हिन्दुस्तान पेट्रोलियम कॉर्पोरेशन लिमिटेड
रजिस्टर्ड ऑफिस : 17, जमशेदजी टाटा रोड, मुंबई - 400 020.
HINDUSTAN PETROLEUM CORPORATION LIMITED
REGISTERED OFFICE : 17, JAMSHEDJI TATA ROAD, MUMBAI - 400 020.

Participant ID	
Participant Name	
Test Center Name	
Test Date	23/12/2023
Test Time	2:00 PM - 4:30 PM
Subject	Chemical Engineer

Section : **English Language**

Q.1 Choose the most appropriate one-word substitution for the below word.

"Study of hereditary, genes and variation in living organisms"

Ans 1. Biology

2. Genetics

3. Hydraulics

4. Demography

Question ID : **630680507247**
Option 1 ID : **6306801982449**
Option 2 ID : **6306801982452**
Option 3 ID : **6306801982451**
Option 4 ID : **6306801982450**
Status : **Answered**
Chosen Option : **1**

Q.2 In the following question a part of the statement is given in brackets. You are required to replace the text with correct Idioms given in the options.

After working for three hours on her science fair project, Serena decided to (stop working and plan to pick it up later).

Ans 1. call it a day

2. crack a window

3. cutting corners

4. cherry on top

Question ID : **630680507248**
Option 1 ID : **6306801982454**
Option 2 ID : **6306801982455**
Option 3 ID : **6306801982456**
Option 4 ID : **6306801982453**
Status : **Not Answered**
Chosen Option : **--**

Q.3 In the following passage some words have been deleted. Fill in the blank with the correct word from the below options.

Mr. Richard suspected that his wife was going deaf. Recently, the number of times which she had kept _____ when Mr. Richard talked to her had increased.

Ans 1. silent

2. talking

3. preparing

4. yelling

Question ID : **630680507254**
Option 1 ID : **6306801982477**
Option 2 ID : **6306801982478**
Option 3 ID : **6306801982479**
Option 4 ID : **6306801982480**
Status : **Answered**
Chosen Option : **1**

Q.4 Select the most appropriate adjective from the given option to fill in the blanks for the given sentence.

Tim is very good at telling funny stories. He can be very _____.

Ans 1. bored

2. amusing

3. interest

4. disappointing

Question ID : **630680507243**
Option 1 ID : **6306801982436**
Option 2 ID : **6306801982435**
Option 3 ID : **6306801982433**
Option 4 ID : **6306801982434**
Status : **Answered**
Chosen Option : **2**

Q.5 Fill in the blank with the correct word from the below options.

Mr. Richard suspected that his wife was going deaf. There _____ a number of occasions when his wife gave no replies when Mr. Richard asked her questions.

Ans 1. were

2. was going

3. have being

4. are

Question ID : **630680507252**
Option 1 ID : **6306801982472**
Option 2 ID : **6306801982471**
Option 3 ID : **6306801982470**
Option 4 ID : **6306801982469**
Status : **Answered**
Chosen Option : **1**

most logical order of the sentences from among the four given choices to coherent paragraph.

ncements in transport by land, sea, and air have transformed the way we travel, ster, more convenient, and reliable.
t-propelled spacecraft has even made it possible to explore outer space.
pter can now take off and land vertically, while the jet engine has ed air travel, making it possible to cross oceans and continents in a matter of

velopments have provided numerous advantages.
have electrified their railway systems, motor cars have become faster and rtable, and hovercraft has made short sea and land journeys more accessible.

C

C

D

A

Question ID : **630680507245**
Option 1 ID : **6306801982443**
Option 2 ID : **6306801982444**
Option 3 ID : **6306801982442**
Option 4 ID : **6306801982441**
Status : **Not Answered**
Chosen Option : **--**

most appropriate one-word substitution for the below word.

f Human Mind"

raphy

nology

hology

atology

Question ID : **630680507246**
Option 1 ID : **6306801982446**
Option 2 ID : **6306801982445**
Option 3 ID : **6306801982447**
Option 4 ID : **6306801982448**
Status : **Answered**
Chosen Option : **3**

ost appropriate adjective from the given option to fill in the blanks for the given

hadn't been cleaned for ages. It was really _____.

ing

usting

zed

ested

Question ID : **630680507242**

ink with the correct word from the below options.

was a man by the name of Mr. Richard. Mr. Richard suspected that his wife was
There were a number of occasions when his wife _____ no replies when Mr.
ed her questions.

g

g

ot

Question ID : **630680507253**
Option 1 ID : **6306801982476**
Option 2 ID : **6306801982473**
Option 3 ID : **6306801982475**
Option 4 ID : **6306801982474**
Status : **Answered**
Chosen Option : **3**

ost appropriate SYNONYM of the given word below.

ficial

ntageous

less

gerous

Question ID : **630680507250**
Option 1 ID : **6306801982463**
Option 2 ID : **6306801982464**
Option 3 ID : **6306801982461**
Option 4 ID : **6306801982462**
Status : **Answered**
Chosen Option : **4**

ost appropriate SYNONYM of the given word below.

ng

aining

ealing

g

ading

Question ID : **630680507251**
Option 1 ID : **6306801982468**
Option 2 ID : **6306801982465**
Option 3 ID : **6306801982466**
Option 4 ID : **6306801982467**
Status : **Not Answered**
Chosen Option : **--**

ing question a part of the statement is given in brackets. You are required to
ext with correct Idioms given in the options.

Jaydon was late with his English assignment, Ms. Angela decided to (ease up
ow some leeway and give another chance) since she knew he had the stomach

the ball

as a cucumber

s your fingers

im some slack

Question ID : **630680507249**
Option 1 ID : **6306801982458**
Option 2 ID : **6306801982459**
Option 3 ID : **6306801982457**
Option 4 ID : **6306801982460**
Status : **Not Answered**
Chosen Option : **--**

nost logical order of the sentences from among the four given choices to
:oherent paragraph.

s a major issue globally, where millions of tons of food fit for consumption are
consumers and retailers in industrialized nations.
of food also wastes other crucial resources such as energy and water used in
:ion and cooking, which could have been used more effectively to feed the
support sustainable food production.
entally, food waste leads to more rotting food, creating more methane, which is
ost harmful greenhouse gases contributing to climate change.
this wastage is happening while over 20,000 children under the age of 5 die
inger and one in every seven people in the world go to bed hungry.
food waste, we need to adopt and practice the theme of "Think. Eat. Save,"
rages individuals to become more aware of the environmental impact of their
and to make informed decisions.

A

D

A

)

Question ID : **630680507244**
Option 1 ID : **6306801982439**
Option 2 ID : **6306801982438**
Option 3 ID : **6306801982437**
Option 4 ID : **6306801982440**
Status : **Not Answered**
Chosen Option : **--**

below passage and answer the questions.

are essential resources for our planet, providing us with valuable medicines, atural insecticides. They are also a habitat for millions of animals, plant, and es, many of which are yet to be discovered. The destruction of rainforests through nization, and cattle ranching is resulting in the loss of species, erosion of fertile cline in the world's oxygen supply. The first cause of mass destruction of logging. The need for commercially valuable trees such as mahogany and r leads to bulldozing roads through the forest, taking down other trees in the en one commercially valuable tree is cut down, on average, 17 non-commercially s also fall. The logging industry can eradicate 30% of a rainforest where only a cially valuable trees were cut down, and this rate can lead to the clearing out of ests in a few years.

ion of rainforests is resulting in the loss of millions of animals, plant, and insect e loss of species and destruction of fertile land has a significant impact on the en supply. Rainforests are responsible for a significant portion of the world's the destruction of rainforests ultimately leads to the destruction of our own ly.

n, the rainforest is an essential resource for our planet and contains many d possibilities. However, the destruction of rainforests through logging, and cattle ranching is leading to the loss of millions of species, eroded and , and a decline in the world's oxygen supply. It is essential that we take action to ests to protect our planet and prevent further damage to the environment.

No : 14

central theme of the passage.

passage talks about the importance of rainforests and the actions we need to to protect our planet and prevent further damage to the environment.

passage talks about the destruction of rainforests through logging.

passage talks about the need for commercially valuable trees such as mahogany.

passage talks about the loss of millions of species due to rainforests.

Question ID : **630680507257**
Option 1 ID : **6306801982486**
Option 2 ID : **6306801982485**
Option 3 ID : **6306801982487**
Option 4 ID : **6306801982488**
Status : **Not Answered**
Chosen Option : --

below passage and answer the questions.

are essential resources for our planet, providing us with valuable medicines,
atural insecticides. They are also a habitat for millions of animals, plant, and
es, many of which are yet to be discovered. The destruction of rainforests through
nization, and cattle ranching is resulting in the loss of species, erosion of fertile
cline in the world's oxygen supply. The first cause of mass destruction of
s logging. The need for commercially valuable trees such as mahogany and
r leads to bulldozing roads through the forest, taking down other trees in the
en one commercially valuable tree is cut down, on average, 17 non-commercially
s also fall. The logging industry can eradicate 30% of a rainforest where only a
cially valuable trees were cut down, and this rate can lead to the clearing out of
ests in a few years.
ion of rainforests is resulting in the loss of millions of animals, plant, and insect
e loss of species and destruction of fertile land has a significant impact on the
en supply. Rainforests are responsible for a significant portion of the world's
the destruction of rainforests ultimately leads to the destruction of our own
ly.
n, the rainforest is an essential resource for our planet and contains many
d possibilities. However, the destruction of rainforests through logging,
and cattle ranching is leading to the loss of millions of species, eroded and
and a decline in the world's oxygen supply. It is essential that we take action to
ests to protect our planet and prevent further damage to the environment.

n No : 15

ost appropriate SYNONYM of the given word below.

gible

nificant

inal

tantial

Question ID :	**630680507259**
Option 1 ID :	**6306801982494**
Option 2 ID :	**6306801982493**
Option 3 ID :	**6306801982495**
Option 4 ID :	**6306801982496**
Status :	**Answered**
Chosen Option :	**3**

...below passage and answer the questions.

...are essential resources for our planet, providing us with valuable medicines, ...atural insecticides. They are also a habitat for millions of animals, plant, and ...es, many of which are yet to be discovered. The destruction of rainforests through ...nization, and cattle ranching is resulting in the loss of species, erosion of fertile ...cline in the world's oxygen supply. The first cause of mass destruction of ...s logging. The need for commercially valuable trees such as mahogany and ...r leads to bulldozing roads through the forest, taking down other trees in the ...en one commercially valuable tree is cut down, on average, 17 non-commercially ...s also fall. The logging industry can eradicate 30% of a rainforest where only a ...cially valuable trees were cut down, and this rate can lead to the clearing out of ...ests in a few years.

...ion of rainforests is resulting in the loss of millions of animals, plant, and insect ...e loss of species and destruction of fertile land has a significant impact on the ...en supply. Rainforests are responsible for a significant portion of the world's ...the destruction of rainforests ultimately leads to the destruction of our own ...ly.

...n, the rainforest is an essential resource for our planet and contains many ...d possibilities. However, the destruction of rainforests through logging, ...and cattle ranching is leading to the loss of millions of species, eroded and ...and a decline in the world's oxygen supply. It is essential that we take action to ...ests to protect our planet and prevent further damage to the environment.

...n No : 16

...suitable title for the passage.

...ral Habitat and its issues

...of millions of species

...orests- essential resources for our planet

...Destruction of Rainforests

Question ID : **630680507256**
Option 1 ID : **6306801982482**
Option 2 ID : **6306801982481**
Option 3 ID : **6306801982483**
Option 4 ID : **6306801982484**
Status : **Not Answered**
Chosen Option : **--**

ion:

below passage and answer the questions.

are essential resources for our planet, providing us with valuable medicines,
atural insecticides. They are also a habitat for millions of animals, plant, and
es, many of which are yet to be discovered. The destruction of rainforests through
nization, and cattle ranching is resulting in the loss of species, erosion of fertile
cline in the world's oxygen supply. The first cause of mass destruction of
logging. The need for commercially valuable trees such as mahogany and
r leads to bulldozing roads through the forest, taking down other trees in the
en one commercially valuable tree is cut down, on average, 17 non-commercially
s also fall. The logging industry can eradicate 30% of a rainforest where only a
cially valuable trees were cut down, and this rate can lead to the clearing out of
ests in a few years.
ion of rainforests is resulting in the loss of millions of animals, plant, and insect
e loss of species and destruction of fertile land has a significant impact on the
en supply. Rainforests are responsible for a significant portion of the world's
the destruction of rainforests ultimately leads to the destruction of our own
ly.
, the rainforest is an essential resource for our planet and contains many
d possibilities. However, the destruction of rainforests through logging,
and cattle ranching is leading to the loss of millions of species, eroded and
, and a decline in the world's oxygen supply. It is essential that we take action to
sts to protect our planet and prevent further damage to the environment.

No : 17

ost appropriate SYNONYM of the given word below.

truction

ing

g

c

ve Aptitude

ill come in the place of "?" in the following question?

$$81 = \sqrt[3]{64} + \sqrt[3]{2197}$$

ld scooter for Rs. 2800 and spends Rs. 1000 on its repairs. If he sells the scooter for Rs. 4800, his gain

.32%

.31%

.67%

.5%

sum of square of prime number between 4 to 16?

1

5

4

d a sum of Rs. 6144 in a bank at 6.5%per annum compounded annually for a time period of 2 years. Find
nterest.

. 825

. 981

. 1181

. 881

cylinder is 47 cm and its radius is 21 cm. Curved surface area of cylinder is:

58 cm^2

90 cm^2

04 cm^2

34 cm^2

atches A and B of a class. Batch A consists of 40 students and batch B consists of 48 students. Find the
of whole class, if average weight of batch A is 36 kg and that of batch B is 38 kg.

5 kg

kg

.1 kg

1 kg

64 times in 2 years, compounded annually at a certain rate of interest. Calculate annual interest rate.

0%

0%

0%

%

a cone is 64680 cm³. If the height of the cone is 140 cm, then find the diameter of its base. (Take $\pi = \frac{22}{7}$)?

cm

cm

cm

cm

=26, and c= 20, then find the value of $a^2 + b^2 + c^2 + 2(ab + bc + ca)$.

00

)0

)

)

25 litres, the ratio of milk and water is 4 : 3. If 4 liters of this mixture is replaced by 4 liters of milk, then ratio of milk and water in the newly formed mixture?

: 11

: 8

7

: 9

> school at a speed of 20 km/hrs. and walks back home at a speed of 5 km/h. If the school is 20 km away,
's average speed for the round trip?

m/hrs.

m/hrs.

m/hrs.

km/hrs.

number, the second digit and the last digit places are interchanged. The new number thus formed is
 original number by 2277. What is the difference between the second and last digit of that number?

$+ \cos \theta = 1$, then what is the value of $\sin^{88} \theta + \cos^{88} \theta$?

playing cards, there are 4 suits (hearts, diamonds, clubs, spades), each with cards numbered 2 through
rds (jack, queen, king) along with an ace. Consider drawing a single card from the deck. What is the
lrawing a face card (jack, queen, king)?

ells his goods at cost price but uses a weight of 992 grams for a kg. weight. What is his gain percent?

%

31%

7%

%

kes a score of 92 runs in the 16th inning and increases average by 5. What is his average after 16th

subtracted from a number; it reduces to its 60 %. Find the four-fifth of that number.

sel increases by 14.8 %. Find by how much percent a truck owner must reduce his consumption in order same budget?

.89%

56%

42%

1%

between two numbers is 5 : 6 and their LCM is 330. The first number is.

…ven below shows the marked price and discount percentage of five different articles.

Marked price	discount percent
2500	35%
1800	40%
1200	25%
2000	20%
800	10%

…erence of selling price of Pant and jeans

. 1625

. 2265

. 900

. 725

…lity of getting a bad egg in a lot of 160 is 0.25. The number of bad eggs in the lot is

)

…as efficient as Akansha and takes 36 days less than Akansha to complete the job. Find the time in which …the job together.

days

days

days

days

between two parallel lines $3x + 4y + 20 = 0$ and $3x + 4y + 5 = 0$ is given by:

56 km upstream in 6 hours and comes back same distance in 3 hours. Find the speed of the boat in still

8 km/hrs.

9 km/hrs.

.5 km/hrs.

.5 km/hrs.

o be an acute angle, and $8*\cos^2 \theta - 2 = 0$, then what is the value of $\tan (\theta - 15°)$?

a piece of work in 4 days, which 'B' completes it in 7 days and 'C' takes 15 days to complete the same g will they take to complete the work , if they work together?

7 days

5 days

18 days

6 days

erical lead shots each of diameter 7 cm can be obtained from a rectangular solid of lead with dimension 35 cm, (Take $\pi = \frac{22}{7}$)?

)

)

)0

0

quare is increased by 8 cm, then its area is increased by 304 sq. cm. What is the perimeter of original

cm

cm

cm

cm

f two number is 110 and the sum of their squares is 264, then the sum of these numbers will be?

ven below shows the marked price and discount percentage of five different articles.

Marked price	discount percent
2500	35%
1800	40%
1200	25%
2000	20%
800	10%

ing price of trouser.

. 2400

. 800

. 400

. 1600

square root of closest perfect square to 532.

o a shop and bought a sofa. She got a 15% discount on it. Had she gotten 20% discount she would have
more. How much did she pay for the sofa?

. 30000

. 25500

. 52000

. 5200

Question ID : **630680507584**
Option 1 ID : **6306801983777**
Option 2 ID : **6306801983778**
Option 3 ID : **6306801983780**
Option 4 ID : **6306801983779**
Status : **Not Answered**
Chosen Option : **--**

he roots of the quadratic equation $x^2 - 9x + 20 = 0$, then the value of $\alpha^2 + \beta^2$ is:

Question ID : **630680507596**
Option 1 ID : **6306801983828**
Option 2 ID : **6306801983826**
Option 3 ID : **6306801983827**
Option 4 ID : **6306801983825**
Status : **Answered**
Chosen Option : **3**

received by a person in 13 years on a principal of Rs. 39000 is 130 percent of the principal. What is the
terest?

%

%

%

%

Question ID : **630680507572**
Option 1 ID : **6306801983730**
Option 2 ID : **6306801983731**
Option 3 ID : **6306801983732**
Option 4 ID : **6306801983729**
Status : **Not Answered**
Chosen Option : **--**

from the top and 18th from the bottom in the class. How many students are
class?

following options will replace the question mark based on the states and their
ties?

itsar:: Rajasthan :?

ali

la

ot

almer

N>O, then which among the following is correct ?

uch symbols are there in the series which are immediately followed by

5 B # 4 C 1 L $ 6 M 7 B 3 $ M @ 6 K 5 @

code language, STOP is written as 70 and CROSS is written as 74. How ROAD
n in the same code language?

s are removed from the series what will be the 8th element from the left?

6 N 5 1 $ 7 # H 2 N 4 ^ 3 D & 8 F 1 H $ %

following is different from the other three options?

a

e

inger

multiplied by", 'B' means 'divided by', 'C' means 'minus' and 'D' means "plus'' ',
ll be the value of following expression?

B 23 D 7 = ?

ers are removed from the series, how many symbols will be left there?

H 9 D & 8 R 3 # 6 K 7 H G D @ S 6 D # 9

g the following option is correct on the basis of statement and courses of

A recent report reflected that children below five died in some cities of India
diarrhoea.

ction:
nts of India should take adequate measures to improve the hygienic conditions
by conduction awareness campaigns.
elow five years in the cities should be periodically checked up by doctors.

II follows

er I nor II follows

I follows

I and II follow

g the following option is correct on the basis of statement and courses of

he sale of a particular product of a company has considerably increased
ight efforts made by the company.

ction:
ny should make a proper study of reasons for the success of the product.
any should accrue some bonus to the every employee.

I and II follow

I follows

II follows

er I nor II follows

in's father's brother's wife's mother-in-law related to Sachin?

dmother

er

rnal grandmother

er in law

boys, Shonit is ranked 10th from either side. How many boys are there in the

rendra, Mohit, Sudesh, Amrit and Ronit are standing in a line from North to
sh is standing between Amrit and Ronit. Ronit is standing between Sudesh and
endra is standing at the north end, then who is standing at the south end of the

it

ndra

sh

g the following option will replace the question mark on the basis sports and
n?

n : Hockey :: Baichung Bhutia :?

ball

ey

et

is

ne in the place of question marks (??) to make the following series logically

7, S 81 ??

3

I3

3

3

e statement given below, identify the total amount spent by a state in a year.

- The state sold 5 articles worth Rs 5000 in a year.
:- The state sold 10000 pieces of clothing worth Rs. 3000 in a year.

statement II is required to answer.

the statements are insufficient to answer.

statement I is required to answer.

Statement I and Statement II are required to answer the question.

me in place of the question marks (?) to make the series given below logically

5, 21, 29, 25, ??

3

6

9

8

Harsh is 5th from the top in a group of 31 candidates and 3 new candidates st before and after him, what will be his new rank from bottom?

following pair is similar to the expression below?

37

12

120

843

uch letters are there in the series which are immediately preceded by numbers?

6 # F % G & * N 6 A 3 $ G @ 5 F 3 @ H 3

g the following option is correct on the basis of the statements and conclusions
Statement is based on hights of 5 person namely Sunil,Rahul
sh,Mansi)?
Sunil>Rahul>Rakesh>Vikash>Mansi
:- Vikas is Shorter than Rakesh.
I:- Mansi is Shorter than Vikas.

II conclusion follow

er conclusion I nor II

I conclusion follow

conclusion I and II

uch numbers are there in the series which are immediately preceded by

J 4 N @ 6 J $ 6 % N 3 F 3 G 1 $ 8 D 5 4 G L $ ^

following option will replace the question mark?

'6 :?

multiplied by", 'B' means 'divided by', 'C' means 'minus' and 'D' means "plus'" ,
ll be the value of following expression?

9 D 8 = ?

following pair is similar to the expression below?

: 23

; : 23

!3 : 33

5 : 23

multiplied by", 'B' means 'divided by', 'C' means 'minus' and 'D' means "plus'" ,
ll be the value of following expression?

B 5 D 3 = ?

en statement(s) and conclusions carefully. Assuming that the information given
ments is true, even if it appears to be at variance with commonly known facts,
of the given conclusions logically follow(s) from the statement(s).

are bread.
r are bread.
kin are burger.

:
a are burger.
ads are pasta
ad are pumpkin.

III

II and III

I and III

I

...me in place of the question marks (?) to make the series given below logically

, 49, 59, 72, ??

4

4

5

2

...rendra, Mohit, Sudesh, Amrit and Ronit are standing in a line from North to
...sh is standing between Amrit and Ronit. Ronit is standing between Sudesh and
...endra is standing at the north end, then who is standing in the middle of the

...ndra

...t

...

...esh

...code language, TABLE is written as **ELBAT** and CHAIR is written as **RIAHC**. How
... written in the same code language?

:

:

)

s

...en statement(s) and conclusions carefully. Assuming that the information given
...nents is true, even if it appears to be at variance with commonly known facts,
...n of the given conclusions logically follow(s) from the statement(s).

...are grapes.
...s are sauces.
...s are apricots.

...:
...s are sauces.
...pes are apricots.
...ricots are sauces.
...icots are grapes.

...II

...I

...III

...IV

...n is different from the other three options on the basis of cities and their
...ountries?

...York

...how

...ut

...agraj

...j after sunrise, Smita was standing facing a wall. The shadow of the pole was
...er left side. Which direction was Smita facing?

...h

...n

e following is method of size reduction in the context of mechanical operations?

sion

oth I and II

ither I nor II

ly I

ly II

Question ID : **630680506791**
Option 1 ID : **6306801980671**
Option 2 ID : **6306801980672**
Option 3 ID : **6306801980669**
Option 4 ID : **6306801980670**
Status : **Answered**
Chosen Option : **1**

ia can be used in manufacturing of _____.

acid

oth I and II

ly I

ly II

ither I nor II

Question ID : **630680506846**
Option 1 ID : **6306801980891**
Option 2 ID : **6306801980889**
Option 3 ID : **6306801980890**
Option 4 ID : **6306801980892**
Status : **Answered**
Chosen Option : **1**

...ttering can be measured for particles of size range of _____.

...1 – 10 μm

...005 – 0.1 μm

...ore than 50 μm

...– 35 μm

...f the following is the type of reactors?

...ar reactor

...d – flow reactor

...ly I

...oth I and II

...ly II

...ither I nor II

...xtinguisher, black coloured band indicates _____.

...m

...ter

...rbon-di-oxide

...t chemical

eparating agent is used in crystallization process?

at

ying gas

embrane

exchange resins

is stationary, then which of the following will be correct regarding velocity (v) of fluid at the boundary?

$< v < 15$

$= 0$

$< v < 35$

$\leq v \leq 20$

to assess the environmental conditions and trends, support policy development and its implementation
ormation for reporting to national policymakers interactions forums and public.

vironmental control

vironmental monitoring

vironmental utilization

vironmental transboundary

f the following is the part of fire extinguishers?

arge hose

ure indicator gauge

ither I nor II

ly I

ly II

oth I and II

following is used in a local closed loop system for maintaining water at a set temperature?

eumatic control

lves control

wer control

ntractors

d extraction, the residual feed stream that may have a little of the solute left in it is called the _____.

latility

ffinate

ractor

tillate

ontext of Hazards identification, which of the following is the type of safety review?

ither I nor II

oth I and II

ly II

ly I

of the following is an example of simulation?

er forecasting

t simulators used for training pilots.

oth I and II

ly I

ither I nor II

ly II

f the following is an application of membrane separation?

ntration of fruit juice.

ration of absolute alcohol.

ither I nor II

ly I

ly II

th I and II

nit of entropy is _____.

J

K/J

K

gK

ed when we need a product with properties in between the untreated process stream and the process

iterial balance

midifier

rtion

pass

f the following is the type of simulation models?

te models

inuous models

th I and II

ly I

ly II

ither I nor II

following is an objective of size reduction in the context of mechanical operations?

solid waste easily

ve the handling

ither I nor II

ly I

th I and II

ly II

...rse of mass transfer coefficient is known as _____.

...lar flux

...ncentration driving force

...ass transfer resistance

...ss flux

...nit of mass of transfer coefficient is same as _____.

...mentum

...locity

...eleration

...ce

...f the following is the strategies used for decarbonizing?

...y efficiency

...trial electrification

...th I and II

...ly II

...ly I

...ither I nor II

ar flow changes to turbulent flow when _____.

ty is increased

sity of fluid is decreased

ly II

oth I and II

ither I nor II

ly I

the shear stress is directly proportional to the rate of shear strain, is known as _____.

ematic fluid

n-newtonian fluid

wtonian fluid

l fluid

reaction depends upon _____.

rature

yst

oth I and II

ither I nor II

ly I

ly II

devices that detect physical variables such as temperature, light intensity or motion.

nsors

trument

point

nverters

ic acid can be used in _____.

es

zers

oth I and II

ither I nor II

ly II

ly I

ynold number is more than 4000, then the flow is _____.

ainar

rbulent

ady

ational

the range of Prandtl number (Pr) for water?

to 1.0

to 13.7

04 to 0.0030

to 100

the process of reducing 'carbon intensity', lowering the amount of greenhouse gas emissions produced
of fossil fuels.

e-carbonization

t-Zero

all modular reaction

rbonization

otion is caused by buoyancy forces, then this type of convention is known as _____.

ernal convection

e convection

ced convection

tricted convection

for a heat engine to produce network in a complete cycle if it exchanges heat only with bodies at a
perature. As per the context of second law of thermodynamics, above statement was given by _____.

ddle – wheel

usius

lvin – Planck

le

...atical models can be useful in _____.

...ch and development

...n

...t operation

...ly II and III

...ly I and III

...ly I and II

...II and III

...f non-ideal flow reactors, it is often not necessary to know the details of the entire flow field but rather
...fluid elements reside in the reactor i.e. called _____.

...distribution of olefins time

...distribution of regression times

...dispersion of radial times

...distribution of residence times

ie classical controllers, reset action is also known as _____.

portional

portional integral

portional integral derivative

portional action

ollowing is true regarding cash flow for industrial operation?

capital reservoir normally are in the form of loans, stock issue and cash flow from project operations

n the capital reservoir are in the form of capital investment in projects, dividends to stockholders

ly I

th I and II

ly II

ither I nor II

of the following is an another name of rate law?

quation

expression

ly I

ither I nor II

ly II

oth I and II

ich a stream leaving a processing unit is partly returned to the same unit for reusing is known as _____ .

illed

urned

rocessing

cycle

ric acid can be manufactured by _____.

horus pentachloride

phorous pentoxide

ly II

ly I

ither I nor II

th I and II

yl chloride can be used in manufacturing of _____.

at

bag

r pipes

ly I and II

I and III

ly I and III

ly II and III

acid with a strength of over 100 wt% is referred to as _____.

phur trioxide

rites

eum

e sulfuric acid

the importance of renewable energy?

eenhouse gas emission

rsifying energy supply

ither I nor II

ly I

ly II

oth I and II

solated system, entropy can be _____.

ater than zero

al to zero

eater than or equal to zero

s than zero

f the following is/are the methods for calculating profitability?

f return on investment

ck period

ly I

ither I nor II

oth I and II

ly II

Question ID : **630680506829**
Option 1 ID : **6306801980821**
Option 2 ID : **6306801980824**
Option 3 ID : **6306801980823**
Option 4 ID : **6306801980822**
Status : **Answered**
Chosen Option : **3**

f the following materials is used for construction of plant?

mers

ite

ither I nor II

ly II

ly I

oth I and II

Question ID : **630680506833**
Option 1 ID : **6306801980840**
Option 2 ID : **6306801980838**
Option 3 ID : **6306801980837**
Option 4 ID : **6306801980839**
Status : **Not Answered**
Chosen Option : **--**

overall order of a reaction which has rate expression i.e. Rate = $K[A]^{3/2}[B]^{1/2}$?

of the following is the important factor for plant location?

materials

portation facilities

ly I

ither I nor II

oth I and II

ly II

...f the following is NOT a type of capital cost estimates?

...inary estimate

...red estimate

...th I and II

...ly II

...ly I

...either I nor II

...f the following is the properties of ammonia?

...rless gas

...n egg smell

...ly I

...ly II

...th I and II

...ither I nor II

ormal rating systems that provide penalties for safety equipment and procedure.

ow index

gal index

nealogical index

torial index

of the following is a type of fluids?

fluid

plastic fluid

ly II

ly I

oth I and II

ither I nor II

us reaction, the units of the rate of reaction are _____.

$L^{-1}s^{-1}$

$L^{-1}s^{-1}$

L^{-1}

s^{-1}

rices that monitor signals from transducers and take the necessary action to keep the process within
s.

op

ntrollers

trument

tuators

the following monomers is used for preparation of polyvinyl chloride?

loride

ither I nor II

ly I

th I and II

ly II

context of first law of thermodynamics, energy can be in _____.

ly II

th I and II

ly I

ither I nor II

nsfer coefficient depends on _____.

ntration driving force (ΔC_A)

flux (N_A)

th I and II

ly I

ither I nor II

ly II

f the following is type of heat exchangers?

e – pipe heat exchanger

pact heat exchanger

ither I nor II

ly I

th I and II

ly II

deal gas, fugacity has the same dimensions as _____.

essure

ce

a

mentum

f the following is the factor for plant layout?

and safety consideration

e availability

th I and II

ly II

ly I

ither I nor II

f the following is an example of evaporation?

g of vegetables

tion of waste heat in wet cooling towers

ither I nor II

th I and II

ly I

ly II

he context of radiation, what is the range of emissivity(ε)?

ε < 1

ε < 1

ε ≤ 1

≤ ε ≤ 1

method of size reduction by rubbing or scrubbing the materials between two hand surfaces.

trition

ability

anular

ear

of the following is the part of fire triangle?

izer

tion source

ly I and III

ly I and II

ly II and III

II and III

...e Fick's law, the SI unit of diffusion coefficient is _____.

s^2

$^2/s$

$/s$

$/s^2$

...f the following is an elemental composition of petrochemicals?

...

...gen

...en

...ly II and III

...ly I and II

...I and III

...ly I and III

he following is the cause of irreversibility in second law of thermodynamics?

quilibrium

nent of dissipative effects

ither I nor II

th I and II

ly I

ly II

ext of numerical method, solution of simultaneous nonlinear algebric equations usually done by _____.

tinuity method

rative method

crete method

egration method

veloped in an attempt to reduce the correction time that would have occurred using proportional action

portional

portional output

oportional derivative

portional integral

ext of joule's experiment in first law of thermodynamics, the SI unit of constant of proportionality (J) is

m-J

/m

mJ

n/J

he following is the factor that affect the investment and production costs?

f equipment

ictuation

ny policies

ly II and III

ly I and III

ly I and II

II and III

f the following separation process is used for separation of air?

ι – exchange

ying

ystallization

stillation

index value for a given time showing the cost at that time relative to certain base time.

ost index

ique index

istered index

sh index

fines in which chemical reactions occur are called _____.

ietics

ictors

alysis

iction rate

context of chemical kinetics, hydrogenation of ethane is an example of _____.

st order reaction

f order reaction

ond order reaction

o order reaction

n over the surface in which the temperature variation in the directional normal to the surface is called

n-boundary line

undary line

ermal boundary layer

dro boundary layer

Question ID : **630680506787**
Option 1 ID : **6306801980655**
Option 2 ID : **6306801980654**
Option 3 ID : **6306801980653**
Option 4 ID : **6306801980656**
Status : **Answered**
Chosen Option : **3**

following is the correct pair about equipment and their sound level(dBA) at a distance of 1 m?

s – 90 to 120

– 120 to 210

ly II

th I and II

ither I nor II

ly I

Question ID : **630680506832**
Option 1 ID : **6306801980834**
Option 2 ID : **6306801980835**
Option 3 ID : **6306801980836**
Option 4 ID : **6306801980833**
Status : **Not Answered**
Chosen Option : **--**

c rate at which a catalytic cycle turns over on an active site is called _____.

face reaction

orption

nover frequency

orption

Question ID : **630680506818**
Option 1 ID : **6306801980778**
Option 2 ID : **6306801980777**
Option 3 ID : **6306801980780**
Option 4 ID : **6306801980779**

f the following is NOT the type of environmental monitoring?

nitoring

monitoring

either I nor II

th I and II

ly I

ly II

f the following is NOT a type of boiling?

oiling

boiling

ly II

ly I

th I and II

either I nor II

following are required to the presence of an intervening medium for the transfer of heat?

n

on

ly I and III

ly II and III

I and III

ly I and II

automatic control of an output variable by sensing the amplitude of the output parameter from the process
it to the desired level.

ocess control

ntrol loop

tuators

erators

init of convection heat transfer coefficient is _____.

K/m^2

m^2/K

$/mK^2$

m^2K

f the following is the type of renewable energy?

energy

energy

ly I

oth I and II

ither I nor II

ly II

are devices that can change one form of energy to another.

ansducers

tuators

nvertors

ntrollers

rocess is characterized by the rapid formation of _____ at the solid – liquid interface.

x

pour bubbles

our pressure

iporation

ntation of the control loops can be achieved by using _____.

atic

g electronics

l electronics

ly II and III

ly I and II

II and III

ly I and III