

HPCL Engineer

**Previous Year Paper
(Chemical) 01 Nov 2022**

HPCL-01st & 04th Nov 22

Participant ID	
Participant Name	
Test Center Name	
Test Date	01/11/2022
Test Time	9:00 AM - 11:30 AM
Subject	Chemical Engineer

Section : English Language

Q.1 Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

- A. The jewels were kept in a library, in Dublin Castle from where they were stolen in 1907.
- B. The ‘crown jewels of Ireland’ were created in 1783.
- C. The jewels also held rupees from a Mughal emperor and possibly precious stones provided by a sultan of Turkey.
- D. The jewellery was made from 394 stones taken from Queen Charlotte's jewellery and an Order of the Bath badge.

- Ans

1. CDAB
2. BACD

3. BDCA4. ADBC

Question ID : 8401604891

Status : Answered

Chosen Option : 3

Q.2 Select the option that is NOT an antonym of another word by way of adding the prefix ‘dis-’.

- Ans

1. Displease
2. Disorganise

3. Dispossess4. Dispose

Question ID : 8401604882

Status : Answered

Chosen Option : 4

Q.3 Select the most appropriate meaning of the given idiom.

Stand your ground

- Ans

1. Stay at one place
2. Refuse to change your opinion

3. Support your friends4. Be in a comfortable situation

Question ID : 8401604887

Status : Answered

Chosen Option : 2

Q.4 Select the correctly spelt word to fill in the blank.

There were only a few _____ trees on the top of the hill.

- Ans
1. scattered

2. scettered

3. scattered

4. sceterred

Question ID : 8401604888

Status : Answered

Chosen Option : 3

Q.5 Select the most appropriate synonym of the given word.

Perspicuous

- Ans
1. Nebulous

2. Indefinite

3. Murky

4. Apparent

Question ID : 8401604884

Status : Answered

Chosen Option : 2

Q.6 Select the most appropriate option to fill in the blank.

The night was silent except _____ the occasional passing of a car on the road.

- Ans
1. about

2. for

3. from

4. with

Question ID : 8401604897

Status : Answered

Chosen Option : 2

Q.7 Select the most appropriate option to fill in the blank.

On 18 March 1990, two thieves _____ as police officers broke into the Isabella Stewart Gardner Museum in Boston, Massachusetts and _____ thirteen works of art.

- Ans
1. dressed, stealing

2. dress, stealing

3. dressing, steal

4. dressed, stole

Question ID : 8401604893

Status : Answered

Chosen Option : 4

Q.8 Select the most appropriate synonym of the given word.

Ostentatious

- Ans

1. Restrained

2. Appropriate

3. Subdued

4. Flamboyant

Question ID : 8401604885

Status : Answered

Chosen Option : 2

Q.9 Select the most appropriate option to fill in the blank.

Solomon was _____ than all the other Jewish kings.

- Ans

1. more wiser

2. wise

3. wiser

4. wisest

Question ID : 8401604898

Status : Answered

Chosen Option : 3

Q.10 Select the most appropriate option to fill in the blank and complete the given proverb correctly.

A _____ always blames his tools

- Ans

1. sleepy operator

2. tired labourer

3. bad workman

4. clever mason

Question ID : 8401604886

Status : Answered

Chosen Option : 3

Q.11 The following sentence has been divided into parts. One of them may contain a spelling error. Select the part that contains the error from the given options. If you don't find any error, mark 'No error' as your answer.

The National Education Policy (NEP) 2020 stresses / on formalising early childhood care and education / and realising the creative potential of each learner.

- Ans

1. and realising the creative potential of each learner

2. on formalising early childhood care and education

3. No error

4. The National Education Policy (NEP) 2020 stresses

Question ID : 8401604889

Status : Answered

Chosen Option : 1

Q.12 Select the most appropriate option to fill in the blank.

They are buying all new furniture as they _____ to a new house.

Ans ☒ 1. had shifted

☒ 2. have shifted

☒ 3. shift

☒ 4. were shifting

Question ID : 8401604896

Status : Answered

Chosen Option : 2

Q.13 Select the most appropriate synonym of the given word.

Obsolete

Ans ☒ 1. Outmoded

☒ 2. Operative

☒ 3. Current

☒ 4. Contemporary

Question ID : 8401604883

Status : Answered

Chosen Option : 4

Q.14 Select the most appropriate option to fill in the blank.

The train _____ before we got to the station.

Ans ☒ 1. left

☒ 2. was leaving

☒ 3. leaves

☒ 4. had left

Question ID : 8401604895

Status : Answered

Chosen Option : 4

Q.15 The following sentence has been divided into parts. One of them may contain a spelling error. Select the part that contains the error from the given options. If you don't find any error, mark 'No error' as your answer.

Long summars and water scarcity / made everything difficult, and / consequently, she sold her piece of land.

Ans ☒ 1. Long summars and water scarcity

☒ 2. made everything difficult, and

☒ 3. No error

☒ 4. consequently, she sold her piece of land

Question ID : 8401604890

Status : Answered

Chosen Option : 1

Q.16 Select the most appropriate option to fill in the blank.

Leave it to me. I _____ care of everything.

- Ans

1. will have taken

2. take

3. will take

4. will be taken
- Question ID : 8401604894

Status : Answered

Chosen Option : 3
- Q.17 Select the most appropriate option to fill in the blank.
- A news report indicated that Steiner was _____, charged with fraud but was later _____.
- Ans

1. excused, convicted

2. jailed, accused

3. arrested, acquitted

4. prisoned, condemned

Question ID : 8401604892

Status : Answered

Chosen Option : 3

Section : Quantitative Aptitude

Q.1

Ans

1.

2.

3. $\frac{9}{2}$

4.

Question ID : 8401604914

Status : Not Attempted and Marked For Review

Chosen Option : --

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Q.2 Let x be the least number which when divided by 12, 16, 18, 20 and 25, the remainder in each case is 3, and x is divisible by 13. What is the sum of the digits of x ?

- Ans

✖

1. 14

2. 12

✖

3. 10

✖

4. 13

Question ID : 8401604900

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.3 The marked price of an article is ₹425. It is sold at an 18% discount on its marked price. If there is a profit of 25%, then what is the cost price (in ₹) of the article?

- Ans

1. 278.80

✖

2. 282.50

✖

3. 275

4. 280

Question ID : 8401604911

Status : Answered

Chosen Option : 1

Q.4 What is the compound interest on a sum of ₹12,000 at 20% p.a. for $2\frac{3}{4}$ years, interest compounded annually?

- Ans

1. ₹7,872

2. ₹7,862

3. ₹7,825

4. ₹7,828

Question ID : 8401604916

Status : Answered

Chosen Option : 1

Q.5 A and B start their journey at the same time from X to Y and Y to X, respectively. After crossing each other, A and B complete their remaining journey in x hours and 9 hours, respectively. If the speed of B is $22\frac{2}{9}$ % less than A, then what is the value of x ?

- Ans

1. $5\frac{4}{9}$

✖

2. $7\frac{1}{9}$

3.

4.
- Question ID : 8401604919

Status : Not Attempted and Marked For Review

Chosen Option : --
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Q.6 The ratio of incomes of A and B is 5 : 4. A and B save ₹4,000 and ₹3,600, respectively. If the ratio of their expenditures is 9 : 7, then what is the difference between the income of A and the expenditure of B?

- Ans

✖

1. ₹8,200

✖

2. ₹7,500

✖

3. ₹9,000

4. ₹8,000

Question ID : 8401604915

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.7 Pipes A and B can fill an empty tank in 10 hours and x hours, respectively. Pipe C alone can empty a full tank in 9 hours. When all three pipes are opened together, the tank is filled up completely in 18 hours. What is the value of x?

- Ans

✖

1. 18

2. 15

✖

3. 20

4. 12

Question ID : 8401604920

Status : Answered

Chosen Option : 2

Q.8 The cost of a computer is 150% more than that of a mobile phone and the cost of a mobile phone is 80% more than that of a calculator. The cost of a computer decreases by 15%, that of a mobile phone increases by 20% and the cost of a calculator increases by 25%. What is the net percentage increase/decrease in the total cost of 2 computers, 5 mobile phones and 2 calculators as compared to the original cost?

- Ans

1. Decrease, 5%

2. Decrease, 4.5%

3. Increase, 4.75%

4. Increase, 4.5%

Question ID : 8401604907

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.9 A can do a certain work in 24 days. B is 20% more efficient than A. Both worked together for 5 days. C alone completed the remaining work in $6\frac{1}{2}$ days. A and C together can complete the original work in:

- Ans

1. 8 days

2. 9 days

3. 12 days

✖

4. 6 days

Question ID : 8401604921

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.10 The area of a triangular park with sides 176 m, 330 m and 374 m is equal to a rectangular plot whose sides are in the ratio 15 : 4. What is the cost of putting fence around the rectangular plot at ₹75 per m?

- Ans
- ✖

1. ₹59,850

✖

2. ₹54,150

3. ₹62,700

✖

4. ₹57,000

Question ID : 8401604930

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.11 The cost of a television is ₹6,000 more than that of a refrigerator. If the television is sold at a loss of 15% and the refrigerator at a profit of 30%, then there is a profit of 5% in the entire transaction. What is the cost price (in ₹) of the refrigerator?

- Ans
1. 24,000

2. 25,000

✖

3. 30,000

4. 28,000

Question ID : 8401604910

Status : Answered

Chosen Option : 1

Q.12 The sales of an article increase by 50% every week. What are the sales in the third week, if the difference between the sales in the third week and the second week is 600?

- Ans
1. 900

2. 1200

3. 1500

4. 1800

Question ID : 8401604905

Status : Answered

Chosen Option : 4

Q.13

- Ans
1. 116°

2. 151°

3. 142°

4. 122°

Question ID : 8401604932

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.14 Two fair dice are rolled once. What is the probability that the sum of numbers appearing on their tops is odd and at least one die shows a prime number?

Ans

☒ 1.

☐ 2.

☒ 3.

☒ 4.

Question ID : 8401604927

Status : Answered

Chosen Option : 2

Q.15 The cost of 3 pens and 2 pencils is ₹93. When the cost of a pen is reduced by ₹1.50 and that of a pencil is increased by ₹0.50, then the cost of 4 pens and 3 pencils is ₹121. What are the original cost (in ₹) of 1 pen and 4 pencils?

Ans

☐ 1. 45

☒ 2. 50

☐ 3. 46

☒ 4. 44

Question ID : 8401604922

Status : Answered

Chosen Option : 3

Q.16

Ans

☐ 1. $3\frac{1}{4}$

☒ 2. $3\frac{1}{2}$

☐ 3. $4\frac{1}{3}$

☐ 4.

Question ID : 8401604899

Status : Not Answered

Chosen Option : --

Q.17 Let α and β be the roots of the equation $4\sqrt{3}x^2 + 5x - 2\sqrt{3} = 0$. What is the value of $|\alpha - \beta|$?

- Ans
1.

$\frac{3}{4}\sqrt{3}$

2.

3.

4.

$\frac{5\sqrt{3}}{6}$

Question ID : 8401604928

Status : Answered

Chosen Option : 3

Q.18 A swim team has 9 members, only two of which are boys. The coach wants to take a delegation from the team to a special swimming camp. If the delegation must have either 5 or 6 members and must include at least one boy, how many ways are there to select the delegation?

- Ans
1.

179

2.

182

3.

105

4.

84

Question ID : 8401604924

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.19 The time taken by a boat to cover a certain distance downstream is 40% of the time taken by it to cover the same distance upstream. What is the ratio of the speed of the boat in still water to its speed going upstream?

- Ans
1.

5 : 2

2.

5 : 3

3.

7 : 4

4.

10 : 7

Question ID : 8401604918

Status : Answered

Chosen Option : 3

Q.20 A man sells a watch for ₹ 523.60, by giving two successive discounts of 15 % and 12 % on its marked price and suffers a loss of 20 %. If he sells the article at the marked price, his profit (in ₹) is

- Ans

✖

1. 48

✖

2. 44

✖

3. 42.50

4. 45.50
- Question ID : 8401604912

Status : Not Attempted and Marked For Review

Chosen Option : --
- Q.21** Solutions A and B contain acid and water in the ratios 4 : 5 and 5 : 7, respectively. Three litres of A is mixed with 5 litres of B. In 960 ml of this solution, how much (in ml) acid should be mixed so that the ratio of acid and water becomes 1 : 1 in the resulting solution?
- Ans

✖

1. 136

✖

2. 144

✖

3. 130

4. 140

Question ID : 8401604904

Status : Answered

Chosen Option : 2

Q.22 If the roots of the equation $x^2 - 2(1 + 3k)x + 7(3 + 2k) = 0$, are equal, then the sum of the squares of all values of k is $\frac{a}{b}$, where a and b are coprime. What is the value of (a + b)?

Ans

1. 515

✖

2. 495

3. 505

4. 478

Question ID : 8401604929

Status : Not Answered

Chosen Option : --

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Q.23

- Ans
1. ₹6,18,000

✖

2. ₹6,17,400

✖

3. ₹6,25,000

4. ₹6,30,000

Question ID : 8401604926

Status : Not Answered

Chosen Option : --

Q.24 The average weight of some persons in a group was 63.5 kg. When 5 persons with weights of 72 kg, 75.8 kg, 76 kg, 72.2 kg and 65 kg joined the group and 9 persons with an average weight of 68 kg left the group, then the average weight of all the persons in the group increased by 0.05 kg. What was the number of persons in the group, initially?

- Ans
1. 64

✖

2. 49

3. 59

✖

4. 74

Question ID : 8401604903

Status : Answered

Chosen Option : 1

Q.25 Surekha typed a 6-digit number but the two 3's she typed did not show. What appeared instead was 7007. How many different 6-digit numbers can be there?

- Ans
1. 15

2. 18

3. 3

✖

4. 10

Question ID : 8401604923

Status : Answered

Chosen Option : 2

Q.26 A car travels first 240 km at 50 km/h, next 90 km at 60 km/h and next 296 km at 80 km/h. What is its average speed (in km/h) for the whole journey?

- Ans

1. 55.8

2. 62.6

3. 58.4

4. 63.2
- Question ID : 8401604902

Status : Answered

Chosen Option : 2
- Q.27 A trader sold a washing machine for ₹28,750 at a gain of 15% and micro-oven for ₹18,768 at a loss of 8%. His profit/loss percentage in the whole transaction is (correct to one decimal place) :
- Ans

1. Profit, 5.4%

2. Loss, 4.7%

3. Loss, 5.4%

4. Profit, 4.7%

Question ID : 8401604908

Status : Answered

Chosen Option : 4

Q.28 Lekhi's expenditure for a month is ₹24,000 and her savings are 15% of the monthly expenditure. If her monthly income increases by 20% and savings decrease by 5%, then what is the net increase (in ₹) in her monthly expenditure?

Ans

1. 5,400

2. 6,200

3. 5,700

4. 5,800

Question ID : 8401604906

Status : Not Attempted and Marked For Review

Chosen Option : --

Q.29 The value of $\frac{4.169 \times 4.169 \times 4.169 - 64 \times (0.728)^3}{(4.169)^2 + (2.912)^2 + 8 \times (0.364)(4.169)}$ is $(2 - k)$. What is the value of k?

Ans

1. 0.743

2. 0.257

3. 0.275

4. 0.734

Question ID : 8401604901

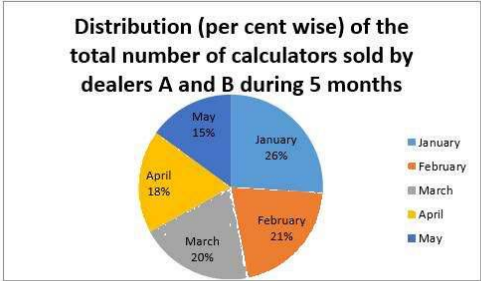
Status : Answered

Chosen Option : 1

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Q.30 Study the following pie chart and answer the question.



Total number of calculators sold by dealers A and B in May = 1620

The difference between the average number of calculators (per month) sold by dealers A and B in January and April and the number of calculators sold by them in March is x. The value of x lies between:

- Ans
1. 200 and 220

✗ 2. 160 and 180

✗ 3. 220 and 240

✗ 4. 180 and 200

Question ID : 8401604925

Status : Not Answered

Chosen Option : --

Q.31 A shopkeeper sells two-thirds of his toys (each of the same cost price) at 40% profit and sells one-fourth of the remaining at 20% loss. He sells the remaining at the cost price. What is his overall profit percentage?

- Ans
1. 28%

2. 20%

3. 25%

4. 24%

Question ID : 8401604909

Status : Answered

Chosen Option : 1

Q.32 Water flows out through a circular pipe with an internal diameter of 6 cm, at the rate of 12.6 km/h into an empty cylindrical tank whose base radius is 3 m. In 40 minutes, the water level in the tank will rise by (assuming no overflow):

- Ans
1. 90 cm

2. 72 cm

3. 80 cm

4. 84 cm

Question ID : 8401604931

Status : Answered

Chosen Option : 4

Q.33 The amount of a certain sum is 72.8% more than the sum itself in 3 years at a certain rate per cent p.a., when the interest is compounded yearly. What will be the compound interest (in ₹) on a sum of ₹8,000, in $1\frac{1}{2}$ years, at the same rate, if interest is compounded 6-monthly?

- Ans 1. 2,648
- ☒ 2. 2,652
- ☒ 3. 2,658
- ☒ 4. 2,630

Question ID : 8401604917

Status : Not Answered

Chosen Option : --

Q.34 An article is marked ₹125 above its cost price. It was sold at a profit of 8%, after giving two successive discounts of 10% and 5%, on its marked price. What is the cost price of the article?

- Ans ☒ 1. ₹525
- ☒ 2. ₹575
3. ₹475
- ☒ 4. ₹425

Question ID : 8401604913

Status : Not Answered

Chosen Option : --

Section : Intellectual Potential Test

Q.1 Six friends Yasir, Lalit, Chandra, Ekaja, Varsha and Jagriti are sitting in a park. Ekaja is not younger than Lalit. Chandra is not older than Varsha. Jagriti is older than Ekaja. Lalit and Varsha are the same age. Yasir is not younger than Chandra. Study the above information and choose the option that is definitely INCORRECT.

- Ans 1. Lalit is younger than Chandra.
2. Ekaja is not younger than Lalit.
3. Yasir is not older than Varsha.
- ☒ 4. Jagriti is older than Lalit.

Question ID : 8401604944

Status : Answered

Chosen Option : 1

Q.2 Eight friends Ganesh, Naveen, Tanya, Vaishali, Ravi, Lavanya, Bhanu and Ishaan are sitting around a circular table facing the centre, not necessarily in the same order. Tanya is not an immediate neighbour of Bhanu. Naveen is third to the left of Ravi. Bhanu is second to the left of Lavanya. Ganesh is not an immediate neighbour of either Ravi or Naveen. Bhanu is to the immediate left of Ganesh. Ishaan is third to the right of Ganesh. Who is sitting second to the right of Tanya?

- Ans 1. Naveen
2. Ishaan
3. Ravi
4. Vaishali

Question ID : 8401604934

Status : Answered

Chosen Option : 4

Q.3 In a certain code language, 'CABIN' is written as 'FUECQ'. How will 'REALM' be written in that language?

- Ans
1. UZDGP

2. VYEFQ

3. UYDFP

4. VZEGQ

Question ID : 8401604951

Status : Answered

Chosen Option : 3

Q.4 Read the following numbers carefully and answer the questions as per direction given after the number series:
289 496 337 268 245
If all the digits of the above given numbers in the sequence are written in a reverse order and then placed in descending order, which of the following numbers will be the second from the Left end of the sequence?

- Ans
1. 363

2. 242

3. 694

4. 542

Question ID : 8401604950

Status : Answered

Chosen Option : 3

Q.5 In a certain code language, 2, 5, 6, 7, 1, 4 and 9 are coded as V, O, R, X, K, I and G, respectively.
If the last two digits of the number cluster are odd, then the first and last letter is to be coded as Q.
If the first two digits of the number cluster are even, then the first and last letter is to be coded as L.
How will '261749' be coded in that language?

- Ans
1. LRKXIL

2. VOKVXG

3. QOKXIQ

4. VRKVXG

Question ID : 8401604952

Status : Not Answered

Chosen Option : --

Q.6 If TEST is coded as 6826, MORE is coded as 7318 and MOST is coded as 7326, what will be the code for MOTOR ?

- Ans
1. 86725

2. 68731

3. 88731

4. 73631

Question ID : 8401604962

Status : Answered

Chosen Option : 4

Q.7 Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.
TKH, ORB, JYV, EFP, ZMJ,?

- Ans
1. TTC

2. UUD

3. UTD

4. TUC

Question ID : 8401604946

Status : Answered

Chosen Option : 3

Q.8 Read the series: 22, 25, 24, 27, 26, ... carefully and suggest the number that should come next?

- Ans
1. 24

2. 29

3. 21

4. 22

Question ID : 8401604961

Status : Answered

Chosen Option : 2

Q.9 In the question, # means 'is the wife of', & means 'is the mother of', % means 'is the husband of', @ means 'is the brother of', ? means 'is the father of'. Assuming the following coded statement to be true, find which of the conclusion given in the options below is definitely true.
C % V & D @ Y # R ? T

- Ans
1. T % D

2. V # C

3. C ? R

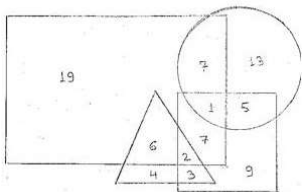
4. R @ D

Question ID : 8401604954

Status : Answered

Chosen Option : 3

Q.10 In the following Venn diagram, the rectangle represents green-coloured items, the circle represents bedsheets, the triangle represents carpets and the square represents floral design items. Select the option which represents the number of green floral-designed carpet.



- Ans ☒ 1. 3
- ☒ 2. 6
- ☐ 3. 2
- ☒ 4. 1

Question ID : 8401604941

Status : Answered

Chosen Option : 2

Q.11 Choose the correct alternative from the given options which will continue the same pattern and replace the question mark in the given number series.

387, 337, 297, 267, 247,?

- Ans ☒ 1. 236
- ☐ 2. 228
- ☐ 3. 237
- ☒ 4. 231

Question ID : 8401604953

Status : Answered

Chosen Option : 3

Q.12 Tara is ranked 5th from the top and Sugandha is ranked 7th from the bottom in an exam. In the next exam, their position got exchanged and Sugandha was ranked 16th from the bottom. How many students in total take the exams?

- Ans ☐ 1. 22 students
- ☐ 2. 20 students
- ☒ 3. 21 students
- ☐ 4. 23 students

Question ID : 8401604937

Status : Answered

Chosen Option : 4

Q.13 Relationship between different elements is shown in the statements. Find if the conclusions also follow the same or not.

Statements: $A \geq B = C > D \geq E \leq F$

Conclusions:

- I. $B > F$
- II. $E < A$
- III. $C < D$
- IV. $A < C$

- Ans
1. If either conclusion I or II is valid.
2. If only conclusion II is valid.
3. If only conclusion I is valid.
4. If neither conclusion I or II is valid.

Question ID : 8401604942

Status : Answered

Chosen Option : 4

Q.14 Two statements are followed by two conclusions numbered I and II. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow/s from the given statements.

Statement

- 1. skilling is a necessity for the performance on the jobs.
- 2. National Education Policy (NEP) is introduced to skill, reskill and upskill people

Conclusions

- I. Unskilled people can also get the job.
- II. NEP will skill the manpower.

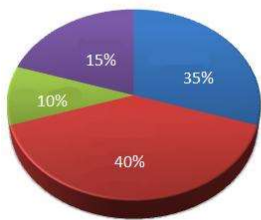
- Ans
1. Only conclusion I follows.
2. Either conclusion I or II follows.
3. Neither conclusion I nor II follows.
4. Only conclusion II follows.

Question ID : 8401604940

Status : Answered

Chosen Option : 2

Q.15 According to a survey the percentage of people liking different design patterns is shown in the following pie-chart. Blue represents people who like checked design, Red represents people who like floral design, Green represents people who like polka dot design and Purple represents people who like animal print design. Study the graph and answer the question.



The survey was to be conducted on 28,500 people. If only one-third of the total people took the survey, then how many people like animal print and polka dots design?

- Ans
1. 1975

2. 2576

3. 2375

4. 2186

Question ID : 8401604965

Status : Answered

Chosen Option : 3

Q.16 If a day before yesterday was Friday, then what day of the week will it be on a day after tomorrow?

- Ans
1. Saturday

2. Sunday

3. Monday

4. Tuesday

Question ID : 8401604936

Status : Answered

Chosen Option : 4

Q.17 Select the number from among the given options that can replace the question mark (?) in the following series.
253, 260, 271, 298, 389, ?

- Ans
1. 679

2. 485

3. 736

4. 597

Question ID : 8401604960

Status : Answered

Chosen Option : 3

Q.18 In a coding language if M = 13 and CAT = 24, then BAT will be equal to

- Ans ☒ 1. 18
- ☒ 2. 26
- ☐ 3. 23
- ☒ 4. 22

Question ID : 8401604966

Status : Answered

Chosen Option : 3

Q.19 Relationship between different elements is shown in the statements. Find if the conclusions also follow the same or not.

Statements: $G > H < I \geq J = K \geq L > M$

Conclusions:

- I. $I > L$
- II. $I = L$
- III. $I < J$
- IV. $K < M$

- Ans ☒ 1. If only conclusion II is valid.
- ☒ 2. If only conclusion I is valid.
- ☐ 3. If either conclusion I or II is valid.
- ☒ 4. If neither conclusion I or II is valid.

Question ID : 8401604945

Status : Answered

Chosen Option : 3

Q.20 Choose the correct alternative from the given options which will continue the same pattern and replace the question mark in the given number series.

698573245, 98573245, 9857324, 857324, 57234,?

- Ans ☐ 1. 7523
- ☐ 2. 3275
- ☐ 3. 5723
- ☒ 4. 7325

Question ID : 8401604956

Status : Answered

Chosen Option : 3

Q.21 Relationship between different elements is shown in the statements. Find if the conclusions also follow the same or not.

Statements: $P \geq Q \geq R = S, T \geq U > P$

Conclusions:

- I. $U > R$
- II. $T > S$
- III. $P < R$
- IV. $T < P$

- Ans
1. If both the conclusion I and II are valid.

✗

2. If either conclusion I or II is valid.

✗

3. If only conclusion I is valid.

✗

4. If only conclusion II is valid.

Question ID : 8401604943

Status : Answered

Chosen Option : 3

Q.22 Eight persons Gitika, Urvika, Vaibhav, Payal, Tanmay, Leena, Arihant and Suraj live on eight different floors in a building. The floor is numbered from the bottom as first, second and so on till eighth. Gitika lives in the floor between Urvika and Vaibhav. Payal lives two floors below Tanmay. No one lives above Leena who lives five floors above Arihant. Suraj lives on the floor immediately below Payal. Vaibhav lives on some floor above Urvika. Who lives two floors below Arihant?

- Ans
1. Suraj

✗

2. Tanmay

3. Urvika

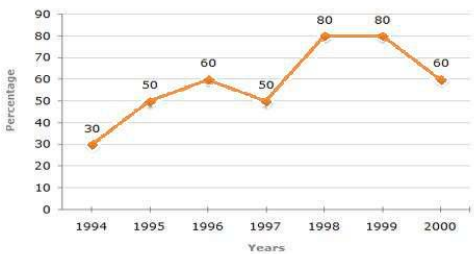
4. Payal

Question ID : 8401604939

Status : Answered

Chosen Option : 3

Q.23 The percentages of people who got US visa in different years is shown in the following graph. Study the graph and answer the question.



If 54,000 people got the US visa, then how many people applied for the visa in the year 1996?

- Ans
1. 34,000

2. 90,000

✗

3. 58,000

4. 18,000

Question ID : 8401604964

Status : Answered

Chosen Option : 1

Q.24 Read the given information and solve the question given at the end.

D, E, F, G, H, I, J and K are eight friends sitting around a circular table by facing its centre. H is third to the right of J who is not an immediate neighbor of either F or K. F is second to the left of K who is third to the left of D. E is fourth to the right of K. Who is sitting immediate Left of D?

- Ans

1. J

2. F

3. E

4. I

Question ID : 8401604933

Status : Answered

Chosen Option : 3

Q.25 Select the number from among the given options that can replace the question mark (?) in the following series.
107, 115, 131, 155, 187, ?

- Ans

1. 215

2. 225

3. 227

4. 219

Question ID : 8401604959

Status : Answered

Chosen Option : 3

Q.26 If letters in the word 'ADEQUATE' are rearranged in alphabetical order, then how many letters are there which are in the same place as in the original sequence of the word?

- Ans

1. 1

2. 2

3. 4

4. 3

Question ID : 8401604947

Status : Answered

Chosen Option : 2

Q.27 Siya is Dhanvi's daughter. Baadal is Ragish's son-in-law. Navya is Tashvi's mother and Dhanvi is married to Ragish. Baadal is Kartik's father and Siya is Garvit's sister. Ragish is Tashvi's paternal grandfather. If Dhanvi has only 2 children, then how is Dhanvi related to Kartik?

- Ans

1. Maternal aunt

2. Paternal aunt

3. Paternal grandmother

4. Maternal grandmother

Question ID : 8401604955

Status : Answered

Chosen Option : 3

Q.28 Select the option that is related to the third term in the same way as the second term is related to the first term.

TG4 : KL12 :: PX7 : ?

- Ans 1. GC21
- ☒ 2. HD16
- ☒ 3. HC16
- ☒ 4. GD21

Question ID : 8401604957

Status : Answered

Chosen Option : 4

Q.29 Study the following arrangement of letters and answer the question that follows:
YNOEXKQUNLAOZIMEGOFUAKOW
How many vowels are there in this arrangement which are placed between two consonants?

- Ans ☒ 1. 3
2. 5
- ☒ 3. 4
- ☒ 4. 2

Question ID : 8401604948

Status : Answered

Chosen Option : 2

Q.30 If the digits given below are arranged in ascending order, then what is the sum of the number third from the right and second from the left?
38, 42, 65, 19, 83, 34, 47, 13, 21, 89

- Ans 1. 84
- ☒ 2. 66
3. 86
4. 68

Question ID : 8401604963

Status : Answered

Chosen Option : 1

Q.31 Four letter-cluster have been given, out of which three are alike in some manner and one is different. Select the one that is different.

- Ans 1. XUES
2. ROYM
3. PMXJ
- ☒ 4. HEOC

Question ID : 8401604949

Status : Answered

Chosen Option : 3

Q.32 By facing the south direction, a certain number of people are sitting in a row. B is sitting sixth from the right of D. D is eight from the left end of the row. E is sitting forth to left of B. Only two persons are sitting between B and A. G is sitting second to the right of F. Six persons are sitting between H and G. H is third from any of the end. C is sitting forth to the left of D. F is sitting between D and E. How many persons sitting in a row?

- Ans

✖

1. 18

2. 20

✖

3. 19

✖

4. 17
- Question ID : 8401604938

Status : Answered

Chosen Option : 3
- Q.33 Four letter-cluster have been given, out of which three are alike in some manner and one is different. Select the one that is different.
- Ans

✖

1. JPKS : QXPL

✖

2. QMYA : JUBT

3. CVRD : XCIV

✖

4. TEWX : GMDQ
- Question ID : 8401604958

Status : Not Attempted and Marked For Review

Chosen Option : --
- Q.34 Eight friends Jaya, Yashvi, Ananta, Vibhor, Manan, Disha, Chandan and Zakir are sitting around a square table at an equal distance facing the centre not necessarily in the same order. Yashvi is sitting sixth to the left of Disha. Ananta is to the immediate right of Vibhor. Jaya is sitting to the immediate left of Zakir. Disha is sitting third to the right of Zakir. Manan is sitting second to the right of Chandan. Vibhor is sitting opposite to Yashvi. Who is sitting third to the right of Vibhor?
- Ans

1. Manan

2. Disha

3. Chandan

✖

4. Jaya
- Question ID : 8401604935

Status : Marked For Review

Chosen Option : 3
- Section : Domain Knowledge
- https://cdn.digialm.com/per/g01/pub/1258/touchstone/AssessmentQPHTMLMode1/1258O22378/1258O22378S1D705/16673724881039034/56066...

25/48

Q.1 The ratio of the quantity of a reactant present in reactor feed of a recycling operation to the quantity of that same reactant entering the operation as fresh feed is known as:

- Ans
- ✖

1.

✖

2.

3.

✖

4. Purge ratio

Question ID : 8401605222

Status : Answered

Chosen Option : 3

Q.2 If the distillation is operating at total reflux, the distillation column requires minimum:

- Ans
1.

✖

2. Reboiler load

✖

3. Condenser load

✖

4.

Question ID : 8401605245

Status : Answered

Chosen Option : 1

Q.3

- Ans
- ✖

1.

✖

2.

✖

3.

4. Packed tower

Question ID : 8401605283

Status : Answered

Chosen Option : 2

Q.4 A 10-cm fire hose with a 3-cm nozzle discharges 1.5 m³/min to the atmosphere. Assuming frictionless flow, find the change in velocity of fluid between the two points, point 1 at the hose & point 2 at nozzle?

- Ans
1.

✖

2. 322 m/s

✖

3. 3.22 m/s

✖

4. 22.3 m/s

Question ID : 8401605275

Status : Answered

Chosen Option : 1

Q.5 Carbon black is produced by decomposition of methane
 $\text{CH}_4 \text{ (g)} \rightarrow 4 \text{ C(s)} + 2\text{H}_2 \text{ (g)}$
The single pass conversion of methane is 60 %. If fresh feed is pure methane and 25% of the methane exiting the reactor is recycled, then the molar ratio of fresh feed stream to recycled stream will be?

- Ans
1. 9

✖

2.

✖

3.

✖

4.

Question ID : 8401605223

Status : Answered

Chosen Option : 2

Q.6

- Ans
1.

✖

2.

3.

4.

Question ID : 8401605301

Status : Answered

Chosen Option : 3

Q.7 Those fluids which require a gradually increasing shear stress to maintain a constant strain rate and are called

- Ans
1. Pseudoplastic

2.

3. dialatant

4. rheopectic

Question ID : 8401605228

Status : Answered

Chosen Option : 2

Q.8 What is the unit of the solid angle which is denoted by ω ?

- Ans
1.

2. degree

3.

✖

4.

Question ID : 8401605239

Status : Answered

Chosen Option : 4

Q.9 Michaelis and Menten guessed the mechanism of which kind of reactions?

- Ans
- ✖

1.

✔

2. Enzyme substrate reaction

✖

3.

✖

4. Reversible recation

Question ID : 8401605259

Status : Answered

Chosen Option : 2

Q.10 For which equipment the energy requirement (per unit mass of material crushed/ground) is highest?

- Ans
- ✔

1.

✖

2.

✖

3.

✖

4. Jaw crusher

Question ID : 8401605254

Status : Answered

Chosen Option : 1

Q.11 Which type of perfume is benzyl acetate that is generally used in soaps?

- Ans
- ✔

1.

✔

2.

✖

3.

✖

4. musk

Question ID : 8401605298

Status : Answered

Chosen Option : 1

Q.12 For the reversible first order reaction
 $A \rightleftharpoons R$; $C_A = C_{AO}$, $C_R = C_{RO} = 0$ at $t=0$
To take place isothermally, the equilibrium fraction conversion x_{Ae} of A and equilibrium constant K are related by

- Ans
- ✖

1. $x_{Ae} = (1 + K) / K$

✖

2.

✔

3.

✖

4.

Question ID : 8401605256

Status : Answered

Chosen Option : 3

Q.13 During visual interpretation of Bernoulli’s equation, the hydraulic grade line (HGL) shows:

- Ans
- ✖

1.

The height of the total Bernoulli constant
- ✖

2.

✖

3.

✓

4.

Question ID : 8401605274

Status : Answered

Chosen Option : 2

Q.14

- Ans
- ✖

1.

✓

2.

✖

3.

✓

4.

Question ID : 8401605235

Status : Answered

Chosen Option : 4

Q.15

- Ans
- ✓

1.

✖

2.

✓

3.

✖

4.

Question ID : 8401605305

Status : Answered

Chosen Option : 1

Q.16

- Ans
- ✓

1.

✖

2.

✖

3.

✓

4.

Question ID : 8401605227

Status : Answered

Chosen Option : 2

Q.17 In a continuous fractionating column, the vapours rising through the rectifying section are completely considered in condenser and collected in accumulator in which a definite liquid level is maintained. Some part of liquid from the accumulator is delivered to the top plate of water. This liquid stream is called:

- Ans
- ✖

1. Bottom product

✖

2.

✖

3. Overhead product

4.

Question ID : 8401605246

Status : Answered

Chosen Option : 4

Q.18 The heat required when 1 k mole of $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ is observed isothermally at 291K in a large mass of water is 13.33 MJ. What is the heat of crystallization per unit mass of salt?

- Ans
- ✖

1.

2. 53.9 kJ/kg

✖

3.

4.

Question ID : 8401605247

Status : Answered

Chosen Option : 3

Q.19 Determine the Overall Heat Transfer Coefficient for a double-tube counter-flow heat exchanger where h_i (= 7663 $\text{W/m}^2\cdot\text{K}$) and h_o (= 75.2 $\text{W/m}^2\cdot\text{K}$) are the convection heat transfer coefficients inside and outside the tube, respectively.

- Ans
1.

2.

✖

3.

4.

Question ID : 8401605242

Status : Answered

Chosen Option : 1

Q.20 A chemical reaction proceeds very slowly and it takes 45 minutes when the temperature is about 70 °C and when the temperature is increased to 85 °C it reaches to same result in just 12 seconds. Find the activation energy for this reaction.

- Ans
1. 449787 J/mol

2. 212.6 J/mol

3. 758.4 J/mol

4. 948868 J/mol

Question ID : 8401605288

Status : Answered

Chosen Option : 3

Q.21

- Ans
1.

2. volumetric efficiency

3. hydraulic efficiency

4. Overall efficiency

Question ID : 8401605230

Status : Answered

Chosen Option : 1

Q.22 Lyophilization is also known as:

- Ans
1.

2.

3. Flash-drying

4. Freeze-drying

Question ID : 8401605248

Status : Answered

Chosen Option : 3

Q.23 For the first order system, the corner frequency (ω_c) is the frequency corresponding to:

- Ans
1.

2. $\omega.\tau = 1/\sqrt{2}$

3.

4.

Question ID : 8401605291

Status : Answered

Chosen Option : 1

Q.24

- Ans
1. 0°

2.

3. -90°

4.

Question ID : 8401605264

Status : Answered

Chosen Option : 3

Q.25 Following gas phase reaction takes place at 500 °C
 $4\text{ PH}_3(\text{g}) \rightarrow \text{P}_4(\text{g}) + 6\text{H}_2(\text{g})$
With $r_{\text{PH}_3} = 85\text{ h}^{-1}\text{ CPH}_3$
What is the volume of the plug reactor operating at this temperature and 5.5 atm. Giving 80% conversion for a feed of 2.5 kg moles PH_3 per hour?

- Ans
- ✖

1.

1 m³

✖

2.

0.50 m³

✖

3.

1.5 m³

4.

0.75 m³

Question ID : 8401605286

Status : Answered

Chosen Option : 3

Q.26

Ans

1.

2.

✖

3.

4. Phase crossover frequency

Question ID : 8401605295

Status : Answered

Chosen Option : 2

Q.27 Which kind of evaporators are well suited for concentrating heat sensitive liquids?

Ans

1.

2.

3. Once through evaporator

4.

Question ID : 8401605281

Status : Answered

Chosen Option : 2

Q.28

Ans

1. 61.9 kW

2.

✖

3. 16.9 kW

4.

Question ID : 8401605279

Status : Answered

Chosen Option : 3

Q.29 Why Lagooning process is mainly used?

- Ans
1.

For enhancing Global warming
2.

3.

4.

Question ID : 8401605297

Status : Answered

Chosen Option : 4

Q.30 In case of plug flow reactor when a recycle stream is added to entrance of reactor and as the recycle ratio increases from zero ($R=0$) towards infinity($R= \infty$) what kind of effect does it have on reactor?

- Ans
1.
2.
- The behavior shifts from plug flow to mix flow

3.

4.

Question ID : 8401605261

Status : Answered

Chosen Option : 2

Q.31

- Ans
1.
2.

3.

4.

Question ID : 8401605258

Status : Answered

Chosen Option : 3

Q.32

- Ans
1.
2.
- $-1/q$

3.

4.

Question ID : 8401605250

Status : Answered

Chosen Option : 1

Q.33 Which of the following is known as Mollier chart?

- Ans
- ✖

1.

Pressure-volume chart

✓

2.

✖

3.

Temperature-enthalpy chart

✖

4.

Temperature-entropy chart

Question ID : 8401605253

Status : Answered

Chosen Option : 2

Q.34 In which equipment the mechanical, kinetic and potential energies do not change appreciably?

- Ans
- ✖

1.

✖

2.

IC engine

✓

3.

blowers and compressors

✖

4.

Boiler

Question ID : 8401605285

Status : Answered

Chosen Option : 1

Q.35 In a throttling process, the pressure of an ideal gas reduces by 50%. If C_p & C_v are the heat capacities at constant pressure and constant volume respectively ($\gamma = C_p / C_v$), the specific volume will change by a factor of

- Ans
- ✖

1.

✖

2.

✓

3.

2

✖

4.

Question ID : 8401605224

Status : Answered

Chosen Option : 2

Q.36

- Ans
- ✓

1.

✖

2.

200

✖

3.

1000

✖

4.

400

Question ID : 8401605293

Status : Answered

Chosen Option : 1

Q.37 Identify the flow measurement device in which the fluid is passed through two U- shaped curved tubes that are vibrated at their natural frequency. This creates an alternating force that produces small elastic deformation in the tubes. From the magnitude of deformation, the mass flow rate may be calculated.

- Ans
- ✖

1.

✖

2.

✖

3. Insertion meter

4.

Question ID : 8401605232

Status : Answered

Chosen Option : 4

Q.38

- Ans
- ✖

1.

2.

✖

3. 1

✖

4.

Question ID : 8401605262

Status : Answered

Chosen Option : 1

Q.39

- Ans
1.

1/mol

2.

3.

mol.sec/L

4.

Question ID : 8401605289

Status : Answered

Chosen Option : 4

Q.40 As the expansion of fluidized bed is concerned, the fluidized bed expands when

- Ans
1.

The superficial velocity remains constant

2.

3.

The superficial velocity diminishes to zero

4.

Question ID : 8401605226

Status : Answered

Chosen Option : 2

Q.41 The time period within which the entire fixed investment on the plant and machineries are earned to recover is known as:

- Ans
- ✖

1.

✖

2. Breakeven point

✖

3. Capacity ratio

4. Payout period

Question ID : 8401605296

Status : Answered

Chosen Option : 4

Q.42

- Ans
1.

✖

2.

✖

3. 350

✖

4. 175

Question ID : 8401605280

Status : Answered

Chosen Option : 3

Q.43 Select the correct chemical which is used as secondary plastisizer for PVC:

- Ans
1. Chlorinated paraffin wax

2. Dioctyl phthalate

3.

4.

Question ID : 8401605306

Status : Answered

Chosen Option : 3

Q.44

- Ans
- ✖

1. Net area

2.

3. Hole area

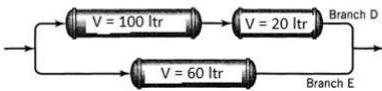
4.

Question ID : 8401605282

Status : Answered

Chosen Option : 3

Q.45 The reactor setup shown in figure consist of three plug flow reactor in two parallel branches. Branch D has a reactor of volume 100 ltr followed by a reactor of volume 20 ltr. Branch E has a reactor of volume 60 ltrs. What fraction of the feed should go to branch D?



- Ans
1.

2. 1/2 of feed

3. 3/4 of feed

4. 1/3 of feed

Question ID : 8401605260

Status : Answered

Chosen Option : 1

Q.46

- Ans
1.

2.

3. 1.307 W/(m³.°K⁵)

4.

Question ID : 8401605251

Status : Answered

Chosen Option : 4

Q.47

- Ans
1. 0 °C

2. 108 °C

3.

4.

Question ID : 8401605240

Status : Answered

Chosen Option : 4

Q.48

- Ans
1. 45 °C temperature and 4.5 pH

2.

3.

4.

Question ID : 8401605300

Status : Answered

Chosen Option : 1

Q.49 The process that is used in depithing of bagasse is known as?

- Ans
1. Dry method process

2.

3.

4. Ritter process

Question ID : 8401605265

Status : Answered

Chosen Option : 2

Q.50 The frequency at which magnitude of $G(j\omega)H(j\omega)$ is unity is knowns as _____.

- Ans
1.

2.

3. Phase crossover frequency

4.

Question ID : 8401605304

Status : Answered

Chosen Option : 3

Q.51 What is the name of parameter associated with underdamped response which indicates the time required for the transient's damped oscillations to reach and stay within 2% of the steady-state value?

- Ans
1. Peak time

2.

3. Overshoot

4. Rise time

Question ID : 8401605263

Status : Answered

Chosen Option : 1

Q.52 Which among the following is the actual property of a catalyst?

- Ans
1. It changes the equilibrium constant of the reaction

2. It increases the equilibrium concentration

3. It supplies energy to the reaction

4. It shortens the time to reach equilibrium

Question ID : 8401605257

Status : Answered

Chosen Option : 1

Q.53 The dimensionless parameter describing flow-induced boiling represented by $[(p_a - p_v) / (.5 \rho V^2)]$ where

p_a = ambient pressure
 p_v = vapor pressure
 V = characteristic flow velocity
 ρ = fluid density

is known as:

- Ans
1. Cavitation number

✖

2. Knudsen number

✖

3. Prandtl number

4. Capillary height

Question ID : 8401605229

Status : Answered

Chosen Option : 1

Q.54

- Ans
- ✖

1.

2.

✖

3.

4.
- equilibrium conversion increases with increase in temperature

Question ID : 8401605287

Status : Answered

Chosen Option : 3

Q.55

- Ans
1.

2.

✖

3. 23.2 kW/m²

4.

Question ID : 8401605238

Status : Answered

Chosen Option : 3

Q.56 Assume that H is the total head at the inlet of pipe, h_f is head lost due to friction in the pipe and Q is discharged fluid per second. The power transmitted through pipe is given by:

- Ans
- ✖

1.

$WQH/75$

2.

$WQ(H - h_f)/75$

✖

3.

✖

4.

Question ID : 8401605276

Status : Answered

Chosen Option : 3

Q.57

- Ans
1.

✖

2.

✖

3.

$\epsilon_i / (\epsilon_i A_i)$

✖

4.

Question ID : 8401605225

Status : Answered

Chosen Option : 1

Q.58 Calculate the height of the column of bromine that would exert the same pressure as atmospheric pressure (10^5 pascal)? Assume the density of bromine 3120 kg/m^3 .

- Ans
- ✖

1.

2.3 m

2.

.23 m

3.

4.

1 m

Question ID : 8401605273

Status : Answered

Chosen Option : 3

Q.59 Select the correct name of the operation of paper production in which Debarking, Chipping, Cutting, Screening are done.

- Ans
1.

2.

Acquisition of Raw Material

3.

Pulping

4.

Question ID : 8401605266

Status : Answered

Chosen Option : 4

Q.60 Fill in the blank:

Polyethylene terephthalate is a/an _____.

- Ans
1. Polyster

✖

2.

✖

3.

✖

4. Polyamide

Question ID : 8401605269

Status : Answered

Chosen Option : 1

Q.61

- Ans
- ✖

1. Space time

2. Reaction time

3. Holding time

4. Half life

Question ID : 8401605290

Status : Answered

Chosen Option : 3

Q.62 Which size measurement technique/analysis is useful for sizing particles with diameters greater than about 100 μm?

- Ans
1.

✖

2.

✖

3.

✖

4.

Question ID : 8401605277

Status : Answered

Chosen Option : 3

Q.63 Identify the correct name of the operation of paper production in which Debarking, Chipping, Cutting, Screening are done.

- Ans
1.

2. Pulping

3.

4.

Question ID : 8401605299

Status : Answered

Chosen Option : 4

Q.64 Eddy diffusivities ν_t and α_t are _____.

- Ans
1.

not fluid properties and their values depend on flow conditions.
- ✗ 2.

fluid properties but their values do not depend on flow conditions.
- ✗ 3.

fluid properties and their values depend on flow conditions.
- ✗ 4.

Question ID : 8401605236

Status : Answered

Chosen Option : 1

Q.65 In crystallizing evaporators, where a slurry of crystals and mother liquor is withdrawn, feed may be admitted directly to each effect, which is known as:

- Ans
- ✗ 1.

Backward feed
- ✗ 2.
3.

Parallel feed
- ✗ 4.

Forward feed

Question ID : 8401605244

Status : Answered

Chosen Option : 3

Q.66

- Ans
- ✗ 1.

0.97
2.

0.77
3.
4.

0.87

Question ID : 8401605252

Status : Answered

Chosen Option : 3

Q.67 In a throttling process, the pressure of an ideal gas reduces by 50%. If C_p & C_v are the heat capacities at constant pressure and constant volume respectively ($Y = C_p / C_v$), the specific volume will change by a factor of

- Ans
- ✗ 1.

 $2(Y-1)/Y$
- ✗ 2.

 $2^{1/Y}$
3.
4.

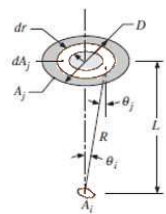
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Question ID : 8401605271

Status : Answered

Chosen Option : 1

Q.68 What will be the view factor while considering a diffuse circular disk of diameter D and area A_j and a plane diffuse surface of area $A_i \ll A_j$?
If the surfaces are parallel, and A_i is located at a distance L from the center of A_j .
Also assume surfaces to be diffuse and uniform radiosity on surface A_j .



- Ans**
- 1.
 - 2.
 - 3. $F_{ij} = D^2 / (D^2 + 4L^2)$
 - 4. $F_{ij} = \theta^2 / (D^2 + 4L^2)$

Question ID : 8401605272
Status : Answered
Chosen Option : 3

Q.69

- Ans**
- 1.
 - 2. To separate the unsaponified fat from soap
 - 3.
 - 4.

Question ID : 8401605303
Status : Answered
Chosen Option : 3

Q.70

- Ans**
- 1.
 - 2.
 - 3. 10.98 m
 - 4. 11.96 m

Question ID : 8401605284
Status : Answered
Chosen Option : 1

Q.71 Identify the process which generally accomplishes physical change, chemical change and increased rate of transportation:

- Ans
1. agitation

✗ 2.

✗ 3. filtering

✗ 4. screening

Question ID : 8401605231

Status : Answered

Chosen Option : 2

Q.72 what rotational speed in revolutions per second would you recommend for a ball mill 1080 mm in diameter charged with 100 mm balls?

- Ans
- ✗ 1.

2. Less than 0.5

✗ 3. Greater than 1

4.

Question ID : 8401605278

Status : Answered

Chosen Option : 4

Q.73 To determine Boiling Point Elevation (BPE) for strong solutions which empirical method is used?

- Ans
1.

2. Hagen equation

✗ 3.

4.

Question ID : 8401605243

Status : Answered

Chosen Option : 4

Q.74 Which among the Copper, Nickel, Aluminum & Commercial bronze has the highest thermal conductivity?

- Ans
1. nickel

2. aluminium

3. Copper

4. Commercial bronze

Question ID : 8401605234

Status : Answered

Chosen Option : 2

Q.75 Which type of microorganism is responsible to develop muddy odour in water?

- Ans
1.

2. Oscillatoria

3. Escherichia coli

4. Anabaena

Question ID : 8401605268

Status : Answered

Chosen Option : 3

Q.76 if a man exposed to 150-200 ppm NO₂ for 3 to 5 weeks what will be the result of it?

- Ans
1. Headache

2. Death

3. Bronchiolitis fibrose obliterans

4. Silo filter disease

Question ID : 8401605267

Status : Answered

Chosen Option : 3

Q.77

- Ans
1. $P(s)/\epsilon(s) = K_c + (1+\tau_D s)$

2.

3.

4.

Question ID : 8401605294

Status : Answered

Chosen Option : 4

Q.78

- Ans
1. Moderately heavy slurries

2. Solution of salt

3.

4.

Question ID : 8401605249

Status : Answered

Chosen Option : 1

Q.79 If and amount 100 is paid at the end of every year for 2 years, then what will be the net present value of the annuity at an interest rate of 10?

- Ans
1.

✖

2.

✖

3.

✖

4. 119

Question ID : 8401605292

Status : Answered

Chosen Option : 1

Q.80 According to Planks distribution law of heat radiation for a blackbody, the value of $(2C_1\pi^5)/(15C_2^4)$, where C_1 and C_2 are constant, is known as:

- Ans
1.

✖

2. Fick's constant

✖

3.

✖

4.

Question ID : 8401605302

Status : Answered

Chosen Option : 3

Q.81

- Ans
- ✖

1.

2.

3. Reynolds analogy

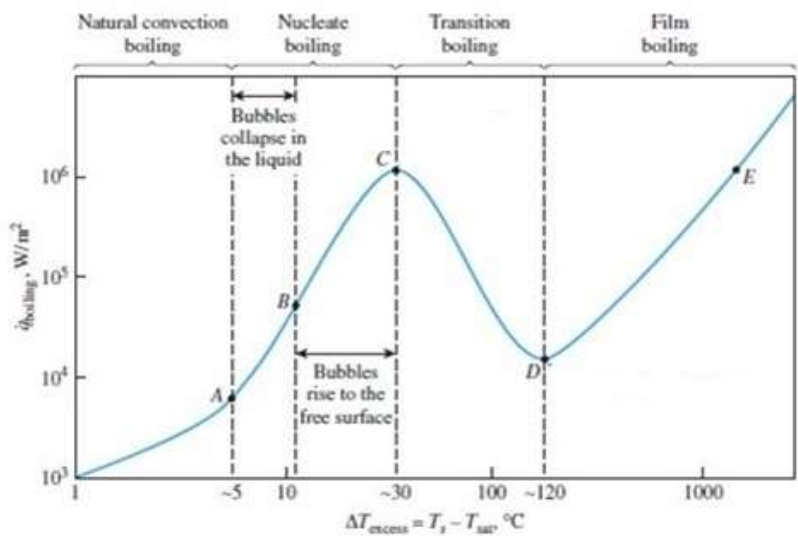
4.

Question ID : 8401605237

Status : Answered

Chosen Option : 4

Q.82 Which point in the below given plot represents the critical heat flux?



- Ans
- 1. Point B
 - 2. Point A
 - 3. Point C
 - 4. F

Question ID : 8401605241
Status : Answered
Chosen Option : 3

Q.83

- Ans
- 1. $Q_{\max} = 1.84 C_d b H^{5/2}$
 - 2. $Q_{\max} = 1.84 C_d b H^{3/2}$
 - 3.
 - 4.

Question ID : 8401605255
Status : Answered
Chosen Option : 2

Q.84 In a process the contents of a pressurized gas container are allowed to escape to the atmosphere, which kind of process is it?

- Ans
- 1. Continuous process
 - 2. Semi batch process
 - 3. Steady state
 - 4. Batch process

Question ID : 8401605270
Status : Answered
Chosen Option : 1

Q.85 A mixer Which is used for mixing non-cohesive solids and consist of a vertical tank containing a helical conveyor that elevates and circulates the material, is known as:

- Ans
1.

2.

3. Ribbon blender

4.

Question ID : 8401605233

Status : Answered

Chosen Option : 1