



हिन्दुस्तान पेट्रोलियम कॉर्पोरेशन लिमिटेड

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|------------------|---------------------|
| Participant ID | |
| Participant Name | |
| Test Center Name | Tcs ion |
| Test Date | 12/08/2021 |
| Test Time | 9:00 AM - 11:30 AM |
| Subject | MECHANICAL ENGINEER |

Section : English Language

Q.1 Which part of the sentence contains an error?

I was walking down the road when all of the sudden it started raining cats and dogs.

- Ans 1. when all of the sudden
 2. I was walking
 3. down the road
 4. it started raining cats and dogs.

Question ID : 50389010630

Status : Answered

Chosen Option : 4

Q.2 Choose the sentence which is grammatically

correct. Ans 1. the change you be want to see

2. be the you want to change
 3. be the change you want to see
 4. see the change want you to be

Question ID : 50389010631

Status : Answered

Chosen Option : 3

Q.3 Select the correctly spelt

word. Ans 1. Recieve

2. recive
 3. Riceive
 4. Receive

Question ID : 50389010626

Status : Answered

Chosen Option : 4

Q.4 Pick the most appropriate synonym of-
Vexation

- Ans
- 1. Ecstasy
 - 2. entertainment
 - 3. Annoyance
 - 4. Excitement

Question ID : 50389010623

Status : **Marked For Review**

Chosen Option : 1

Q.5 Select the most appropriate option to complete the sentence.
My father works _____ day and night to make the two ends meet.

- Ans
- 1. Hard
 - 2. Hardly
 - 3. Hardenly
 - 4. hardest

Question ID : 50389010621

Status : **Answered**

Chosen Option : 1

Q.6 Select the most appropriate option to complete the sentence.
Did you _____ your essay yourself or did you _____ help from your sister?

- Ans
- 1. Wrote, take
 - 2. Write, taken
 - 3. Write, took
 - 4. Write, take

Question ID : 50389010619

Status : **Answered**

Chosen Option : 4

Q.7 Which conjunction can be used for this sentence?
Sudha is an extrovert _____ Ramona, her sister, is an introvert.

- Ans
- 1. Also
 - 2. When
 - 3. so
 - 4. Whereas

Question ID : 50389010617

Status : **Answered**

Chosen Option : 4

Q.8 Pick the most appropriate synonym of-
Vicinity

- Ans 1. surrounding
 2. Distance
 3. Separation
 4. Removal

Question ID : 50389010622

Status : Answered

Chosen Option : 1

Q.9 Fill in the blank using the most appropriate phrase.
Many children are _____ to be extremely independent thinkers by their parents.

- Ans 1. Brought up
 2. Brought in
 3. Brought of
 4. Brought as

Question ID : 50389010629

Status : Marked For Review

Chosen Option : 4

Q.10 Select the most appropriate option to complete the
sentence. This book is _____ and I will not lend it to

- Ans 1. Mine, yours
 2. My, yours
 3. Mine, you
 4. My, you

Question ID : 50389010620

Status : Answered

Chosen Option : 3

Q.11 Select the misspelt

word. Ans

1. Jubilant
 2. adamant
 3. Permanent
 4. Restaurant

Question ID : 50389010627

Status : Answered

Chosen Option : 2

Q.12 Pick the most appropriate antonym of-
supreme

- Ans
- 1.Superior
 - 2.Best
 - 3.Excellent
 - 4.inconsequential

Question ID : 50389010624
Status : Answered
Chosen Option : 4

Q.13 Select the most appropriate option to complete the sentence.
I know she is not experienced for this job but her communication skills seem to be far
_____ than the other candidates who were interviewed today.

- Ans
- 1. More good
 - 2.Better
 - 3.Best
 - 4. good

Question ID : 50389010618
Status : Answered
Chosen Option : 2

Q.14 Choose the most appropriate option to complete the
sentence. The Western Coastal Plainsarefound Gujarat.

- Ans
- 1.For
 - 2.In
 - 3.On
 - 4.At

Question ID : 50389010616
Status : Answered
Chosen Option : 2

Q.15 Choose the appropriate word to complete the phrase.
Sidharth and Madhuri decidedtocall _____ their wedding just one week beforethe
ceremony.

- Ans
- 1.On
 - 2.In
 - 3.Off
 - 4.up

Question ID : 50389010628
Status : Answered
Chosen Option : 4

Q.16 Choose the correct preposition.

As it started to rain, the snail withdrew _____ its shell, using his natural umbrella.

- Ans
- 1. for
 - 2. along
 - 3. from
 - 4. Into

Question ID : 50389010615
Status : Answered
Chosen Option : 3

Q.17 Choose the word which can be used in place of the words underlined.

She hates eating meat, and all her friends are eaters of meat and chicken.

- Ans
- 1. Non-vegetarian
 - 2. Vegetarian
 - 3. Lacto-vegetarian
 - 4. Non-Vegan

Question ID : 50389010625
Status : Answered
Chosen Option : 1

Section : Quantitative Aptitude

Q.1 Product of two natural numbers is 135. If sum of their squares is 306, then what is the smaller number?

- Ans
- 1. 9
 - 2. 3
 - 3. 15
 - 4. 5

Question ID : 50389010663
Status : Answered
Chosen Option : 1

Q.2 A sum of money amounts to Rs 100000 after 4 years and to Rs 156250 after 6 years on compound interest. What is the sum (in Rs)?

- Ans
- 1. 42000
 - 2. 41500
 - 3. 40000
 - 4. 40960

Question ID : 50389010658
Status : Marked For Review
Chosen Option : 2

Q.3 Find the time taken by a train of length 480 m running at 108 km/h to cross an electric pole (in seconds).

- Ans
- 1.10
 - 2.12
 - 3.15
 - 4.16

Question ID : 50389010646
Status : Answered
Chosen Option : 4

Q.4 A and B can do a work in 12 and 20 days respectively. They worked together for 2 days and then C joined them. This allowed them to complete the whole work in a total of 5 days. In how many days can C alone complete the whole work?

- Ans
- 1.9
 - 2.7
 - 3.10
 - 4.8

Question ID : 50389010650
Status : Answered
Chosen Option : 4

Q.5 A trader sells his goods at a discount of 8%. He still makes a profit of 15%. In order to make a profit of 20%, how much percent discount should he allow?

- Ans
- 1.5
 - 2.4
 - 3.3
 - 4.3.5

Question ID : 50389010653
Status : Answered
Chosen Option : 2

Q.6 The average of 10 numbers is 26.5. If the average of first 6 numbers is 25 and the average of last 6 numbers is 29, then what is the average of the 5th and the 6th number?

- Ans
- 1.29.2
 - 2.29.5
 - 3.29
 - 4.28

Question ID : 50389010654
Status : Not Attempted and Marked For Review
Chosen Option : --

Q.7 If the difference between the compound interest and the simple interest earned on a certain sum at 12% per annum in 2 years is Rs 675, then what is the sum (in Rs)?

- Ans 1.46500
 2.46578
 3.46875
 4.48675

Question ID : 50389010657
Status : Answered
Chosen Option : 3

Q.8 The average weight of 44 students of section A is 44.8 kg and that of 40 students of section B is 44.2 kg. If 2 students of section A are shifted to section B, then the average weight of the students in both the sections become equal. What is the average weight of the two students (in kg) who were shifted from section A to section B?

- Ans 1.49.5
 2.50.6
 3.50.8
 4.50.5

Question ID : 50389010656
Status : Answered
Chosen Option : 2

Q.9

- Ans 1.20
 2.18
 3.8
 4.-8

Question ID : 50389010636
Status : NotAnswered
Chosen Option : --

Q.10 If cost of 5 computer keyboards is Rs 750, then what is the cost of 8 keyboards (in Rs)? Ans 1.1280

- 2.1150
 3.1200
 4.1250

Question ID : 50389010643
Status : Answered
Chosen Option : 3

Q.11 A train passes 200 m long platform in 30 seconds and a man standing on the platform in 18 seconds. What is the speed of the train (in km/h)?

- Ans 1.56
 2.58
 3.55
 4.60

Question ID : 50389010648
Status : Answered
Chosen Option : 4

Q.12

- Ans 1.
 2.
 3.
 4.

Question ID : 50389010637
Status : Answered
Chosen Option : 4

Q.13 Dalip can row 42 km downstream in 2 hours and the same distance upstream in 2 hours and 48 minutes. How much time will he take to row 31.5 km downstream and 22.5 km upstream?

- Ans 1. 3 h 5m
 2. 2 h 50m
 3. 3 h 15m
 4. 3h

Question ID : 50389010647
Status : Not Attempted and Marked For Review
Chosen Option : --

Q.14 Find the value of in

$0.35 \times 0.25x = 1.75$ Ans 1.20

- 2.200
 3.0.2
 4.2

Question ID : 50389010638
Status : Answered
Chosen Option : 1

Q.15 Find the greatest number 281953k such that it is divisible by 3 but not by

6. Ans 1.2819535

2.2819539

3.2819532

4.2819538

Question ID : 50389010634

Status : Answered

Chosen Option : 1

Q.16 A shopkeeper bought shirts at 6 for Rs 1800 and sold them at 5 for Rs 1800. What is his profit percentage?

Ans 1.21

2.20

3.18

4.15

Question ID : 50389010652

Status : Answered

Chosen Option : 2

Q.17

Ans 1.

2.

3.

4.

Question ID : 50389010640

Status : Answered

Chosen Option : 3

Q.18 The ratio between two numbers is 6:11. If 100 and 50 are added to the first and the second number respectively, then the ratio becomes 10:17. What will be the ratio when 50 is subtracted from the first number and added to the second number taken initially?

Ans 1.1:2

2.2:3

3.8:15

4.8:13

Question ID : 50389010641

Status : Answered

Chosen Option : 1

Q.19 A sum of money is to be distributed among A, B, C and D such that A:B = 1:2, B:C = 3:2, C:D = 3:4. If difference in the shares of A and D is 2240, then what is the share of B (in Rs)?

- Ans 1.2880
 2.5120
 3.3840
 4.5760

Question ID : 50389010642
Status : Answered
Chosen Option : 4

Q.20 A is twice as efficient as B and completes a work in 12 days less than B. They worked together for 3 days and then A left the work. In how many days will B alone complete the remaining work?

- Ans 1.24
 2.18
 3.20
 4.15

Question ID : 50389010651
Status : NotAnswered
Chosen Option : --

Q.21 The average of 10 consecutive odd numbers is 60. What is the average of the three greatest numbers and the numbers 44 and 60?

- Ans 1.61
 2.62
 3.63
 4.65

Question ID : 50389010655
Status : Not Attempted and Marked ForReview
Chosen Option : --

Q.22

- Ans 1.12:25
 2.6:11
 3.13:23
 4.13:22

Question ID : 50389010661
Status : Answered
Chosen Option : 4

Q.23 Four men can do a work in 3 days which 6 women can do in 4 days or 9 boys in 4 days. How many days will 1 man, 2 women and 3 boys working together take to do the same work?

- Ans 1.
 2.
 3.4
 4.

Question ID : 50389010649
Status : Answered
Chosen Option : 2

Q.24 A path has been developed around a circular park. Inner and outer circumferences of the path are 308 m and 352 m respectively. Find the area of the path (in sq. m).

- Ans 1.2420
 2.2310
 3.2500
 4.2280

Question ID : 50389010660
Status : Answered
Chosen Option : 4

Q.25 Following table shows the earning (in Rs 1000) of 5 persons A, B, C, D and E over the months. What is the ratio of earning of A in March and May taken together to that of E in March and June taken together?

- Ans 1.25:26
 2.250:263
 3.20:21
 4.181:175

Question ID : 50389010665
Status : Answered
Chosen Option : 3

Q.26

- Ans 1.10.04
 2.100.04
 3.10.004
 4.100.4

Question ID : 50389010639
Status : Answered
Chosen Option : 3

Q.27 The curved surface area of a cylinder is 484 sq. cm. If height of the cylinder is 7 cm, then what is the volume of the cylinder (in cubic cm)?

- Ans 1.2650
 2.2662
 3.2200
 4.2750

Question ID : 50389010659
Status : Answered
Chosen Option : 2

Q.28

- Ans 1.7
 2.23
 3.
 4.

Question ID : 50389010633
Status : Answered
Chosen Option : 1

Q.29 Sum of two numbers is 2750. If the first number increases by 10% and second number increases by 20%, then their sum becomes 3170. Find the positive difference between the two numbers.

- Ans 1.160
 2.145
 3.150
 4.130

Question ID : 50389010664
Status : Answered
Chosen Option : 3

Q.30

- Ans 1.4
 2.9
 3.3
 4.6

Question ID : 50389010662
Status : Answered
Chosen Option : 2

Q.31 The value of a new Laptop depreciated by 5% in the first year, by 10% in the second year and by 15% in the third year. If the present value of the Laptop is Rs 43605, then for how much (in Rs) was the Laptop purchased?

- Ans 1.56000
 2.60000
 3.57500
 4.58000

Question ID : 50389010645
Status : Answered
Chosen Option : 2

Q.32 Which is the greatest 4-digit number which is divisible by 12, 15, 20 and

- 25? Ans 1.9980
 2.9900
 3.9996
 4.9999

Question ID : 50389010635
Status : NotAnswered
Chosen Option : --

Q.33

- Ans 1.12
 2.112
 3.0
 4.102

Question ID : 50389010632
Status : Answered
Chosen Option : 1

Q.34 In the wholesale market, prices of vegetables increased by 5%. In the next week, these further increased by 20% and in the next week, these decreased by 5%. Find the overall increase percentage in the prices after 3 weeks.

- Ans 1.19.7
 2.20
 3.20.3
 4.30

Question ID : 50389010644
Status : Answered
Chosen Option : 3

Q.1 What is the maximum number of triangles in this

image? Ans 1.14

2.19

3.10

4.17

Question ID : 50389010695

Status : Answered

Chosen Option : 1

Q.2 Select the option that is related to the third term in the same way as the second term is related to the first term.

7 : 64 :: 11 : ?

Ans 1.121

2.132

3.144

4.111

Question ID : 50389010668

Status : Answered

Chosen Option : 3

Q.3 In a code language, ROOM is coded as *@@&; POOR is coded as #@@*; ROME is coded as *@&\$; and ROAM is coded as *@%&. Then, how would POEM be coded in that language?

Ans 1.#@\$&

2.&@%#

3.@*%#

4.#\$@&

Question ID : 50389010674

Status : Answered

Chosen Option : 1

Q.4 In a code language, green is called blue; blue is called red; red is called orange; and orange is called white. Then, what would be the colour of peas in this code language?

Ans 1.Red

2.orange

3.White

4.Blue

Question ID : 50389010675

Status : Answered

Chosen Option : 4

Q.5 Select the mirror image of the following

figure. Ans  1.

 2.

 3.

 4.

Question ID : 50389010691

Status : Answered

Chosen Option : 3

Q.6 Select the image that will be formed after the unfolded net of the cube is folded inwards to form the cube.

Ans  1.

 2.

 3.

 4.

Question ID : 50389010693

Status : Answered

Chosen Option : 3

Q.7 Select the option that is similar to the key word given below:
Patna

Ans  1. Ahmedabad

 2. Mysuru

 3. Thiruvananthapuram

 4. Allahabad

Question ID : 50389010678

Status : Answered

Chosen Option : 3

Q.8 What is the maximum number of squares in this

image? Ans  1. 21

 2. 19

 3. 16

 4. 24

Question ID : 50389010696

Status : Answered

Chosen Option : 1

Q.9 Select the number that will come next in the number series. 4, 10, 18, 28, 40, 54, ?

- Ans
- 1.75
 - 2.68
 - 3.69
 - 4.70

Question ID : 50389010686
Status : Answered
Chosen Option : 4

Q.10 D's mother H is the only daughter-in-law of Z. Z's husband P has two sons only, named X and Y. How is D's father related to P?

- Ans
- 1. Nephew
 - 2. Son
 - 3. Father
 - 4. Grandson

Question ID : 50389010682
Status : Answered
Chosen Option : 2

Q.11 Select the number that will come next in the number series. 99, 92, 83, 71, 58, ?

- Ans
- 1.43
 - 2.47
 - 3.45
 - 4.41

Question ID : 50389010685
Status : Answered
Chosen Option : 2

Q.12 Sasikala is Malathi's only daughter. Pavan is Sasikala's father, Umesh's only son. How is Pavan's daughter, Navya related to Sasikala?

- Ans
- 1. Cousin
 - 2. Daughter
 - 3. Aunt
 - 4. Niece

Question ID : 50389010683
Status : Answered
Chosen Option : 1

Q.13 Three out of the following for options share a similarity. Select the option that is different from the others.

- Ans 1.37,23,51,91
 2.47,19,61,89
 3.43,17,67,83
 4.41,13,53,97

Question ID : 50389010672
Status : NotAnswered
Chosen Option : --

Q.14 What is the total number of cubes in the 3-D figure given below? (Assume that the entire arrangement is made up of the cubes)

- Ans 1.25
 2.27
 3.30
 4.32

Question ID : 50389010694
Status : Answered
Chosen Option : 4

Q.15 Select the number that will come next in the number series. 0, 2, 6, 14, 30, 62, ?

- Ans 1.124
 2.126
 3.130
 4.128

Question ID : 50389010684
Status : Answered
Chosen Option : 2

Q.16 Select the option that is related to the third term in the same way as the second term is related to the first term.
50 : 125 :: 70 : ?

- Ans 1.275
 2.375
 3.243
 4.343

Question ID : 50389010670
Status : Answered
Chosen Option : 4

Q.17 Select the option that is related to the third term in the same way as the second term is related to the first term.

Malaria : Mosquito :: Plague : ?

- Ans
- 1.Virus
 - 2.Bat
 - 3.Rat
 - 4.Bacteria

Question ID : 50389010666

Status : Answered

Chosen Option : 3

Q.18 Mandakini's father, Himalaya, is the only son-in-law of Sagar. Ganga has only two daughters, Yamuna and Kaveri; one of them is married, and has a daughter. How is Yamuna's only niece, Mandakini related to Sagar?

- Ans
- 1.Niece
 - 2.Daughter
 - 3.Sister-in-law
 - 4.Granddaughter

Question ID : 50389010681

Status : Answered

Chosen Option : 4

Q.19 Select the option that is similar to the key word given below: Ear

- Ans
- 1. Nose
 - 2.Kidney
 - 3.Liver
 - 4.Lungs

Question ID : 50389010677

Status : Answered

Chosen Option : 1

Q.20 Three out of the four figures — A, B, C and D — are different from figure Q. Select the figure that is similar to figure Q.

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

Question ID : 50389010699

Status : Answered

Chosen Option : 1

Q.21 Three out of the following for options share a similarity. Select the option that is different from the others.

- Ans 1. Candela
 2. Watt
 3. Pascal
 4. Newton

Question ID : 50389010671
Status : Answered
Chosen Option : 1

Q.22 Select the option that is similar to the pair given below: Silk : Sericulture

- Ans 1. Silviculture :Silver
 2. Aviculture :Apes
 3. Fish :Pisciculture
 4. Fodder :Horticulture

Question ID : 50389010679
Status : Answered
Chosen Option : 1

Q.23 In a family there are 3 married couples, 2 married sons, 1 grandson, 3 fathers, 3 mothers, 2 mothers-in-law, 2 fathers-in-law, 2 daughters-in-law, 2 unmarried daughters, 2 unmarried granddaughters and 1 unmarried great granddaughter. What is the LEAST number of members in the family?

- Ans 1.7
 2.21
 3.8
 4.12

Question ID : 50389010687
Status : Answered
Chosen Option : 4

Q.24 In a code language, MUSIC is coded as NFHRX; TONIC is coded as GLMRX; and BOOST is coded as YLLHG. Then, how would MOIST be coded in that language?

- Ans 1.NMSGH
 2.NRSGH
 3.NLRHG
 4.MNRGH

Question ID : 50389010676
Status : Answered
Chosen Option : 3

Q.25 Select the option that is similar to the pair given below: Natural : Artificial

- Ans 1. Optimism :Pessimism
 2. Revolt :Rebellion
 3. Generous :Exquisite
 4. Fiction :Legendary

Question ID : 50389010680
Status : Answered
Chosen Option : 1

Q.26 Select the option that is related to the third term in the same way as the second term is related to the first term.
Tokyo : Yen :: Moscow : ?

- Ans 1.Dollar
 2.Ruble
 3.Pesos
 4.Russia

Question ID : 50389010669
Status : Answered
Chosen Option : 2

Q.27 Select the option that will replace the question mark and complete the series correctly. Ans 1.

2.
 3.
 4.

Question ID : 50389010697
Status : Answered
Chosen Option : 1

Q.28 In a code language, DIAL is coded as LAID; MOOD is coded as DOOM; and EVIL is coded as LIVE. Then, how would PLUG be coded in that language?

- Ans 1.LUPG
 2.GULP
 3.GLUP
 4.GLUE

Question ID : 50389010673
Status : Answered
Chosen Option : 2

Q.29 The product of two consecutive odd numbers is 483, and their sum is 44. What is the square of the smaller of these 2 numbers?

- Ans
- 1.529
 - 2.484
 - 3.441
 - 4.400

Question ID : 50389010690
Status : Answered
Chosen Option : 3

Q.30 Three out of the four figures — A, B, C and D — are different from figure Q. Select the figure that is similar to figure Q

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

Question ID : 50389010698
Status : Answered
Chosen Option : 2

Q.31 Azhar bought a piano for Rs. 12,000; then he spent Rs. 3,500 on repairs and renovation. For the next 3 months, he lent it to a music company at a monthly rent of Rs.1,500. After 3 months, he sold the piano to the same music company for a price of 14,300. Did Azhar make profit or loss in the entire transaction? Select the correct option.


- Ans
- 1. Loss of Rs.1,200
 - 2. Loss of Rs.2,300
 - 3. Profit of Rs.2,300
 - 4. Profit of Rs.3,300

Question ID : 50389010688
Status : Answered
Chosen Option : 4

Q.32 Select the image that shows the correct water image of the following figure. Ans

- 1.
- 2.
- 3.
- 4.

Question ID : 50389010692
Status : Answered
Chosen Option : 3

Q.33 What the difference between the greatest and smallest 3-digit even numbers? Ans  1.898

 2.896

 3.893

 4.986

Question ID : 50389010689

Status : Answered

Chosen Option : 1

Q.34 Select the option that is related to the third term in the same way as the second term is related to the first term.

DL : JR :: FN : ?

Ans  1.LT

 2.KS

 3.MU

 4.LS

Question ID : 50389010667

Status : Answered

Chosen Option : 1


Section : Domain Knowledge

Q.1 The strain energy stored in a body due to the external loads is known

as Ans  1. Resonance

 2. ProofResilience

 3. Resilience

 4. Modulus of Resilience

Question ID : 50389010716

Status : Answered

Chosen Option : 3

Q.2 A unit cell of Face centred cubical crystal structure has ___ atoms per unit

cell. Ans  1.2

 2.12

 3.8

 4.4

Question ID : 50389010759

Status : Answered

Chosen Option : 2

Q.3 The logarithmic mean temperature difference for parallel flow heat exchangers is Ans 1.

2.

3.

4.

Question ID : 50389010733
Status : Answered
Chosen Option : 4

Q.4

Ans 1.

2.

3.

4.

Question ID : 50389010724
Status : Answered
Chosen Option : 2

Q.5 Generally, the bill of material does not consist

of Ans 1. Partnumber

2. Price of the part

3. Specifications of part

4. Name of the part

Question ID : 50389010784
Status : Answered
Chosen Option : 1

Q.6 A number of forces are acting simultaneously on a particle. The resultant of these forces will have the same effect as produced by all the forces. This principle is known as

Ans 1. Equilibrium of forces

2. Transmissibility of forces

3. Physical independence of forces

4. Resolution of forces

Question ID : 50389010703
Status : Answered
Chosen Option : 4

Q.7 A mirror image for a 2D reflection is generated relative to an axis of reflection by rotating the object by

- Ans
- 1. 180degree
 - 2. 270degree
 - 3. 90degree
 - 4. 360degree

Question ID : 50389010782
Status : Answered
Chosen Option : 3

Q.8 At constant pressure, heat energy of 1800 J supplied to 2 kg of fluid, which cause a rise in temperature of 15 degree C. The average specific heat of the fluid is

- Ans
- 1. $C_v = 60 \text{ J/kg}^\circ\text{C}$
 - 2. $C_p = 30 \text{ J/kg}^\circ\text{C}$
 - 3. $C_p = 60 \text{ J/kg}^\circ\text{C}$
 - 4. $C_v = 30 \text{ J/kg}^\circ\text{C}$

Question ID : 50389010738
Status : Answered
Chosen Option : 3

Q.9 The perpetual motion machine of the first kind is impossible. This statement is the corollary of

- Ans
- 1. Second Law of Thermodynamics
 - 2. Third Law of Thermodynamics
 - 3. Thermodynamic Zeroth Law
 - 4. First Law of Thermodynamics

Question ID : 50389010737
Status : Answered
Chosen Option : 4

Q.10

- Ans
- 1.32
 - 2.12
 - 3.18
 - 4.14

Question ID : 50389010720
Status : Marked For Review
Chosen Option : 3

Q.11

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

Question ID : 50389010747
Status : Answered
Chosen Option : 2

Q.12 A vibrating system consists of a mass of 200 kg, spring stiffness of 80 N/mm. The natural frequency of vibration of the system is

- Ans
- 1. 20rad/s
 - 2. 2.5rad/s
 - 3. 5.0rad/s
 - 4. 40rad/s

Question ID : 50389010723
Status : Answered
Chosen Option : 1

Q.13 In a flywheel, the maximum and minimum speeds in a cycle are 180 and 120 rpm, respectively. Then, the coefficient of fluctuation of the speed is

- Ans
- 1.0.9
 - 2.0.8
 - 3.0.4
 - 4.0.6

Question ID : 50389010721
Status : Answered
Chosen Option : 3

Q.14 The algebraic difference between the maximum limit and the basic size is called Ans

- 1. lower deviation
- 2. fundamental deviation
- 3. actual deviation
- 4. upper deviation

Question ID : 50389010779
Status : Answered
Chosen Option : 4

Q.15 A system in which the energy or matter flows into or out of the system is called as Ans 1. OpenSystem

2. TransientSystem

3. Adiabaticsystem

4. IsolatedSystem

Question ID : 50389010735
Status : Answered
Chosen Option : 1

Q.16 The concept of internal energy is discussed

inAns 1. Second Law ofThermodynamics

2. First Law of Thermodynamics

3. Third Law ofThermodynamics

4. Thermodynamic Zeroth Law

Question ID : 50389010734
Status : Answered
Chosen Option : 2

Q.17 The smallest circle that can be drawn from the centre of the cam and tangent to the pitch curve of a cam with a roller follower is

Ans 1. Basecircle

2. Primecircle

3. Pitchcircle

4. Pressurecircle

Question ID : 50389010718
Status : Marked For Review
Chosen Option : 2

Q.18 The nominal thickness of the boundary layer is defined when the velocity reaches the velocity of the free stream by

Ans 1. 97%

2. 99%

3. 95%

4. 90%

Question ID : 50389010731
Status : Answered
Chosen Option : 2

Q.19 Long cast-iron pipes of uniform thickness are manufactured

- byAns
- 1. Lost wax method
 - 2. Die casting method
 - 3. Green Sand casting method
 - 4. Centrifugal castingmethod

Question ID : 50389010768
Status : Answered
Chosen Option : 4

Q.20 The oxy-acetylene gas used in gas welding produces a flame temperature ofAns

- 1. 3200 degreeC
- 2. 2100 degreeC
- 3. 2400 degreeC
- 4. 1800 degreeC

Question ID : 50389010776
Status : Answered
Chosen Option : 1

Q.21 Two forces of equal magnitude 'F' acts on a particle, and the angle between these forces is θ . Then the resultant of these forces is givenby

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

Question ID : 50389010702
Status : Answered
Chosen Option : 1

Q.22 In the MIG welding process, a lot of spattering occurs when the shielding gas used isAns

- 1. CarbonDioxide
- 2.Argon
- 3. Mixture ofArgon
- 4.Helium

Question ID : 50389010774
Status : Answered
Chosen Option : 1

Q.23 Control charts for the attribute are concerned

with Ans

for control

- 1. Direct measurement of the variable
- 2. Qualitative checking of defects
- 3. Checking if the variable is out of control
- 4. The actual measurement of the parameter, comparing with a standard

Question ID : 50389010783
Status : Marked For Review
Chosen Option : 3

Q.24 A refrigerator absorbs the heat of 27 kJ/s at minimum temperature. The work required to run the refrigerator if the coefficient of performance is 3.

Ans

- 1. 54 kJ/s
- 2. 27 kJ/s
- 3. 81 kJ/s
- 4. 9 kJ/s

Question ID : 50389010753
Status : Answered
Chosen Option : 4

Q.25 A frame is made with four joints and five members. This frame is

a Ans

- 1. Perfect frame
- 2. Deficient frame
- 3. Imperfect frame
- 4. Redundant frame

Question ID : 50389010708
Status : Answered
Chosen Option : 1

Q.26 The pressure ratio per stage for a centrifugal compressor is Ans

- 1. 10:1
- 2. 4:1
- 3. 16:1
- 4. 8:1

Question ID : 50389010751
Status : Marked For Review
Chosen Option : 1

Q.27

- Ans 1. 50 mm
 2. 312.5mm
 3. 5 mm
 4. 20 mm

Question ID : 50389010730
Status : Answered
Chosen Option : 1

Q.28 A gear tooth profile generated using a curve traced by a point on the circumference of a circle that rolls without slipping on a fixed straight line is known as

- Ans 1. Involute
 2. Epi-Cycloid
 3. Hypo-Cycloid
 4. Cycloid

Question ID : 50389010719
Status : Answered
Chosen Option : 4

Q.29 The power transmitted through the pipe is maximum when the head loss due to friction in the pipe is

- Ans 1. 2/3 of the total supply head
 2. 1/3 of the total supply head
 3. 1/4 of the total supply head
 4. 1/2 of the total supply head

Question ID : 50389010748
Status : Answered
Chosen Option : 1

Q.30 The open-circuit voltage range for an AC electric arc welding

- is Ans 1. 50-90V
 2. 220-440V
 3. 210-440V
 4. 100-210V

Question ID : 50389010772
Status : Answered
Chosen Option : 2

Q.31 The moment of inertia about X-X axis for a hollow rectangular section with external dimensions breadth 6 mm, depth 8 mm and internal dimensions, breadth 3 mm and depth 4 mm respectively, is

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

Question ID : 50389010705

Status : Answered

Chosen Option : 4

Q.32 The ratio of the relative lateral strain (normal to the applied load) to the relative axial strain (in the direction of applied load) is called the:

- Ans
- 1. Poisson'sratio
 - 2. Einstein'sratio
 - 3. Young'sratio
 - 4. Pareto'sratio

Question ID : 50389010765

Status : Answered

Chosen Option : 1

Q.33

- Ans
- 1.0.12
 - 2.0.21
 - 3.0.44
 - 4.0.16

Question ID : 50389010766

Status : Answered

Chosen Option : 3

Q.34 The unbalanced vertical force, which tends to slide one portion of the beam upward or downward, is called as

- Ans
- 1. Shearforce
 - 2. Bendingforce
 - 3. Reactiveforce
 - 4. Bodyforce

Question ID : 50389010712

Status : Answered

Chosen Option : 1

Q.35 A single plate disc clutch is used to transmit torque with the axial load W . The mean radius of the surface of friction material is R , and the coefficient of friction for the clutch material is μ . The frictional torque transmitted for a case of uniform axial wear is

- Ans
- 1. $T = 2(\mu WR)$
 - 2. $T = \mu WR$
 - 3. $T = \pi (\mu WR)$
 - 4. $T = 1/2 (\mu WR)$

Question ID : 50389010727

Status : Marked For Review

Chosen Option : 2

Q.36 The relationship between Young's modulus (E) and modulus of rigidity (G) using the Poisson's ratio μ is

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

Question ID : 50389010711

Status : Answered

Chosen Option : 4

Q.37 The end fixity coefficient is used in the Crippling load equation based on Euler's theory for buckling of columns. The value of this coefficient for the case; one end is fixed, and the other end is hinged, is

- Ans
- 1.2
 - 2.1
 - 3.4
 - 4.0.25

Question ID : 50389010715

Status : Answered

Chosen Option : 1

Q.38 Transfer of heat from one part of a substance to another by lattice vibration is

- called Ans
- 1. Conduction
 - 2. Natural Convection
 - 3. Radiation
 - 4. Forced Convection

Question ID : 50389010729

Status : Answered

Chosen Option : 1

Q.39

Ans 1. 0.40 to0.60

2. 0.25 to0.40

3. 0.20 to0.25

4. 0.1 to0.2

Question ID : 50389010777

Status : Answered

Chosen Option : 2

Q.40 When a tensile specimen loaded beyond the yield point, and then the load is released.
The elastic strain recovery is indicated on the stress-strain curve as a line

Ans 1. Along the original elasticcurve

2. Along X-axis, vertical line from the point of release to returnpoint

3. Along Y- axis, origin to yield stress

4. Tangent to the curve at the yieldpoint

Question ID : 50389010767

Status : Answered

Chosen Option : 4

Q.41 The total weight of a body is an example for

Ans 1. Volumeforce

2. Tractionforce

3. Distributed Areaforce

4. Pointforce

Question ID : 50389010700

Status : Answered

Chosen Option : 3

Q.42 In the metal forming process, the value of stress required for continuous material
deformation is known as

Ans 1. Truestress

2. ProofStress

3. Ultimatestress

4. FlowStress

Question ID : 50389010771

Status : Answered

Chosen Option : 4

Q.43 A wheel accelerates uniformly from a velocity of 10 rad/s to 60 rad/s in 20 seconds.
What is its angular acceleration?

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

Question ID : 50389010717
Status : Answered
Chosen Option : 4

Q.44

- Ans
- 1.1800
 - 2.15000
 - 3.180
 - 4.5000

Question ID : 50389010749
Status : Answered
Chosen Option : 4

Q.45 CNC machine operator can set the zero point at any position on the machine table.
This feature is called

- Ans
- 1. Fixedorigin
 - 2. Floatingzero
 - 3. Fixedzero
 - 4. Machinezero

Question ID : 50389010781
Status : Marked For Review
Chosen Option : 2

Q.46 In the Nitriding process for steels to harden the surface, the gas used

- isAns
- 1. CarbonDioxide
 - 2.Oxygen
 - 3.Ammonia
 - 4.Hydrogen

Question ID : 50389010764
Status : Answered
Chosen Option : 3

Q.47 An ideal reciprocating air compressor demands less work to run if the compression

follows Ans

- 1. Reversible adiabatic process
- 2. adiabatic process
- 3. isothermal process
- 4. non-isothermal process

Question ID : 50389010750

Status : Answered

Chosen Option : 3

Q.48 The analogy of conductivity in heat transfer to fluid flow

is Ans

- 1. Pressure of fluid
- 2. Density of fluid
- 3. Viscosity of fluid
- 4. Velocity of fluid

Question ID : 50389010732

Status : Answered

Chosen Option : 3

Q.49 The "etch factor" in the chemical machining process is given by the

ratio Ans

- 1. tool wear/ Workpiece wear
- 2. Undercut/depth of cut
- 3. Depth of cut/ Undercut
- 4. Workpiece wear/tool wear

Question ID : 50389010778

Status : Answered

Chosen Option : 2

Q.50 In a reciprocating engine, the primary direct crank makes an angle θ with the line of stroke. Then the secondary direct crank will make an angle of

Ans

- 1. $\theta/4$
- 2. 2θ
- 3. 2θ
- 4. $\theta/2$

Question ID : 50389010722

Status : Answered

Chosen Option : 3

Q.51 A stone is dropped from the top of a building, which is 8 m high. The final velocity of the stone when it hit the ground is

- Ans
- 1. 4m/s
 - 2.
 - 3.
 - 4. 2m/s

Question ID : 50389010706
Status : Answered
Chosen Option : 3

Q.52

- Ans
- 1. 0.037mm
 - 2. 15mm 3.
 - 0.074mm
 - 4. 5 mm

Question ID : 50389010714
Status : Answered
Chosen Option : 4

Q.53 Water is flowing through a square pipe 100 mm side with an average velocity of 10 m/s. The rate of flow of water is

- Ans
- 1.
 - 2. 1000ltr/s
 - 3.
 - 4. 10ltr/s

Question ID : 50389010745
Status : Answered
Chosen Option : 3

Q.54 The allowance for the liquid shrinkage is considered in designing casting patterns. The reduction in the volume of cast metal occurs during

- Ans
- 1. Rise in volume of araiser
 - 2. mould cooling
 - 3. Due torramming
 - 4. Cooling of liquid metal tosolid-state

Question ID : 50389010770
Status : Answered
Chosen Option : 4

Q.55 In a Diesel cycle, the heat is supplied during compression from the external source at Ans

- 1. Constant pressure
- 2. Adiabatic process
- 3. Isentropic process
- 4. Constant volume

Question ID : 50389010754
Status : Answered
Chosen Option : 1

Q.56 In a simple Lever of the third order, the position of effort, load and fulcrum is Ans

- 1. The fulcrum is in between the effort and the load
- 2. The load is in between the fulcrum and the effort on the same side of the fulcrum
- 3. The effort is in between the fulcrum and the load on the same side of the fulcrum
- 4. The effort and the load are equidistance to the fulcrum on either side

Question ID : 50389010704
Status : Answered
Chosen Option : 3

Q.57 A balloon is floating in the air and is in equilibrium. The relationship between the centre of gravity and the centre of buoyancy

- Ans
- 1. the centre of gravity is below the centre of buoyancy
 - 2. the centre of gravity is above the centre of buoyancy
 - 3. the centre of buoyancy and the centre of gravity at different points on the same horizontal plane
 - 4. the centre of gravity and the centre of buoyancy are at the same point

Question ID : 50389010744
Status : Marked For Review
Chosen Option : 1

Q.58 A Pelton wheel with a mean diameter D has the jet diameter d . The number of buckets required for this impulse turbine is

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

Question ID : 50389010758
Status : Answered
Chosen Option : 1

Q.59 A dual cycle is one in which the heat is supplied at

- Ans
- 1. Constant volume and Isentropic compression
 - 2. Isentropic and Adiabatic compression
 - 3. Constant volume and Constant pressure compression
 - 4. Constant pressure and Isentropic compression

Question ID : 50389010755

Status : Answered

Chosen Option : 3

Q.60 A vernier caliper has main scale with 10 divisions for 1 cm and vernier scale has 10 divisions for 9mm. The least count of the caliper is

- Ans
- 1. 0.01mm
 - 2. 0.1mm
 - 3. 0.02mm
 - 4. 0.2mm

Question ID : 50389010780

Status : Answered

Chosen Option : 1

Q.61 In TIG welding, the welding zone is shielded by an atmosphere

- of Ans
- 1. Argon gas
 - 2. Carbon dioxide gas
 - 3. Oxygen gas
 - 4. Hydrogen gas

Question ID : 50389010775

Status : Answered

Chosen Option : 1

Q.62 The lattice structure of a ferrite iron at room temperature

- is Ans
- 1. Body centred
 - 2. Face centred
 - 3. Cubic
 - 4. Close packed hexagonal

Question ID : 50389010760

Status : Answered

Chosen Option : 1

Q.63 The fundamental property of material able to resist abrasion is called

as Ans 1. Hardness

2. Resilience

3. malleability

4. Toughness

Question ID : 50389010761

Status : Answered

Chosen Option : 1

Q.64

Ans 1. 981kW

2. 100kW

3. 50kW

4. 490.5kW

Question ID : 50389010757

Status : Answered

Chosen Option : 1

Q.65 Braking jets are used in turbines to

Ans 1. To keep the speed of turbine constant

2. To bring the turbine to rest

3. Reduce the speed of turbine while running

4. Used to regulate the speed according to load

Question ID : 50389010756

Status : Marked For Review

Chosen Option : 2

Q.66 Which of the following is the usual (approximate) composition of the soft solder used in soldering?

Ans 1. Lead 90% and Tin 10%

2. Lead 37% and Tin 63%

3. Lead 80% and Tin 20%

4. Lead 63% and Tin 37%

Question ID : 50389010773

Status : Marked For Review

Chosen Option : 3

Q.67 An oil of 2.5 litre weighs 5 N at room temperature. The specific weight of the oil is Ans

- 1.
- 2.
- 3.
- 4.

Question ID : 50389010742

Status : Answered

Chosen Option : 4

Q.68 A shaft is subjected to a bending moment of 30 Nmm and a twisting moment of 40 Nmm. The equivalent twisting moment on this shaft is

- Ans
- 1. 70Nmm
 - 2. 10Nmm
 - 3. 140Nmm
 - 4. 50Nmm

Question ID : 50389010713

Status : Answered

Chosen Option : 4

Q.69 A tank carries an ideal gas at an absolute pressure of 4 bar at 27 degree C. If the temperature is increased to 60 degree C. the pressure inside the tank is

- Ans
- 1. 5.55bar
 - 2. 4.44bar
 - 3. 2.22bar
 - 4. 8.88bar

Question ID : 50389010741

Status : Answered

Chosen Option : 4

Q.70 A reversible engine with 25% operates with a higher temperature of 127 degree C. Then the sink temperature is

- Ans
- 1. 54 DegreeC
 - 2. 100 DegreeC
 - 3. 27 DegreeC
 - 4. 31.25 DegreeC

Question ID : 50389010739

Status : Answered

Chosen Option : 3

Q.71 The water is flowing through a pipe with a mean velocity of 2 m/s. The approximate kinetic head of water flow is

- Ans
- 1. 1.0m
 - 2. 2.0m
 - 3. 0.4m
 - 4. 0.2m

Question ID : 50389010746
Status : Answered
Chosen Option : 4

Q.72 The performance of a steam cycle in a power plant is compared with a standard process of Ans

- 1. Rankine cycle
- 2. Constant pressure cycle
- 3. Air standard cycle
- 4. Carnot cycle

Question ID : 50389010752
Status : Answered
Chosen Option : 4

Q.73 The absolute temperature (K) scale needs only one fixpoint, which is the Ans

- 1. Normal body temperature
- 2. Boiling point of water
- 3. The triple point of water
- 4. The melting point of ice

Question ID : 50389010736
Status : Answered
Chosen Option : 3

Q.74 A body, which can retain its shape and size, even it is subjected to external forces, is called Ans

- 1. Rigid body
- 2. Solid-body
- 3. Elastic body
- 4. Flexible body

Question ID : 50389010701
Status : Marked For Review
Chosen Option : 1

Q.75 The term (h-T.S) in deriving the maximum work done for a steady flow system is known

- as Ans
- 1. Rankinefunction
 - 2. Van-derfunction
 - 3. Gibbsfunction
 - 4. Helmholtzfunction

Question ID : 50389010740
Status : Answered
Chosen Option : 3

Q.76 The Mercury does not wet the glass tube. This is due to the property of liquid

- known as Ans
- 1. Compressibility
 - 2. Viscosity
 - 3. Density
 - 4. Surface tension

Question ID : 50389010743
Status : Answered
Chosen Option : 4

Q.77 A vehicle of mass 1200 kg is moving at a speed of 72 km/h. The amount of energy to be absorbed by the brakes to stop the vehicle is

- Ans
- 1. 480kJ
 - 2. 240kJ
 - 3. 1440kJ
 - 4. 720kJ

Question ID : 50389010728
Status : Marked For Review
Chosen Option : 3

Q.78 A casting of volume V and the surface area is cooled in an open-air naturally. The time required for solidification of casting is

- Ans
- 1. inversely proportional to V/A
 - 2.
 - 3. directly proportional to V/A
 - 4.

Question ID : 50389010769
Status : Answered
Chosen Option : 2

Q.79

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

Question ID : 50389010725
Status : Answered
Chosen Option : 3

Q.80 The hardness of the steel can be reduced considerably by the treatment of:

- Ans
- 1. Normalizing
 - 2. Normalizing and hardening both
 - 3. Annealing
 - 4. Hardening

Question ID : 50389010763
Status : Answered
Chosen Option : 3

Q.81 A double fillet weld is used to join the steel plates of 5 mm thick for a length of 20 mm. The allowable tensile stress for the weld metal is 100 MPa. The tensile strength of the joint is

- Ans
- 1. 20kN
 - 2. 7.07kN
 - 3. 10kN
 - 4. 14.14kN

Question ID : 50389010726
Status : Answered
Chosen Option : 4

Q.82 A compressive load of 2.4 kN acts on a circular bar of 200 sq. mm area and 20 mm high. It experiences a compression of 0.15 mm. Then, the Young's Modulus of the material is

- Ans
- 1. 3200MPa
 - 2. 1600MPa
 - 3. 120MPa
 - 4. 1500MPa

Question ID : 50389010709
Status : Marked For Review
Chosen Option : 2

Q.83 According to the law of collision of elastic bodies, the value of Coefficient of Restitution (e) for the two inelastic bodies is

- Ans
- 1. $e = 1$
 - 2. $e = 0$
 - 3. $e = \infty$
 - 4. $e = 2$

Question ID : 50389010707
Status : Answered
Chosen Option : 1

Q.84 The approximate content of Carbon in the Eutectoid

- Steel is Ans
- 1. 0.25%
 - 2. 0.8%
 - 3. 0.4%
 - 4. 1.2%

Question ID : 50389010762
Status : Answered
Chosen Option : 2

Q.85 A rectangular steel bar of size 100 x 25 x 20 mm has strains in x, y and z directions, 0.0065, 0.0025 and 0.002 respectively. The change in volume due to these strains is

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

Question ID : 50389010710
Status : Answered
Chosen Option : 1