chosen Option : 1

Q.21 In a certain code language, 'POET' is coded as '6428' and 'EARS' is coded as '3567'.
What is the code for 'E' in that language?

Ans 1. 5
 2. 6
 3. 2
 4. 3

Question ID : 441009755635

Option 1 ID : 4410092976536

Option 2 ID : 4410092976533

Option 3 ID : 4410092976534

Option 4 ID : 4410092976535

Status : Answered

Chosen Option : 2

Q.22 Each of A, B, I, J, O, P and S has an exam on a different day of a week starting from Monday and ending on Sunday of the same week.
Only one person has exam after S. Only one person has exam between S and B.
Exactly four people have their exams between J and S.
A has an exam immediately before P. I does not have an exam on Friday.
How many people have exams before O?

Ans 1. One

2. Four

3. Three

4. Two

Question ID : 4410091313709

Option 1 ID : 4410095186538

Option 2 ID : 4410095186535

Option 3 ID : 4410095186536

Option 4 ID : 4410095186537

Status : Answered

Chosen Option : 2

Q.23 REST is related to QDRS in a certain way based on the English alphabetical order. In the same way, FOIL is related to ENHK. To which of the following is GULF related, following the same logic?

Ans 1. BSLF

2. FTKE

3. FSJE

4. FUHB

Question ID : 441009771618

Option 1 ID : 4410093040466

Option 2 ID : 4410093040465

Option 3 ID : 4410093040467

Option 4 ID : 4410093040468

Status : Answered

Chosen Option : 2

Q.24 A, B, C, D, E, F and G are sitting around a circular table, facing the centre of the table. A sits third to the left of E. C and B are immediate neighbours of E. F is an immediate neighbour of G. F sits third to the left of D. Who among the following is the neighbour of A?

Ans 1. F
 2. E
 3. C
 4. D

Question ID : 441009755585

Option 1 ID : 44100929/6336

Option 2 ID : 44100929/6335

Option 3 ID : 44100929/6333

Option 4 ID : 44100929/6334

Status : Answered

Chosen Option : 4

Q.25 What should come in place of the question mark (?) in the given series?

12, 24, 72, ?, 1440, 8640

Ans 1. 222
 2. 288
 3. 286
 4. 218

Question ID : 441009605260

Option 1 ID : 4410092376159

Option 2 ID : 4410092376158

Option 3 ID : 4410092376157

Option 4 ID : 4410092376160

Status : Answered

Chosen Option : 2

Q.26 What will come in place of the question mark (?) in the following equation if '÷' and '–' are interchanged and 'x' and '+' are interchanged?

$114 - 6 \div 3 + 2 \times 8 = ?$

Ans 1. 20
 2. 17
 3. 23
 4. 21

Question ID : 441009531903

Option 1 ID : 4410092083018

Option 2 ID : 4410092083019

Option 3 ID : 4410092083016

Option 4 ID : 4410092083017

Status : Answered

Chosen Option : 4

Q.27 Select the letter-cluster from among the given options that can replace the question mark (?) to complete the given series.

NDTK, MFQO, ?, KJKW, JLHA

Ans 1. LDNS

2. LNHS

3. LHNS

4. LHNT

Question ID : 4410091313943

Option 1 ID : 4410095187473

Option 2 ID : 4410095187474

Option 3 ID : 4410095187471

Option 4 ID : 4410095187472

Status : Answered

Chosen Option : 3

Q.28 Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number result(s) in the second number. Similarly, certain mathematical operation(s) on the second number result(s) in the third number and so on. Which of the given options follows the same set of operations as in the given sets?

(Note: A two/three digit number cannot be broken into individual digits for operations, e.g., if 37 is followed by 10, the operation cannot be $3 + 7$ as a two-digit number cannot be broken into individual digits.)

38 - 266 - 532 - 544

13 - 91 - 182 - 194₂₃₀₁

Ans 1. 22 - 154 - 770 - 782

2. 15 - 105 - 210 - 222

3. 12 - 96 - 288 - 300

4. 25 - 155 - 465 - 478

Question ID : 441009552766

Option 1 ID : 4410092166381

Option 2 ID : 4410092166378

Option 3 ID : 4410092166379

Option 4 ID : 4410092166380

Status : Answered

Chosen Option : 2

Q.29 Refer to the given letter series and answer the question that follows. Counting to be done from left to right only.

(Left) C D P B Q L M O A J K T S N F G R E H W Y (Right)

How many such consonants are there, each of which is immediately preceded by a vowel and also immediately followed by a vowel?

Ans 1. One

2. Three

3. None

4. Two

Question ID : 441009793056

Option 1 ID : 4410093126224

Option 2 ID : 4410093126226

Option 3 ID : 4410093126223

Option 4 ID : 4410093126225

Status : Answered

Chosen Option : 3

Q.30 What should come in place of the question mark (?) in the given series?

35 48 64 83 105 130 ?

Ans 1. 155

2. 163

3. 158

4. 149

Question ID : 4410091312767

Option 1 ID : 4410095182773

Option 2 ID : 4410095182775

Option 3 ID : 4410095182776

Option 4 ID : 4410095182774

Status : Answered

Chosen Option : 1

Section : Branch Specific (Mechanical)

Q.1 In the stress-strain diagram for structural steels, the slope of the linear portion represents:

Ans 1. the yield strength
 2. the modulus of elasticity
 3. the ultimate tensile strength
 4. plastic deformation

Question ID : 441009130823

Option 1 ID : 441009519789

Option 2 ID : 441009519791

Option 3 ID : 441009519790

Option 4 ID : 441009519792

Status : Answered

Chosen Option : 2

Q.2 Which of the following factors primarily determines the cooling characteristics of a casting in Caine's method?

Ans 1. Ratio of pouring temperature to solidification time
 2. Ratio of mould thickness to riser height
 3. Ratio of surface area to volume of the casting
 4. Ratio of metal density to mould material conductivity

Question ID : 441009131812

Option 1 ID : 441009523833

Option 2 ID : 441009523830

Option 3 ID : 441009523831

Option 4 ID : 441009523832

Status : Answered

Chosen Option : 3

Q.3 In which of the following mechanisms is a cam and follower used to convert rotary motion into reciprocating motion?

Ans 1. Gearbox
 2. Belt conveyor
 3. Chain drive
 4. IC engine valve mechanism

Question ID : 441009100896

Option 1 ID : 441009401597

Option 2 ID : 441009401595

Option 3 ID : 441009401594

Option 4 ID : 441009401596

Status : Answered

Chosen Option : 4

Q.4 How does sensible heat transfer from a substance to the refrigerant in the evaporator?

Ans 1. Through only radiation process
 2. Through both conduction and convection processes
 3. Through only convection process
 4. Through only conduction process

Question ID : 44100996915

Option 1 ID : 441009385696

Option 2 ID : 441009385698

Option 3 ID : 441009385697

Option 4 ID : 441009385695

Status : Answered

Chosen Option : 2

Q.5 The change in the length of a thin cylindrical shell of 100 cm diameter, 1 cm thickness, and 5 m length ($E = 2 \times 10^8$ N/mm 2 and $\mu = 0.3$), when subjected to an internal pressure of 3 N/mm 2 is:

Ans 1. 7.5 cm
 2. 0.075 cm
 3. 75 cm
 4. 0.75 cm

Question ID : 441009139364

Option 1 ID : 441009553736

Option 2 ID : 441009553738

Option 3 ID : 441009553735

Option 4 ID : 441009553737

Status : Answered

Chosen Option : 2

Q.6 What is one benefit of multi-stage compression in gas pipelines?

Ans 1. Decreases compression costs significantly
 2. Reduces the need for lubricants
 3. Improves gas flow over long distances
 4. Simplifies pipeline design

Question ID : 441009120675

Option 1 ID : 441009479741

Option 2 ID : 441009479738

Option 3 ID : 441009479739

Option 4 ID : 441009479740

Status : Answered

Chosen Option : 3

Q.7 What is the function of a tool post?

Ans 1. Support the tailstock
 2. Rotate the spindle
 3. Support the chuck
 4. Hold and adjust the cutting tool

Question ID : 441009161394
Option 1 ID : 441009639232
Option 2 ID : 441009639229
Option 3 ID : 441009639230
Option 4 ID : 441009639231

Status : Answered
Chosen Option : 4

Q.8 In the P-V diagram of a refrigeration cycle, the working fluid enters the compressor after the _____.
_____.

Ans 1. condenser
 2. evaporator
 3. throttling valve
 4. expander

Question ID : 441009176790
Option 1 ID : 441009699062
Option 2 ID : 441009699063
Option 3 ID : 441009699064
Option 4 ID : 441009699061

Status : Answered
Chosen Option : 2

Q.9 What is the formula for determining the number of friction surfaces (n) for a multi-plate clutch?

Ans 1. $n = \text{number of driving plates} - \text{number of driven plates} - 1$
 2. $n = \text{number of driving plates} + \text{number of driven plates}$
 3. $n = \text{number of driving plates} + \text{number of driven plates} - 1$
 4. $n = \text{number of driving plates} + \text{number of driven plates} + 1$

Question ID : 44100999524
Option 1 ID : 441009396035
Option 2 ID : 441009396036
Option 3 ID : 441009396033
Option 4 ID : 441009396034

Status : Answered
Chosen Option : 3

Q.10 What is the relation between maximum fluctuation of energy and coefficient of fluctuation of speed for a flywheel?

Ans 1. Maximum fluctuation of energy = $I\omega^2 C_s$
 2. Maximum fluctuation of energy = $I\omega C_s$
 3. $C_s = I\omega \times$ Maximum fluctuation of energy
 4. $C_s = I\omega^2 \times$ Maximum fluctuation of energy

Question ID : 441009151025

Option 1 ID : 441009599330

Option 2 ID : 441009599332

Option 3 ID : 441009599331

Option 4 ID : 441009599329

Status : Answered

Chosen Option : 1

Q.11 Force is a____ quantity.

Ans 1. tensor
 2. scalar
 3. dimensionless
 4. vector

Question ID : 441009100945

Option 1 ID : 441009401792

Option 2 ID : 441009401790

Option 3 ID : 441009401793

Option 4 ID : 441009401791

Status : Answered

Chosen Option : 4

Q.12 If the surfaces are rough, the friction between the two surfaces_____.

Ans 1. is zero
 2. can't be determined
 3. is less
 4. is more

Question ID : 441009169208

Option 1 ID : 441009669813

Option 2 ID : 441009669814

Option 3 ID : 441009669812

Option 4 ID : 441009669811

Status : Answered

Chosen Option : 4

Q.13 Which chain is used in quietness operation?

Ans 1. Hoisting chain
 2. Roller chain
 3. Block chain
 4. Inverted tooth chain

Question ID : 441009163046
Option 1 ID : 441009645823
Option 2 ID : 441009645821
Option 3 ID : 441009645820
Option 4 ID : 441009645822

Status : Answered
Chosen Option : 2

Q.14 Which of the following correctly describes an open impeller used in centrifugal pumps?

Ans 1. It has a partially enclosed design with a crown plate but no base plate.
 2. It has vanes enclosed between a crown plate and a base plate.
 3. It has open vanes on both sides and lacks crown and base plates.
 4. It is used only for pumping clear water without suspended particles.

Question ID : 441009131407
Option 1 ID : 441009522201
Option 2 ID : 441009522200
Option 3 ID : 441009522199
Option 4 ID : 441009522202

Status : Answered
Chosen Option : 3

Q.15 What is the role of the feed rod in a lathe machine?

Ans 1. Align the workpiece
 2. Rotate the spindle
 3. Provide power to the carriage for feed motion
 4. Transmit motion to the lead screw

Question ID : 441009161362
Option 1 ID : 441009639104
Option 2 ID : 441009639102
Option 3 ID : 441009639103
Option 4 ID : 441009639101

Status : Answered
Chosen Option : 4

Q.16 What happens when the number of plates are increased in a multi-plate clutch?

Ans 1. The clutch response time decreases.
 2. The clutch stops working.
 3. The torque transmission capacity increases.
 4. The clutch becomes weaker.

Question ID : 441009100888
Option 1 ID : 441009401563
Option 2 ID : 441009401562
Option 3 ID : 441009401565
Option 4 ID : 441009401564

Status : Answered
Chosen Option : 3

Q.17 A force of 120 kN makes angles of 60^0 , 80^0 and 120^0 with x, y and z axes, respectively. Determine its z component of force.

Ans 1. -60 kN
 2. 120 kN
 3. -21 kN
 4. 21 kN

Question ID : 441009168072
Option 1 ID : 441009665287
Option 2 ID : 441009665288
Option 3 ID : 441009665285
Option 4 ID : 441009665286

Status : Answered
Chosen Option : 1

Q.18 Mollier diagram is a plot between _____. .

Ans 1. temperature and entropy
 2. pressure and enthalpy
 3. enthalpy and entropy
 4. pressure and entropy

Question ID : 441009151775
Option 1 ID : 441009602263
Option 2 ID : 441009602266
Option 3 ID : 441009602265
Option 4 ID : 441009602264

Status : Answered
Chosen Option : 3

Q.19 For a hollow shaft, the polar moment of inertia is used to determine:

Ans 1. axial stress
 2. torsional rigidity
 3. bending moment
 4. compressive strength

Question ID : 441009135068
Option 1 ID : 441009536900
Option 2 ID : 441009536902
Option 3 ID : 441009536901
Option 4 ID : 441009536903

Status : Answered
Chosen Option : 2

Q.20 Which type of feed pump is commonly used in high-pressure boiler systems?

Ans 1. Gear pump
 2. Reciprocating pump
 3. Diaphragm pump
 4. Centrifugal pump

Question ID : 441009104237
Option 1 ID : 441009415140
Option 2 ID : 441009415137
Option 3 ID : 441009415139
Option 4 ID : 441009415138

Status : Answered
Chosen Option : 4

Q.21 The air temperature during compression in a single-stage compressor

Ans 1. remains constant
 2. fluctuates randomly
 3. only decreases
 4. only increases

Question ID : 4410091119507
Option 1 ID : 441009475148
Option 2 ID : 441009475150
Option 3 ID : 441009475147
Option 4 ID : 441009475149

Status : Answered
Chosen Option : 4

Q.22 In compressible flow through an orifice meter, the mass flow rate equation includes a correction factor to account for which of the following?

Ans 1. Change in potential energy
 2. Pipe roughness
 3. Change in kinetic energy
 4. Compressibility of fluid

Question ID : 441009125672

Option 1 ID : 441009499508

Option 2 ID : 441009499509

Option 3 ID : 441009499511

Option 4 ID : 441009499510

Status : Answered

Chosen Option : 2

Q.23 What is the primary source of heat for the refrigeration system?

Ans 1. Work done on the refrigerant in the expansion valve
 2. Heat absorbed from the refrigerated space in the evaporator
 3. Heat released by the refrigerant in the condenser
 4. Work done by the compressor

Question ID : 44100997781

Option 1 ID : 441009389134

Option 2 ID : 441009389132

Option 3 ID : 441009389133

Option 4 ID : 441009389131

Status : Answered

Chosen Option : 4

Q.24 Cavitation in a centrifugal pump occurs when the suction pressure falls below the _____ of the liquid.

Ans 1. vapour pressure
 2. suction head
 3. discharge pressure
 4. atmospheric pressure

Question ID : 441009131221

Option 1 ID : 441009521487

Option 2 ID : 441009521489

Option 3 ID : 441009521488

Option 4 ID : 441009521486

Status : Answered

Chosen Option : 1

Q.25 For a dual combustion cycle for fixed value of heat addition and compression ratio, the _____.

Ans 1. mean effective pressure will be greater with increase in pressure ratio and decrease in compression ratio
 2. mean effective pressure will be greater with decrease in pressure ratio and increase in compression ratio
 3. mean effective pressure remain the same with increase in pressure ratio and decrease in compression ratio
 4. mean effective pressure will be greater with decrease in pressure ratio and decrease in compression ratio

Question ID : 441009177242

Option 1 ID : 441009700830

Option 2 ID : 441009700833

Option 3 ID : 441009700832

Option 4 ID : 441009700831

Status : Answered

Chosen Option : 2

Q.26 If the coefficient of friction is 0.577, then find out the angle of friction.

Ans 1. 600
 2. 450
 3. 300
 4. 900

Question ID : 441009168876

Option 1 ID : 441009668473

Option 2 ID : 441009668472

Option 3 ID : 441009668471

Option 4 ID : 441009668474

Status : Answered

Chosen Option : 3

Q.27 What is the primary purpose of a steam trap?

Ans 1. To regulate steam pressure
 2. To store steam
 3. To increase steam temperature
 4. To remove condensate and non-condensable gases from the steam system

Question ID : 441009109529

Option 1 ID : 441009435825

Option 2 ID : 441009435827

Option 3 ID : 441009435828

Option 4 ID : 441009435826

Status : Answered

Chosen Option : 4

Q.28 Which of the following views causes an object to appear smaller than the actual size due to foreshortening?

Ans 1. Isometric view
 2. Perspective view
 3. Orthographic view
 4. Isometric projection

Question ID : 441009229094
Option 1 ID : 441009896014
Option 2 ID : 441009896016
Option 3 ID : 441009896013
Option 4 ID : 441009896015

Status : Answered

Chosen Option : 1

Q.29 In the Rankine cycle, what is the purpose of the pump?

Ans 1. Increases pressure
 2. Decreases pressure
 3. Increases temperature
 4. Decreases entropy

Question ID : 441009120065
Option 1 ID : 441009477331
Option 2 ID : 441009477334
Option 3 ID : 441009477332
Option 4 ID : 441009477333

Status : Answered

Chosen Option : 1

Q.30 Which of the following is the correct expression for gauge pressure?

Ans 1. Gauge pressure = Atmospheric pressure
 2. Gauge pressure = Hydrostatic pressure + Atmospheric pressure
 3. Gauge pressure = Absolute pressure - Atmospheric pressure
 4. Gauge pressure = Absolute pressure + Atmospheric pressure

Question ID : 441009103344
Option 1 ID : 441009411495
Option 2 ID : 441009411497
Option 3 ID : 441009411496
Option 4 ID : 441009411498

Status : Answered

Chosen Option : 3

Q.31 Why SHM is preferred for follower motion, in a cam mechanism?

Ans 1. It minimises wear and tear.
 2. It gives higher lift in lesser time.
 3. It ensures constant velocity throughout.
 4. It provides uniform acceleration and deceleration.

Question ID : 441009100911
Option 1 ID : 441009401657
Option 2 ID : 441009401655
Option 3 ID : 441009401656
Option 4 ID : 441009401654

Status : Answered
Chosen Option : 3

Q.32 Which of the following is used in a diesel engine for mixing fuel and air?

Ans 1. Fuel injector
 2. Exhaust valve
 3. Carburettor
 4. Spark plug

Question ID : 441009176817
Option 1 ID : 441009699171
Option 2 ID : 441009699172
Option 3 ID : 441009699170
Option 4 ID : 441009699169

Status : Answered
Chosen Option : 1

Q.33 What is the primary purpose of converting a pictorial view into orthographic views in technical drawing?

Ans 1. To simplify the drawing for artistic interpretation
 2. To add colours and texture to the drawing
 3. To accurately represent all dimensions and details from different views
 4. To create a 3D representation for visual appeal

Question ID : 441009224007
Option 1 ID : 441009877317
Option 2 ID : 441009877314
Option 3 ID : 441009877316
Option 4 ID : 441009877315

Status : Answered
Chosen Option : 4

Q.34 What is the true scale factor used in isometric projection (not isometric drawing)?

Ans 1. 0.916
 2. 2
 3. 1
 4. 0.816

Question ID : 441009227088
Option 1 ID : 441009889140
Option 2 ID : 441009889139
Option 3 ID : 441009889138
Option 4 ID : 441009889141

Status : Answered
Chosen Option : 4

Q.35 Back gear used in simple lathe is part of which gear train?

Ans 1. Compound gear train
 2. Reverted gear train
 3. Epicyclic gear train
 4. Simple gear train

Question ID : 441009160760
Option 1 ID : 441009636793
Option 2 ID : 441009636792
Option 3 ID : 441009636794
Option 4 ID : 441009636791

Status : Answered
Chosen Option : 1

Q.36 Which of the following is INCORRECT with respect to rope drive?

Ans 1. Resultant driving tension is more than belt drive.
 2. Preferred for long centre distance.
 3. Friction grip is more than belt drive.
 4. Tension in it is not uniformly distributed.

Question ID : 441009162458
Option 1 ID : 441009643484
Option 2 ID : 441009643487
Option 3 ID : 441009643485
Option 4 ID : 441009643486

Status : Answered
Chosen Option : 4

Q.37 What is the key factor affecting the efficiency of a cone clutch?

Ans 1. Type of lubrication

2. Angle of the cone

3. Speed of the shaft

4. Material of the cone

Question ID : 441009100880

Option 1 ID : 441009401533

Option 2 ID : 441009401530

Option 3 ID : 441009401532

Option 4 ID : 441009401531

Status : Answered

Chosen Option : 2

Q.38 The formula for the polar moment of inertia of a hollow circular shaft with outer diameter 'D' and inner diameter 'd' is:

Ans 1. $J = \pi D^4 / 32$

2. $J = \pi d^4 / 32$

3. $J = \pi (D^4 + d^4) / 32$

4. $J = \pi (D^4 - d^4) / 32$

Question ID : 441009135054

Option 1 ID : 441009536836

Option 2 ID : 441009536837

Option 3 ID : 441009536839

Option 4 ID : 441009536838

Status : Answered

Chosen Option : 4

Q.39 Which of the following statements about a tailrace in a hydroelectric power plant is true?

Ans 1. It removes sediments from the water before entering the turbine.

2. It is located after the turbine and returns water to the river.

3. It increases the head of water entering the turbine.

4. It carries water from the reservoir to the penstock.

Question ID : 441009126643

Option 1 ID : 441009503255

Option 2 ID : 441009503252

Option 3 ID : 441009503253

Option 4 ID : 441009503254

Status : Answered

Chosen Option : 4

Q.40 Which drilling machine is characterised by multiple spindles operating simultaneously to perform drilling operations on a single workpiece?

Ans 1. Pillar Drilling Machine
 2. Sensitive Drilling Machine
 3. Upright Drilling Machine
 4. Multi-Spindle Drilling Machine

Question ID : 441009229115

Option 1 ID : 441009896097

Option 2 ID : 441009896098

Option 3 ID : 441009896100

Option 4 ID : 441009896099

Status : Answered

Chosen Option : 4

Q.41 A solid circular shaft with a radius of 50 mm is subjected to torsion. The maximum shear stress developed at the outer surface of the shaft is 80 MPa. The shear stress at a radius of 20 mm from the centre of the shaft is:

Ans 1. 32 MPa
 2. 8 MPa
 3. 16 MPa
 4. 24 MPa

Question ID : 441009135108

Option 1 ID : 441009537063

Option 2 ID : 441009537060

Option 3 ID : 441009537061

Option 4 ID : 441009537062

Status : Answered

Chosen Option : 1

Q.42 The specific heat of a refrigerant is typically measured in SI units of:

Ans 1. kcal/kg·°C
 2. J/mol·°C
 3. kJ/mol·K
 4. J/kg·K

Question ID : 44100996840

Option 1 ID : 441009385393

Option 2 ID : 441009385394

Option 3 ID : 441009385392

Option 4 ID : 441009385391

Status : Answered

Chosen Option : 4

Q.43 Calculate the maximum velocity of belt in which centrifugal tens

Ans 1. $\sqrt{10}$
 2. $\sqrt{1}$
 3. $\sqrt{1000}$
 4. $\sqrt{100}$

Question ID : 441009162988

Option 1 ID : 441009645593

Option 2 ID : 441009645592

Option 3 ID : 441009645595

Option 4 ID : 441009645594

Status : Answered

Chosen Option : 1

Q.44 Entropy per unit mass is an intensive property and has the unit of _____.

Ans 1. kJ/kg-K
 2. kJ-kg/K
 3. kJ/K
 4. kg/K

Question ID : 441009171055

Option 1 ID : 441009677126

Option 2 ID : 441009677127

Option 3 ID : 441009677125

Option 4 ID : 441009677128

Status : Answered

Chosen Option : 1

Q.45 The thermal efficiency of Otto cycle can be expressed as _____, where, Q_s = heat supplied and Q_R = heat rejected.

Ans 1. $Q_s / (Q_s - Q_R)$
 2. $(Q_s - Q_R) / Q_s$
 3. $(Q_s - Q_R)$
 4. Q_s / Q_R

Question ID : 441009187503

Option 1 ID : 441009740562

Option 2 ID : 441009740561

Option 3 ID : 441009740564

Option 4 ID : 441009740563

Status : Answered

Chosen Option : 2

Q.46 Identify the INCORRECT statement from among the following.

Ans 1. The superheated vapour behaves like a perfect gas.

2. The process of leakage of steam through the safety valve of a boiler corresponds through a throttling process.

3. The latent heat of vapourisation has a maximum value at the critical point.

4. The evaporation process is both isobaric and isothermal in character.

Question ID : 441009168470

Option 1 ID : 441009666840

Option 2 ID : 441009666842

Option 3 ID : 441009666841

Option 4 ID : 441009666839

Status : **Answered**

Chosen Option : **3**

Q.47 What is the primary role of flux in the soldering process?

Ans 1. To melt the base metal

2. To remove oxides and promote wetting

3. To insulate the joint

4. To act as a filler material

Question ID : 441009161175

Option 1 ID : 441009638370

Option 2 ID : 441009638369

Option 3 ID : 441009638372

Option 4 ID : 441009638371

Status : **Answered**

Chosen Option : **2**

Q.48 Which of the following statements is true regarding isometric projection?

Ans 1. It uses the same scale as orthographic projection.

2. Dimensions are scaled down using the isometric scale.

3. Circles appear as circles.

4. All faces are drawn in the true shape.

Question ID : 441009229090

Option 1 ID : 441009896000

Option 2 ID : 441009895999

Option 3 ID : 441009895998

Option 4 ID : 441009895997

Status : **Answered**

Chosen Option : **2**

Q.49 According to the Principle of Transmissibility, shifting a force along its line of action does NOT affect:

Ans 1. the external reaction forces
 2. the motion of the body
 3. the force itself
 4. the internal forces in the body

Question ID : 441009100987
Option 1 ID : 441009401959
Option 2 ID : 441009401960
Option 3 ID : 441009401961
Option 4 ID : 441009401958

Status : Answered

Chosen Option : 1

Q.50 How does by-pass governing affect the power output of a steam turbine?

Ans 1. It increases power output.
 2. It limits or reduces the power output during low load conditions.
 3. It maintains constant power output regardless of load.
 4. It has no effect on power output.

Question ID : 441009101850
Option 1 ID : 441009405415
Option 2 ID : 441009405417
Option 3 ID : 441009405416
Option 4 ID : 441009405418

Status : Answered

Chosen Option : 3

Q.51 What is typically mounted on the lathe bed?

Ans 1. Pulley system
 2. Chuck and gears only
 3. Tailstock, carriage and headstock
 4. Cutting fluids

Question ID : 441009161375
Option 1 ID : 441009639155
Option 2 ID : 441009639154
Option 3 ID : 441009639153
Option 4 ID : 441009639156

Status : Answered

Chosen Option : 3

Q.52 What is the typical threading mechanism linked to the lead screw?

Ans 1. Compound rest
 2. Half-nut
 3. Cross-slide
 4. Rack and pinion

Question ID : 441009161383
Option 1 ID : 441009639188
Option 2 ID : 441009639187
Option 3 ID : 441009639186
Option 4 ID : 441009639185
Status : Answered
Chosen Option : 4

Q.53 What is the function of the combustion chamber in the Cochran Boiler?

Ans 1. To mix water and fuel
 2. To circulate water
 3. To burn fuel and produce heat
 4. To store steam

Question ID : 441009106478
Option 1 ID : 441009423932
Option 2 ID : 441009423934
Option 3 ID : 441009423933
Option 4 ID : 441009423931
Status : Answered
Chosen Option : 3

Q.54 What is one of the main advantages of using the Babcock and Wilcox Boiler?

Ans 1. Low initial cost
 2. Easy to maintain
 3. Compact design
 4. High fuel efficiency

Question ID : 441009106494
Option 1 ID : 441009424006
Option 2 ID : 441009424004
Option 3 ID : 441009424005
Option 4 ID : 441009424003
Status : Answered
Chosen Option : 3

Q.55 Which of the following correctly describes the flow characteristics in a Pelton wheel turbine?

Ans 1. Water enters the runner axially and gradually loses pressure.

2. Water flows radially inward through the runner to generate power.

3. Water flows in a mixed direction to ensure efficient energy transfer.

4. Water flows tangentially and impacts the buckets to rotate the wheel.

Question ID : 441009132174

Option 1 ID : 441009525324

Option 2 ID : 441009525322

Option 3 ID : 441009525325

Option 4 ID : 441009525323

Status : Answered

Chosen Option : 4

Q.56 What is the key difference between creep and elastic deformation?

Ans 1. Elastic deformation depends on time, whereas creep is independent of time.

2. Creep occurs only at low temperatures, whereas elastic deformation occurs only at high temperatures.

3. Elastic deformation is reversible upon load removal, whereas creep leads to permanent deformation over time under constant stress.

4. Creep occurs instantly when a load is applied, whereas elastic deformation occurs over a long period under constant stress.

Question ID : 441009130793

Option 1 ID : 441009519692

Option 2 ID : 441009519691

Option 3 ID : 441009519690

Option 4 ID : 441009519689

Status : Answered

Chosen Option : 3

Q.57 Which of the following tools is used for holding multiple cutters on a horizontal milling machine?

Ans 1. Vise

2. Chuck

3. Arbor

4. Mandrel

Question ID : 441009229435

Option 1 ID : 441009897343

Option 2 ID : 441009897341

Option 3 ID : 441009897342

Option 4 ID : 441009897344

Status : Answered

Chosen Option : 3

Q.58 Which of the following is commonly used to hold cylindrical workpieces in a milling machine?

Ans 1. Angle plate
 2. V-block
 3. T-slot table
 4. Collet

Question ID : 441009229415

Option 1 ID : 44100989/263

Option 2 ID : 44100989/264

Option 3 ID : 44100989/261

Option 4 ID : 44100989/262

Status : Answered

Chosen Option : 2

Q.59 The correct relation between tension T_1 , T_2 , angle of lap θ and

Ans 1. $\frac{T_1}{T_2} = e^{\frac{\theta}{\mu}}$
 2. $\frac{T_1}{T_2} = \mu\theta$
 3. $\frac{T_1}{T_2} = e^{\frac{\mu}{\theta}}$
 4. $\frac{T_1}{T_2} = e^{\mu\theta}$

Question ID : 441009162600

Option 1 ID : 441009644055

Option 2 ID : 441009644053

Option 3 ID : 441009644054

Option 4 ID : 441009644052

Status : Answered

Chosen Option : 4

Q.60 A reaction turbine has a hydraulic efficiency of 90% and a mechanical efficiency of 92%. If the generator efficiency is 95%, what is the overall efficiency of the turbine-generator system?

Ans 1. 85.5%
 2. 80.8%
 3. 74.5%
 4. 78.66%

Question ID : 441009126156

Option 1 ID : 441009501328

Option 2 ID : 441009501329

Option 3 ID : 441009501331

Option 4 ID : 441009501330

Status : Answered

Chosen Option : 4

Q.61 Which assumption is NOT required for the Continuity Equation to be valid?

Ans 1. Mass conservation
 2. No-slip condition
 3. External forces
 4. Steady flow

Question ID : 441009125980

Option 1 ID : 441009500644

Option 2 ID : 441009500647

Option 3 ID : 441009500645

Option 4 ID : 441009500646

Status : Answered

Chosen Option : 3

Q.62 The specific speed (N_s) of a hydraulic turbine is defined as the speed of a geometrically similar turbine that _.

Ans 1. delivers unit discharge at unit head
 2. develops unit power at unit head
 3. delivers unit power at maximum efficiency
 4. operates at maximum efficiency

Question ID : 441009126165

Option 1 ID : 441009501367

Option 2 ID : 441009501366

Option 3 ID : 441009501365

Option 4 ID : 441009501364

Status : Answered

Chosen Option : 2

Q.63 In the Babcock and Wilcox Boiler, where is the water present?

Ans 1. Inside the water tubes

2. In the steam drum

3. Inside the furnace tubes

4. Inside the combustion chamber

Question ID : 441009106493

Option 1 ID : 441009424001

Option 2 ID : 441009424000

Option 3 ID : 441009423999

Option 4 ID : 441009424002

Status : Answered

Chosen Option : 1

Q.64 Which of the following is the condition to be met for the wall thickness (t) of a sphere to be considered 'thin-walled'?

Ans 1. $t > 1/10$ of the radius

2. $t < 1/10$ of the radius

3. $t > 1/2$ of the radius

4. $t < 1/2$ of the radius

Question ID : 441009139540

Option 1 ID : 441009554425

Option 2 ID : 441009554426

Option 3 ID : 441009554424

Option 4 ID : 441009554423

Status : Answered

Chosen Option : 2

Q.65 A Watt governor is ineffective at:

Ans 1. 70 RPM

2. 50 RPM

3. 80 RPM

4. 60 RPM

Question ID : 44100999357

Option 1 ID : 441009395396

Option 2 ID : 441009395398

Option 3 ID : 441009395397

Option 4 ID : 441009395395

Status : Answered

Chosen Option : 2

Q.66 Which of the following increases the specific speed of a turbine?

Ans 1. Decreasing rotational speed
 2. Increasing net head
 3. Decreasing power output
 4. Increasing power output

Question ID : 441009126350
Option 1 ID : 441009502093
Option 2 ID : 441009502095
Option 3 ID : 441009502092
Option 4 ID : 441009502094

Status : Answered
Chosen Option : 4

Q.67 What is the main reason for cutting the runners in the cope and in-gates in the drag for ferrous metals?

Ans 1. To increase the speed of solidification of the molten metal
 2. To trap the slag and dross, which are lighter and tend to float on top
 3. To improve the flow of molten metal into the mould cavity
 4. To reduce the weight of the mould and make it easier to handle

Question ID : 441009131756
Option 1 ID : 441009523609
Option 2 ID : 441009523608
Option 3 ID : 441009523607
Option 4 ID : 441009523606

Status : Answered
Chosen Option : 2

Q.68 A domestic food freezer maintains a temperature of -15°C . If heat leaks into the freezer at the continuous rate of 1.75 kJ/s and heat is discharged from the condenser at the rate of 2.06 kJ/s, then what is the least power necessary to pump this heat out continuously?

Ans 1. 38.1 W
 2. 31 W
 3. 3.81 kW
 4. 0.31 kW

Question ID : 441009176749
Option 1 ID : 441009698902
Option 2 ID : 441009698904
Option 3 ID : 441009698901
Option 4 ID : 441009698903

Status : Answered
Chosen Option : 3

Q.69 The abscissa of a Mollier diagram represents _____. .

Ans 1. enthalpy of the system
 2. temperature of the system
 3. dryness fraction of the system
 4. entropy of the system

Question ID : 441009151712
Option 1 ID : 441009602028
Option 2 ID : 441009602027
Option 3 ID : 441009602030
Option 4 ID : 441009602029

Status : Answered
Chosen Option : 4

Q.70 Why is shear stress considered tangential to the area over which it acts?

Ans 1. Because it is a normal force
 2. Because it causes elongation
 3. Because it causes compression
 4. Because it acts along the surface of the area, causing sliding

Question ID : 441009130713
Option 1 ID : 441009519386
Option 2 ID : 441009519388
Option 3 ID : 441009519387
Option 4 ID : 441009519385

Status : Answered
Chosen Option : 1

Q.71 A material has a bulk modulus of 80 GPa and a Poisson's ratio of 0.25. Its Young's modulus is:

Ans 1. 120 GPa
 2. 180 GPa
 3. 100 GPa
 4. 200 GPa

Question ID : 441009130852
Option 1 ID : 441009519902
Option 2 ID : 441009519903
Option 3 ID : 441009519901
Option 4 ID : 441009549317

Status : Answered
Chosen Option : 1

Q.72 During steam formation, external work of evaporation is basically _____.

Ans 1. heat supplied to steam to increase its temperature
 2. work done on steam by external force to reduce its volume
 3. heat removed from saturated or superheated steam to make it a wet steam
 4. work done by steam to increase its volume

Question ID : 441009161419

Option 1 ID : 441009639331

Option 2 ID : 441009639330

Option 3 ID : 441009639332

Option 4 ID : 441009639329

Status : Answered

Chosen Option : 1

Q.73 At critical pressure, _____.

Ans 1. saturated vapour becomes a gas
 2. sublimation occurs from solid to vapour phase
 3. entropy is zero
 4. latent heat of vapourisation is zero

Question ID : 441009163633

Option 1 ID : 441009648177

Option 2 ID : 441009648178

Option 3 ID : 441009648175

Option 4 ID : 441009648176

Status : Answered

Chosen Option : 4

Q.74 Which of the following steady flow devices increases the pressure of a fluid by slowing it down?

Ans 1. Compressor
 2. Diffuser
 3. Nozzle
 4. Turbine

Question ID : 441009171093

Option 1 ID : 441009677278

Option 2 ID : 441009677279

Option 3 ID : 441009677277

Option 4 ID : 441009677280

Status : Answered

Chosen Option : 3

Q.75 Which of the following is NOT typically included in the specifications of a drilling machine?

Ans 1. Type of coolant used
 2. Table size
 3. Spindle speed range
 4. Maximum drilling capacity

Question ID : 441009229145

Option 1 ID : 441009896218

Option 2 ID : 441009896220

Option 3 ID : 441009896217

Option 4 ID : 441009896219

Status : Answered

Chosen Option : 1

Q.76 Which of the following engines operate in the way that the rate of burning can be controlled by the rate of injection of fuel?

Ans 1. Dual combustion engine
 2. Spark-ignition engine
 3. External combustion engine
 4. Compression-ignition engine

Question ID : 441009176825

Option 1 ID : 441009699203

Option 2 ID : 441009699201

Option 3 ID : 441009699204

Option 4 ID : 441009699202

Status : Answered

Chosen Option : 4

Q.77 Which of the following statements states that the heat engine will not produce net work in a complete cycle by exchanging heat with only one reservoir?

Ans 1. Clausius statement
 2. Clausius inequality
 3. Carnot's theorem
 4. Kelvin-Planck statement

Question ID : 441009176769

Option 1 ID : 441009698981

Option 2 ID : 441009698983

Option 3 ID : 441009698984

Option 4 ID : 441009698982

Status : Answered

Chosen Option : 4

Q.78 The process of leakage of steam through a narrow aperture or slightly open valve constitutes a _____.

Ans 1. constant temperature process
 2. constant enthalpy process
 3. constant volume process
 4. constant pressure process

Question ID : 441009151683

Option 1 ID : 441009601918

Option 2 ID : 441009601917

Option 3 ID : 441009601916

Option 4 ID : 441009601915

Status : Answered

Chosen Option : 2

Q.79 In a separating and throttling calorimeter, the steam will be at minimum pressure:

Ans 1. before separating unit
 2. after separating unit
 3. after throttling unit
 4. before throttling unit

Question ID : 441009149335

Option 1 ID : 441009593103

Option 2 ID : 441009593100

Option 3 ID : 441009593102

Option 4 ID : 441009593101

Status : Answered

Chosen Option : 3

Q.80 Which of the following is NOT required when converting orthographic views into isometric projection?

Ans 1. Line thickness
 2. Front, top, and side views
 3. Type of object
 4. Dimensions

Question ID : 441009226811

Option 1 ID : 441009888074

Option 2 ID : 441009888072

Option 3 ID : 441009888075

Option 4 ID : 441009888073

Status : Answered

Chosen Option : 1

Q.81 When a body slides or tends to slide on a surface on which it is resting, a resisting force opposing the motion is produced at the contact surface. This resisting force is called _____.

Ans 1. friction
 2. limiting friction
 3. angle of response
 4. angle of friction

Question ID : 441009169232

Option 1 ID : 441009669907

Option 2 ID : 441009669908

Option 3 ID : 441009669910

Option 4 ID : 441009669909

Status : Answered

Chosen Option : 1

Q.82 Resistance seam welding creates a continuous joint using:

Ans 1. induction coil
 2. laser beam
 3. pointed electrodes
 4. rotating wheel electrodes

Question ID : 441009161350

Option 1 ID : 441009639056

Option 2 ID : 441009639055

Option 3 ID : 441009639053

Option 4 ID : 441009639054

Status : Answered

Chosen Option : 4

Q.83 Which of the following is a key benefit of multi-stage compression?

Ans 1. Increases the complexity of the compressor
 2. Eliminates the need for cooling
 3. Increases the overall efficiency of the system
 4. Reduces the need for lubrication

Question ID : 441009114199

Option 1 ID : 441009454252

Option 2 ID : 441009454253

Option 3 ID : 441009454251

Option 4 ID : 441009454250

Status : Answered

Chosen Option : 3

Q.84 Which of the following steady flow devices is a kind of flow-restricting device that causes a significant pressure drop in the fluid?

Ans 1. Throttling valve
 2. Nozzle
 3. Turbine
 4. Compressor

Question ID : 441009171103

Option 1 ID : 441009677316

Option 2 ID : 441009677313

Option 3 ID : 441009677314

Option 4 ID : 441009677315

Status : Answered

Chosen Option : 1

Q.85 At which location is absolute pressure typically measured?

Ans 1. In a vacuum or outer space
 2. Near the surface of the Earth
 3. At the top of a mountain
 4. At sea level

Question ID : 44100999735

Option 1 ID : 441009396882

Option 2 ID : 441009396880

Option 3 ID : 441009396881

Option 4 ID : 441009396883

Status : Answered

Chosen Option : 1

Q.86 When analysing a spherical pressure vessel, the convenient free body used for analysis is:

Ans 1. one-half of the sphere
 2. a small segment of the sphere wall
 3. the entire sphere
 4. a quarter of the sphere

Question ID : 441009139539

Option 1 ID : 441009554420

Option 2 ID : 441009554422

Option 3 ID : 441009554421

Option 4 ID : 441009554419

Status : Answered

Chosen Option : 2

Q.87 The throat diameter of a Venturi meter is one-third of the pipe diameter. If the velocity in the pipe is 2 m/s, what is the velocity at the throat (assuming ideal flow conditions)?

Ans 1. 18 m/s
 2. 6 m/s
 3. 2 m/s
 4. 9 m/s

Question ID : 441009125428

Option 1 ID : 441009498556

Option 2 ID : 441009498558

Option 3 ID : 441009498557

Option 4 ID : 441009498555

Status : Answered

Chosen Option : 2

Q.88 The point locus in a multi-stage turbine is influenced by:

Ans 1. both blade angle and flow conditions
 2. only the blade angle
 3. only the flow rate
 4. only the turbine speed

Question ID : 441009124802

Option 1 ID : 441009496089

Option 2 ID : 441009496087

Option 3 ID : 441009496088

Option 4 ID : 441009496090

Status : Answered

Chosen Option : 1

Q.89 Which of the following relations is correct between train value and velocity ratio?

Ans 1. Train value - Velocity ratio = 1
 2. Train value / Velocity ratio = 1
 3. Train value + Velocity ratio = 1
 4. Train value X Velocity ratio = 1

Question ID : 441009163112

Option 1 ID : 441009646086

Option 2 ID : 441009646084

Option 3 ID : 441009646085

Option 4 ID : 441009646083

Status : Answered

Chosen Option : 4

Q.90 How does the use of an economiser impact the overall fuel consumption of a boiler system?

Ans 1. It decreases fuel consumption by recovering waste heat.
 2. It has no effect on fuel consumption.
 3. It increases fuel consumption significantly.
 4. It increases the heat losses from the boiler.

Question ID : 441009104199

Option 1 ID : 441009414992

Option 2 ID : 441009414993

Option 3 ID : 441009414991

Option 4 ID : 441009414994

Status : Answered

Chosen Option : 1

Q.91 When comparing the torsional strength of a solid and a hollow circular shaft of the same material and outer diameter, which of the following statement is true?

Ans 1. The hollow shaft always has greater torsional strength.
 2. Both shafts have equal torsional strength, regardless of weight.
 3. The solid shaft always has greater torsional strength.
 4. The hollow shaft can have equivalent torsional strength with less weight.

Question ID : 441009131557

Option 1 ID : 441009522815

Option 2 ID : 441009522817

Option 3 ID : 441009522814

Option 4 ID : 441009522816

Status : Answered

Chosen Option : 1

Q.92 In orthographic projection, which of the following is true regarding auxiliary views?

Ans 1. They show parts of an object not visible in principal views.
 2. They are only used in third angle projection.
 3. They replace the top or front views.
 4. They are used to simplify the drawing.

Question ID : 441009226764

Option 1 ID : 441009887889

Option 2 ID : 441009887891

Option 3 ID : 441009887890

Option 4 ID : 441009887888

Status : Answered

Chosen Option : 1

Q.93 If the diameter (d) and length (L) of a thin cylinder are doubled, then how does the force due to fluid pressure change?

Ans 1. It increases by two times.

2. It increases by four times.

3. It remains the same.

4. It decreases by two times.

Question ID : 441009138821

Option 1 ID : 441009551613

Option 2 ID : 441009551614

Option 3 ID : 441009551612

Option 4 ID : 441009551615

Status : Answered

Chosen Option : 2

Q.94 In a pressure-compounded turbine, each stage typically includes _____.

Ans 1. one nozzle, one fixed blade and one moving blade

2. two moving blades

3. one nozzle and one moving blade

4. one condenser and one nozzle

Question ID : 441009157531

Option 1 ID : 441009625288

Option 2 ID : 441009625289

Option 3 ID : 441009625287

Option 4 ID : 441009625290

Status : Answered

Chosen Option : 1

Q.95 Identify the INCORRECT statement with respect to superheated steam.

Ans 1. A greater heat content of superheated steam leads to more steam consumption for a given output.

2. The moisture content of steam leaving the steam turbine can be kept within safe limits.

3. It allows higher work capacity without increase in pressure.

4. Superheating is done generally by utilising the heat of waste furnace gases, which will otherwise pass unutilised to the atmosphere.

Question ID : 441009133349

Option 1 ID : 441009530196

Option 2 ID : 441009530195

Option 3 ID : 441009530194

Option 4 ID : 441009530197

Status : Answered

Chosen Option : 1

Q.96 Find the kinetic energy of a flywheel at 250rpm if it absorbs 24kJ of energy on increasing its speed from 210rpm to 214rpm.

Ans 1. 884.3kJ
 2. 784.3J
 3. 884.3J
 4. 784.3kJ

Question ID : 441009151132
Option 1 ID : 441009599744
Option 2 ID : 441009599742
Option 3 ID : 441009599741
Option 4 ID : 441009599743

Status : **Answered**

Chosen Option : 1

Q.97 Which of the following is a characteristic effect of using argon as a shielding gas in Metal Inert Gas (MIG) arc welding or Gas Metal Arc Welding (GMAW)?

Ans 1. It prevents spray transfer of metal, even when used in large proportions.
 2. It increases spatter and requires higher arc voltages for ionisation.
 3. It enhances arc concentration, reduces spatter, and enables deep penetration.
 4. It conducts heat rapidly from the arc to the weld zone, making it unsuitable for thin sheets.

Question ID : 441009131849
Option 1 ID : 441009523985
Option 2 ID : 441009523982
Option 3 ID : 441009523983
Option 4 ID : 441009523984

Status : **Answered**

Chosen Option : 3

Q.98 The relation between circular pitch (p) and module (m) for a spur gear is _____.
GEAR ANSWER

Ans 1. $p \times m = \pi$
 2. $p/m = 1/\pi$
 3. $p/m = \pi$
 4. $p/m = 1$

Question ID : 441009163139
Option 1 ID : 441009646189
Option 2 ID : 441009646187
Option 3 ID : 441009646188
Option 4 ID : 441009646186

Status : **Answered**

Chosen Option : 3

Q.99 The principle that the pressure intensity in a fluid at a given depth is the same in all directions is known as:

Ans 1. Viscosity
 2. Pascal's Law
 3. Hook's Law
 4. Surface Tension

Question ID : 441009103374

Option 1 ID : 441009411634

Option 2 ID : 441009411633

Option 3 ID : 441009411632

Option 4 ID : 441009411631

Status : Answered

Chosen Option : 2

Q.100 Which turbine type is more efficient in large-scale power generation?

Ans 1. Reaction turbine only
 2. Impulse turbine only
 3. De-Lavel turbine
 4. Both impulse and reaction turbines are equally efficient

Question ID : 441009102559

Option 1 ID : 441009408259

Option 2 ID : 441009408258

Option 3 ID : 441009408261

Option 4 ID : 441009408260

Status : Answered

Chosen Option : 1

Q.101 In terms of energy consumption, how does a multi-stage compressor compare to a single-stage compressor?

Ans 1. It consumes the same amount of energy
 2. It consumes less energy for the same output
 3. It consumes more energy
 4. Energy consumption is irrelevant

Question ID : 441009120680

Option 1 ID : 441009479760

Option 2 ID : 441009479759

Option 3 ID : 441009479758

Option 4 ID : 441009479761

Status : Answered

Chosen Option : 2

Q.102 The value of frictional force for V-belt is _____ .

Ans 1. $\mu R/\cos\alpha$
 2. $\mu R\sin\alpha$
 3. $\mu R\cos\alpha$
 4. $\mu R/\sin\alpha$

Question ID : 441009162878
Option 1 ID : 441009645152
Option 2 ID : 441009645155
Option 3 ID : 441009645153
Option 4 ID : 441009645154

Status : Answered
Chosen Option : 3

Q.103 In the system, the ordinate of the Mollier diagram represents _____ .

Ans 1. enthalpy
 2. dryness fraction
 3. entropy
 4. temperature

Question ID : 441009151724
Option 1 ID : 441009602076
Option 2 ID : 441009602078
Option 3 ID : 441009602077
Option 4 ID : 441009602075

Status : Answered
Chosen Option : 1

Q.104 The two fundamental stress components developed within the material of a thin-walled cylindrical pressure vessel when subjected to internal fluid pressure are:

Ans 1. radial stress and tangential stress
 2. hoop stress and longitudinal stress
 3. shear stress and bending stress
 4. compressive stress and tensile stress

Question ID : 441009138827
Option 1 ID : 441009551637
Option 2 ID : 441009551638
Option 3 ID : 441009551636
Option 4 ID : 441009551639

Status : Answered
Chosen Option : 2

Q.105 What is a common issue caused by a steam trap failing to function properly?

Ans 1. Overheating of the system
 2. Increased steam pressure
 3. Leakage of air into the system
 4. Water hammer and reduced system efficiency

Question ID : 441009109518
Option 1 ID : 441009435781
Option 2 ID : 441009435783
Option 3 ID : 441009435784
Option 4 ID : 441009435782

Status : Answered
Chosen Option : 1

Q.106 What type of velocity components are present in the velocity diagram of an impulse turbine?

Ans 1. Absolute, relative and blade velocity components
 2. Only tangential velocity
 3. Only absolute velocity
 4. Only axial velocity

Question ID : 441009128131
Option 1 ID : 441009509145
Option 2 ID : 441009509144
Option 3 ID : 441009509143
Option 4 ID : 441009509146

Status : Answered
Chosen Option : 2

Q.107 Which of the following correctly represents the components included in the total manometric head (H_m) of a centrifugal pump?

Ans 1. Pressure head, velocity head in the delivery pipe and losses due to impeller rotation
 2. Suction head, delivery head and velocity head in the suction pipe
 3. Pressure head, velocity head in the suction pipe and vertical height of the pump
 4. Suction head, delivery head, frictional losses and velocity head in the delivery pipe

Question ID : 441009131265
Option 1 ID : 441009521661
Option 2 ID : 441009521658
Option 3 ID : 441009521660
Option 4 ID : 441009521659

Status : Answered
Chosen Option : 4

Q.108 Determine the number of teeth in gear D in a reverted gear train in which gear A and B meshes with compound gear B-C; gear C is meshing with gear D. Modulus of gear A and C are 6 mm and 5 mm, respectively. The number of teeth in gear A, B, C are 24, 36 and 40, respectively.

Ans 1. 34
 2. 38
 3. 30
 4. 32

Question ID : 441009160846

Option 1 ID : 44100963/109

Option 2 ID : 44100963/111

Option 3 ID : 44100963/110

Option 4 ID : 44100963/108

Status : Answered

Chosen Option : 2

Q.109 Which of the following processes proceeds in such a way that the system remains in equilibrium state at all times?

Ans 1. Isochoric process
 2. Quasi-static process
 3. Polytropic process
 4. Isopiestic process

Question ID : 441009171198

Option 1 ID : 44100967/690

Option 2 ID : 44100967/691

Option 3 ID : 44100967/689

Option 4 ID : 44100967/692

Status : Answered

Chosen Option : 2

Q.110 During compression of 10 kg of gas from 1.5 m^3 to 0.3 m^3 at constant pressure of 15 bars, the temperature rise was observed to be from 20°C to 150°C . The increase in internal energy was observed to be 3250 kJ. The work done and heat interaction during the process was observed as _____ and _____, respectively.

Ans 1. -1450 kJ; -1800 kJ
 2. -1450 kJ; 1800 kJ
 3. -1800 kJ; 1450 kJ
 4. 1800 kJ; 1450 kJ

Question ID : 441009157893

Option 1 ID : 441009626552

Option 2 ID : 441009626550

Option 3 ID : 441009626551

Option 4 ID : 441009626553

Status : Answered

Chosen Option : 3

Q.111 Which of the following has the least impact on the accuracy of velocity measurement using a Pitot tube?

Ans 1. Size of Pitot tube orifice
 2. Fluid density variation
 3. Surface roughness of the tube exterior
 4. Misalignment with the flow direction

Question ID : 441009125710

Option 1 ID : 441009499634

Option 2 ID : 441009499633

Option 3 ID : 441009499632

Option 4 ID : 441009499635

Status : Answered

Chosen Option : 3

Q.112 How is the welding current controlled in Gas Metal Arc Welding (GMAW) or Metal Inert Gas (MIG) arc welding?

Ans 1. By varying the feed rate of the electrode wire
 2. By changing the voltage setting on the power supply
 3. By adjusting the gas flow from the cylinder
 4. By modifying the electrode type used in welding

Question ID : 441009131846

Option 1 ID : 441009523964

Option 2 ID : 441009523963

Option 3 ID : 441009523962

Option 4 ID : 441009523965

Status : Answered

Chosen Option : 2

Q.113 The centre of pressure of a submerged plane surface always lies _____.

Ans 1. at the free surface
 2. at the centroid of the surface
 3. below the centroid of the surface
 4. above the centroid of the surface

Question ID : 441009103326

Option 1 ID : 441009411415

Option 2 ID : 441009411418

Option 3 ID : 441009411417

Option 4 ID : 441009411416

Status : Answered

Chosen Option : 3

Q.114 The Naval Research Laboratory (NRL) method simplifies Caine's method by defining a shape factor to replace the freezing ratio. How is this shape factor calculated?

Ans 1. (Length + Width) / Thickness
 2. (Length ÷ Width) / Thickness
 3. (Length × Width) / Thickness
 4. (Length - Width) / Thickness

Question ID : 441009131829
Option 1 ID : 441009523899
Option 2 ID : 441009523901
Option 3 ID : 441009523898
Option 4 ID : 441009523900

Status : Answered

Chosen Option : 3

Q.115 The projection lines in orthographic projection are:

Ans 1. inclined
 2. diverging
 3. converging
 4. perpendicular to the projection plane

Question ID : 441009226755
Option 1 ID : 441009887853
Option 2 ID : 441009887852
Option 3 ID : 441009887854
Option 4 ID : 441009887855

Status : Answered

Chosen Option : 4

Q.116 If the speed of a turbine is doubled, how will the unit speed (Nu) change?

Ans 1. Decrease by 2 times
 2. Remain constant
 3. Increase by 2 1/2 times
 4. Increase by 2 times

Question ID : 441009126566
Option 1 ID : 441009502955
Option 2 ID : 441009502953
Option 3 ID : 441009502952
Option 4 ID : 441009502954

Status : Answered

Chosen Option : 4

Q.117 For a system, if the initial enthalpy of the substance is 40 kJ/kg and heat transferred at constant pressure to the system is 55 kJ/kg, then what will be the final enthalpy of the substance?

Ans 1. 60 kJ/kg
 2. 95 kJ/kg
 3. 75 kJ/kg
 4. 15 kJ/kg

Question ID : 441009187703

Option 1 ID : 441009/41186

Option 2 ID : 441009/41184

Option 3 ID : 441009/41185

Option 4 ID : 441009/41183

Status : Answered

Chosen Option : 2

Q.118 In the T-S diagram of Otto cycle, the entropy remains constant and the temperature increases in _____.

Ans 1. constant volume heat rejection
 2. isentropic expansion
 3. constant volume heat addition
 4. isentropic compression

Question ID : 441009187633

Option 1 ID : 441009/40941

Option 2 ID : 441009/40940

Option 3 ID : 441009/40939

Option 4 ID : 441009/40938

Status : Answered

Chosen Option : 4

Q.119 Which drive has constant velocity ratio?

Ans 1. Chain and gear
 2. V-Belt and rope
 3. V-Belt and flat belt
 4. Flat belt and rope

Question ID : 441009163145

Option 1 ID : 441009646210

Option 2 ID : 441009646211

Option 3 ID : 441009646213

Option 4 ID : 441009646212

Status : Answered

Chosen Option : 1

Q.120 The total energy of a simple harmonic oscillator is proportional to ____.

Ans 1. the mass of the oscillator
 2. the square of the amplitude
 3. the displacement
 4. the velocity

Question ID : 441009100915
Option 1 ID : 441009401673
Option 2 ID : 441009401670
Option 3 ID : 441009401671
Option 4 ID : 441009401672

Status : Answered

Chosen Option : 2

Q.121 The movement of the sleeve in a dead-weight Porter governor ____.

Ans 1. moves randomly
 2. is upward when the speed decreases
 3. is downward when the speed increases
 4. is downward when the speed decreases

Question ID : 44100999419
Option 1 ID : 441009395636
Option 2 ID : 441009395633
Option 3 ID : 441009395635
Option 4 ID : 441009395634

Status : Answered

Chosen Option : 4

Q.122 How does the water jet interact with the runner before exiting in a cross-flow turbine?

Ans 1. The jet flows along the runner's length, exits axially without re-entering, and transfers half its energy.
 2. The jet enters from the top, reacts with the buckets twice, and exits after losing most of its energy.
 3. The jet strikes the runner buckets once, transfers all its kinetic energy, and exits radially.
 4. The jet is deflected by guide vanes, enters from the side, and exits after a single pass through the runner.

Question ID : 441009132193
Option 1 ID : 441009525447
Option 2 ID : 441009525446
Option 3 ID : 441009525445
Option 4 ID : 441009525448

Status : Answered

Chosen Option : 4

Q.123 In which type of follower does the motion depend on the axis movement of the follower rod?

Ans 1. Radial follower
 2. Oscillating follower
 3. Roller follower
 4. Knife-edge follower

Question ID : 441009100907

Option 1 ID : 441009401638

Option 2 ID : 441009401639

Option 3 ID : 441009401641

Option 4 ID : 441009401640

Status : Answered

Chosen Option : 4

Q.124 In which of the following examples does the shape of an object change by the application of force?

Ans 1. A car coming to a stop
 2. Kicking a football
 3. A falling apple
 4. Squeezing a sponge

Question ID : 441009100964

Option 1 ID : 441009401866

Option 2 ID : 441009401867

Option 3 ID : 441009401869

Option 4 ID : 441009401868

Status : Answered

Chosen Option : 4

Q.125 What is the coefficient of fluctuation of speed in flywheel defined as?

Ans Maximum fluctuation of speed
 1.
$$\frac{\text{Mean speed}}{\text{Maximum Speed}}$$

 2.
$$\frac{\text{Maximum fluctuation of speed}}{\text{Maximum fluctuation of speed}}$$

 3.
$$\frac{\text{Work Done}}{\text{Maximum fluctuation of speed}}$$

 4.
$$\frac{\text{Maximum fluctuation of speed}}{\text{Maximum speed}}$$

Question ID : 441009150972

Option 1 ID : 441009599119

Option 2 ID : 441009599122

Option 3 ID : 441009599120

Option 4 ID : 441009599121

Status : Answered

Chosen Option : 1

Q.126 What happens if a centrifugal pump is NOT primed before starting?

Ans 1. The impeller will rotate faster due to the presence of air.

2. The pump will generate a high head but fail to discharge water.

3. The pump will function normally, but with reduced efficiency.

4. The air inside the pump will prevent it from creating sufficient suction.

Question ID : 441009131356

Option 1 ID : 441009521990

Option 2 ID : 441009521987

Option 3 ID : 441009521989

Option 4 ID : 441009521988

Status : Answered

Chosen Option : 4

Q.127 Which of the following refrigerants has the highest latent heat of vaporisation?

Ans 1. Carbon dioxide (R-744)

2. R-123 (Dichloro-trifluoro ethane)

3. R-12 (Dichlorodifluoromethane)

4. Ammonia (R-717)

Question ID : 44100997715

Option 1 ID : 441009388860

Option 2 ID : 441009388862

Option 3 ID : 441009388861

Option 4 ID : 441009388859

Status : Answered

Chosen Option : 4

Q.128 Which of the following statements correctly describes a characteristic of a cross-flow turbine?

Ans 1. It has a cylindrical runner mounted on a horizontal shaft.

2. It works under fully submerged conditions like a Kaplan turbine.

3. It operates as a reaction turbine with pressure variation along the blades.

4. Its runner consists of straight blades instead of curved ones.

Question ID : 441009132188

Option 1 ID : 441009525410

Option 2 ID : 441009525413

Option 3 ID : 441009525411

Option 4 ID : 441009525412

Status : Answered

Chosen Option : 3

Q.129 If a hydraulic turbine has a hydraulic efficiency of 85% and a mechanical efficiency of 90%, what is the overall efficiency?

Ans 1. 76.5%
 2. 75.6%
 3. 81.2%
 4. 78.4%

Question ID : 441009126129

Option 1 ID : 441009501230

Option 2 ID : 441009501229

Option 3 ID : 441009501228

Option 4 ID : 441009501231

Status : Answered

Chosen Option : 1

Q.130 What is the purpose of providing a draft allowance in a pattern?

Ans 1. To increase the strength of the mould cavity
 2. To minimise shrinkage defects in the casting
 3. To improve the surface finish of the casting
 4. To prevent mould damage during pattern removal

Question ID : 441009131779

Option 1 ID : 441009523698

Option 2 ID : 441009523701

Option 3 ID : 441009523700

Option 4 ID : 441009523699

Status : Answered

Chosen Option : 4

Q.131 When specifying a drilling machine, what does the term 'maximum drill size' refer to?

Ans 1. The largest diameter of the drill bit that can be used
 2. The maximum depth the drill can reach
 3. The size of the machine's base
 4. The maximum speed of the spindle

Question ID : 441009229158

Option 1 ID : 441009896265

Option 2 ID : 441009896266

Option 3 ID : 441009896268

Option 4 ID : 441009896267

Status : Answered

Chosen Option : 1

Q.132 Which valve allows air to enter the cylinder during the intake stroke?

Ans 1. Suction valve
 2. Check valve
 3. Pressure relief valve
 4. Discharge valve

Question ID : 441009119524
Option 1 ID : 441009475213
Option 2 ID : 441009475212
Option 3 ID : 441009475214
Option 4 ID : 441009475211

Status : Answered
Chosen Option : 1

Q.133 A centrifugal clutch operates because of _____. -

Ans 1. force due to belt tension
 2. centripetal force
 3. centrifugal force
 4. hydraulic pressure

Question ID : 441009100865
Option 1 ID : 441009401473
Option 2 ID : 441009401472
Option 3 ID : 441009401470
Option 4 ID : 441009401471

Status : Answered
Chosen Option : 3

Q.134 A cone clutch with a cone angle that is too small will result in which of the following?

Ans 1. The clutch may become self-locking.
 2. The slippage increases.
 3. The clutch engagement becomes smoother.
 4. The torque transmission increases.

Question ID : 441009100885
Option 1 ID : 441009401553
Option 2 ID : 441009401552
Option 3 ID : 441009401551
Option 4 ID : 441009401550

Status : Answered
Chosen Option : 2

Q.135 The amount of refrigeration effect produced depends on the:

Ans 1. temperature difference across the system
 2. amount of heat absorbed at the evaporator
 3. size of the compressor
 4. efficiency of the condenser

Question ID : 44100995924
Option 1 ID : 441009381661
Option 2 ID : 441009381658
Option 3 ID : 441009381659
Option 4 ID : 441009381660
Status : Answered
Chosen Option : 2

Q.136 Which of the following is a key advantage of submerged arc welding?

Ans 1. Portable equipment
 2. High deposition rate
 3. No need for flux
 4. Good for thin sheets

Question ID : 441009161153
Option 1 ID : 441009638283
Option 2 ID : 441009638284
Option 3 ID : 441009638282
Option 4 ID : 441009638281
Status : Answered
Chosen Option : 1

Q.137 Which of the following assumptions is NOT valid for Bernoulli's theorem?

Ans 1. Viscous flow
 2. Frictionless flow
 3. Steady flow
 4. Incompressible flow

Question ID : 441009125305
Option 1 ID : 441009498082
Option 2 ID : 441009498083
Option 3 ID : 441009498085
Option 4 ID : 441009498084
Status : Answered
Chosen Option : 1

Q.138 On an inclined plane, a block is resting. The inclination angle is progressively raised.

The block only starts to slide when the angle approaches 30° . What is the block's angle of friction and coefficient of friction?

Ans 1. Angle of friction = 300° ; Coefficient of friction = 0.50
 2. Angle of friction = 600° ; Coefficient of friction = $\tan 600^\circ$
 3. Angle of friction = $\tan^{-1}(0.5)$; Coefficient of friction = 0.50
 4. Angle of friction = 300° ; Coefficient of friction = $\tan 300^\circ$

Question ID : 441009168911

Option 1 ID : 441009668615

Option 2 ID : 441009668618

Option 3 ID : 441009668617

Option 4 ID : 441009668616

Status : Answered

Chosen Option : 4

Q.139 The enthalpy of vapourisation is minimum at:

Ans 1. triple point
 2. 373 K
 3. absolute zero
 4. critical temperature

Question ID : 441009163669

Option 1 ID : 441009648322

Option 2 ID : 441009648320

Option 3 ID : 441009648319

Option 4 ID : 441009648321

Status : Answered

Chosen Option : 4

Q.140 In which of the following systems, the mass flow rate within the control volume, which is accumulated, changes?

Ans 1. Diffuser
 2. Compressor
 3. Evacuating gas cylinders
 4. Throttling valve

Question ID : 441009171279

Option 1 ID : 441009678008

Option 2 ID : 441009678006

Option 3 ID : 441009678007

Option 4 ID : 441009678005

Status : Answered

Chosen Option : 3