

Narsee Monjee Institute of Management Studies

Notations :

- 1.Options shown in green color and with ✓ icon are correct.
- 2.Options shown in red color and with ✗ icon are incorrect.

Question Paper Name :	NMIMS CET PHARM 2021 27th June 2021 Shift 2
Subject Name :	NMIMS CET PHARM 2021
Creation Date :	2021-06-25 17:02:06
Duration :	126
Total Marks :	122
Display Marks:	Yes
Calculator :	Normal
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	Yes
Scratch Pad Required? :	Yes
Rough Sketch/Notepad Required? :	Yes
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console? (SA type of questions will be always auto saved) :	No

Display Notepad Pre Exam

Group Number :

1

Group Id :	9046841604
Group Maximum Duration :	3
Group Minimum Duration :	3
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	1
Is this Group for Examiner? :	No

Display Notepad Pre Exam

Section Id :	9046841697
Section Number :	1
Section type :	Offline
Mandatory or Optional :	Mandatory
Number of Questions :	1
Number of Questions to be attempted :	1
Section Marks :	1
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Sub-Section Number :	1
Sub-Section Id :	9046842618
Question Shuffling Allowed :	No

Question Number : 1 Question Id : 90468414687 Question Type : SUBJECTIVE

Correct Marks : 1

Kindly display your Notepad (Rough Sheet) for 3 minutes before the webcam. Also show both pages both sides numbered 1,2,3 and 4. This is a mandatory step if you are using rough sheets.

Language Proficiency

Group Number :	2
Group Id :	9046841605
Group Maximum Duration :	0
Group Minimum Duration :	0
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	10
Is this Group for Examiner? :	No

Language Proficiency

Section Id :	9046841698
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	7
Number of Questions to be attempted :	7
Section Marks :	10
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Sub-Section Number :	1
Sub-Section Id :	9046842619
Question Shuffling Allowed :	Yes

Question Number : 2 Question Id : 90468414688 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Parts of the given sentence have been underlined. One of them contains an error. Select the

option that correctly rectifies the error.

So many 500 children a week use the computers, whether it is to play educational games or to connect with the rest of the world.

Options :

1. ✓ As many as
2. ✗ are using the
3. ✗ whether for
4. ✗ in connecting with the

Question Number : 3 Question Id : 90468414689 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Parts of the given sentence have been underlined. One of them contains an error. Select the option that correctly rectifies the error.

The drivers are not making enough money because there are so many of them with the city, while millions of people outside the city need transportation.

Options :

1. ✗ will not be making
2. ✗ of many
3. ✓ in the city
4. ✗ needing transportation

Question Number : 4 Question Id : 90468414690 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Select the most appropriate option to fill in the blank.

They could not find the map because it had fallen _____ the large bookcase.

Options :

1. ✘ within
2. ✔ behind
3. ✘ beyond
4. ✘ further than

Question Number : 5 Question Id : 90468414691 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Select the most appropriate option to fill in the blank.

Some glaciers are just a few centuries old, _____ others have been in existence for hundreds of thousands of years.

Options :

1. ✔ whereas
2. ✘ insofar as
3. ✘ furthermore
4. ✘ nevertheless

Question Number : 6 Question Id : 90468414692 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Select the most appropriate option to fill in the blanks.

They realise _____ not liable for the payment, so _____ is nothing that can be done to force them to do so.

Options :

1. ✘ their, there
2. ✘ there, they're
3. ✔ they're, there
4. ✘ there, their

Question Number : 7 Question Id : 90468414693 Question Type : MCQ Option Shuffling : Yes Is

Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

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

A. Secondary compounds help tea plants in many different respects.

B. The distinctive taste of tea comes from essential oils that impart flavour and caffeine into a cup of hot water.

C. These include defending them against pests and helping them fight for survival.

D. These compounds are not necessary for the survival of the tea plant's cells; they are what is known as secondary compounds.

Options :

1. ✓ B, D, A, C

2. ✗ A, B, D, C

3. ✗ A, B, C, D

4. ✗ B, C, A, D

Sub-Section Number : 2

Sub-Section Id : 9046842620

Question Shuffling Allowed : Yes

Question Id : 90468414694 Question Type : COMPREHENSION Sub Question Shuffling Allowed

: Yes Group Comprehension Questions : No

Question Numbers : (8 to 11)

Question Label : Comprehension

Read the given passage and answer the following questions.

Let's remind ourselves of what green plants do for us. They shower oxygen and clear up carbon-dioxide meant to suffocate us. They pump up and purify water from the earth's depths — and make rain, too. Most importantly, they provide every calorie of energy — in different forms — that every living (and non-living) thing uses. They convert sunlight into sugars and starch, and dare I say, steaks and smoked ham and petrol! Even when long dead and buried deep, they provide the

fuel required to run our factories, cars and planes...

Plants also run the world's best juice factory, producing, through their fruit, juices of bewildering variety, natural sweetness and flavour. ...One of the main reasons put forward by people as to why it's okay to rip out plants from their roots and plunge them into boiling water or sizzling oil is that, unlike animals, they are not sentient. Perhaps, not in the way we understand, but maybe they are sentient in their own way. They are sensitive to light... When under attack, plants produce (at great cost) poisons and stomach irritants — like tannins — to protect themselves (the reason why tea is bitter and is used by the poor to suppress appetite). They even warn their neighbours that an elephant or human with a sickle is coming around. Deep underground, their roots spread far and wide, and, with the help of fungi, barter with other plants for nutrients they may lack...

I think our attitude would change if we could all see exactly what goes on in a plant as it lives, grows and matures — as if it were transparent. The miracle machinery of the leaves working with chlorophyll, the marvellous channels up and down the stem and trunk through which water and food are transported, the delicate manner a flower unfolds and how a fruit ripens and sweetens just until it is perfect. How its systems shut down as winter — or the blazing hot summer — approaches and then rev up again when the season changes. How it might go to war with a neighbouring plant claiming territory and resources, often when it is an intruder (we call these weeds).

Sub questions

Question Number : 8 Question Id : 90468414695 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following best describes the central theme of the passage?

Options :

1. ✘ The role of plants in the food chain.
2. ✔ The importance of plants in our everyday lives.
3. ✘ The role of plant-based foods in our everyday diet.
4. ✘ The importance of shifting to a plant-based diet.

Question Number : 9 Question Id : 90468414696 Question Type : MCQ Option Shuffling : Yes Is

Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The author lists all of the following as benefits from plants, EXCEPT:

Options :

1. ✘ their actions have positive environmental outcomes
2. ✘ they provide fuel for machinery
3. ✘ they provide the variety of nutrition our bodies need
4. ✔ their sensitivity protects us from attacks

Question Number : 10 Question Id : 90468414697 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

According to the author, people believe that it is alright to cook plants because:

Options :

1. ✘ of essential nutrients contained in plant-based foods.
2. ✔ unlike animals they are not conscious of the harm being done to them.
3. ✘ they provide us with important energy our bodies need.
4. ✘ they proliferate faster than animals and can be easily replaced.

Question Number : 11 Question Id : 90468414698 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In the last paragraph, which of the following best describes the emotion the author suggests we should adopt towards plants?

Options :

1. ✔ Appreciation
2. ✘ Bewilderment
3. ✘ Pride
4. ✘ Empathy

Logical Intelligence

Group Number :	3
Group Id :	9046841606
Group Maximum Duration :	0
Group Minimum Duration :	0
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	20
Is this Group for Examiner? :	No

Logical Intelligence

Section Id :	9046841699
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	20
Number of Questions to be attempted :	20
Section Marks :	20
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Sub-Section Number :	1
Sub-Section Id :	9046842621
Question Shuffling Allowed :	Yes

Question Number : 12 Question Id : 90468414699 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Six friends L, M, N, O, P and Q are sitting in a circle, facing away from the centre.

- a) L is the neighbour to M.
- b) N is not between L and Q.
- c) O is sitting to the immediate right of M and third to the right of N.

Who is sitting to the immediate right of O?

Options :

- 1. ✘ M
- 2. ✘ N
- 3. ✘ L
- 4. ✔ Q

Question Number : 13 Question Id : 90468414700 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Five friends, U, V, W, X and Y, are sitting in a row and all of them are facing south.

- a) U is not the neighbour to V.
- b) W is between U and V.
- c) X is fourth to the right of U.

Who is sitting second to the right of V?

Options :

- 1. ✘ W
- 2. ✘ U
- 3. ✔ X
- 4. ✘ Y

Question Number : 14 Question Id : 90468414701 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Study the given information carefully and answer the question that follows.

Following are the criteria to recruit a lab technician in a college.

The candidate must:

- A. have minimum 75% marks in 12th class in the Science stream.
- B. have minimum 65% marks in the entrance exam.
- C. have good practical knowledge of lab experiments.
- D. have at least one-year experience as a lab technician.
- E. be ready to be on one-year probation.
- F. be aged not more than 34 years as on 2 March 2021.

However, if the candidate fulfils the aforementioned criteria, EXCEPT:

- 1. at (A) above, but he/she is a graduate in Biology discipline with minimum 70% marks, then the case is to be referred to the Principal.

Details of a candidate are given. Based on the information and criteria provided, select one of the courses of action from the following options. You should not assume anything other than the information provided.

Ankit has scored 76% marks in 12th class and 66% marks in the entrance exam. He has good practical knowledge of lab experiments and is ready to be on one-year probation. He has three years of experience as a lab technician. His date of birth is 4 January 1993.

Options :

- 1. ✘ The candidate is to be selected.
- 2. ✘ The candidate is not to be selected.
- 3. ✔ Data is inadequate to provide the answer.
- 4. ✘ Case is to be referred to the Principal.

**Question Number : 15 Question Id : 90468414702 Question Type : MCQ Option Shuffling : Yes
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

Ten students, G, H, I, J, K, L, M, N, O and P, go for a competition in two batches of five each. G and

H do not go together. M and O have to go together with their best friend H. K and O never go together. G and P go together. If I and J go in one batch, then which option represents the five students who can be in the other batch?

Options :

1. ✘ GKPLM
2. ✔ GKPLN
3. ✘ GKPLO
4. ✘ GKPLH

Question Number : 16 Question Id : 90468414703 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Study the given information carefully and answer the question that follows.

Following are the criteria to recruit an employee for an IT company.

The candidate must:

- A. be a graduate in any discipline with minimum 75% marks.
- B. be aged not more than 60 years as on 1 January 2021.
- C. have a postgraduate degree with minimum 60% marks.
- D. have completed Business Analyst certification.
- E. have minimum 21 years' experience in an IT company.
- F. be ready to be on probation for five years.

However, if the candidate fulfils the aforementioned criteria, EXCEPT:

1. at (C) above, but is a graduate in Economics discipline with minimum 80% marks, his/her case is to be referred to the Vice-President of the company.
2. at (D) above, but has a 25 years' experience in an IT company, his/her case is to be referred to the CEO of the company.

Details of a candidate are given. Based on the information and criteria provided, select one of the courses of action from the following options. You should not assume anything other than the information provided.

Sandeep is 58 years old and a B.A. Economics graduate with 89% marks. He has completed his M.B.A. degree with 65%, and has 26 years' experience in an IT company. He is ready to join with the five years' probation period.

Options :

1. ✘ The employee is not to be selected.
2. ✔ Case is to be referred to the CEO of the company.
3. ✘ Case is to be referred to the Vice-President of the company.
4. ✘ The employee is to be selected.

Question Number : 17 Question Id : 90468414704 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. No debit is money.
2. All money is credit.

Conclusions:

- I. No credit is debit.
- II. Some credit is debit.

Options :

1. ✘ Both the conclusions follow
2. ✘ Only conclusion I follows
3. ✔ Either conclusion I or II follows
4. ✘ Only conclusion II follows

Question Number : 18 Question Id : 90468414705 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions is/are true with respect to the statements.

Statements:

In a football match played between Team A and Team B, the total goals made by the Team A were 5. Out of 5, 3 goals were made by LM.

Conclusions:

- I. LM is the only good player in that team.
- II. Players of Team A are much better than the players of Team B.

Options :

- 1. ✓ Neither conclusion is true
- 2. ✗ Only conclusion I is true
- 3. ✗ Only conclusion II is true
- 4. ✗ Both the conclusions are true

Question Number : 19 Question Id : 90468414706 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A statement is given followed by two conclusions. Decide which of the conclusions is/are FALSE with respect to the statement.

Statement:

Riya's best friend Rahul scolded her in front of their friends.

Conclusions:

- I. Rahul is not a good friend of Riya.
- II. Riya is not a good girl.

Options :

- 1. ✗ Only conclusion II is false

2. ✘ Only conclusion I is false
3. ✘ Neither conclusion I nor II is false
4. ✔ Both conclusions I and II are false

Question Number : 20 Question Id : 90468414707 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions does NOT follow(s) logically from the statements.

Statements:

1. All walls are windows.
2. All windows are paints.
3. No paint is a building.

Conclusions:

- I. No building is a wall.
- II. No building is a window.
- III. Some paints are walls.
- IV. All paints are windows.

Options :

1. ✔ Only conclusion IV does not follow
2. ✘ Only conclusion II does not follow
3. ✘ Only conclusion I does not follow
4. ✘ Only conclusion III does not follow

Question Number : 21 Question Id : 90468414708 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A question is given, followed by two arguments. Decide which of the arguments is/are weak with respect to the question.

Question:

Should celebrities who have raped girls be given special treatment?

Arguments:

I. Yes. Because they can never do this consciously, this has been done by mistake.

II. No. Everyone is equal in front of the law.

Options :

- 1. ✘ None of the arguments are weak
- 2. ✔ Only argument I is weak
- 3. ✘ Both arguments I and II are weak
- 4. ✘ Only argument II is weak

Question Number : 22 Question Id : 90468414709 Question Type : MCQ Option Shuffling : Yes

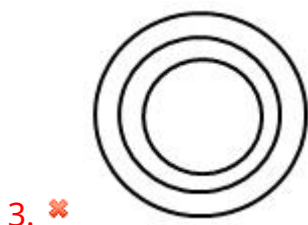
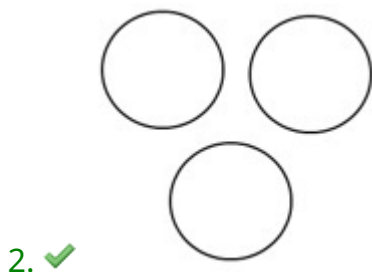
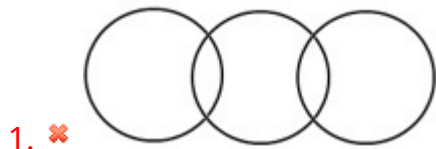
Is Question Mandatory : No

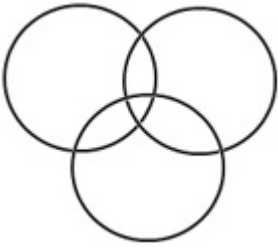
Correct Marks : 1 Wrong Marks : 0

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

Almond, Cashew, Raisin

Options :





4. ✘

Question Number : 23 Question Id : 90468414710 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

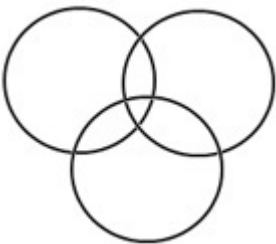
Select the Venn diagram that best represents the relationship between the following classes.

Gas, Helium, Hydrogen

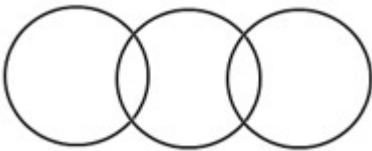
Options :



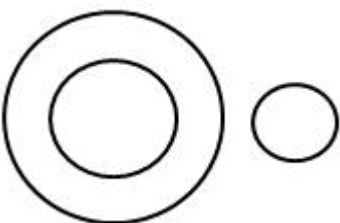
1. ✔



2. ✘



3. ✘



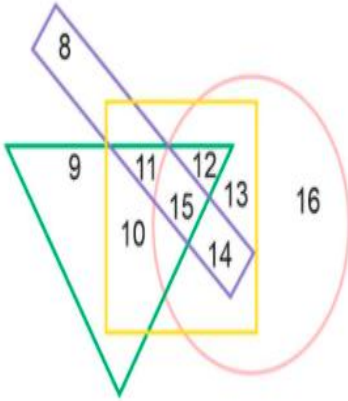
4. ✘

Question Number : 24 Question Id : 90468414711 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In the given diagram, the circle represents 'IT Company Employees', the rectangle represents 'BPO Employees', the square represents 'Hospital Staff', and the triangle represents 'School Teachers'.



As per the diagram, which of the following numbers represents IT Company Employees, School Teachers, Hospital Staff but NOT BPO Employees?

Options :

1. ✘ 13
2. ✘ 9
3. ✘ 10
4. ✔ 12

Question Number : 25 Question Id : 90468414712 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In a village of 616 people, 250 can play Hockey, 150 can play Cricket, and 300 can play Badminton. Only 24 can play Hockey and Cricket, 34 can play Cricket and Badminton, and 36 can play Hockey and Badminton. Only 10 people can play all the three sports. What will be the sum of the people who can play any and only one of the mentioned sports?

Options :

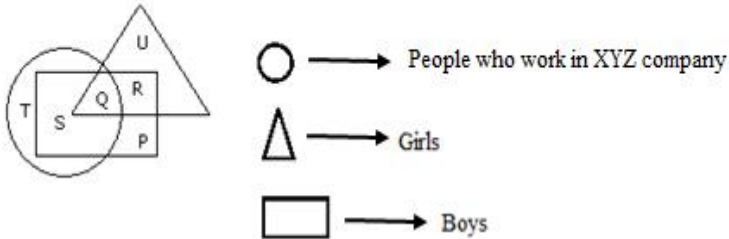
1. ✘ 400
2. ✔ 542
3. ✘ 502

4. ✖ 530

Question Number : 26 Question Id : 90468414713 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

As per the given diagram, which letter represents the boys who work in XYZ company?



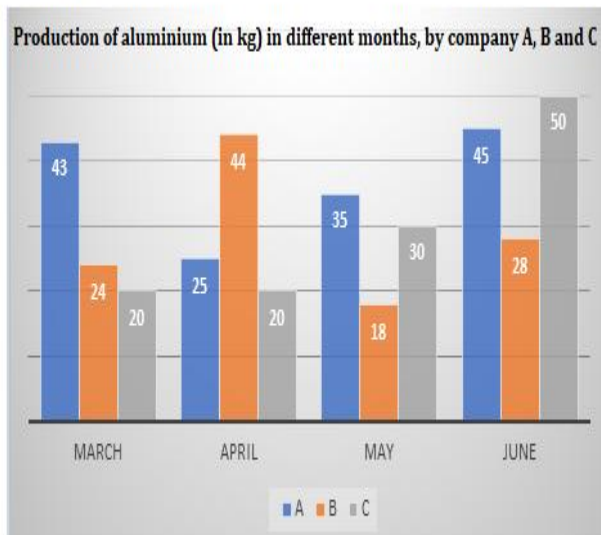
Options :

1. ✖ T
2. ✔ S
3. ✖ P
4. ✖ R

Question Number : 27 Question Id : 90468414714 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The given column graph shows the production of aluminium (in kg) in different months, by three companies, A, B and C. Study the graph and answer the question that follows.



What will be the ratio of aluminium produced by company A in both, March and June, to the aluminium produced by both, company B and company C, in May?

Options :

- 1. ✘ 11 : 5
- 2. ✘ 11 : 4
- 3. ✔ 11 : 6
- 4. ✘ 11 : 3

Question Number : 28 Question Id : 90468414715 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The given line graph shows the number of tyres manufactured by two companies, P and Q, during the period 1990-1995. Study the graph and answer the question that follows.

Number of Tyres Manufactured by Two companies over the Years (Number in Thousands)



What is the difference between the number of tyres manufactured by company P and company Q in 1994 and in 1995?

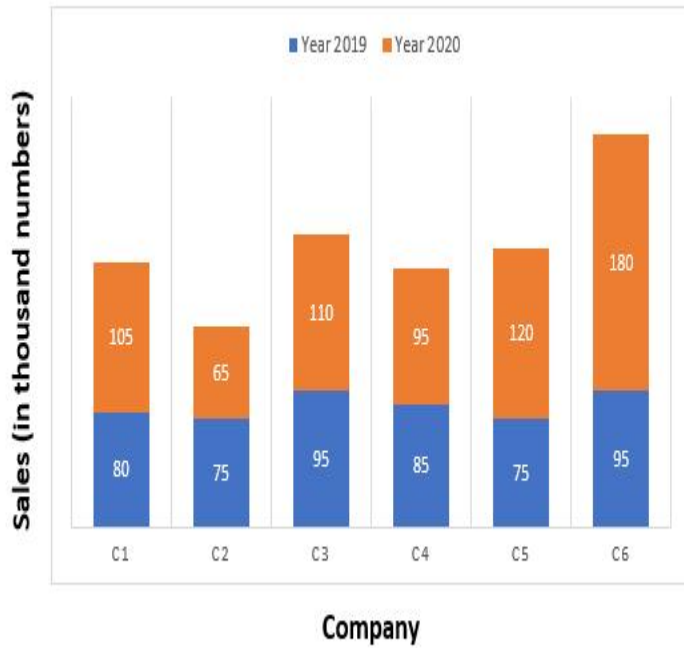
Options :

- 1. ✔ 35000
- 2. ✘ 37000
- 3. ✘ 36000
- 4. ✘ 34000

Question Number : 29 Question Id : 90468414716 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The given column graph shows the sales of shoes (in thousand numbers) by six companies during two consecutive years, 2019 and 2020. Study the graph and answer the question that follows.



The total sales of shoes in the years 2019 and 2020 by company C3 was approximately how many times that of company C4?

Options :

1. ✘ 1.67
2. ✔ 1.13
3. ✘ 1.81
4. ✘ 1.33

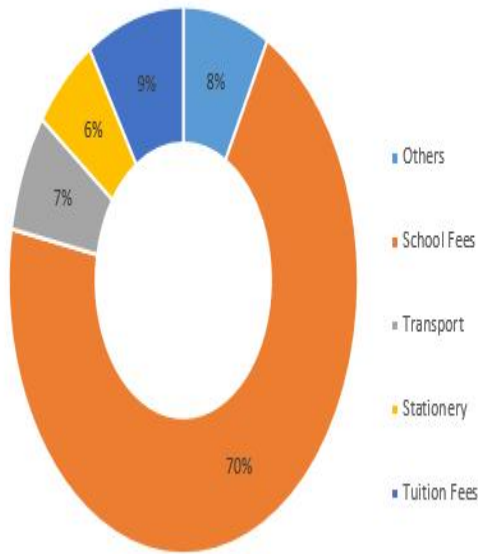
Question Number : 30 Question Id : 90468414717 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The given pie chart shows the expenditure (in percentage) on education of a student. Study the pie chart and answer the question that follows.

Education expenditure of a student (% allocation)



If ₹4,000 was spent on 'Others', then what will be the difference between the total education expenditure and the expenditure on 'Transport'?

Options :

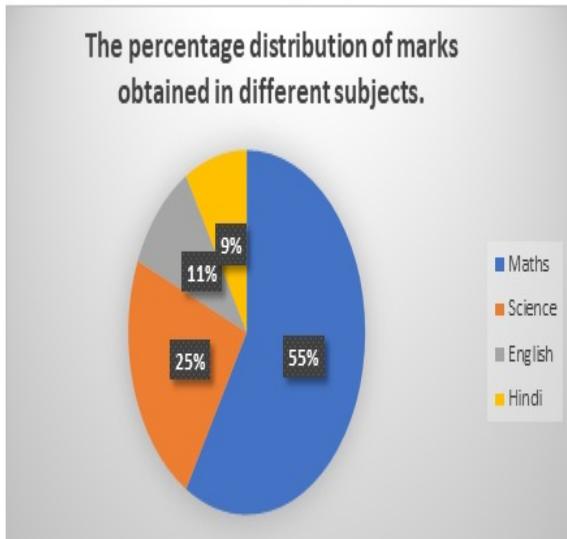
1. ✘ ₹47,500
2. ✘ ₹44,500
3. ✔ ₹46,500
4. ✘ ₹45,500

Question Number : 31 Question Id : 90468414718 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The given pie chart shows the percentage of marks obtained by Rahul in different subjects. The sum of Rahul's marks of all the subjects is 100. Study the pie chart and answer the question that follows.



Riya is a friend of Rahul and she has scored 50% more marks in Maths as compared to that scored by Rahul. She has scored 10 marks less in English as compared to that in Maths. What will be the sum of the marks scored by both of them in English?

Options :

1. ✘ 81.2
2. ✘ 83.4
3. ✘ 82.3
4. ✔ 83.5

Physics

Group Number :	4
Group Id :	9046841607
Group Maximum Duration :	0
Group Minimum Duration :	0
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	30
Is this Group for Examiner? :	No

Physics

Section Id :	9046841700
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	30
Number of Questions to be attempted :	30
Section Marks :	30
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Sub-Section Number :	1
Sub-Section Id :	9046842622
Question Shuffling Allowed :	Yes

Question Number : 32 Question Id : 90468414719 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following quantities has the dimensional formula $[M^0L^0T^{-1}]$?

Options :

1. ✓ Frequency
2. ✗ Stress
3. ✗ Impulse
4. ✗ Force

Question Number : 33 Question Id : 90468414720 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The position of an object moving along the x-axis is given by $x = a + bt^2$, where $a = 5.4$ m, $b = 3.5$ m s⁻² and t is measured in seconds. Find its velocity at $t = 0$ s and $t = 2.0$ s. Also calculate its average velocity between $t = 2.0$ s and $t = 4.0$ s.

Options :

1. ✓ $0 \text{ ms}^{-1}, 14 \text{ ms}^{-1}, 21.0 \text{ m s}^{-1}$
2. ✗ $0 \text{ ms}^{-1}, 3.5 \text{ m s}^{-1}, 6.0 \text{ m s}^{-1}$
3. ✗ $0 \text{ ms}^{-1}, 7 \text{ m s}^{-1}, 12 \text{ m s}^{-1}$
4. ✗ $0 \text{ ms}^{-1}, 3.5 \text{ m s}^{-1}, 42 \text{ m s}^{-1}$

Question Number : 34 Question Id : 90468414721 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A 50 m long train is moving with a uniform velocity of 45km/h. Calculate the time taken by the train to cross a bridge that is 500m in length.

Options :

1. ✗ 28 s
2. ✗ 35 s
3. ✗ 38 s
4. ✓ 44 s

Question Number : 35 Question Id : 90468414722 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A system gives out 60 J of heat and also does 120 J of work. What is the internal energy change?

Options :

1. ✗ 60 J
2. ✗ 180 J
3. ✗ -60 J
4. ✓ -180 J

Question Number : 36 Question Id : 90468414723 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A geyser heats water, flowing at the rate of 4000 g/min, from 20°C to 70°C. If the geyser operates on a gas burner, what is the total heat used by water? (Heat of water, $C = 4.2\text{J/g}^\circ\text{C}$)

Options :

1. ✓ $8.4 \times 10^5\text{J/min}$
2. ✗ $7.4 \times 10^5\text{J/min}$
3. ✗ $6.3 \times 10^5\text{J/min}$
4. ✗ $5.3 \times 10^5\text{J/min}$

Question Number : 37 Question Id : 90468414724 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The efficiency of a Carnot engine is 50%. If the temperature of the sink is 0°C, find the temperature of the source.

Options :

1. ✗ 165°C
2. ✗ 178°C
3. ✓ 273°C
4. ✗ 196°C

Question Number : 38 Question Id : 90468414725 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A cyclist comes to a skidding stop in 7 m. During this process, the force on the cycle due to the road is 200 N and is directly opposed to the motion. How much work does the road do on the cycle?

Options :

1. ✘ 2800J
2. ✘ -2800J
3. ✔ -1400J
4. ✘ 200J

Question Number : 39 Question Id : 90468414726 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The decrease in potential energy of a ball of mass 20kg which falls from a height of 50 cm to the ground is _____. (Take $g = 10 \text{ m/s}^2$)

Options :

1. ✘ 250J
2. ✘ 200J
3. ✘ 150J
4. ✔ 100J

Question Number : 40 Question Id : 90468414727 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The power of a pump which can pump 50 kg of water to a height of 100 m in 5 s is _____. (Take $g = 10 \text{ m/s}^2$)

Options :

1. ✘ 5 kW
2. ✔ 10 kW
3. ✘ 25 kW
4. ✘ 50 kW

Question Number : 41 Question Id : 90468414728 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The angular momentum of a body about an axis is 10Js and its rotational kinetic energy is 5J . Find the moment of inertia of the body.

Options :

1. ✘ 50kg m^2

2. ✘ 40kg m^2

3. ✘ 30kg m^2

4. ✔ 10kg m^2

Question Number : 42 Question Id : 90468414729 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If the distance between two masses is made 6 times, then the gravitational attraction between them will become _____.

Options :

1. ✘ $1/6$ times

2. ✘ $1/12$ times

3. ✘ $1/24$ times

4. ✔ $1/36$ times

Question Number : 43 Question Id : 90468414730 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A constant retarding force of 70 N is applied on a particle of mass 20 kg moving with an initial velocity of 10m/s. After how much time will the particle stop?

Options :

1. ✘ 1.8 s
2. ✘ 2.2 s
3. ✘ 2.6 s
4. ✔ 2.8 s

Question Number : 44 Question Id : 90468414731 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A batsman hits back a ball straight in the direction of the bowler without changing its initial speed of 24 m/s. If the mass of the ball is 0.20 kg, determine the impulse imparted to the ball. (Assume linear motion of the ball.)

Options :

1. ✘ 0 Ns
2. ✘ 3.0 Ns
3. ✘ 4.5 Ns
4. ✔ 9.6 Ns

Question Number : 45 Question Id : 90468414732 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The potential energy of atoms at an equilibrium distance is _____.

Options :

1. ✘ zero
2. ✔ minimum
3. ✘ maximum
4. ✘ infinity

Question Number : 46 Question Id : 90468414733 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In a Zener regulated power supply, a Zener diode with $V_Z = 5.0 \text{ V}$ is used for regulation. The load current is to be 5.0 mA and the unregulated input is 10.0 V . What should be the value of the series resistor R_S ? Let Zener current I_Z be 25 mA .

Options :

1. ✘ 17Ω

2. ✘ 121Ω

3. ✔ 167Ω

4. ✘ 320Ω

Question Number : 47 Question Id : 90468414734 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In a p-n junction diode, 0.15 V change in potential causes 5 mA change in current. Calculate the dynamic resistance.

Options :

1. ✘ 10Ω

2. ✘ 20Ω

3. ✔ 30Ω

4. ✘ 40Ω

Question Number : 48 Question Id : 90468414735 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Four molecules of gas have speeds 1, 3, 5, 7 km/s, respectively. Calculate the root mean square speed.

Options :

1. ✘ 3.5 km/s
2. ✔ 4.5 km/s
3. ✘ 5.5 km/s
4. ✘ 6.5 km/s

Question Number : 49 Question Id : 90468414736 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If a simple pendulum is taken to a place where g decreases by 8%, then the time period _____.

Options :

1. ✘ decreases by about 2%
2. ✘ decreases by about 0.5%
3. ✘ increases by about 2%
4. ✔ increases by about 4%

Question Number : 50 Question Id : 90468414737 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A sound source with 1160 Hz frequency moves at 50.0 m/s towards a listener who is at rest. The apparent frequency heard by the listener is _____. (Speed of sound = 340 m/s)

Options :

1. ✘ 680 Hz
2. ✘ 989 Hz
3. ✔ 1360 Hz
4. ✘ 1480 Hz

Question Number : 51 Question Id : 90468414738 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The specific resistance of the material of a wire is $1.33 \times 10^{-8} \Omega \text{ m}$. The resistance of the wire of area of cross-section 0.02 mm^2 is 2 ohm. Calculate the length of the wire.

Options :

1. ✘ 1.2m
2. ✘ 2m
3. ✘ 2.1m
4. ✔ 3m

Question Number : 52 Question Id : 90468414739 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In a wire, 48 coulomb of charge is flowing per minute. Find the value of the current flowing through the wire.

Options :

1. ✘ 0.6 A
2. ✘ 0.7 A
3. ✔ 0.8 A
4. ✘ 0.9 A

Question Number : 53 Question Id : 90468414740 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Two resistors of 6Ω and 12Ω are connected in parallel. This combination, in turn, is connected in series to a 16Ω resistor and a 6 V battery. The current in the 16Ω resistor is _____.

Options :

1. ✔ 0.3 A
2. ✘ 0.6 A

3. ✘ 0.9 A

4. ✘ 1.2 A

**Question Number : 54 Question Id : 90468414741 Question Type : MCQ Option Shuffling : Yes
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

The radius of a circular coil is 0.3 m. It has 100 turns. If 0.7 A current is flowing through it, then calculate the magnetic moment linked with the coil.

Options :

1. ✘ 1.98 Am²

2. ✘ 6.60 Am²

3. ✘ 13.2 Am²

4. ✔ 19.8 Am²

**Question Number : 55 Question Id : 90468414742 Question Type : MCQ Option Shuffling : Yes
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

A solenoid has a core of a material with relative permeability 600. The windings of the solenoid are insulated from the core and carry a current of 5 A. If the number of turns is 1000 per meter, the magnetic field at the centre of the coil is close to _____. ($\mu_0 = 4\pi \times 10^{-7} \text{ N/A}^2$)

Options :

1. ✘ 1.2 T

2. ✘ 1.9 T

3. ✔ 3.8 T

4. ✘ 4.2 T

Question Number : 56 Question Id : 90468414743 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If the RMS voltage is 70.72 V, what will be the peak voltage of AC supply?

Options :

1. ✘ 400V
2. ✘ 300V
3. ✘ 200V
4. ✔ 100V

Question Number : 57 Question Id : 90468414744 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In a plane electromagnetic wave, the electric field oscillates sinusoidally with amplitude 48 V/m and frequency of 3.0×10^{10} Hz. What is the amplitude of the oscillating magnetic field?

Options :

1. ✘ 1.2×10^{-7} T
2. ✘ 1.4×10^{-7} T
3. ✔ 1.6×10^{-7} T
4. ✘ 1.8×10^{-7} T

Question Number : 58 Question Id : 90468414745 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A concave mirror has a focal length of 10 cm. When an object is placed 12 cm in front of it, the image formed is _____ and the magnification produced is _____.

Options :

1. ✘ erect; 0.5

2. ✘ inverted; 0.5

3. ✘ erect; 5

4. ✔ inverted; 5

Question Number : 59 Question Id : 90468414746 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The wavelength of light in air is 5320\AA . Calculate the refractive index of a medium in which the wavelength of the same light is 4000\AA .

Options :

1. ✘ 1.20

2. ✘ 1.25

3. ✘ 1.30

4. ✔ 1.33

Question Number : 60 Question Id : 90468414747 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In Young's double slit experiment, the slit separation is 0.4cm and the distance between screen and slit is 1m . The wavelength of light used is 1000 Angstrom . The distance (in mm) between two consecutive dark fringes is _____.

Options :

1. ✔ 0.025

2. ✘ 0.125

3. ✘ 0.05

4. ✘ 0.01

Question Number : 61 Question Id : 90468414748 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Calculate the magnitude of the force acting on an electron placed in an electric field of intensity 6×10^3 N/C.

Options :

1. ✘ 4.8×10^{-16} N

2. ✔ 9.6×10^{-16} N

3. ✘ 4.8×10^{-14} N

4. ✘ 9.6×10^{-14} N

Chemistry

Group Number :	5
Group Id :	9046841608
Group Maximum Duration :	0
Group Minimum Duration :	0
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	30
Is this Group for Examiner? :	No

Chemistry

Section Id :	9046841701
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	30

Number of Questions to be attempted :	30
Section Marks :	30
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Sub-Section Number :	1
Sub-Section Id :	9046842623
Question Shuffling Allowed :	Yes

Question Number : 62 Question Id : 90468414749 Question Type : MCQ Option Shuffling : Yes
Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In a reaction, 0.184 g of NaOH is required to be added for completing the reaction. How many mL of a 0.15 M NaOH solution should be added for this reaction?

Options :

1. ✘ 40 mL
2. ✔ 30.6 mL
3. ✘ 4.6 mL
4. ✘ 46 mL

Question Number : 63 Question Id : 90468414750 Question Type : MCQ Option Shuffling : Yes
Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following is the correct values of quantum numbers for the 22nd electron in vanadium?

Options :

1. ✘ $n = 3, l = 1, m_l = +1$
2. ✘ $n = 3, l = 0, m_l = +1/0/-1$
3. ✘ $n = 4, l = 2, m_l = 0$

4. ✓ $n = 3, l = 2, m_s = +\frac{1}{2}$ or $-\frac{1}{2}$

Question Number : 64 Question Id : 90468414751 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The correct sequence of energies of 2s orbitals is:

Options :

1. ✗ $E_{2s}(\text{Li}) < E_{2s}(\text{Be}) < E_{2s}(\text{B}) < E_{2s}(\text{C}) < E_{2s}(\text{N})$

2. ✗ $E_{2s}(\text{Li}) < E_{2s}(\text{Be}) < E_{2s}(\text{B}) > E_{2s}(\text{C}) < E_{2s}(\text{N})$

3. ✓ $E_{2s}(\text{Li}) > E_{2s}(\text{Be}) > E_{2s}(\text{B}) > E_{2s}(\text{C}) > E_{2s}(\text{N})$

4. ✗ $E_{2s}(\text{Li}) > E_{2s}(\text{Be}) = E_{2s}(\text{B}) > E_{2s}(\text{C}) < E_{2s}(\text{N})$

Question Number : 65 Question Id : 90468414752 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following statement is correct?

Options :

1. ✗ BF_3 and NH_3 have the same hybridisation but different dipole moment.

2. ✗ BF_3 and NH_3 have the same dipole moment but different hybridisation.

3. ✗ BF_3 and NH_3 have the same dipole moment but different shape.

4. ✓ BF_3 and NH_3 have different shape and different dipole moment.

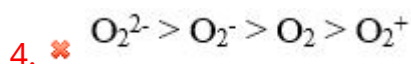
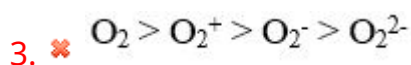
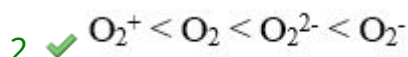
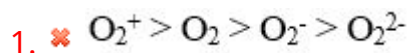
Question Number : 66 Question Id : 90468414753 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following is the correct order of bond length?

Options :



Question Number : 67 Question Id : 90468414754 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The enthalpy of combustion of $C_{(s)}$ is -393.5 kJmol . What is the amount of heat released on formation of 35.2 g of CO_2 from $C_{(s)}$ and $O_{2(g)}$?

Options :

1. ✔ 314.8 kJ

2. ✘ 346 kJ

3. ✘ 364.5 kJ

4. ✘ 495 kJ

Question Number : 68 Question Id : 90468414755 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A patient, admitted in the hospital, is given a medicine by an intravenous injection in a solution which is hypertonic to normal saline solution. Which of the following will occur?

Options :

1. ✘ Blood will start flowing more rapidly
2. ✔ Blood cells will shrink
3. ✘ Blood cells will burst
4. ✘ Blood cells will remain unchanged

Question Number : 69 Question Id : 90468414756 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

For a reaction $A(g) + B(g) \rightleftharpoons C(g)$, if the value of K_c is 9.1×10^{-5} at 300 K and 7.6×10^{-6} at 380 K, then which of the following is true for this reaction?

Options :

1. ✘ $\Delta H = +ve$
2. ✔ $\Delta H = -ve$
3. ✘ $\Delta H = 0$
4. ✘ Reaction is not feasible

Question Number : 70 Question Id : 90468414757 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The standard electrode potential of two redox couples is given as follows:

$$E^\circ(\text{Sn}^{2+}/\text{Sn}) = -0.14 \text{ V}; E^\circ(\text{Ni}^{2+}/\text{Ni}) = -0.25 \text{ V}$$

Which of the following statements are true about these elements?

- (i) Tin and nickel are stronger oxidising agents than hydrogen.
- (ii) Tin and nickel are weaker oxidising agents than hydrogen.
- (iii) Nickel is a stronger reducing agent than tin.
- (iv) Tin is a weaker oxidising agent than nickel.

Options :

- 1. ✘ (i) and (iii)
- 2. ✔ (ii) and (iii)
- 3. ✘ (ii) and (iv)
- 4. ✘ (i) and (iv)

Question Number : 71 Question Id : 90468414758 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following is a zero order reaction?

Options :

- 1. ✘ Radioactive disintegration of Sr-90
- 2. ✘ Hydrolysis of an ester
- 3. ✔ Decomposition of $\text{NH}_3(\text{g})$ on hot surface of Pt at high pressure
- 4. ✘ Decomposition of $\text{HI}(\text{g})$ on hot surface of Au at low pressure

Question Number : 72 Question Id : 90468414759 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

0.25 g of an organic compound, on heating with sodium peroxide in a Carius tube, followed by reaction with $\text{BaCl}_{2(\text{aq})}$, produced 0.942 g of BaSO_4 . What was the percentage of sulphur in the organic compound?

Options :

- ✘ 64%
- ✔ 51.7%
- ✘ 3.64%
- ✘ 36.4%

Question Number : 73 Question Id : 90468414760 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which type of isomerism exists in the following pair of organic compounds?

$\text{CH}_3\text{CH}_2\text{CH}_2\text{COCH}_3$ and $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CHO}$

Options :

- ✘ Position
- ✔ Functional
- ✘ Metamerism
- ✘ Tautomerism

Question Number : 74 Question Id : 90468414761 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

An aliphatic organic compound 'A', having molecular formula C_7H_{16} , is heated at 773 K under 10-20 atm pressure in the presence of Cr_2O_3 catalyst. The product of this reaction is treated with acetic anhydride in presence of anhydrous AlCl_3 to give compound 'B'. Compound 'B' is:

Options :

- ✘ 3-methyl acetophenone
- ✘ 1-phenyl propan-1-one
- ✘ 4-ethyl benzaldehyde
- ✔ 4-methyl acetophenone

Question Number : 75 Question Id : 90468414762 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What type of drug is chloramphenicol?

Options :

1. ✘ Antidepressant
2. ✘ Bactericidal, broad spectrum antibiotic
3. ✔ Bacteriostatic, broad spectrum antibiotic
4. ✘ Antifertility drug

Question Number : 76 Question Id : 90468414763 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

If some sweet food is to be cooked for a diabetic person, which of the following sweeteners is most suitable?

Options :

1. ✘ Sucrose
2. ✔ Ortho-sulphobenzimide
3. ✘ Methyl ester of phenylalanine and aspartic acid
4. ✘ Alitame

Question Number : 77 Question Id : 90468414764 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In oxalic acid vs. KMnO_4 titration, if oxalic acid is allowed to be heated to boiling, the volume of KMnO_4 used for attaining the end point will be:

Options :

1. ✔ less than expected
2. ✘ more than expected
3. ✘ the same as expected

4. ✘ infinite

Question Number : 78 Question Id : 90468414765 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

0.9 mL of a solution of NaOH is used up to completely neutralise 2 mL of 0.1 M oxalic acid solution. How many moles of NaOH are present in 0.9 mL of NaOH solution?

Options :

1. ✘ 198×10^{-6}

2. ✘ 99×10^{-6}

3. ✔ 396×10^{-6}

4. ✘ 45×10^{-4}

Question Number : 79 Question Id : 90468414766 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Given are some organic compounds:

(i) p-chloronitrobenzene (ii) m-chlorotoluene (iii) m-chloronitrobenzene (iv) p-chlorotoluene (v) p-chloroaniline

Which of the following is the correct order of their reactivity towards nucleophilic substitution?

Options :

1. ✘ (i) < (ii) < (iii) < (iv) < (v)

2. ✔ (v) < (ii) < (iv) < (iii) < (i)

3. ✘ (i) < (iii) < (iv) < (ii) < (v)

4. ✘ (iv) < (ii) < (v) < (iii) < (i)

Question Number : 80 Question Id : 90468414767 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

To prepare phenetole, which of the following combinations of reactants is most suitable?

Options :

1. ✓ Sodium phenoxide and chloroethane
2. ✗ Sodium phenoxide and chloromethane
3. ✗ Sodium ethoxide and chlorobenzene
4. ✗ Sodium methoxide and chlorotoluene

Question Number : 81 Question Id : 90468414768 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Nylon 6 is a/an:

Options :

1. ✗ addition homopolymer
2. ✓ condensation homopolymer
3. ✗ condensation copolymer
4. ✗ addition copolymer

Question Number : 82 Question Id : 90468414769 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What is the oxidation state and covalency, respectively, of aluminium in $[\text{AlCl}_4]^-$?

Options :

1. ✗ -1, 4
2. ✗ +3, 3
3. ✗ +4, 3

4. ✓ +3, 4

Question Number : 83 Question Id : 90468414770 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following is the correct order of $\Delta_f H_f^\ominus$ of the given elements?

Options :

1. ✗ $\text{Be} > \text{B} > \text{C} > \text{N} > \text{O} > \text{F}$

2. ✗ $\text{Be} < \text{B} < \text{C} < \text{N} < \text{O} < \text{F}$

3. ✓ $\text{Be} > \text{B} < \text{C} < \text{N} > \text{O} < \text{F}$

4. ✗ $\text{Be} < \text{B} > \text{C} > \text{N} < \text{O} > \text{F}$

Question Number : 84 Question Id : 90468414771 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following is the correct order of covalent character of the given molecules?

Options :

1. ✓ $\text{LiF} < \text{LiCl} < \text{LiBr} < \text{LiI}$

2. ✗ $\text{LiCl} < \text{NaCl} < \text{KCl} < \text{RbCl}$

3. ✗ $\text{NaCl} > \text{MgCl}_2 > \text{AlCl}_3 > \text{CCl}_4$

4. ✗ $\text{NCl}_3 > \text{PCl}_3 > \text{AsCl}_3 > \text{PCl}_5$

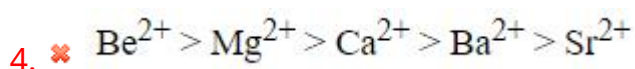
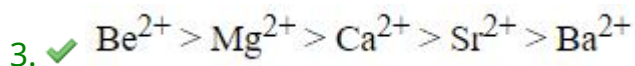
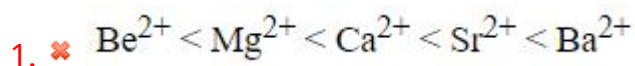
Question Number : 85 Question Id : 90468414772 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following is the correct order of hydration enthalpies of the given species?

Options :



Question Number : 86 Question Id : 90468414773 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What are the products formed on the reaction of zinc with dilute nitric acid?

Options :

1. ✘ Zinc nitrate, water and nitric oxide

2. ✘ Zinc nitrate, water and nitrogen dioxide

3. ✘ Zinc oxide, water and nitrogen dioxide

4. ✔ Zinc nitrate, water and nitrous oxide

Question Number : 87 Question Id : 90468414774 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following are true for $\Delta_a H$ of transition elements?

(i) $\Delta_a H$ increases across a transition series, reaches maximum in the middle of the series and then decreases.

(ii) $\Delta_a H$ of transition elements is smaller than s-block elements.

(iii) $\Delta_a H$ of transition elements increases down the group.

(iv) $\Delta_a H$ of transition elements decreases down the group.

Options :

1. ✘ (i) and (ii)
2. ✔ (i) and (iii)
3. ✘ (i) and (iv)
4. ✘ (i), (ii) and (iv)

Question Number : 88 Question Id : 90468414775 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following is the correct formula of the coordination compound whose IUPAC name is given below?

triamminechlorido(ethane-1,2-diamine)chromium(III)hexacyanidocobaltate(III)

Options :

1. ✘ $[\text{Cr}(\text{NH}_3)_3\text{Cl}(\text{en})][\text{Co}(\text{CN})_6]$
2. ✘ $[\text{Cr}(\text{NH}_3)_3\text{Cl}(\text{en})][\text{Co}(\text{CN})_6]_2$
3. ✔ $[\text{Cr}(\text{NH}_3)_3\text{Cl}(\text{en})]_3[\text{Co}(\text{CN})_6]_2$
4. ✘ $[\text{Cr}(\text{NH}_3)_3\text{Cl}(\text{en})]_2[\text{Co}(\text{CN})_6]_3$

Question Number : 89 Question Id : 90468414776 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following statements is/are true?

- (i) BOD for clean water is less than 5 ppm.
- (ii) BOD increases as water becomes cleaner.
- (iii) BOD increases as water becomes more polluted.
- (iv) BOD for clean water is more than 17 ppm.

Options :

1. ✓ (i) and (iii)
2. ✗ (i) and (ii)
3. ✗ (ii) and (iv)
4. ✗ Only (iii)

**Question Number : 90 Question Id : 90468414777 Question Type : MCQ Option Shuffling : Yes
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

In the extraction of copper from copper pyrites, heating of ore in a reverberatory furnace produces copper matte. The chemical composition of copper matte is:

Options :

1. ✗ CuSiO_3
2. ✗ $\text{Cu}_2\text{O} + \text{Cu}_2\text{S}$
3. ✓ $\text{Cu}_2\text{S} + \text{FeS}$
4. ✗ $\text{Cu}_2\text{S} + \text{FeO}$

**Question Number : 91 Question Id : 90468414778 Question Type : MCQ Option Shuffling : Yes
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

In an Ellingham diagram, the C, CO line is below the Fe, FeO line at a temperature above 1073 K. What does this imply?

Options :

1. ✗ Coke will reduce FeO at a temperature below 1073 K
2. ✓ Coke will reduce FeO at a temperature above 1073 K
3. ✗ Coke will not reduce FeO at any temperature
4. ✗ Fe will reduce CO at a temperature above 1073 K

Biology

Group Number :	6
Group Id :	9046841609
Group Maximum Duration :	0
Group Minimum Duration :	0
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	30
Is this Group for Examiner? :	No

Biology

Section Id :	9046841702
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	30
Number of Questions to be attempted :	30
Section Marks :	30
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Sub-Section Number :	1
Sub-Section Id :	9046842624
Question Shuffling Allowed :	Yes

Question Number : 92 Question Id : 90468414779 Question Type : MCQ Option Shuffling : Yes
Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Select the appropriate term used to explain the transmission of characters from one generation to the next or from parents to off springs.

Options :

1. ✓ Heredity
2. ✗ Variation
3. ✗ Genetics
4. ✗ Evolution

Question Number : 93 Question Id : 90468414780 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Why are some alleles recessive?

Options :

1. ✗ Due to functional enzymes
2. ✓ Due to non-functional enzymes
3. ✗ Due to over-active enzymes
4. ✗ Due to normal enzymes

Question Number : 94 Question Id : 90468414781 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

A pea plant with round and yellow seeds crossed with another pea plant with wrinkled and green seeds, produced 51 round yellow seeds and 49 wrinkled yellow seeds. The genotype of the plant with round yellow seeds must be _____.

Options :

1. ✓ RrYY
2. ✗ RrYy
3. ✗ RRYy

4. ✘ RRY Y

Question Number : 95 Question Id : 90468414782 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What is the nature of the external solution if root hair absorbs water?

Options :

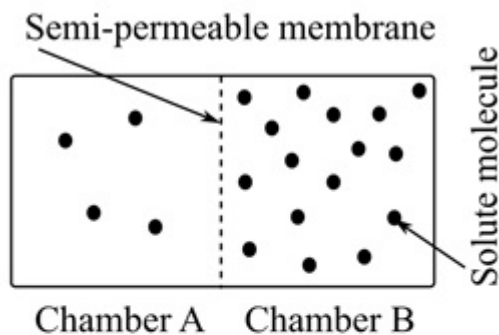
1. ✘ Viscous
2. ✘ Isotonic
3. ✘ Hypertonic
4. ✔ Hypotonic

Question Number : 96 Question Id : 90468414783 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Study the given figure and answer the questions that follow.



1. The solution of which chamber has lower water potential?
2. In which direction will osmosis occur?
3. Which solution has higher solute potential?
4. At equilibrium, which chamber will have lower water potential?

Options :

1. ✔

1. Chamber B
2. From Chamber A to B
3. Chamber B
4. At equilibrium, both the chambers will have the same water potential

1. Chamber A
2. From Chamber A to B
3. Chamber B
2. ✘ 4. At equilibrium, both the chambers will have the same water potential

1. Chamber B
2. From Chamber B to A
3. Chamber B
3. ✘ 4. At equilibrium, both the chambers will have the same water potential

1. Chamber A
2. From Chamber A to B
3. Chamber A
4. ✘ 4. At equilibrium, both the chambers will have the same water potential

Question Number : 97 Question Id : 90468414784 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Compare the following processes and fill in the blanks (denoted by numbers) in the table.

Property	Simple Diffusion	Facilitated Transport	Active Transport
Requires special membrane proteins	No	1	Yes
Highly selective	No	Yes	Yes
Transport saturates	No	Yes	Yes
Uphill transport	No	No	2
Requires ATP energy	3	No	Yes

Options :

- ✘ 1. No 2. Yes 3. No
- ✔ 1. Yes 2. Yes 3. No
- ✘ 1. Yes 2. No 3. No
- ✘ 1. Yes 2. No 3. Yes

Question Number : 98 Question Id : 90468414785 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What is the name of the neurotransmitter responsible for chemical transmission at the synapse?

Options :

- ✘ Cholesterol
- ✘ Adenosine Triphosphate
- ✔ Acetylcholine
- ✘ Cholinesterase

Question Number : 99 Question Id : 90468414786 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What is the nature of the ion movement observed when neuron is resting?

Options :

- ✔ More permeable to K^+ ions and less permeable to Na^+ ions

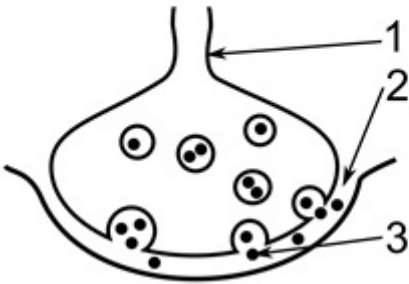
2. ✘ Impermeable to K^+ ions and permeable to Na^+ ions
3. ✘ More permeable to Na^+ ions and impermeable to K^+ ions
4. ✘ Impermeable to Na^+ ions and permeable to K^+ ions

Question Number : 100 Question Id : 90468414787 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Label the parts of the given diagram.



Options :

1. ✘ 1. Synaptic cleft 2. Axon terminal 3. Neurotransmitters
2. ✘ 1. Neurotransmitters 2. Axon terminal 3. Synaptic cleft
3. ✘ 1. Neurotransmitters 2. Synaptic cleft 3. Axon terminal
4. ✔ 1. Axon terminal 2. Synaptic cleft 3. Neurotransmitters

Question Number : 101 Question Id : 90468414788 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Identify the part of the respiratory system that has cartilages.

Options :

1. ✔ Trachea
2. ✘ Alveolar walls
3. ✘ Bronchioles

4. ✖ Pharynx

Question Number : 102 Question Id : 90468414789 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Select the appropriate options to fill in the blanks.

(1) _____ is a red coloured pigment in the red blood cells, which can combine with (2) _____ and form (3) _____. Carbon dioxide is carried by haemoglobin as (4) _____.

Options :

1. ✖ (1) Oxygen (2) Carbamino-haemoglobin (3) Haemoglobin (4) Oxyhaemoglobin

2. ✖ (1) Oxygen (2) Haemoglobin (3) Carbamino-haemoglobin (4) Oxyhaemoglobin

3. ✔ (1) Haemoglobin (2) Oxygen (3) Oxyhaemoglobin (4) Carbamino-haemoglobin

4. ✖ (1) Haemoglobin (2) Oxyhaemoglobin (3) Oxygen (4) Carbamino-haemoglobin

Question Number : 103 Question Id : 90468414790 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

With the help of the given symptoms, identify the disorder of the respiratory system.

Difficulty in breathing due to inflammation of the bronchi and the bronchioles, coughing, wheezing and constriction of the bronchi.

Options :

1. ✖ Emphysema

2. ✔ Bronchitis

3. ✖ Asthma

4. ✖ Pneumonia

Question Number : 104 Question Id : 90468414791 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Name the molecular knives used to cut DNA.

Options :

1. ✘ Ligases
2. ✘ Polymerases
3. ✔ Endonucleases
4. ✘ Transcriptases

Question Number : 105 Question Id : 90468414792 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

How can the separated DNA fragments be visualised by using the gel electrophoresis technique?

Options :

1. ✘ By staining the DNA fragments with eosin, followed by exposure to UV radiation
2. ✘ By staining the DNA fragments with ethidium bromide, followed by exposure to infrared radiation
3. ✘ By staining the DNA fragments with crystal violet, followed by exposure to UV radiation
4. ✔ By staining the DNA fragments with ethidium bromide, followed by exposure to UV radiation

Question Number : 106 Question Id : 90468414793 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Give expanded forms of the given abbreviations.

ELISA, ADA, RNAi, Bt, GMOs, GEAC

Options :

1. ✔ ELISA - Enzyme Linked Immuno-sorbent Assay, ADA - Adenosine deaminase, RNAi - Ribo Nucleic Acid interference, Bt - Bacillus thuringiensis, GMOs - Genetically Modified Organisms, GEAC - Genetic Engineering Approval Committee
2. ✘ ELISA - Enzyme Linked Immuno-sucrose Assay, ADA - Adenosine deoxyaminase, RNAi - Ribo Nucleic Acid interference, Bt - Bacillus thuringiensis, GMOs - Genetically Modified Organisms, GEAC - Genetic Engineering Approval Committee

3. ✖ ELISA - Enzyme Linked Immuno-sorbent Assay, ADA - Adenosine deaminase, RNAi - Ribo Nucleic Acid involvement, Bt - Bacteria thuringiensis, GMOs - Generally Modified Organisms, GEAC - Genetic Engineering Approval Committee

4. ✖ ELISA - Enzyme Linked Immuno-sorbent Assay, ADA - Adenosine deaminase, RNAi - Ribo Nucleic Acid interference, Bt - Bacterial thuringiensis, GMOs - Genetically Modified Organisms, GEAC - Genetic Engineering Appreciation Committee

Question Number : 107 Question Id : 90468414794 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Give suitable term/s for each of the following.

1. The inborn capacity of the body to resist pathogens.
2. Any foreign substance invading the body and capable of stimulating an immune response.
3. The protective chemicals produced by immune cells in response to antigens.
4. The resistance or immunity that an individual acquires during a life time.

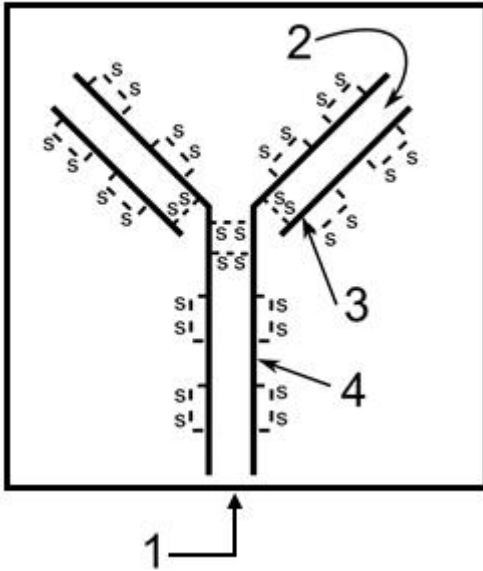
Options :

1. ✖ 1. Acquired immunity 2. Antigen 3. Antibodies 4. Innate immunity
2. ✔ 1. Innate immunity 2. Antigen 3. Antibodies 4. Acquired immunity
3. ✖ 1. Innate immunity 2. Antigen 3. Acquired immunity 4. Antibodies
4. ✖ 1. Innate immunity 2. Antibodies 3. Antigen 4. Acquired immunity

Question Number : 108 Question Id : 90468414795 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Select the option to label the parts of the given diagram.



Options :

- 1. ✘ 1. Structure of an antibody molecule 2. Antibody-binding site 3. Heavy chain 4. Light chain
- 2. ✘ 1. Structure of an antibody molecule 2. Antigen-binding site 3. Heavy chain 4. Light chain
- 3. ✘ 1. Structure of an antigen molecule 2. Antibody-binding site 3. Light chain 4. Heavy chain
- 4. ✔ 1. Structure of an antibody molecule 2. Antigen-binding site 3. Light chain 4. Heavy chain

Question Number : 109 Question Id : 90468414796 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Select suitable names for the following theories of origin of life.

- 1. The mythological belief that living organisms on earth is created by a Divine power.
- 2. Life must have existed elsewhere in the universe (cosmos) and it might have reached Earth in the form of resistant spores.
- 3. Life originated from non-living or decaying substances.
- 4. The Earth was subjected to periodic catastrophes that existing organisms would die and new organisms would be created after every catastrophe.
- 5. Living organisms originate from pre-existing organisms.
- 6. Primitive organisms evolved spontaneously from the inorganic substances acted by physical forces.

Options :

- 1. ✔ 1. Theory of special creation 2. Cosmozoic theory 3. Theory of spontaneous generation or

abiogenesis 4. Theory of catastrophism 5. Theory of biogenesis 6. Theory of chemical and biological origin of life

2. ✘ 1. Cosmozoic theory 2. Theory of biogenesis 3. Theory of spontaneous generation or abiogenesis 4. Theory of catastrophism 5. Theory of special creation 6. Theory of chemical and biological origin of life

3. ✘ 1. Theory of biogenesis 2. Cosmozoic theory 3. Theory of spontaneous generation or abiogenesis 4. Theory of catastrophism 5. Theory of special creation 6. Theory of chemical and biological origin of life

4. ✘ 1. Theory of special creation 2. Theory of catastrophism 3. Theory of spontaneous generation or abiogenesis 4. Cosmozoic theory 5. Theory of biogenesis 6. Theory of chemical and biological origin of life

Question Number : 110 Question Id : 90468414797 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Match the following terms of primitive man (prehistoric man) with their popular names.

- | | |
|--|---------------------------|
| 1 <i>Homo habilis</i> | a Modern man |
| 2 <i>Homo erectus</i> | b A man with ape brain |
| 3 <i>Homo neanderthalensis</i> | c Handy man |
| 4 <i>Homo sapiens fossilis</i>
(Cro-magnon man) | d Java man and Peking man |
| 5 <i>Homo sapiens sapiens</i> | e Neanderthal man |
| 6 <i>Australopithecus</i> | f Extinct 'Modern' man |

Options :

1. ✘ 1-b, 2-d, 3-e, 4-c, 5-a, 6-f

2. ✘ 1-b, 2-d, 3-c, 4-a, 5-f, 6-e

3. ✔ 1-c, 2-d, 3-e, 4-f, 5-a, 6-b

4. ✘ 1-c, 2-a, 3-e, 4-f, 5-d, 6-b

Question Number : 111 Question Id : 90468414798 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Select the appropriate options to fill in the blanks.

Different varieties of cheese are known by their characteristic texture, flavour, taste and the specificity coming from the microbes used. The large holes in (1) _____ are due to production of a large amount of (2) _____ by a bacterium named (3) _____. The Roquefort cheese is ripened by growing a specific kind of (4) _____ on it, which gives it a particular flavour.

Options :

1. ✘ 1. Roquefort cheese 2. CO 3. *Propionibacterium sharmanii* 4. Fungi
2. ✔ 1. Swiss cheese 2. CO₂ 3. *Propionibacterium sharmanii* 4. Fungi
3. ✘ 1. Swiss cheese 2. CO₂ 3. *Propionibacterium sharmanii* 4. Algae
4. ✘ 1. Roquefort cheese 2. SO₂ 3. *Propionibacterium sharmanii* 4. Lichens

Question Number : 112 Question Id : 90468414799 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Some mushrooms and their scientific/biological names are given, which are mismatched. Match them properly.

Mushroom	Biological name
White button mushroom	<i>Amanita sp.</i>
Paddy straw mushroom	<i>Agaricus bisporus</i>
Oyster mushroom	<i>Volvariella volvacea</i>
Non-edible (poisonous) mushroom	<i>Pleurotus florida</i>

Options :

1. ✘

Mushroom	Biological name
White button mushroom	<i>Amanita sp.</i>
Paddy straw mushroom	<i>Volvariella volvacea</i>
Oyster mushroom	<i>Pleurotus florida</i>
Non-edible (poisonous) mushroom	<i>Agaricus bisporus</i>

2. ✘

Mushroom	Biological name
White button mushroom	<i>Agaricus bisporus</i>
Paddy straw mushroom	<i>Amanita sp.</i>
Oyster mushroom	<i>Pleurotus florida</i>
Non-edible (poisonous) mushroom	<i>Volvariella volvacea</i>

Mushroom	Biological name
White button mushroom	<i>Volvariella volvacea</i>
Paddy straw mushroom	<i>Agaricus bisporus</i>
Oyster mushroom	<i>Pleurotus florida</i>
Non-edible (poisonous) mushroom	<i>Amanita sp.</i>

3. ✘

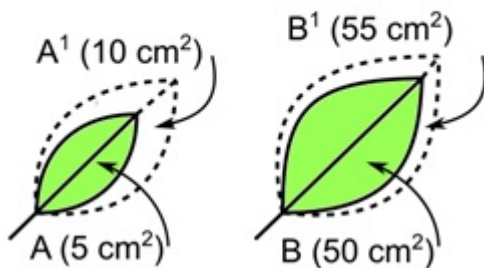
Mushroom	Biological name
White button mushroom	<i>Agaricus bisporus</i>
Paddy straw mushroom	<i>Volvariella volvacea</i>
Oyster mushroom	<i>Pleurotus florida</i>
Non-edible (poisonous) mushroom	<i>Amanita sp.</i>

4. ✔

Question Number : 113 Question Id : 90468414800 Question Type : MCQ Option Shuffling : Yes Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What do you understand from the given diagrammatic representation?



Options :

1. ✘ Both the leaves A and B have increased their area by 5 cm² in a given time to produce A¹, B¹ leaves. Leaf B shows a much higher relative growth rate.

2. ✘ Both the leaves A and B have increased their area by 5 cm² in a given time to produce A¹, B¹ leaves. Neither of the leaves shows a higher relative growth rate.

3. ✔ Both the leaves A and B have increased their area by 5 cm² in a given time to produce A¹, B¹ leaves. However, leaf A shows a much higher relative growth rate.

Both the leaves A and B have increased their area by 5 cm^2 in a given time to produce A1, B1 leaves. Both the leaves A

4. ✘ and B show a much higher relative growth rate.

Question Number : 114 Question Id : 90468414801 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Match the following.

- | | | | |
|---|--------------------|---|--|
| 1 | Photoperiodism | a | Some plants must be exposed to light for a period less than the critical duration. |
| 2 | Long-day plants | b | Some plants require periodic exposure to light to induce flowering. |
| 3 | Short-day plants | c | In some plants, there is no correlation between duration of exposure to light and induction of flowering response. |
| 4 | Day-neutral plants | d | Some plants require exposure to light for a period exceeding the critical duration. |

Options :

1. ✘ 1-a, 2-d, 3-b, 4-c

2. ✔ 1-b, 2-d, 3-a, 4-c

3. ✘ 1-b, 2-a, 3-d, 4-c

4. ✘ 1-a, 2-d, 3-c, 4-b

Question Number : 115 Question Id : 90468414802 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Fill in the blanks in the following sentences with suitable words.

(a) Plants are called as _____ because they fix carbon dioxide.

(b) In an ecosystem dominated by trees, the pyramid (of numbers) is _____ type.

(c) In aquatic ecosystems, the limiting factor for the productivity is _____.

(d) Common detritivores in our ecosystem are _____.

(e) The major reservoir of carbon on the earth is _____.

Options :

1. ✓ (a) Autotrophs (b) Inverted (c) Light (d) Earthworms (e) Oceans
2. ✘ (a) Heterotrophs (b) Inverted (c) Light (d) Earthworms (e) Rivers
3. ✘ (a) Autotrophs (b) Inverted (c) Light (d) Bacteria (e) Sea
4. ✘ (a) Chemotrophs (b) Inverted (c) Light (d) Earthworms (e) Stream

**Question Number : 116 Question Id : 90468414803 Question Type : MCQ Option Shuffling : Yes
Is Question Mandatory : No**

Correct Marks : 1 Wrong Marks : 0

1. What is decomposition?
2. Arrange the following steps of decomposition in a proper order.
 - a) Leaching: It is a process wherein the water-soluble nutrients go down into the soil layers and get locked as unavailable salts.
 - b) Humification: The next step is humification, which leads to the formation of a dark-coloured colloidal substance called humus, which acts as a reservoir of nutrients for plants.
 - c) Fragmentation: It involves the breakdown of detritus into smaller pieces by the action of detritivores such as earthworms.
 - d) Mineralization: The humus is further degraded by the action of microbes, which finally leads to the release of inorganic nutrients into the soil. This process of releasing inorganic nutrients from the humus is known as mineralization.
 - e) Catabolism: It is a process in which bacteria and fungi degrade detritus into smaller pieces through various enzymes.

Options :

1. ✘ 1. Decomposition is the breakdown of complex organic matter into simple organic raw materials.
2. d, a, e, c, b
2. ✘ 1. Decomposition is the process that involves the breakdown of complex organic matter from the body of dead plants and animals with the help of decomposers into organic raw materials such as glucose, amino acids and other nutrients.
2. c, b, e, a, d
3. ✓ 1. Decomposition is the process that involves the breakdown of complex organic matter from the body of dead plants and animals with the help of decomposers into inorganic raw materials

such as carbon dioxide, water and other nutrients.

2. c, a, e, b, d

4. ✘ 1. Decomposition is the breakdown of complex organic matter into inorganic raw materials.

2. d, e, a, b, c

Question Number : 117 Question Id : 90468414804 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The three hypotheses for explaining why tropical regions show greater levels of species richness are given below. Check them for their correctness.

(1) Tropical latitudes receive more solar energy than temperate regions, which leads to high productivity and high species diversity.

(2) Tropical regions have more seasonal variations and have a more or less changing environment and thus less species richness.

(3) Temperate regions were subjected to glaciations during the ice age, while tropical regions remained undisturbed, which led to an increase in the species diversity in tropical regions.

Options :

1. ✘ 1. True 2. True 3. True

2. ✘ 1. False 2. False 3. True

3. ✘ 1. True 2. False 3. False

4. ✔ 1. True 2. False 3. True

Question Number : 118 Question Id : 90468414805 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Identify the invasive weed species causing environmental damage and posing threat to native species.

Options :

1. ✘ Carrot

2. ✘ Wheat grass

3. ✓ Carrot grass

4. ✘ Wheat

Question Number : 119 Question Id : 90468414806 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

What is the full form of the given abbreviations?

ICAR, IRRI, IARI, SCP

Options :

1. ✘ ICAR - International Council for Agricultural Research

IRRI - Indian Rice Research Institute

IARI - International Agricultural Research Institute

SCP - Single Cell Protein

2. ✓ ICAR - Indian Council for Agricultural Research

IRRI - International Rice Research Institute

IARI - Indian Agricultural Research Institute

SCP - Single Cell Protein

3. ✘ ICAR - International Council for Agricultural Research

IRRI - International Rice Research Institute

IARI - Indian Agricultural Research Institute

SCP - Simple Cell Protein

4. ✘ ICAR - Indian Council for Agricultural Research

IRRI - International Rice Research Institute

IARI - International Agricultural Research Institute

SCP - Simple Cell Protein

Question Number : 120 Question Id : 90468414807 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Select the appropriate option to fill in the blanks.

During the reproductive phase, cyclic changes happen in organisms. In non-primate mammals like cows, sheep, rats, dogs and tigers, such cyclic changes during reproduction are called (1) _____. In (2) _____ like monkeys, apes, and (3) _____, they are called (4) _____.

Options :

1. ✘ 1. Menstrual cycle 2. Primates 3. Humans 4. Oestrus cycle
2. ✘ 1. Oestrus cycle 2. Humans 3. Primates 4. Menstrual cycle
3. ✘ 1. Menstrual cycle 2. Humans 3. Primates 4. Oestrus cycle
4. ✔ 1. Oestrus cycle 2. Primates 3. Humans 4. Menstrual cycle

Question Number : 121 Question Id : 90468414808 Question Type : MCQ Option Shuffling : Yes

Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Select the appropriate option to fill in the blanks.

The tuberous roots are adventitious and may be produced singly or in groups/clusters and are called (1) _____ and (2) _____, respectively. Example for 1 is (3) _____ and 2 is (4) _____.

Options :

1. ✔ 1. simple tuber 2. fasciculated tuberous 3. sweet potato 4. Asparagus
2. ✘ 1. simple tuber 2. fasciculated tuberous 3. Asparagus 4. sweet potato
3. ✘ 1. fasciculated tuberous 2. simple tuber 3. sweet potato 4. Asparagus
4. ✘ 1. simple tuber 2. sweet potato 3. fasciculated tuberous 4. Asparagus

Display Notepad Post Exam

Group Number :	7
Group Id :	9046841610
Group Maximum Duration :	3
Group Minimum Duration :	3
Show Attended Group? :	No
Edit Attended Group? :	No

Break time : 0
Group Marks : 1
Is this Group for Examiner? : No

Display Notepad Post Exam

Section Id : 9046841703
Section Number : 1
Section type : Offline
Mandatory or Optional : Mandatory
Number of Questions : 1
Number of Questions to be attempted : 1
Section Marks : 1
Enable Mark as Answered Mark for Review and Clear Response : Yes
Sub-Section Number : 1
Sub-Section Id : 9046842625
Question Shuffling Allowed : No

Question Number : 122 Question Id : 90468414809 Question Type : SUBJECTIVE

Correct Marks : 1

Kindly display your Notepad (Rough Sheet) for 3 minutes before the webcam. Also show both pages both sides numbered 1,2,3 and 4. This is a mandatory step if you are using rough sheets.