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SSC JE ME 27 Sep 2017 Morning Session

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Section : General Intelligence and Reasoning

Q.1 Select the letter that can replace the question mark (?) in the following series.

T, N, I, ?, B

Ans 1. E

2. F

3. H

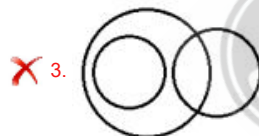
4. G

Question ID : 5581011148
Status : Answered
Chosen Option : 1

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

Lawyers, Illiterate, Cardiologists

Ans



Question ID : 5581011195
Status : Answered
Chosen Option : 4

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

SECOND : CDENOS :: FIRST : ?

Ans 1. FIRST

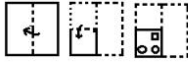
2. FIRTS

3. RFITS

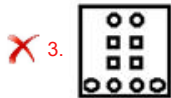
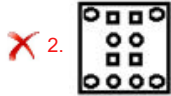
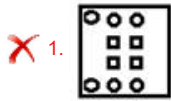
4. IRFTS

Question ID : 5581011164
Status : Answered
Chosen Option : 1

Q.4 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 : 5581011194
Status : Answered
Chosen Option : 4

Q.5 Which two numbers should be interchanged to make the given equation correct?

$$18 + 2 (7 \times 2) - 11 (4 - 2) + 15 \div 3 = 27$$

- Ans
- 1. 7 and 15
 - 2. 15 and 18
 - 3. 7 and 11
 - 4. 11 and 18

Question ID : 5581011186
Status : Answered
Chosen Option : 2

Q.6 Select the correct alternative to indicate the arrangement of the following in a logical and meaningful order.

1. Getting election identity card
2. Voting eligibility
3. Casting vote
4. Name in electoral list
5. Apply for voting rights

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

Question ID : 5581011152
Status : Answered
Chosen Option : 1

Q.7 Three salesmen named X, Y and Z sell 268 phones during a week. X sells 12 phones less than Z. Y sells half the number of phones sold by Z. If a total of 268 phones have been sold during the week, how many phones has salesman Z sold?

Ans

- 1. 108
- 2. 104
- 3. 112
- 4. 116

Question ID : 5581011187
Status : Answered
Chosen Option : 3

Q.8 Select the option in which the number-pair shares the same relationship as that shared by the given number-pair.

11 : 2662

- Ans
- 1. 7 : 683
 - 2. 8 : 1024
 - 3. 6 : 632
 - 4. 9 : 729

Question ID : 5581011180
Status : Answered
Chosen Option : 2

Q.9 In a code language, if 'INCOME' is coded as '181324121422' then how will 'FASTER' be coded in the same language?

- Ans
- 1. 202687219
 - 2. 202687228
 - 3. 212676229
 - 4. 212687229

Question ID : 5581011168
Status : Answered
Chosen Option : 4

Q.10 Find the missing number from among the below options.

4 6 8

6 7 7

52 85 ?

- Ans
- 1. 114
 - 2. 112
 - 3. 113
 - 4. 111

Question ID : 5581011184
Status : Not Answered
Chosen Option : --

Q.11 Tanuj walks 40 m towards south from his home, then he turns right and walks 30 m, now he turns left and walks 20 m. Then he turns right and walks 20 m. Now he turns right again and walks 60 m. How far and in which direction is he with reference to his home?

- Ans
- 1. 50 m, east
 - 2. 60 m, north

3. 60 m, west

4. 50 m, west

Question ID : 5581011172
Status : Answered
Chosen Option : 3

Q.12 Select the number that can replace the question mark (?) in the following series.

25, 26, 22, 31, 15, ?

Ans 1. 42

2. 43

3. 38

4. 40

Question ID : 5581011178
Status : Not Answered
Chosen Option : --

Q.13 Which two signs should be interchanged to make the given equation correct?

$15 \times 12 \div 18 - 46 + 42 = 14$

Ans 1. \times and \div

2. $-$ and \times

3. $+$ and $-$

4. \div and $+$

Question ID : 5581011185
Status : Answered
Chosen Option : 3

Q.14 Eight friends P, Q, R, S, T, U, V and W are sitting around a circular table at equal distances in the same sequence in clockwise manner. T is sitting in North-east. Now, if Q and W interchange their positions, then in which direction is W sitting?

Ans 1. East

2. South-west

3. West

4. South

Question ID : 5581011176
Status : Answered
Chosen Option : 4

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

25 : 625 :: 27 : ?

Ans 1. 541

2. 616

3. 343

4. 729

Question ID : 5581011182
Status : Answered
Chosen Option : 4

Q.16 In a code language, 'TECHO' is written as 'UDDIN'. How will 'PIXEL' be written in that

language?

- Ans
- 1. OHYCM
 - 2. QJYFM
 - 3. PHZDM
 - 4. QHYDM

Question ID : 5581011165
Status : Answered
Chosen Option : 4

Q.17 Ravindra was facing one of the directions in the beginning. Then he turned 90° anticlockwise, then he again turned 135° anticlockwise. After that he again turned 45° clockwise. Now, if Ravindra is facing east, then which direction was he facing in the beginning?

- Ans
- 1. East
 - 2. West
 - 3. South
 - 4. North

Question ID : 5581011171
Status : Answered
Chosen Option : 2

Q.18 Select the term that can replace the question mark (?) in the following series.

PARTH, PARTI, QARTI, QARUI, ?, QBSUI

- Ans
- 1. QBRUJ
 - 2. QBSVI
 - 3. RBRUJ
 - 4. QBRUI

Question ID : 5581011149
Status : Answered
Chosen Option : 4

Q.19 Five friends Arpita, Narayani, Vaishali, Amrapali and Chitra are sitting in a line in the class facing the teacher. Chitra is to the immediate left of Vaishali. Arpita is to the immediate right of Amrapali. Narayani is not sitting at the corners. Who is sitting in the middle?

- Ans
- 1. Narayani
 - 2. Vaishali
 - 3. Amrapali
 - 4. Chitra

Question ID : 5581011175
Status : Answered
Chosen Option : 1

Q.20 $A + B$ means 'A is the wife of B'
 $A - B$ means 'A is the son of B'
 $A \times B$ means 'A is the sister of B'
 $A \div B$ means 'A is the father of B'
If $W + Z \div P \div R \times T - Q$, then how is W related to Q?

- Ans
- 1. Maternal grandmother
 - 2. Mother-in-law
 - 3. Paternal grandmother
 - 4. Mother

Question ID : 5581011174

Status : Answered

Chosen Option : 2

Q.21 The age of Gopal is one third of his grandfather's age. The age of his grandmother is 6 years less than his grandfather. If the total of the ages of all three persons is 113 years. What is the age of the grandmother?

- Ans
- 1. 48
 - 2. 45
 - 3. 44
 - 4. 46

Question ID : 5581011188

Status : Answered

Chosen Option : 2

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

15 : 375 :: 12 : ?

- Ans
- 1. 260
 - 2. 262
 - 3. 266
 - 4. 264

Question ID : 5581011181

Status : Answered

Chosen Option : 4

Q.23 Select the option that is related to the third term in the same way as the second term is related to the first term.

PICKLE : CIPELK :: CATTLE : ?

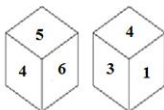
- Ans
- 1. TCAELT
 - 2. TACELT
 - 3. CTAELT
 - 4. TACTLE

Question ID : 5581011162

Status : Answered

Chosen Option : 2

Q.24 Two different positions of the same dice are shown. Select the number that will be on the face opposite to the one having '2'?



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

Question ID : 5581011189

Status : Answered

Chosen Option : 3

Q.25 Select the option in which the given figure is embedded (rotation is NOT allowed).



Ans

1.



2.



3.



4.



Question ID : 5581011190
Status : Answered
Chosen Option : 4

Q.26 In a code language, if 'MIXER' is coded as '75261', 'PROOF' is coded as '91884', then how would 'PREFIX' be coded in the same language?

Ans

1. 816452

2. 916452

3. 917512

4. 916852

Question ID : 5581011167
Status : Answered
Chosen Option : 2

Q.27 Select the option in which the words share the same relationship as that shared by the given pair of words.

Month : January

Ans

1. Salary : employment

2. Sweets : sugar

3. Zodiac sign : Aries

4. Wood : iron

Question ID : 5581011161
Status : Answered
Chosen Option : 3

Q.28 Select the correct alternative to indicate the arrangement of the following words in a

logical and meaningful order.

1. Eyes
2. Shoulders
3. Knees
4. Lips
5. Lungs

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

Question ID : 5581011153
Status : Answered
Chosen Option : 3

Q.29 Select the option that is related to the third word in the same way as the second word is related to the first word.

Femur : thigh :: humerus : ?

- Ans
- 1. fingers
 - 2. upper arm
 - 3. toes
 - 4. skull

Question ID : 5581011157
Status : Answered
Chosen Option : 4

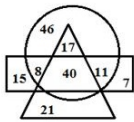
Q.30 Select the number that can replace the question mark (?) in the following series.

55, 58, 64, ?, 100

- Ans
- 1. 77
 - 2. 76
 - 3. 74
 - 4. 75

Question ID : 5581011177
Status : Answered
Chosen Option : 2

Q.31 In the given Venn diagram, the circle represents 'PhD students', the triangle represents 'science students' and the rectangle represents 'girls'. The numbers given in the shapes represent the number of persons of that particular category.



How many girls are PhD students but are NOT science students?

- Ans
- 1. 40
 - 2. 19
 - 3. 8
 - 4. 11

Question ID : 5581011196
Status : Answered
Chosen Option : 2

Q.32 Select the term that can replace the question mark (?) in the following series.

CAMEL, AMELC, MELCA, ELCAM, ? , CAMEL

- Ans
- 1. LCAME
 - 2. LACEM
 - 3. CAMLE
 - 4. LCAEM

Question ID : 5581011151
Status : Answered
Chosen Option : 1

Q.33 Select the option in which the numbers share the same relationship as that shared by the given set of numbers.

88, 56, 72

- Ans
- 1. 54, 52, 86
 - 2. 50, 20, 60
 - 3. 76, 44, 60
 - 4. 80, 64, 70

Question ID : 5581011183
Status : Not Answered
Chosen Option : --

Q.34 Select the number that can replace the question mark (?) in the following series.

4, 27, 16, 125, ?

- Ans
- 1. 216
 - 2. 625
 - 3. 225
 - 4. 36

Question ID : 5581011179
Status : Answered
Chosen Option : 1

Q.35 Pointing to the photograph of a girl, Anuj said, 'She is the daughter of my paternal grandfather's only son's wife.' How is the girl in the photograph related to Anuj?

- Ans
- 1. Daughter
 - 2. Mother
 - 3. Sister
 - 4. Wife

Question ID : 5581011173
Status : Answered
Chosen Option : 2

Q.36 Select the letter that can replace the question mark (?) in the following series.

TKL, UMO, V?R, WQU, XSX

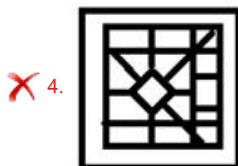
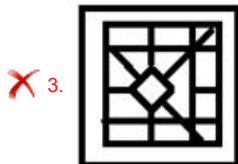
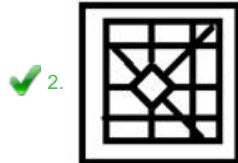
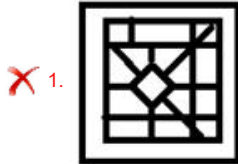
- Ans
- 1. N
 - 2. O
 - 3. S
 - 4. P

Question ID : 5581011147

Q.37 Select the option in which the given figure is embedded (rotation is NOT allowed).



Ans



Question ID : 558101191
Status : Answered
Chosen Option : 2

Q.38 In a code language, 'SON' is written as 'HLM'. How will 'MASTER' be written in that language?

Ans

- ✓ 1. NZHGV I
- ✗ 2. NBHIWI
- ✗ 3. OBHIWJ
- ✗ 4. NZIFVI

Question ID : 558101166
Status : Answered
Chosen Option : 1

Q.39 Select the letter-cluster that can replace the question mark (?) in the following series.

CDKR, ZGHU, ?, TMBA

Ans

- ✗ 1. WJEY
- ✗ 2. VJEX
- ✗ 3. WKEX
- ✓ 4. WJEX

Question ID : 558101150
Status : Answered
Chosen Option : 4

Q.40 Select the option that is related to the third term in the same way as the second term is related to the first term.

LCNJ : HYJF :: ORUM : ?

- Ans
- 1. JNQI
 - 2. KMPJ
 - 3. LNPI
 - 4. KNQI

Question ID : 5581011163
Status : Answered
Chosen Option : 4

Q.41 Arrange the following words in the order in which they appear in an English dictionary.

1. Dialogue
2. Dialysis
3. Diameter
4. Diabetic
5. Diabetes

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

Question ID : 5581011154
Status : Answered
Chosen Option : 3

Q.42 Arrange the following words in the order in which they appear in an English dictionary.

1. Leading
2. Leader
3. Learner
4. Leaner
5. Leather

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

Question ID : 5581011155
Status : Answered
Chosen Option : 1

Q.43 Select the option in which the words share the same relationship as that shared by the given pair of words.

Hard-work : success

- Ans
- 1. Effort : person
 - 2. Study : knowledge
 - 3. Student : examination
 - 4. Pride : arrogance

Question ID : 5581011159
Status : Answered
Chosen Option : 2

Q.44

Select the correct mirror image of the given combination when the mirror is placed to the right side of it.

7 6 5 4 2 4

Ans

- ✓ 1.
- ✗ 2.
- ✗ 3.
- ✗ 4.

Question ID : 5581011193
Status : Answered
Chosen Option : 1

Q.45 Select the option in which the words share the same relationship as that shared by the given pair of words.

Mason : house

Ans

- ✗ 1. Medal : bronze
- ✗ 2. Tourist : destination
- ✗ 3. Dentist : college
- ✓ 4. Confectioner : cake

Question ID : 5581011160
Status : Answered
Chosen Option : 4

Q.46 Two statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

Some surgeons are doctors.
All doctors are experts.

Conclusions:

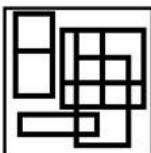
I. Some experts are surgeons.
II. No expert is surgeon.
III. Some experts are doctors.

Ans


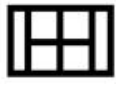


- ✗ 1. Only conclusions I and II follow.
- ✓ 2. Only conclusions I and III follow.
- ✗ 3. Either conclusion I or II follows.
- ✗ 4. Only conclusions II and III follow.

Question ID : 5581011169
Status : Answered
Chosen Option : 2

Q.47 Select the option that is embedded in the given figure (rotation is NOT allowed).



Ans

- ✓ 1. 
- ✗ 2. 
- ✗ 3. 
- ✗ 4. 

Question ID : 5581011192
 Status : Answered
 Chosen Option : 1

Q.48 Two statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:
 Some hens are cranes.
 Some cranes are ducks.

Conclusions:
 I. No hen is duck.
 II. Some ducks are cranes.
 III. Some hens are ducks.

- Ans ✓ 1. Conclusion II and either I or III follow.
- ✗ 2. Only conclusions I and II follow.
- ✗ 3. Conclusion I and either II or III follow.
- ✗ 4. Only conclusions I and III follow.

Question ID : 5581011170
 Status : Answered
 Chosen Option : 2

Q.49 'March' is related to 'third' in the same way as 'October' is related to '_____'.
 Ans ✗ 1. seven

- ✗ 2. month
- ✗ 3. ninth
- ✓ 4. tenth

Question ID : 5581011156
 Status : Answered
 Chosen Option : 4

Q.50 'Mamba' is related to 'snake' in the same way as '_____' is related to 'bird'.
 Ans ✗ 1. wings

- ✗ 2. fly
- ✗ 3. sky
- ✓ 4. eagle

Question ID : 5581011158
 Status : Answered
 Chosen Option : 4

Q.1 What is India's rank in the International Intellectual Property Index 2019 brought out by the US Chamber of Commerce's Global Innovation Policy Centre?

- Ans
- 1. 44th
 - 2. 29th
 - 3. 28th
 - 4. 36th

Question ID : 5581011100
Status : Not Answered
Chosen Option : --

Q.2 With reference to the sessions of the Indian National Congress which of the following pairs is correct?

- Ans
- 1. 1939 - Haripura
 - 2. 1929 - Bombay
 - 3. 1907 - Surat
 - 4. 1917 - Madras

Question ID : 5581011135
Status : Answered
Chosen Option : 4

Q.3 Through which of the following countries does the Equator NOT pass?

- Ans
- 1. Uganda
 - 2. Thailand
 - 3. Gabon
 - 4. Indonesia

Question ID : 5581011127
Status : Not Answered
Chosen Option : --

Q.4 Bharatiya Janata Party(BJP) was founded as a political party in India in ____.

- Ans
- 1. 1948
 - 2. 1965
 - 3. 1980
 - 4. 1954

Question ID : 5581011137
Status : Not Answered
Chosen Option : --

Q.5 Salivary amylase which is contained in saliva, digests _____ and converts it into maltose (disaccharide).

- Ans
- 1. starch
 - 2. fat
 - 3. vitamin
 - 4. protein

Question ID : 5581011108
Status : Answered
Chosen Option : 1

Q.6 With which of the following countries does Bihar shares its boundary?

- Ans
- 1. China
 - 2. Bhutan
 - 3. Nepal
 - 4. Bangladesh

Question ID : 5581011129
Status : Answered
Chosen Option : 3

Q.7 Samsung, one of the producers of the electronic devices is based in _____.

- Ans
- 1. Philippines
 - 2. South Korea
 - 3. Japan
 - 4. China

Question ID : 5581011145
Status : Answered
Chosen Option : 2

Q.8 The atomic number of germanium is:

- Ans
- 1. 26
 - 2. 16
 - 3. 32
 - 4. 8

Question ID : 5581011112
Status : Answered
Chosen Option : 3

Q.9 The novel 'Midnight's Children' is written by _____.

- Ans
- 1. Amitav Ghosh
 - 2. Salman Rushdie
 - 3. Vikram Seth
 - 4. Arvind Adiga

Question ID : 5581011141
Status : Not Answered
Chosen Option : --

Q.10 Which of the following metals is used to make a protective coating to steel in the galvanisation process?

- Ans
- 1. Platinum
 - 2. Zinc
 - 3. Lead
 - 4. Copper

Question ID : 5581011107
Status : Answered
Chosen Option : 2

Q.11 1 Horsepower is equal to _____ watts.

- Ans
- 1. 746

- 2. 735
- 3. 686
- 4. 628

Question ID : 558101111
Status : Answered
Chosen Option : 1

Q.12 Which of the following organs of the human body produces urea?

- Ans
- 1. Pancreas
 - 2. Kidney
 - 3. Large intestines
 - 4. Liver

Question ID : 558101105
Status : Answered
Chosen Option : 2

Q.13 Which of the following is an east coast port?

- Ans
- 1. Kandla
 - 2. Mazagaon
 - 3. Haldia
 - 4. Marmagao

Question ID : 558101126
Status : Not Answered
Chosen Option : --

Q.14 What is approximate the period (in years) of Mars retrograde?

- Ans
- 1. 4
 - 2. 2
 - 3. 3
 - 4. 5

Question ID : 558101122
Status : Not Answered
Chosen Option : --

Q.15 Which of the following has the highest melting point?

- Ans
- 1. Strontium
 - 2. Tungsten
 - 3. Molybdenum
 - 4. Nickel

Question ID : 558101109
Status : Answered
Chosen Option : 2

Q.16 Who among the following coined the famous slogan 'Jai Jawan–Jai Kisan'?

- Ans
- 1. Lal Bahadur Shastri
 - 2. Indira Gandhi
 - 3. Morarji Desai
 - 4. Charan Singh

Question ID : 5581011139
Status : Answered
Chosen Option : 1

Q.17 In his Independence Day address (2019), Prime Minister Narendra Modi announced the appointment of _____.

- Ans
- 1. Chief of Postal Department
 - 2. Chief of National Museum
 - 3. Chief of Defence Staff
 - 4. Chief of Textile Board

Question ID : 5581011099
Status : Answered
Chosen Option : 3

Q.18 Which of the following states is also known as the 'Molasses Basin'?

- Ans
- 1. Tripura
 - 2. Assam
 - 3. Jharkhand
 - 4. Mizoram

Question ID : 5581011125
Status : Not Answered
Chosen Option : --

Q.19 What name has been given to the lander of Chandryaan 2 launched by India?

- Ans
- 1. Vikram
 - 2. Keshav
 - 3. Chander
 - 4. Pragyam

Question ID : 5581011103
Status : Answered
Chosen Option : 4

Q.20 Which of the following is NOT a Vedanga?

- Ans
- 1. Siksha
 - 2. Kalpa
 - 3. Mundaka
 - 4. Chanda

Question ID : 5581011131
Status : Not Answered
Chosen Option : --

Q.21 Which among the following is equivalent to 1 Pascal?

- Ans
- 1. 1 newton per square meter
 - 2. 1 newton per centimetre
 - 3. 1 newton per metre
 - 4. 1 newton per square centimetre

Question ID : 5581011113
Status : Answered

Chosen Option : 1

Q.22 The first meeting of the Constituent Assembly was held in _____.

- Ans
- 1. Delhi
 - 2. Madras
 - 3. Kolkata
 - 4. Bombay

Question ID : 5581011138
Status : Not Answered
Chosen Option : --

Q.23 Which of the following woman scientists is associated with the element having atomic number 109?

- Ans
- 1. Lise Meitner
 - 2. Marie Curie
 - 3. Irene Joliot Curie
 - 4. Emmy Noether

Question ID : 5581011116
Status : Answered
Chosen Option : 2

Q.24 The venue of the 52nd ASEAN summit was in _____.

- Ans
- 1. Bangkok
 - 2. Jakarta
 - 3. Tutong
 - 4. Singapore

Question ID : 5581011104
Status : Not Answered
Chosen Option : --

Q.25 The 'Photu La' pass is located in which of the following ranges of the Himalayas?

- Ans
- 1. Karakoram
 - 2. Pir Panjal
 - 3. Ladakh
 - 4. Zaskar

Question ID : 5581011124
Status : Not Answered
Chosen Option : --

Q.26 Which famous scientist posed the question, 'If time travel is possible, where are the tourists from the future?'

- Ans
- 1. Albert Einstein
 - 2. Jane Hawking
 - 3. Issac Newton
 - 4. Stephen Hawking

Question ID : 5581011121
Status : Answered
Chosen Option : 4

Q.27 What is the maximum amount of investment permissible per senior citizen under the Pradhan Mantri Vaya Vandana Yojana on or before March 31, 2020?

- Ans
- 1. ₹15 lakhs
 - 2. ₹12 lakhs
 - 3. ₹10 lakhs
 - 4. ₹5 lakhs

Question ID : 5581011144
Status : Not Answered
Chosen Option : --

Q.28 Most of the sun's mass is:

- Ans
- 1. Carbon
 - 2. Hydrogen
 - 3. Nitrogen
 - 4. Helium

Question ID : 5581011106
Status : Answered
Chosen Option : 2

Q.29 With reference to the currencies of the world which of the following pairs is correctly matched?

- Ans
- 1. China - Ruble
 - 2. Bhutan - Peso
 - 3. Myanmar - Kyat
 - 4. Russia - Yen

Question ID : 5581011146
Status : Not Answered
Chosen Option : --

Q.30 With reference to the tourist sites of India which of the following pairs is INCORRECTLY matched?

- Ans
- 1. Kodai Kanal - Tamil Nadu
 - 2. Mount Abu - Rajasthan
 - 3. Badrinath - Himachal Pradesh
 - 4. Panhala- Maharashtra

Question ID : 5581011128
Status : Answered
Chosen Option : 1

Q.31 The summer capital of British India was _____.

- Ans
- 1. Munnar
 - 2. Shimla
 - 3. Nainital
 - 4. Coorg

Question ID : 5581011130
Status : Answered
Chosen Option : 2

Q.32 The Fisheries College and Research Institute is located at _____.

Ans

- 1. Thoothukudi
- 2. Visakhapatnam
- 3. Kolkata
- 4. Paradip

Question ID : 5581011120
Status : Not Answered
Chosen Option : --

Q.33 In the context of LED what does D stand for?

- Ans
- 1. Disk
 - 2. Diode
 - 3. Decode
 - 4. Desk

Question ID : 5581011098
Status : Answered
Chosen Option : 2

Q.34 What does 'T' stand for in IVF-ET?

- Ans
- 1. Transit
 - 2. Toxicity
 - 3. Transfer
 - 4. Terminal

Question ID : 5581011115
Status : Not Answered
Chosen Option : --

Q.35 Who was the first person in the world to calculate the height of Mount Everest?

- Ans
- 1. Radhanath Sikdar
 - 2. Tenzing Norgay
 - 3. Capt. HL Thullier
 - 4. Peary Chand Mitra

Question ID : 5581011123
Status : Answered
Chosen Option : 3

Q.36 Which country launched the world's first floating nuclear reactor in the Arctic?

- Ans
- 1. Russia
 - 2. Sweden
 - 3. France
 - 4. Norway

Question ID : 5581011110
Status : Not Answered
Chosen Option : --

Q.37 The headquarters of the computer technology giant 'Intel' is located in _____.

- Ans
- 1. California
 - 2. Singapore
 - 3. London

4. Paris

Question ID : 5581011097
Status : Not Answered
Chosen Option : --

Q.38 Noble gases are _____.

- Ans 1. monoatomic
 2. polyatomic
 3. triatomic
 4. diatomic

Question ID : 5581011118
Status : Not Answered
Chosen Option : --

Q.39 Which of the following is NOT a certification mark employed on food products?

- Ans 1. FSSAI
 2. AGMARK
 3. FPO
 4. BIS Hallmark

Question ID : 5581011114
Status : Answered
Chosen Option : 4

Q.40 Which of the following pairs is INCORRECTLY matched?

- Ans 1. 1757 - Battle of Plassey
 2. 1556 - Battle of Haldighati
 3. 1764 - Battle of Buxar
 4. 1539 - Battle of Chausa

Question ID : 5581011134
Status : Not Answered
Chosen Option : --

Q.41 Who among the following was conferred with the Rajiv Gandhi Khel Ratna Award for the year 2019?

- Ans 1. Gaurav Gill
 2. Promod Bhagat
 3. Deepa Malik
 4. Pooja Dhanda

Question ID : 5581011101
Status : Not Answered
Chosen Option : --

Q.42 The famous Shanti Swarup Bhatnagar Prize is given in the field of _____.

- Ans 1. Architecture
 2. Science and Technology
 3. Journalism
 4. Music

Status : **Not Answered**
Chosen Option : --

Q.43 Which of the following was NOT added to the list of registered Geographical Indication(GI) tags in August 2019?

- Ans
- 1. Tirur Betel leaf
 - 2. Kandhamal Turmeric
 - 3. Palani Panchamirtham
 - 4. Tawlhlohpuan

Question ID : 5581011102
Status : **Not Answered**
Chosen Option : --

Q.44 Which of the following metal – ore pairs is correct?

- Ans
- 1. Mercury - cinnabar
 - 2. Uranium - bauxite
 - 3. Sodium - galena
 - 4. Lead – hematite

Question ID : 5581011119
Status : **Answered**
Chosen Option : 1

Q.45 Who among the following drafted the Indian Penal Code which later became the basis of the Indian Criminal Code?

- Ans
- 1. William Wedderburn
 - 2. Thomas Babington Macaulay
 - 3. Maurice Linford Gwyer
 - 4. Sir Henry McMohan

Question ID : 5581011133
Status : **Not Answered**
Chosen Option : --

Q.46 _____ ceased to be a member after the reconstitution of the NITI Aayog in June 2019

- Ans
- 1. Bibek Debroy
 - 2. Rajiv Kumar
 - 3. Ramesh Chand
 - 4. Rajnath Singh

Question ID : 5581011136
Status : **Not Answered**
Chosen Option : --

Q.47 The atomic number of which of the following elements is 11?

- Ans
- 1. Silicon
 - 2. Germanium
 - 3. Carbon
 - 4. Sodium

Question ID : 5581011117
Status : **Answered**
Chosen Option : 4

Q.48 Which of the following was written by Ziauddin Barani?

- Ans
- 1. Ain-i-Akbari
 - 2. Siyar-ul-Mutakherin
 - 3. Tarikh-i-Firuzshahi
 - 4. Mantakhab-ul-Tawarikh

Question ID : 558101132
Status : Answered
Chosen Option : 1

Q.49 As of August 2019 who is the only Indian to figure among the Forbes list of world's highest-paid female athletes?

- Ans
- 1. Saina Nehwal
 - 2. P V Sindhu
 - 3. Mary Kom
 - 4. Sania Mirza

Question ID : 558101142
Status : Not Answered
Chosen Option : --

Q.50 Who was the first Indian sprinter to win a gold medal at the U-20 World Championships in a 400m event?

- Ans
- 1. Hima Das
 - 2. PT Usha
 - 3. Tintu Luka
 - 4. Seema Singh

Question ID : 558101143
Status : Answered
Chosen Option : 1

Section : Part C General Engineering Mechanical

Q.1 In practice, the pressure rise in an SI engine during combustion is lower than that in an air-standard Otto cycle for the same heat input because of:

- Ans
- 1. variable specific heat and dissociation
 - 2. detonation in the farther regions from the spark plug
 - 3. leakage past the piston rings
 - 4. resistance to flow in the air filter

Question ID : 5581011023
Status : Not Answered
Chosen Option : --

Q.2 Which of the following fittings is used to extinguish the boiler furnace fire in case the water level falls below the safe level?

- Ans
- 1. Feed check valve
 - 2. Safety valve
 - 3. Fusible plug
 - 4. Blow-off cock

Question

Status : **Answered**
Chosen Option : 4

Q.3 The steady flow energy equation:

$Q = m(h_2 - h_1)$ is applicable for:

- Ans
- 1. Nozzle
 - 2. Turbine
 - 3. Compressor
 - 4. Boiler

Question ID : **5581011012**
Status : **Answered**
Chosen Option : 4

Q.4 If the compression of air is carried out in a large number of stages with perfect intercooling between the stages, then the overall compression approaches an:

- Ans
- 1. isochoric process
 - 2. isenthalpic process
 - 3. isentropic process
 - 4. isothermal process

Question ID : **5581011045**
Status : **Answered**
Chosen Option : 2

Q.5 Determine the total pressure on a circular plate of diameter 1.5 m which is placed vertically in water in such a way that the center of plate is 3 m below the surface of water.

- Ans
- 1. 52002.81 N
 - 2. 520.028 N
 - 3. 52.002 N
 - 4. 5200.281 N

Question ID : **5581011067**
Status : **Not Answered**
Chosen Option : --

Q.6 An undesirable property of a refrigerant is its:

- Ans
- 1. low freezing point
 - 2. low viscosity
 - 3. high miscibility with lubricating oil
 - 4. low latent heat of evaporation

Question ID : **5581011052**
Status : **Answered**
Chosen Option : 3

Q.7 Which of the following engine cooling systems is commonly employed in heavy trucks?

- Ans
- 1. Evaporative cooling system
 - 2. Air cooling system with fins

- 3. Forced-circulation system
- 4. Thermosyphon system

Question ID : 5581011027
Status : Answered
Chosen Option : 2

Q.8 The modern method of making primary steel from liquid iron and scrap uses:

- Ans
- 1. Ladle furnace
 - 2. the basic oxygen steel-making process
 - 3. the Bessemer process
 - 4. the crucible process

Question ID : 5581011094
Status : Answered
Chosen Option : 3

Q.9 The compression of vapour is carried out by an ejector in which of the following refrigeration systems?

- Ans
- 1. Vapour jet refrigeration system
 - 2. Vapour compression refrigeration system
 - 3. Vapour absorption refrigeration system
 - 4. Air cycle refrigeration system

Question ID : 5581011050
Status : Not Answered
Chosen Option : --

Q.10 Which of the following devices is used to preheat the feed water before being supplied to the boiler?

- Ans
- 1. Steam trap
 - 2. Economizer
 - 3. Superheater
 - 4. Air preheater

Question ID : 5581011032
Status : Answered
Chosen Option : 2

Q.11 The dimension of dynamic viscosity of a fluid is:

- Ans
- 1. $[M L T^{-1}]$
 - 2. $[L^2 T^{-1}]$
 - 3. $[L T^{-2}]$
 - 4. $[M L^{-1} T^{-1}]$

Question ID : 5581011068
Status : Answered
Chosen Option : 1

Q.12

A system is said to be in thermodynamic equilibrium if the system is in:

- Ans
- 1. chemical equilibrium
 - 2. thermal, chemical and mechanical equilibrium
 - 3. thermal equilibrium
 - 4. mechanical equilibrium

Question ID : 5581011010
Status : Answered
Chosen Option : 2

Q.13 The relationship between the coefficient of performance (COP) of a heat pump and the coefficient of performance (COP) of a refrigerator is given by:

- Ans
- 1. $(COP)_{\text{Refrigerator}} = 1 - (COP)_{\text{Heat Pump}}$
 - 2. $(COP)_{\text{Refrigerator}} = 1 + (COP)_{\text{Heat Pump}}$
 - 3. $(COP)_{\text{Heat Pump}} = 1 - (COP)_{\text{Refrigerator}}$
 - 4. $(COP)_{\text{Heat Pump}} = 1 + (COP)_{\text{Refrigerator}}$

Question ID : 5581011051
Status : Answered
Chosen Option : 2

Q.14 Kinematic viscosity is the ratio of:

- Ans
- 1. Absolute viscosity to density of liquid
 - 2. Density of liquid to absolute viscosity
 - 3. Mass of liquid to absolute viscosity
 - 4. Absolute viscosity to mass of the liquid

Question ID : 5581011080
Status : Answered
Chosen Option : 1

Q.15 The change in head across a small turbine is 10 m, the flow rate of water is $1 \text{ m}^3/\text{s}$ and the efficiency is 80%. The power developed by the turbine is approximately:

- Ans
- 1. 100 kW
 - 2. 78 kW
 - 3. 1 MW
 - 4. 50 kW

Question ID : 5581011088
Status : Not Answered
Chosen Option : --

Q.16 In collinear force system the forces whose line of action lie on:

- Ans
- 1. Does not meet at the one point
 - 2. Same line
 - 3. On the same plain
 - 4. Meet at one point

Question ID : 5581011004
Status : Answered
Chosen Option : 2

Q.17 The coefficient of performance of the Bell-Coleman air refrigeration cycle in terms of the pressure ratio r_p is given by:

Ans

1. $\frac{1}{r_p^{(\gamma-1)/(\gamma+1)-1}}$
2. $\frac{1}{r_p^{(\gamma-1)/\gamma-1}}$
3. $\frac{1}{r_p^{(\gamma-1)/\gamma+1}}$
4. $\frac{1}{r_p^{\gamma/(\gamma+1)-1}}$

Question ID : 5581011054
Status : Answered
Chosen Option : 3

Q.18 The knock rating of an SI engine is determined by matching the performance of the engine with a mixture of:

Ans

1. cetane and benzene
2. iso-octane and alpha-methylnaphthalene
3. iso-octane and n-Heptane
4. cetane and alpha-methylnaphthalene

Question ID : 5581011020
Status : Not Answered
Chosen Option : --

Q.19 A mixture of refrigerants having a fixed boiling point is called:

Ans

1. Primary refrigerant
2. brine
3. a secondary refrigerant
4. Azeotropic mixture

Question ID : 5581011048
Status : Answered
Chosen Option : 4

Q.20 Using the stream function in a two-dimensional flow automatically satisfies the:

Ans

1. energy equation
2. momentum equation
3. ideal flow equation
4. continuity equation

Question ID : 5581011075
Status : Answered
Chosen Option : 4

Q.21 Water is a:

Ans

1. Brinkmann fluid

- 2. Newtonian fluid
- 3. hydrodynamic fluid
- 4. hydrostatic fluid

Question ID : 5581011060
Status : Answered
Chosen Option : 2

Q.22 For a centrifugal water pump if flow rate is 36000 lit/hr and head added to flow is 10 mt, calculate water horse power (WHP).

- Ans
- 1. 981 HP
 - 2. 9.81 HP
 - 3. 98.1 HP
 - 4. 0.981 HP

Question ID : 5581011091
Status : Not Answered
Chosen Option : --

Q.23 The furnace is situated outside the boiler shell in case of a:

- Ans
- 1. Locomotive boiler
 - 2. Cochran boiler
 - 3. Babcock and Wilcox boiler
 - 4. Cornish boiler

Question ID : 5581011042
Status : Answered
Chosen Option : 1

Q.24 If the relative motion between two links is pure sliding, then the relative instantaneous centre is:

- Ans
- 1. not defined
 - 2. at the point of contact
 - 3. at the infinity on a line perpendicular to the direction of sliding
 - 4. at a point unit distance away on the common normal at the point of sliding

Question ID : 558101997
Status : Answered
Chosen Option : 3

Q.25 Fluid flows through a converging nozzle, with the exit diameter equal to half the entrance diameter. Assuming an ideal flow, if the velocity at the entrance is 2 m/s, then the velocity at the exit is:

- Ans
- 1. 16 m/s
 - 2. 32 m/s
 - 3. 8 m/s
 - 4. 4 m/s

Question ID : 5581011074
Status : Answered
Chosen Option : 3

Q.26 A cantilever beam of length 'L' is subjected to an end load 'P'. What is the deflection under the load?

- Ans
- 1. $PL^3/24EI$
 - 2. PL^3/EI
 - 3. $PL^3/3EI$
 - 4. $PL^3/48EI$

Question ID : 5581011002
Status : Answered
Chosen Option : 1

Q.27 The steam which contains moisture or particles of water in suspension is known as:

- Ans
- 1. Dry saturated steam
 - 2. Wet steam
 - 3. Super wet steam
 - 4. Superheated steam

Question ID : 5581011008
Status : Answered
Chosen Option : 2

Q.28 A body is in equilibrium when:

- Ans
- 1. no force or moment acts on the body
 - 2. the vector sum of external forces and moments is zero
 - 3. the body is accelerating
 - 4. the vector sum of external forces is zero

Question ID : 5581011005
Status : Answered
Chosen Option : 2

Q.29 Total loss developed in series of pipes is:

- Ans
- 1. Zero
 - 2. Sum of local losses only
 - 3. Sum of losses in each pipe
 - 4. Sum of local losses plus losses in each pipe

Question ID : 5581011072
Status : Answered
Chosen Option : 3

Q.30 For the same maximum and minimum temperatures, the Rankine cycle has:

- Ans
- 1. more efficiency than that of the Carnot cycle
 - 2. equal efficiency to that of the Carnot cycle
 - 3. lower specific work output than that of the Carnot cycle
 - 4. higher specific work output than that of the Carnot cycle

Question ID : 5581011028

Status : **Answered**
Chosen Option : 3

Q.31 The kinematic viscosity of a fluid is the:

- Ans
- 1. viscous force / strain
 - 2. dynamic viscosity / pressure
 - 3. dynamic viscosity / density
 - 4. viscous force / flow rate

Question ID : 5581011083
Status : **Answered**
Chosen Option : 3

Q.32 A path line:

- Ans
- 1. cannot be defined for fluid flows
 - 2. indicates fluid velocity
 - 3. indicates path taken by a fluid element
 - 4. indicates local fluid direction

Question ID : 5581011071
Status : **Answered**
Chosen Option : 3

Q.33 Function of governor is to:

- Ans
- 1. Reduced fluctuations of speed
 - 2. Regulate the speed during one cycle
 - 3. Minimise the vibration of a cycle
 - 4. Maintain the speed of engine within specified limits

Question ID : 558101998
Status : **Answered**
Chosen Option : 4

Q.34 Tool steels:

- Ans
- 1. have a carbon content of less than 0.5%
 - 2. typically contain carbides
 - 3. cannot hold hardness at an elevated temperature
 - 4. are not very resistant to abrasion

Question ID : 5581011092
Status : **Answered**
Chosen Option : 2

Q.35 In a locomotive boiler, the draught is produced by:

- Ans
- 1. chimney
 - 2. an induced draught fan
 - 3. steam jet

4. centrifugal fan

Question ID : 5581011035
Status : Answered
Chosen Option : 1

Q.36 The volume of air delivered by the compressor is called:

- Ans 1. Compressor capacity
 2. Compression ratio
 3. Free air delivery
 4. Swept volume

Question ID : 5581011046
Status : Answered
Chosen Option : 1

Q.37 Natural drought is produced:

- Ans 1. By the use of steam jet
 2. By the use of chimney
 3. By the use of mechanical fan & steam jet
 4. By the use of mechanical fan

Question ID : 5581011031
Status : Answered
Chosen Option : 2

Q.38 For Isochoric Processes, which of the following property remains constant?

- Ans 1. Volume
 2. Temperature
 3. Pressure
 4. Entropy

Question ID : 5581011011
Status : Answered
Chosen Option : 1

Q.39 In an ideal fluid flow, the:

- Ans 1. surface tension forces are zero.
 2. pressure is equal everywhere.
 3. Viscosity is zero.
 4. pressure increases linearly with depth.

Question ID : 5581011061
Status : Answered
Chosen Option : 3

Q.40 Second Law of Thermodynamics defines:

- Ans 1. Internal Energy

2. Entropy

3. Heat

4. Work

Question ID : 5581011016
Status : Answered
Chosen Option : 2

Q.41 The head loss in pipe bend is proportional to:
(‘V’ is fluid velocity and ‘g’ is acceleration due to gravity.)

Ans 1. $V/2g$

2. V^2g

3. $(Vg)^{1/2}$

4. $V^2/2g$

Question ID : 5581011084
Status : Answered
Chosen Option : 4

Q.42 The volume of a wooden block, of specific gravity of 0.5, is 0.1 m^3 . The volume of the block immersed in water when floating is:

Ans 1. 0.005 m^3

2. 0.05 m^3

3. 0.1 m^3

4. 0.02 m^3

Question ID : 5581011066
Status : Answered
Chosen Option : 3

Q.43 During quenching, martensite is produced:

Ans 1.

with an appropriate cooling rate such that the carbon has time to migrate

2. with low cooling rate

3. Rapid cooling rate

4. medium cooling rate

Question ID : 5581011096
Status : Answered
Chosen Option : 1

Q.44 If pitch diameter is 200 mm and number of teeth are 20 then circular pitch of the gear will be:

Ans 1. 31.4 mm

2. 314 mm

3. 0.314 mm

4. 3.14 mm

Question ID : 5581011096

Status : **Answered**
Chosen Option : 1

Q.45 A tapered roller bearing:

Ans 1. is the same as a needle bearing

2.

is designed such that all elements in the roller surface and raceways intersect at a common point on the bearing axis.

3. cannot take radial loading

4. cannot take thrust loading

Question ID : **558101999**
Status : **Not Answered**
Chosen Option : --

Q.46 Steam which is formed in contact with a water is known as:

Ans 1. Saturated steam

2. Supersaturated steam

3. Dry saturated steam

4. Superheated steam

Question ID : **5581011006**
Status : **Answered**
Chosen Option : 4

Q.47 Which of the following devices is present in the vapour absorption refrigeration system and absent in the vapour compression refrigeration system?

Ans 1. Evaporator

2. Throttling valve

3. Generator

4. Compressor

Question ID : **5581011049**
Status : **Answered**
Chosen Option : 4

Q.48 A fluid is defined as one which:

Ans 1. is solid-like when there is no motion

2. Deforms continuously when subjected to shear stress

3. cannot withstand shear

4. can withstand elongation

Question ID : **5581011063**
Status : **Answered**
Chosen Option : 2

Q.49 The Reynolds number represents:

Ans 1. $\left(\frac{\text{inertial forces}}{\text{viscous forces}}\right)$ in a fluid

2. $\left(\frac{\text{viscous forces}}{\text{gravitational forces}}\right)$ in a fluid

- 3. pressure forces in a fluid
- 4. viscous forces in a fluid

Question ID : 5581011078
Status : Answered
Chosen Option : 1

Q.50 Specific speed indicates:

- Ans
- 1. type of pump
 - 2. rated rpm
 - 3. RPM at maximum efficiency point
 - 4. RPM at no load

Question ID : 5581011090
Status : Answered
Chosen Option : 2

Q.51 Willian's line method, Morse test and motoring test can all be used to find which of the following for an IC engine?

- Ans
- 1. Indicated mean effective pressure
 - 2. Indicated power
 - 3. Frictional power
 - 4. Brake power

Question ID : 5581011021
Status : Answered
Chosen Option : 2

Q.52 The flow rate is $1 \text{ m}^3/\text{s}$ in a pipe of radius 1 m. The velocity of the fluid is approximately:

- Ans
- 1. 1 m/s
 - 2. $1/2\pi \text{ m/s}$
 - 3. $1/\pi \text{ m/s}$
 - 4. $2/\pi \text{ m/s}$

Question ID : 5581011073
Status : Answered
Chosen Option : 3

Q.53 Typical stainless steel are alloy steels with:

- Ans
- 1. less than 10.5% chromium and more than 1.2% carbon
 - 2. more than 10.5% chromium and more than 1.2% carbon
 - 3. less than 10.5% chromium and less than 1.2% carbon
 - 4. more than 10.5% chromium and less than 1.2% carbon

Question ID : 5581011093
Status : Answered
Chosen Option : 4

Q.54 In a Newtonian fluid, the shear stress:

- Ans
- 1. Is inversely proportional to the strain

- 2. is directly proportional to rate of shear strain
- 3. balances pressure
- 4. balances inertia stress

Question ID : 5581011062
Status : Answered
Chosen Option : 2

Q.55 The flow of fluid in a straight smooth pipe becomes turbulent when the:

- Ans
- 1. Reynolds number is less than 2000.
 - 2. Reynolds number is less than 4000.
 - 3. Reynolds number is greater than 4000.
 - 4. Reynolds number is equal 2000.

Question ID : 5581011076
Status : Answered
Chosen Option : 3

Q.56 Dry saturated steam at a pressure of 8 bar enters a convergent nozzle. The index of isentropic expansion for dry saturated steam is 1.135. For maximum mass flow rate to occur through the nozzle, the exit pressure should be:

- Ans
- 1. 5.32 bar
 - 2. 3.62 bar
 - 3. 2.32 bar
 - 4. 4.62 bar

Question ID : 5581011059
Status : Not Answered
Chosen Option : --

Q.57 A pitot tube measures the:

- Ans
- 1. Fluid density
 - 2. dynamic pressure
 - 3. Fluid flow velocity
 - 4. Fluid viscosity

Question ID : 5581011081
Status : Answered
Chosen Option : 3

Q.58 Navier-Stokes equations represent:

- Ans
- 1. mass conservation
 - 2. vorticity conservation
 - 3. energy conservation
 - 4. viscosity

Question ID : 5581011082
Status : Answered
Chosen Option : 3

Q.59 In an impulse turbine:

Ans 1.

The steam is expanded both in fix and moving blades continuously.

2.

The steam is expanded in nozzles only and there is a pressure drop and heat drop.

3. Steam is expanded in moving blades only.

4. Pressure and temperature of steam remains constant.

Question ID : 5581011057
Status : Not Answered
Chosen Option : --

Q.60 The pressure in a stationary water column:

Ans 1. increases with depth.

2. varies nonlinearly with depth.

3. is constant with depth.

4. depends on the viscosity at a depth.

Question ID : 5581011065
Status : Answered
Chosen Option : 1

Q.61 The multistage compression of air as compare to single stage compression:

Ans 1. Increases work done per kg of air

2.

Does not improve volumetric efficiency for the given pressure ratio

3. Gives less uniform torque

4.

Improves volumetric efficiency for the given pressure ratio

Question ID : 5581011043
Status : Answered
Chosen Option : 4

Q.62 Which of the following devices is used to find the composition of exhaust gases from IC engines?

Ans 1. Bomb calorimeter

2. Barometer

3. Rope dynamometer

4. Orsat apparatus

Question ID : 5581011022
Status : Answered
Chosen Option : 1

Q.63 Rankine cycle consist of:

Ans 1. Two isothermal & two isochoric processes

2. Two isothermal & two isentropic processes

- 3. Two isobaric & two isentropic processes
- 4. Two isobaric & two isothermal processes

Question ID : 5581011029
Status : Answered
Chosen Option : 2

Q.64 In a LaMont boiler, the mass flow rate of water through the boiler circulation pump, compared to the rate of evaporation of water, is typically:

- Ans
- 1. twenty-five times
 - 2. forty times
 - 3. ten times
 - 4. thirty times

Question ID : 5581011034
Status : Not Answered
Chosen Option : --

Q.65 In two-stroke engines, the type of lubrication system employed in the crankcase is the:

- Ans
- 1. mist lubrication system
 - 2. wet sump lubrication system
 - 3. dry sump lubrication system
 - 4. splash lubrication system

Question ID : 5581011026
Status : Answered
Chosen Option : 3

Q.66 In an axial flow pump, the liquid enters:

- Ans
- 1. radially inwards
 - 2. radially outwards
 - 3. tangentially through the sides
 - 4. enters and leaves the impeller axially

Question ID : 5581011089
Status : Answered
Chosen Option : 4

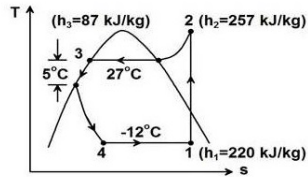
Q.67 The maximum shear stress in a shaft, of diameter 'd' subjected to torsion 'T', is given by:

- Ans
- 1. $16 T/\pi d^3$
 - 2. $64 T/\pi d^3$
 - 3. $8 T/\pi d^3$
 - 4. $32 T/\pi d^3$

Question ID : 5581011003
Status : Answered
Chosen Option : 1

Q.68

A vapour compression refrigeration cycle with subcooling is shown in the figure along with refrigerant enthalpy data. The specific heat of the liquid refrigerant is 5 kJ/(kg.K). What is the coefficient of performance of the cycle?



- Ans
- 1. 5.4
 - 2. 3.8
 - 3. 2.9
 - 4. 4.3

Question ID : 5581011055
Status : Not Answered
Chosen Option : --

Q.69 The power available at the engine crankshaft is known as:

- Ans
- 1. Brake Power
 - 2. True Power
 - 3. Indicated Power
 - 4. Friction Power

Question ID : 5581011017
Status : Answered
Chosen Option : 3

Q.70 If m_w is the mass of water changing the enthalpy from h_1 to h_2 in a boiler and L is the latent heat of steam at 100°C , then the equivalent evaporation is defined as:

- Ans
- 1. $[m_w(h_2 - h_1)]/L$
 - 2. $[m_w(h_2 + h_1)]/L$
 - 3. $[m_w(h_2 + L)]/h_1$
 - 4. $(m_w h_1 h_2)/L$

Question ID : 5581011038
Status : Not Answered
Chosen Option : --

Q.71 An orifice meter is used to measure the:

- Ans
- 1. flow rate in a pipe
 - 2. static pressure in the fluid
 - 3. atmospheric pressure
 - 4. flow pressure in the pipe

Question ID : 5581011079
Status : Answered
Chosen Option : 1

Q.72 Cavitation is a phenomenon that occurs in turbines due to:

- Ans
- 1. formation of a boundary layer

- 2. high viscous stress
- 3. local vapour formation
- 4. low viscous stress

Question ID : 5581011087
Status : Answered
Chosen Option : 1

Q.73 A Pelton turbine is a / an:

- Ans
- 1. impulse flow turbine
 - 2. radial flow turbine
 - 3. mixed flow turbine
 - 4. axial flow turbine

Question ID : 5581011085
Status : Answered
Chosen Option : 2

Q.74 The law that permits temperature measurement with a calibrated instrument is called the:

- Ans
- 1. first law of thermodynamics
 - 2. zeroth law of thermodynamics
 - 3. second law of thermodynamics
 - 4. third law of thermodynamics

Question ID : 5581011013
Status : Answered
Chosen Option : 2

Q.75 Modified polyolester is a suitable lubricant in a refrigeration system with the refrigerant:

- Ans
- 1. R11
 - 2. R134a
 - 3. R245fa
 - 4. R12

Question ID : 5581011056
Status : Not Answered
Chosen Option : --

Q.76 In an IC engine, boundary lubrication is likely to occur between surfaces with relative velocity during:

- Ans
- 1. starting and stopping
 - 2. maximum power condition
 - 3. constant speed operation
 - 4. idling

Question ID : 5581011025
Status : Not Answered
Chosen Option : --

Q.77 A device used to put off fire in the furnace of the boiler when the level of the water in the boiler falls to an unsafe limit is called:

- Ans
- 1. Blow off cock
 - 2. Economiser
 - 3. Fusible plug
 - 4. Superheater

Question ID : 5581011033
Status : Answered
Chosen Option : 3

Q.78 In a draft tube at the exit of a turbine:

- Ans
- 1. the kinetic energy increases
 - 2. the flow is generally laminar
 - 3. sand particles are prevented from entering the turbine
 - 4. the cross-sectional area increases in flow direction

Question ID : 5581011086
Status : Answered
Chosen Option : 4

Q.79 The following data recorded during a test on oil engine:

Speed of Engine = 1000 rpm,

Load on the brake = 1000 N,

Length of brake = 750 ml,

Then brake power is:

- Ans
- 1. 68.55 kw
 - 2. 785.5 kw
 - 3. 55.78 kw
 - 4. 78.55 kw

Question ID : 5581011018
Status : Not Answered
Chosen Option : --

Q.80 Heat treatment of steel _____.

- Ans
- 1. can be used to change the carbon percentage.
 - 2. involves heating steel to a temperature above melting point and then cooling.
 - 3. is effective when the carbon percentage is lower than 0.8%.
 - 4. Cannot be used to relieve local stresses and strains.

Question ID : 5581011095
Status : Answered
Chosen Option : 1

Q.81 Bernoulli's equation is used for:

- Ans
- 1. laminar viscous flows
 - 2. incompressible fluid

- 3. viscous flows at high speeds
- 4. turbulent flow

Question ID : 5581011077
Status : Answered
Chosen Option : 1

Q.82 Atmospheric pressure at ground level is approximately:

- Ans
- 1. 1 N/m^2
 - 2. 1 N
 - 3. 1 dyne/m^2
 - 4. 1 kgf/cm^2

Question ID : 5581011070
Status : Answered
Chosen Option : 1

Q.83 In a throttling process with negligible change in the potential and kinetic energies:

- Ans
- 1. the enthalpy remains constant
 - 2. the entropy remains constant
 - 3. the pressure remains constant
 - 4. the enthalpy does not remains constant

Question ID : 5581011007
Status : Answered
Chosen Option : 1

Q.84 In an IC engine, combustion was found to proceed during the expansion stroke also. The reason could be:

- Ans
- 1. rich mixture with ignition advance
 - 2. high calorific value of the fuel
 - 3. weak mixture with ignition advance
 - 4. weak mixture without ignition advance

Question ID : 5581011024
Status : Answered
Chosen Option : 1

Q.85 Electrolux system of refrigerant has:

- Ans
- 1. Only one liquid pump
 - 2. Only three liquid pump
 - 3. No liquid pump
 - 4. Only two liquid pump

Question ID : 5581011047
Status : Not Answered
Chosen Option : --

Q.86

When the pressure inside the boiler drum exceeds the desired level, then which of the following devices blows off the excess steam from the boiler?

- Ans
- 1. Stop valve
 - 2. Blow-off cock
 - 3. Fusible plug
 - 4. Safety valve

Question ID : 5581011040
Status : Answered
Chosen Option : 4

Q.87 The specific gravity of a liquid is 2.5. Assuming $g = 9.8 \text{ m/s}^2$, the mass of 1 litre of the liquid is:

- Ans
- 1. 24.5 kg
 - 2. 2.5 kg
 - 3. 1.0 kg
 - 4. 9.8 kg

Question ID : 5581011064
Status : Answered
Chosen Option : 1

Q.88 $\oint \frac{dq}{T}$, with usual notation represents:

- Ans
- 1. Volume
 - 2. Entropy
 - 3. Pressure
 - 4. Enthalpy

Question ID : 5581011014
Status : Answered
Chosen Option : 2

Q.89 The degree of reaction for an impulse steam turbine is:

- Ans
- 1. 0.5
 - 2. 1
 - 3. 0
 - 4. -1

Question ID : 5581011058
Status : Not Answered
Chosen Option : --

Q.90 Maximum bending moment for simply supported beam with udl over entire length of beam, if W = weight of beam and L = length of beam, is:

- Ans
- 1. $WL/8$
 - 2. $WL^2/8$
 - 3. $WL/4$
 - 4. $WL^2/4$

Status : **Answered**
Chosen Option : 2

Q.91 The right limb of simple U-tube manometer containing mercury is open to atmosphere while the left limb is connected to a pipe in which fluid of specific gravity 0.9 is flowing. The center of the pipe is 12 cm below the level of mercury in the right limb. Find the pressure of fluid in the pipe if the difference of mercury level in two limbs is 20 cm.

- Ans
- 1. 2590 N/cm²
 - 2. 2597 N/cm²
 - 3. 25.97 N/cm²
 - 4. 2.597 N/cm²

Question ID : **5581011069**
Status : **Answered**
Chosen Option : 3

Q.92 Which of the following devices controls the refrigerant flow in a refrigeration system as per the heat load on the evaporator?

- Ans
- 1. Expansion valve
 - 2. Evaporator
 - 3. Condenser
 - 4. Compressor

Question ID : **5581011053**
Status : **Answered**
Chosen Option : 1

Q.93 The ideal cycle for which steam engine work is:

- Ans
- 1. Joule Cycle
 - 2. Otto Cycle
 - 3. Rankine Cycle
 - 4. Carnot Cycle

Question ID : **5581011030**
Status : **Answered**
Chosen Option : 4

Q.94 Biggest loss in the boiler is:

- Ans
- 1. Dryness in flue gasses
 - 2. Steam formation
 - 3. Unburnt carbon
 - 4. Moisture in fuel

Question ID : **5581011037**
Status : **Answered**
Chosen Option : 4

Q.95 The ratio of indicated thermal efficiency to the air standard efficiency is called as:

- Ans
- 1. Overall efficiency
 - 2. Relative efficiency

- 3. Volumetric efficiency
- 4. Mechanical efficiency

Question ID : 5581011019
Status : Answered
Chosen Option : 2

Q.96 A single-cylinder, single-acting compressor has a bore D , stroke L , radius of the cylinder R and rotational speed n revolutions per second. The piston displacement of the compressor is given by:

- Ans
- 1. $(\pi D^2 Ln)/4$
 - 2. $(\pi R^2 Ln)/2$
 - 3. $(\pi D^2 Ln)/2$
 - 4. $(\pi R^2 Ln)/4$

Question ID : 5581011044
Status : Not Answered
Chosen Option : --

Q.97 The property enthalpy is defined as the:

- Ans
- 1. difference of the pressure and specific volume
 - 2. product of the pressure and specific volume
 - 3. sum of the internal energy and the product of the pressure and specific volume
 - 4. sum of the pressure and specific volume

Question ID : 5581011009
Status : Answered
Chosen Option : 3

Q.98 A water heating heat pump abstracting 10 kW of heat from the atmosphere requires 2 kW of power input. The COP of the heat pump is:

- Ans
- 1. 4
 - 2. 7
 - 3. 5
 - 4. 6

Question ID : 5581011015
Status : Answered
Chosen Option : 3

Q.99 Which boiler has a relatively large storage of steam and water?

- Ans
- 1. Simple vertical boiler
 - 2. Lancashire boiler
 - 3. Cochran boiler
 - 4. Cornish boiler

Question ID : 5581011036
Status : Not Answered
Chosen Option : --

Q.100 The pressure of steam produced in a supercritical boiler is in the range of:

- Ans
- 1. 200 bar to 240 bar
 - 2. 100 bar to 130 bar
 - 3. 180 bar to 190 bar
 - 4. 150 bar to 180 bar

Question ID : 5581011039

Status : Not Answered

Chosen Option : --

