

Telangana State Council Higher Education

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 :	Agriculture and Medical English 31st Jul 2022 Shift 2
Subject Name :	Agriculture and Medical (English)
Creation Date :	2022-07-31 18:56:58
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Total Marks :	160
Display Marks:	No
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	Yes
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No

Show Progress Bar : No

Agriculture and Medical (English)

Group Number : 1
Group Id : 10561515
Group Maximum Duration : 0
Group Minimum Duration : 180
Show Attended Group? : No
Edit Attended Group? : No
Break time : 0
Group Marks : 160
Is this Group for Examiner? : No
Examiner permission : Cant View
Show Progress Bar? : No

Botany

Section Id : 10561548
Section Number : 1
Section type : Online
Mandatory or Optional : Mandatory
Number of Questions : 40
Number of Questions to be attempted : 40
Section Marks : 40
Enable Mark as Answered Mark for Review and Clear Response : Yes
Maximum Instruction Time : 0
Sub-Section Number : 1
Sub-Section Id : 10561548

Question Shuffling Allowed :

Yes

**Question Number : 1 Question Id : 1056152241 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0**

Identify the organism with correct sequence of taxa in hierarchy from the following.

Options :

Homo – sapiens – Mammalia – Chordata – Hominidae

1. ✘

Triticum – vulgare – Poales – Monocotyledonae – Spermatophyta

2. ✘

domestic – Musca – Muscidae – Diptera – Insecta

3. ✔

Sapindales – Dicotyledonae – Mangifera– indica – Anacardiaceae

4. ✘

**Question Number : 2 Question Id : 1056152242 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0**

Which of the following plants are called as petro-plants?

Options :

Jatropha and Banana

1. ✘

Banana and *Arnica*

2. ✘

Jatropha and *Pongamia*

3. ✔

Pongamia and Banana

4. ✘

Question Number : 3 Question Id : 1056152243 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Match the following:

List - I

- A) Buchner
- B) Summer
- C) Knoll and Ruska
- D) Ramanujam
- E) Khorana

List - II

- I) Urease
- II) Artificial synthesis of the gene
- III) Palynology
- IV) Zymase
- V) Electron microscope

The correct match is :

Options :

1. ✘

A	B	C	D	E
IV	V	I	II	III

2. ✘

A	B	C	D	E
IV	I	V	II	III

3. ✘

A	B	C	D	E
IV	V	II	I	III

4. ✔

A	B	C	D	E
IV	I	V	III	II

Question Number : 4 Question Id : 1056152244 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Assertion (A) : All bryophytes are homosporous with haplo–diplontic life cycle.

Reason (R) : The sporophytes of all bryophytes produce two kinds of spores.

The correct option among the following is:

Options :

(A) is true (R) is true and (R) is the correct explanation for (A)

1. ✘

(A) is true (R) is true but (R) is not the correct explanation for (A)

2. ✖

(A) is true but (R) is false

3. ✔

(A) is false but (R) is true

4. ✖

Question Number : 5 Question Id : 1056152245 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following features are common between *Salvinia*, *Ginkgo* and *Leucas*?

- A) Type of lifecycle
- B) Water conducting system
- C) Female sex organs
- D) Male Sex organs
- E) Process of fusion between gametes
- F) Dominant phase in life cycle
- G) Sporophytic main plant body
- H) Differentiation of main plant body into true roots, stem and leaves
- I) Secondary growth
- J) Production of spores

The correct answer is :

Options :

1. ✖

A, F, G, I, J only

2. ✓
A, B, F, G, H only

3. ✗
B, E, G, I, J only

4. ✗
B, C, D, F, H only

Question Number : 6 Question Id : 1056152246 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Identify the plants based on the given characters in a sequence.

- A) Peduncle is unbranched.
- B) Flowers appear to have arisen from the same point.
- C) The main axis continues to grow.

Options :

1. ✓
Datura – Carrot – Crotalaria

2. ✗
Carrot – Crotalaria – Datura

Cocos – Tridax – Carrot

3. ✖

Cocos – Crotalaria – Carrot

4. ✖

Question Number : 7 Question Id : 1056152247 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following statements are correct regarding the placentation in mustard?

- A) Ovules develop on the inner wall of ovary.
- B) One chambered ovary becomes two chambered due to the formation of a false septum.
- C) Two chambered ovary becomes one chambered due to the disintegration of a false septum.
- D) Ovules develop along the ventral suture of the ovary.

Options :

A, D only

1. ✖

A, C only

2. ✖

C, D only

3. ✖

A, B only

4. ✓

Question Number : 8 Question Id : 1056152248 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct combinations from the following:

- A) Nucleus irregularly shaped – Cell size smaller - Generative cell
- B) Spindle shaped cell – Cell size bigger – Vegetative cell
- C) Outer wall of pollen grain – Cannot withstand high temperature – Variety of designs and patterns
- D) Micropyle close to funiculus – Ovule covered by an integument – Anatropous ovule of Asteraceae
- E) Prior to the pollen release, stigma becomes receptive – Endospermic seeds in potato – Dichogamy

The correct answer is :

Options :

C, D, E only

1. ✘

A, B, E only

2. ✘

D, E only

3. ✓

4. ✘

C, D only

Question Number : 9 Question Id : 1056152249 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Which of the following condition leads to development of more than one embryo in a seed?

Options :

Growth of thick walled nucellar cells into the embryosac

1. ✘

Fruit developed with parthenocarpy

2. ✘

Thick walled collenchymatous cells surrounding embryosac

3. ✘

Growth of thin walled parenchymatous cells around the embryosac into the embryosac

4. ✔

Question Number : 10 Question Id : 1056152250 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Taxonomy based on description of morphological characteristics only is called as:

Options :

Numerical taxonomy

1. ✘

Omega taxonomy

2. ✘

Alpha taxonomy

3. ✔

Cytotaxonomy

4. ✘

Question Number : 11 Question Id : 1056152251 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Arrange the characters of Solanaceae in a sequence which are represented in the floral formula.

- A) Gamosepalous calyx
- B) Bisexual flowers
- C) Bilocular placenta
- D) Petals in valvate condition
- E) Basifixed anthers
- F) Zygomorphic flowers
- G) Pedicellate flowers
- H) Introrse Anthers

The correct answer is :

Options :

B, A, D, H, C only

1. ✘

F, B, D, H only

2. ✘

B, A, H, C only

3. ✔

G, F, A, H, E only

4. ✘

Question Number : 12 Question Id : 1056152252 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What happens if golgi apparatus of a cell is malfunctioning?

Options :

1. ✘ Cell wall synthesis takes place
2. ✔ No cell plate formation
3. ✘ Two cells are completely formed during mitosis from a single cell
4. ✘ There is no effect on the cytokinesis

Question Number : 13 Question Id : 1056152253 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Assertion(A) : Endoplasmic reticulum divides the intercellular space into luminal and extraluminal compartments.

Reason(R) : The tiny tubular structures scattered in the cytoplasm is responsible for this partition.

The correct option among the following is:

Options :

1. ✔

(A) is true. (R) is true and (R) is the correct explanation for (A)

(A) is true. (R) is true but (R) is not the correct explanation for (A)

2. ✘

(A) is true but (R) is false

3. ✘

(A) is false but (R) is true

4. ✘

Question Number : 14 Question Id : 1056152254 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following are not homopolymers?

- A) Collagen
- B) Starch
- C) Inulin
- D) Chitin

Options :

A, D only

1. ✔

A, C only

2. ✘

B, C only

3. ✘

C, D only

4. ✘

Question Number : 15 Question Id : 1056152255 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Arrange the following compounds in ascending order with respect to the number of carbons present in their structure.

- A) Glycine
- B) Ribose
- C) Lecithin
- D) Glucose

Options :

A, B, C, D

1. ✘

B, A, C, D

2. ✘

A, B, D, C

3. ✔

4. ✘

D, C, B, A

Question Number : 16 Question Id : 1056152256 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

The DNA molecule has 4 heterocyclic compounds namely 'A', 'B', 'C', and 'D'. In that 'A' pairs with 'C' by means of 2 hydrogen bonds, while 'B' pairs with 'D' by means of 3 hydrogen bonds during formation of its double helical structure. Identify the names of 'A', 'B', 'C', and 'D', in the same sequence.

Options :

Adenine, Guanine, Thymine and Cytosine

1. ✓

Guanine, Adenine, Cytosine and Thymine

2. ✗

Thymine, Adenine, Guanine and Cytosine

3. ✗

Cytosine, Guanine, Adenine and Thymine

4. ✗

Question Number : 17 Question Id : 1056152257 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Formation of synaptonemal complex and the stage(s) at which it is best visible.

Options :

Leptotene

1. ✘

Zygotene only

2. ✘

Zygotene and pachytene

3. ✔

Pachytene and pachytene

4. ✘

Question Number : 18 Question Id : 1056152258 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Assertion (A) : The cell layer above the pericycle will have barrel shaped cells and will not allow water through them.

Reason (R) : As these cell walls have waxy material deposition, they become impermeable to water.

The correct option among the following is:

Options :

(A) is true. (R) is true and (R) is the correct explanation for (A)

1. ✘

(A) is true. (R) is true but (R) is not the correct explanation for (A)

2. ✘

(A) is true but (R) is false

3. ✔

(A) is false but (R) is true

4. ✘

Question Number : 19 Question Id : 1056152259 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Match the following :

List - I

List - II

- | | |
|--|-------------------------|
| A) Submerged suspended hydrophytes | I) <i>Pistia</i> |
| B) Root caps are absent | II) <i>Sagittaria</i> |
| C) Rooted hydrophytes with floating leaves | III) <i>Utricularia</i> |
| D) Plants live partly in water and partly in air | IV) <i>Nymphaea</i> |

The correct match is:

Options :

1. ✘

A	B	C	D
II	IV	I	III

2. ✘

A	B	C	D
II	I	IV	III

3. ✔

A	B	C	D
III	I	IV	II

4. ✘

A	B	C	D
III	IV	I	II

Question Number : 20 Question Id : 1056152260 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct answer from the following:

A student identified three xerophytes A, B and C consisting of succulent leaf, succulent stem and tuberous root, respectively. Identify those plants in the same order.

Options :

Aloe, Opuntia and Asparagus

1. ✔

Opuntia, Aloe, and Asparagus

2. ✖

Aloe, Asparagus and Opuntia

3. ✖

Asparagus, Aloe and Opuntia

4. ✖

Question Number : 21 Question Id : 1056152261 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Assertion(A) : Competitive inhibitors are used in the control of bacterial pathogens.

Reason(R) : A competitive inhibitor does not resemble the substrate of an enzyme in its molecular structure.

The correct option among the following is:

Options :

(A) is true. (R) is true and (R) is the correct explanation for (A)

1. ✖

(A) is true. (R) is true but (R) is not the correct explanation for (A)

2. ✖

(A) is true but (R) is false

3. ✓

(A) is false but (R) is true

4. ✗

Question Number : 22 Question Id : 1056152262 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Identify the respective absorption maxima of chlorophyll-a in reaction centres of photosystem-I and photosystem-II.

Options :

700 nm and 680 nm

1. ✓

680 nm and 700 nm

2. ✗

650 nm and 750 nm

3. ✗

750 nm and 650 nm

4. ✗

Question Number : 23 Question Id : 1056152263 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the site of chemiosmosis for the formation of proton gradient and ATP synthesis in the given two metabolisms resulting in:

Options :

Photosynthesis	Respiration
Intermembrane space	In lumen

1. ✘

Photosynthesis	Respiration
Cytoplasm	Nucleoplasm

2. ✘

Photosynthesis	Respiration
Lumen of thylakoids	Intermembrane space of mitochondria

3. ✔

Photosynthesis	Respiration
In stroma	In cytoplasm

4. ✘

Question Number : 24 Question Id : 1056152264 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Arrange the following reactions in a sequence that occur in Calvin cycle.

- A) Carboxylation
- B) Regeneration
- C) Reduction
- D) Oxidation

Options :

1. ✓ A, C, B

2. ✗ A, B, C

3. ✗ B, C, D

4. ✗ A, B, D

Question Number : 25 Question Id : 1056152265 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Identify the reason for not releasing O_2 by maize during anabolism of glucose.

- A) Carboxylase activity of RuBiSco in mesophyll cells.
- B) Increase of CO_2 concentration in intercellular spaces of leaves.
- C) Activation of oxygenase of RuBiSco.
- D) Decarboxylation of C_4 acids.

The correct answer is :

Options :

A, B only

1. ✘

B, C only

2. ✘

C, D only

3. ✘

B, D only

4. ✔

**Question Number : 26 Question Id : 1056152266 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0**

Assertion(A) : Present day living organisms include both facultative and obligate anaerobes.

Reason(R) : All the living organisms possess enzymatic machinery for partial oxidation of glucose with the help of O_2 .

The correct option among the following is:

Options :

(A) is true. (R) is true and (R) is the correct explanation for (A)

1. ✘

(A) is true. (R) is true but (R) is not the correct explanation for (A)

2. ✘

(A) is true but (R) is false

3. ✔

(A) is false but (R) is true

4. ✘

Question Number : 27 Question Id : 1056152267 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is a substrate level phosphorylation reaction in Krebs cycle?

Options :

1. ✔

succinyl CoA \longrightarrow succinic acid

succinic acid \longrightarrow fumaric acid

2. ✘

α -Ketoglutaric acid \longrightarrow succinyl CoA

3. ✘

fumaric acid \longrightarrow malic acid

4. ✘

Question Number : 28 Question Id : 1056152268 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Assertion(A) : Respiratory pathway is considered as an amphibolic pathway.

Reason(R) : Respiratory pathway is connected with the breakdown and the synthesis of both proteins and fatty acids.

The correct option among the following is:

Options :

(A) is true. (R) is true and (R) is the correct explanation for (A)

1. ✔

2. ✘

(A) is true. (R) is true but (R) is not the correct explanation for (A)

(A) is true but (R) is false

3. ✘

(A) is false but (R) is true

4. ✘

Question Number : 29 Question Id : 1056152269 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Identify the correct combinations from the following:

- | | | | | |
|--------------------------------|----|-----------------------------------|----|---------|
| A) Terpenes | —— | hastens malting process | —— | 2,4 D |
| B) Carotenoid derivatives | —— | stimulates the closure of stomata | —— | ABA |
| C) Indole compounds | —— | Increases the inter nodal length | —— | IBA |
| D) A modified form of a purine | —— | helps nutrient mobilization | —— | kinetin |

Options :

A, B only

1. ✘

2. ✔

B, D only

C, D only

3. ✖

B, C only

4. ✖

Question Number : 30 Question Id : 1056152270 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct statements from the following according to G.J. Mendel.

- A) In self-pollinated heterozygous tall F_1 plants, some off springs of F_2 were dwarf.
- B) The factors to express specific characters are present in the genes of an organism.
- C) The symbol for dominance tall will be 'T' and recessive is 'd' dwarf.
- D) Genes that code for a pair of contrasting traits are known as alleles.

Options :

A, B, D only

1. ✔

A, B, C only

2. ✖

3. ✖

B, C, D only

A, C, D only

4. ✘

Question Number : 31 Question Id : 1056152271 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

A pea plant with dominant phenotype and unknown genotype is used in the hybridization experiments. If the progeny is having 1: 1 ratio between dominant and recessive phenotype, which cross is used in this experiment?

Options :

Back cross

1. ✔

Test Cross

2. ✘

Selfing

3. ✘

Dihybrid cross

4. ✘

Question Number : 32 Question Id : 1056152272 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Identify the correctly matched statement pairs from the following:

- A) F. Griffith – Transformation in the bacteria.
- B) Avery, MacLeod and McCarty – DNA passed from virus to bacteria.
- C) Hershey and Chase – DNA is the genetic material.
- D) Wilkins and Franklin – RNA is a genetic material in viruses.

Options :

1. ✘ A, B

2. ✔ A, C

3. ✘ B, C

4. ✘ B, D

Question Number : 33 Question Id : 1056152273 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which culture medium was used to prove “DNA replicates conservatively”?

Options :

^{35}S containing medium

1. ✘

^{32}P containing medium

2. ✘

Medium with $^{15}\text{NH}_4\text{Cl}$

3. ✔

Chromogenic medium

4. ✘

Question Number : 34 Question Id : 1056152274 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Identify the mutation and the amino acid involved in causing sickle cell anaemia disease.

Options :

Point mutation, Valine

1. ✔

Point mutation, Lysine

2. ✘

Frame shift mutation, Glutamate

3. ✖

Frame shift mutation, Valine

4. ✖

Question Number : 35 Question Id : 1056152275 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Assertion (A) : Traditional breeding leads to multiplication of undesirable genes along with desirable genes.

Reason (R) : Sexual reproduction permits variation.

The correct option among the following is

Options :

(A) is true. (R) is true and (R) is the correct explanation for (A)

1. ✔

(A) is true. (R) is true but (R) is not the correct explanation for (A)

2. ✖

(A) is true but (R) is false

3. ✖

4. ✖

(A) is false but (R) is true

Question Number : 36 Question Id : 1056152276 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Which one of the following is a correct part of methodology used in plant DNA isolation?

Options :

Digestion of tissues with chitinase

1. ✘

Dissolution histones with detergents

2. ✘

Addition of ethyl alcohol to precipitate the genetic material having uracil

3. ✘

Removing polymer of amino acids with proteases

4. ✔

Question Number : 37 Question Id : 1056152277 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the incorrect statement from the following:

Options :

1. ✓
DNA can be stained by ethidium bromide followed by halogen light exposure for observation.
2. ✘
Agarose gel electrophoresis is employed to check the progression of restriction enzyme digestion of DNA fragments.
3. ✘
Purified DNA can be separated and removed by spooling.
4. ✘
In order to select the cells with the desired genes, colony hybridization is used.

Question Number : 38 Question Id : 1056152278 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Assuming that the occurrence of nucleotide bases in adjacent position in DNA is random, what is the probability of the occurrence of a 8 -bp restriction site (5^1 GGGG CCCC 3^1) in a 650 kb genome?

Options :

5

1. ✘

10

2. ✔

15

3. ✘

20

4. ✘

Question Number : 39 Question Id : 1056152279 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Identify the mismatched statements from the following:

- A) Streptokinase - *Streptococcus* - Immunosuppressive agent.
- B) Statins – *Monascus purpureus* – Blood cholesterol lowering agent.
- C) Penicillin – *Penicillium notatum* – kills bacteria.
- D) Cyclosporin – A – *Trichoderma polysporum* – removes clots from blood vessels.

Options :

A, B only

1. ✘

2. ✔

A, D only

3. ✘ A, C only

4. ✘ B, C only

Question Number : 40 Question Id : 1056152280 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Biogas formed by the action of anaerobic bacteria during the secondary treatment of effluent consists of the following gases.

- A) methane
- B) hydrogen sulphide
- C) carbon dioxide
- D) nitrogen

Options :

1. ✔ A, B, C only

2. ✘ A, C, D only

3. ✘

A, B, D only

B, C, D only

4. ✖

Zoology

Section Id :	10561549
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	40
Number of Questions to be attempted :	40
Section Marks :	40
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	10561549
Question Shuffling Allowed :	Yes

Question Number : 41 Question Id : 1056152281 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Study of animal behaviour is

Options :

1. ✘ Ecology
2. ✘ Evolution
3. ✔ Ethology
4. ✘ Eugenics

Question Number : 42 Question Id : 1056152282 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Assertion (A) : Species is dynamic.

Reason (R) : It is the basic unit of classification.

The correct option among the following is

Options :

1. ✘ (A) is true, (R) is true and (R) is the correct explanation for (A)
2. ✔ (A) is true, (R) is true but (R) is not the correct explanation for (A)

(A) is true but (R) is false

3. ✘

(A) is false but (R) is true

4. ✘

Question Number : 43 Question Id : 1056152283 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Statement I : Tilman showed that increased diversity contributed to higher productivity.

Statement II: Constant environment promotes niche specialisation.

The correct option among the following is

Options :

Statement I is true, but Statement II is false

1. ✘

Statement II is true, but Statement I is false

2. ✘

Both Statement I and Statement II are true

3. ✔

Both Statement I and Statement II are false

4. ✘

Question Number : 44 Question Id : 1056152284 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Which of the following is not a triploblastic phylum?

Options :

1. ✓ Ctenophora
2. ✘ Hemichordata
3. ✘ Platyhelminthes
4. ✘ Echinodermata

Question Number : 45 Question Id : 1056152285 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Identify the retroperitoneal organ from the following.

Options :

1. ✘ Heart

2. ✓
Kidney

3. ✘
Gonad

4. ✘
Lung

Question Number : 46 Question Id : 1056152286 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The junctions between epithelial cells that prevent the leakage of body fluids

Options :

1. ✘
Desmosomes

2. ✓
Tight junctions

3. ✘
Gap junctions

4. ✘
Synapses

Question Number : 47 Question Id : 1056152287 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Assertion (A) : Cardiac muscle is described as a functional syncytium.

Reason (R) : The rate of heart beat is regulated by an autonomic innervation and adrenaline.

The correct option among the following is

Options :

(A) is true, (R) is true and (R) is the correct explanation for (A)

1. ✘

(A) is true, (R) is true but (R) is not the correct explanation for (A)

2. ✔

(A) is true but (R) is false

3. ✘

(A) is false but (R) is true

4. ✘

Question Number : 48 Question Id : 1056152288 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Match the following :

- | List -I | List -II |
|-------------------|----------------|
| A) Choanocytes | I) Cnidaria |
| B) Lasso cells | II) Porifera |
| C) Stinging cells | III) Nematoda |
| D) Renette cells | IV) Ctenophora |
| | V) Mollusca |

The correct match is

Options :

1. ✘

A	B	C	D
V	I	IV	II

2. ✘

A	B	C	D
II	IV	I	V

3. ✘

A	B	C	D
IV	III	II	I

4. ✔

A	B	C	D
II	IV	I	III

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The function of parapodia is

Options :

1. ✘ Burrowing

2. ✔ Swimming

3. ✘ Food collection

4. ✘ Visual sense

Question Number : 50 Question Id : 1056152290 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Antennary glands are the excretory organs of

Options :

1. ✘ Chilopoda

Diplopoda

2. ✘

Arachnida

3. ✘

Crustacea

4. ✔

Question Number : 51 Question Id : 1056152291 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Read the following statements:

- A) Circulatory system is closed type.
- B) Excretion is performed by solenocytes.
- C) Exchange of respiratory gases occurs mostly across the external body surface.
- D) Notochord persists throughout life.

The above characteristics are applicable to

Options :

Ascidia

1. ✘

Petromyzon

2. ✘

3. ✔

Branchiostoma

Balanoglossus

4. ✘

Question Number : 52 Question Id : 1056152292 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Study the following table and pick up the correct combination(s).

S.No	Group	Salient feature	Example
I)	Cyclostomata	Circular mouth	<i>Lamprey</i>
II)	Pisces	Poikilotherms	<i>Hag fish</i>
III)	Chondrichthyes	Lamelliform gills	<i>Pristis</i>
IV)	Osteichthyes	Placoid scales	<i>Labeo</i>

Options :

I, II

1. ✘

II, IV

2. ✘

I, III

3. ✔

III, IV

4. ✘

Question Number : 53 Question Id : 1056152293 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Match the following:

List -I

- A) Anurans
- B) Urodeles
- C) Caecilians
- D) Birds

List -II

- I) Opisthocoelous vertebrae
- II) Heterocoelous vertebrae
- III) Amphiplatyans
- IV) Procoelous vertebrae
- V) Amphicoelous vertebrae

The correct match is

Options :

- | | | | |
|----|---|-----|---|
| A | B | C | D |
| IV | I | III | V |

1. ✘

- | | | | |
|----|---|---|----|
| A | B | C | D |
| IV | I | V | II |

2. ✔

- | | | | |
|-----|---|----|---|
| A | B | C | D |
| III | V | IV | I |

3. ✘

A	B	C	D
II	V	I	IV

4. ✘

Question Number : 54 Question Id : 1056152294 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Statement I : Increase of size of the infected cell of the host due to parasite is known as hyperplasia.

Statement II : Some parasites cause degeneration of gonads of their hosts. This phenomenon is called parasitic castration.

The correct option among the following is

Options :

Statement I is true, but Statement II is false

1. ✘

Statement II is true, but Statement I is false

2. ✔

Both Statement I and Statement II are true

3. ✘

Both Statement I and Statement II are false

4. ✘

Question Number : 55 Question Id : 1056152295 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Stages of *Plasmodium* in order in pre-erythrocytic cycle is

Options :

1. ✓ Sporozoite – Trophozoite – Schizont – Cryptozoite
2. ✘ Sporozoite – Trophozoite – Cryptozoite – Schizont
3. ✘ Sporozoite – Schizont – Trophozoite – Cryptozoite
4. ✘ Cryptozoite – Trophozoite – Schizont – Sporozoite

Question Number : 56 Question Id : 1056152296 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Assertion (A) : Sexual dimorphism is distinct in *Ascaris*.

Reason (R) : The post anal tail in male *Ascaris* is curved.

The correct option among the following is

Options :

(A) is true, (R) is true and (R) is the correct explanation for (A)

1. ✘

(A) is true, (R) is true but (R) is not the correct explanation for (A)

2. ✘

(A) is true but (R) is false

3. ✔

(A) is false but (R) is true

4. ✘

Question Number : 57 Question Id : 1056152297 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Statement I : Confirmatory test for pneumonia is widal test.

Statement II : In pneumonia, alveoli get filled with fluid.

The correct option among the following is

Options :

1. ✘

Statement I is true, but Statement II is false

Statement II is true, but Statement I is false

2. ✓

Both Statement I and Statement II are true

3. ✘

Both Statement I and Statement II are false

4. ✘

**Question Number : 58 Question Id : 1056152298 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0**

Which of the following are sleeping pills?

Options :

Amphetamines

1. ✘

Barbiturates

2. ✓

Tranquilizers

3. ✘

Benzodiazepines

4. ✖

Question Number : 59 Question Id : 1056152299 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Certain organisms show delay in development during periods of unfavourable environmental conditions, and spend some period in an inactive state is called

Options :

Hibernation

1. ✖

Aestivation

2. ✖

Diapause

3. ✔

Dormancy

4. ✖

Question Number : 60 Question Id : 1056152300 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Identify the denitrifying bacteria.

Options :

Nitrosomonas

1. ✘

Nitrosococcus

2. ✘

Nitrobacter

3. ✘

Thiobacillus

4. ✔

Question Number : 61 Question Id : 1056152301 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Match the following:

List-I

List-II

- | | |
|---------------|-------------------------------------|
| A) Pharynx | D) Prevents entry of food |
| B) Larynx | II) Tube up to mid thoracic cavity |
| C) Trachea | III) Help in sound production |
| D) Epiglottis | IV) Common passage for food and air |
| | V) Tube into the alveoli |

The correct match is

Options :

A	B	C	D
IV	V	I	II

1. ✘

A	B	C	D
III	IV	I	II

2. ✘

A	B	C	D
III	II	V	I

3. ✘

A	B	C	D
IV	III	II	I

4. ✔

Question Number : 62 Question Id : 1056152302 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Left side shift of oxygen haemoglobin dissociation curve takes place during

Options :

Low pH, High CO₂, High temperature

1. ✘

2. ✘

High pH, High CO₂, High temperature

Low pH, Low CO₂, Low temperature

3. ✘

High pH, Low CO₂, Low temperature

4. ✔

Question Number : 63 Question Id : 1056152303 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In extrinsic pathway during blood clotting tissue thromboplastin released from damaged vascular wall activates

Options :

Factor XII

1. ✘

Factor VII

2. ✔

Factor XI

3. ✘

Factor V

4. ✘

Question Number : 64 Question Id : 1056152304 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Study the following and pick up the correct statements.

- I) Hepatic portal vein carries blood from liver to the heart.
- II) Normal activities of the heart are regulated, intrinsically by specialised muscles.
- III) Angina pectoris is a warning signal of deprivation of blood supply to the heart muscles.
- IV) Systemic circulation is also called lesser circulation.

Options :

I, IV only

1. ✘

I, II only

2. ✘

II, III only

3. ✔

III, IV only

4. ✘

Question Number : 65 Question Id : 1056152305 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Assertion (A) : Protonephridia are found in lancelets.

Reason (R) : Protonephridia are primary concerned with excretion.

The correct option among the following is

Options :

1. ✘ (A) is true, (R) is true and (R) is the correct explanation for (A)

2. ✘ (A) is true, (R) is true but (R) is not the correct explanation for (A)

3. ✔ (A) is true but (R) is false

4. ✘ (A) is false but (R) is true

**Question Number : 66 Question Id : 1056152306 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0**

Match the following:

- | List -I | List -II |
|--------------------|----------------------|
| A) ADH | I) Aldosterone |
| B) Renin | II) Vasodilator |
| C) ANP | III) Neurohypophysis |
| D) Angiotensin -II | IV) JG cells |

The correct match is

Options :

A	B	C	D
III	IV	I	II

1. ✘

A	B	C	D
IV	III	II	I

2. ✘

A	B	C	D
IV	III	I	II

3. ✘

A	B	C	D
III	IV	II	I

4. ✔

Question Number : 67 Question Id : 1056152307 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Motor protein in the myofibril that is able to convert chemical energy into mechanical energy is

Options :

Actin

1. ✘

Troponin

2. ✘

Tropomyosin

3. ✘

Myosin

4. ✔

Question Number : 68 Question Id : 1056152308 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Pneumotaxic centre lies in

Options :

Cerebellum

1. ✘

2. ✘

Medulla oblongata

Limbic system

3. ✘

Pons varolii

4. ✔

Question Number : 69 Question Id : 1056152309 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Statement I : In electrical synapse, the pre and post synaptic membranes have conductive links called gap junctions.

Statement II : In chemical synapses, the post synaptic membrane has ligand gated channels.

The correct option among the following is

Options :

Statement I is true, but Statement II is false

1. ✘

Statement II is true, but Statement I is false

2. ✘

Both Statement I and Statement II are true

3. ✔

Both Statement I and Statement II are false

4. ✘

Question Number : 70 Question Id : 1056152310 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Match the following:

List-I	List-II
A) Thyroxine	I) Reduces glucose level in blood
B) Calcitonin	II) Reabsorption of water in nephrons
C) Insulin	III) Lowers calcium level in blood
D) Oxytocin	IV) Metamorphosis of tadpole larva
E) Vasopressin	V) Contraction of uterine muscles

The correct match is

Options :

A	B	C	D	E
IV	III	I	II	V

1. ✘

A	B	C	D	E
I	II	III	IV	V

2. ✘

3. ✔

A	B	C	D	E
IV	III	I	V	II

A	B	C	D	E
V	IV	III	I	II

4. ✘

Question Number : 71 Question Id : 1056152311 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Select the odd one with reference to disorders caused due to hormone deficiency.

Options :

Addison's disease

1. ✘

Cretinism

2. ✘

Gout disease

3. ✔

Diabetes insipidus

4. ✘

Question Number : 72 Question Id : 1056152312 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Vaccination is a type of

Options :

Innate immunity

1. ✘

Passive acquired immunity

2. ✘

Artificial active acquired immunity

3. ✔

Natural active acquired immunity

4. ✘

Question Number : 73 Question Id : 1056152313 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Peyer's patches are

Options :

Primary lymphoid organs

1. ✘

Secondary lymphoid organs

2. ✓

Lymph nodes

3. ✘

Endocrine structures of small intestine

4. ✘

Question Number : 74 Question Id : 1056152314 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Assertion (A) : Almost in the middle of the menstrual cycle, ovulation takes place in human beings.

Reason (R) : L.H. levels in blood reaches to maximum.

The correct option among the following is

Options :

(A) is true, (R) is true and (R) is the correct explanation for (A)

1. ✓

(A) is true, (R) is true but (R) is not the correct explanation for (A)

2. ✘

(A) is true but (R) is false

3. ✘

(A) is false but (R) is true

4. ✘

Question Number : 75 Question Id : 1056152315 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is not a barrier?

Options :

Vaginal ring

1. ✔

Cervical cap

2. ✘

Diaphragm

3. ✘

Vaults

4. ✘

Question Number : 76 Question Id : 1056152316 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following blood group(s) is /are not possible in the progeny, if the parents have AB and O blood groups?

- I) A II) B III) AB IV) O

Options :

1. ✘ I only
2. ✘ II only
3. ✘ IV only
4. ✔ III and IV

Question Number : 77 Question Id : 1056152317 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

According to Genic balance theory, the *Drosophila* with the Karyotype AAXO is

Options :

1. ✔ Male
2. ✘ Female

Intersex

3. ✘

Metafemale

4. ✘

Question Number : 78 Question Id : 1056152318 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If a person has an additional copy of chromosome number 21, the disorder is described as

Options :

Down syndrome

1. ✔

Klinefelter syndrome

2. ✘

Turner syndrome

3. ✘

Edward syndrome

4. ✘

Question Number : 79 Question Id : 1056152319 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Mule is a product of

Options :

Out crossing

1. ✘

Interspecific hybridisation

2. ✔

Cross breeding

3. ✘

Line breeding

4. ✘

Question Number : 80 Question Id : 1056152320 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Liquid tumours are

Options :

Lymphomas

1. ✘

Carcinomas

2. ✖

Sarcomas

3. ✖

Leukemias

4. ✔

Physics

Section Id :	10561550
Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	40
Number of Questions to be attempted :	40
Section Marks :	40
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	10561550
Question Shuffling Allowed :	Yes

Question Number : 81 Question Id : 1056152321 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Two particles having equal mass and charge are separated by a distance r . The force(s) they experience is (are)

Options :

Attractive electromagnetic force only

1. ✘

Repulsive electromagnetic force only

2. ✘

Attractive electromagnetic force and attractive gravitational force

3. ✘

Repulsive electromagnetic force and attractive gravitational force

4. ✔

Question Number : 82 Question Id : 1056152322 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Bernoulli equation can be presented as $P + \frac{1}{2}\rho V^2 + \rho gz = C$ where P is pressure,

ρ is fluid density, V is fluid velocity, g is gravitational acceleration, z is distance and C is the constant. The dimension of the constant C is

Options :

$$\left\{ \frac{\text{m}}{\text{TL}} \right\}$$

1. ✘

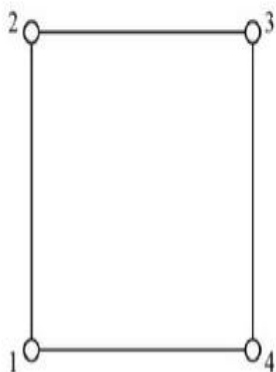
2. ✘ $\left\{ \frac{m}{TL^2} \right\}$

3. ✘ $\left\{ \frac{m}{T^2L^2} \right\}$

4. ✔ $\left\{ \frac{m}{T^2L} \right\}$

Question Number : 83 Question Id : 1056152323 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

A track is in square shape. The length of each side is 'a'. There exists a pole at each corner as shown below. The person who walks on the track starts at the 1st pole and reach the 4th pole. The ratio of distance travelled by the person to displacement is



Options :

1. ✘

$$\frac{1}{3}$$

2. ✓

$$3$$

3. ✘

$$\frac{2}{3}$$

4. ✘

$$\frac{3}{2}$$

Question Number : 84 Question Id : 1056152324 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Acceleration a is given in terms of position x as $a = 2x \text{ m/s}^2$. At $x = 0$, the velocity v is zero. What is the relation between velocity v and position x ?

Options :

1. ✓

$$v = \sqrt{2} x$$

2. ✘

$$v = 2x$$

$$v^2 = 2x$$

3. ✘

$$v = \frac{x^2}{2}$$

4. ✘

Question Number : 85 Question Id : 1056152325 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

The co-ordinates (x, y) of a moving particle at any time 't' are given by $x = \alpha t^3$ and $y = \beta t^3$. The speed of the particle at time 't' is given by

Options :

$$3t\sqrt{\alpha^2 + \beta^2}$$

1. ✘

$$3t^2\sqrt{\alpha^2 + \beta^2}$$

2. ✔

$$t^2\sqrt{\alpha^2 + \beta^2}$$

3. ✘

4. ✘

$$\sqrt{\alpha^2 + \beta^2}$$

Question Number : 86 Question Id : 1056152326 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

A football is kicked off with a velocity of 147 m/s at an angle of 30° with the ground. The time the ball takes to touch the ground is
($g = 9.8 \text{ m/s}^2$)

Options :

7.5 s

1. ✘

15 s

2. ✔

21 s

3. ✘

26 s

4. ✘

Question Number : 87 Question Id : 1056152327 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A 10 kg box is pulled on a rough horizontal surface. The force 40 N is applied at 60° angle from vertical. If co-efficient of kinetic friction is 0.25, what will the acceleration of the moving box? (Consider $g = 10 \text{ m/s}^2$)

Options :

0.76 m/s^2

1. ✘

1.52 m/s^2

2. ✘

1.46 m/s^2

3. ✔

0.68 m/s^2

4. ✘

Question Number : 88 Question Id : 1056152328 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The relation between the displacement and time of an object is given as $x = t^2 + 7$. The displacement happens under the action of a force in x- direction. The mass of the object is 2 kg. The displacement of object when the velocity is 2 m/s and work done by the force during initial 10 s are

Options :

7 m and 428 J

1. ✘

8 m and 428 J

2. ✘

7 m and 400 J

3. ✘

8 m and 400 J

4. ✔

Question Number : 89 Question Id : 1056152329 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Two identical bodies of same mass move with speed V_0 and $2V_0$, respectively in directions perpendicular to each other. After some time, the bodies collide and merge with each other. The speed after collision is

Options :

$$\frac{V_0}{2}$$

1. ✘

$$\frac{V_0\sqrt{5}}{2}$$

2. ✔

3. ✘ $\frac{V_0}{2\sqrt{5}}$

4. ✘ V_0

Question Number : 90 Question Id : 1056152330 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

A body of mass 'M' collides against a wall with a speed 'v' and retraces its path with the same speed, the change in momentum is

Options :

1. ✘ Zero

2. ✔ $2 Mv$

3. ✘ Mv

4. ✘ $-Mv$

Question Number : 91 Question Id : 1056152331 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The time periods of a given simple pendulum on the surface of earth T_1 , in international space station T_2 and on the surface of the moon T_3 are related as

Options :

1. ✘ $T_2 < T_1 < T_3$

2. ✘ $T_2 > T_1 > T_3$

3. ✘ $T_1 > T_2 > T_3$

4. ✔ $T_1 < T_2 < T_3$

Question Number : 92 Question Id : 1056152332 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A satellite is revolving around the earth at the speed V . The height of the satellite is $6R_E$ from the earth surface (R_E is radius of earth = 6400 km). If another satellite is orbiting 600 km above the earth surface. The speed of this orbiting satellite is

Options :

6 V

1. ✘

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

2. ✘

$4\sqrt{2} V$

3. ✘

$\frac{8V}{\sqrt{10}}$

4. ✔

Question Number : 93 Question Id : 1056152333 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Two wires A and B made of same material is subjected to same tension. The length and diameter of A, B are 10 cm, 1 mm and 70 cm, 2 mm respectively. Then identify the correct statement from the following:

Options :

Wire A would have larger extension than wire B

1. ✔

Wire A would have lesser extension than wire B

2. ✘

Wire A and Wire B would have same extension

3. ✘

No extension for Wire A and Wire B despite the application of tension

4. ✘

Question Number : 94 Question Id : 1056152334 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A cylindrical container of cross sectional area 10 cm^2 contains a liquid of density 1.2 g/cm^3 upto a certain level. A piece of ice having mass 9 g (density = 0.9 g/cm^3) is floating in this liquid. If the ice melts completely, the change in level is

Options :

0.15 cm

1. ✔

0.25 cm

2. ✘

0.35 cm

3. ✘

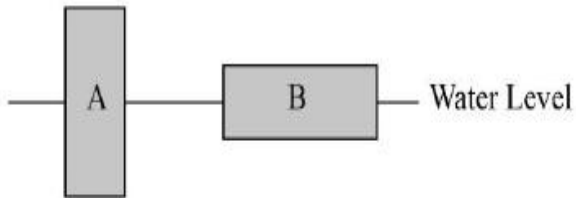
0.45 cm

4. ✘

Question Number : 95 Question Id : 1056152335 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Two identical blocks of ice A and B float in water as shown in figure. Then



Options :

Block A displaced a greater volume of water since the pressure acts on a smaller bottom area

1. ✘

Block B displaced a greater volume of water since the pressure is less on its bottom

2. ✘

The two blocks displace equal volumes of water since they have the same weight

3. ✔

4. ✘

Block A displaces a greater volume of water since its submerged end is lower in the water

Question Number : 96 Question Id : 1056152336 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

A hole is drilled at the center of a metallic plate. If the metal plate is heated, then the size of the hole will be

Options :

1. Expanding
2. Contracting
3. Remains same
4. Not predicted

Question Number : 97 Question Id : 1056152337 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

An object cools down from $90\text{ }^{\circ}\text{C}$ to $70\text{ }^{\circ}\text{C}$ in 10 minutes, when room temperature is $30\text{ }^{\circ}\text{C}$. The time taken by the object to cool from $70\text{ }^{\circ}\text{C}$ to $50\text{ }^{\circ}\text{C}$ is

Options :

10 min

1. ✘

20.3 min

2. ✘

16.7 min

3. ✔

14.5 min

4. ✘

Question Number : 98 Question Id : 1056152338 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Consider n moles of an ideal gas. The gas expands adiabatically from initial temperature T_i to final lower temperature T_f . The work done by gas is proportional to

Options :

Specific heat at constant pressure and difference between initial and final temperature

1. ✘

2. ✔

Specific heat at constant volume and difference between initial and final temperature

Only specific heat

3. ✘

Only difference between initial and final temperature

4. ✘

Question Number : 99 Question Id : 1056152339 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An ideal gas undergoes through an isochoric process whereby its internal energy is increased by ΔU . If the heat expelled (thrown out) by the gas is ΔQ , then the ratio $\frac{\Delta U}{\Delta Q}$ is

Options :

1.0

1. ✘

0.5

2. ✘

-1.0

3. ✔

-2.0

4. ✘

Question Number : 100 Question Id : 1056152340 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

A gaseous mixture consists of molecules of type A, B and C with masses $M_A > M_B > M_C$. The correct relation between their average kinetic energy is

Options :

$$K_A > K_B > K_C$$

1. ✘

$$K_A < K_B < K_C$$

2. ✘

$$K_A = K_B = K_C$$

3. ✔

$$K_A = K_B < K_C$$

4. ✘

Question Number : 101 Question Id : 1056152341 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Consider following statements.

- A) Longitudinal waves need bulk modulus of elasticity and therefore can propagate in all media.
- B) Progressive wave is a wave that moves from one point of medium to another.
- C) In a wave, energy and matter are transferred from one point to another.

Choose the correct option.

Options :

A, B, C are correct

1. ✘

only B and C are correct

2. ✘

only A and B are correct

3. ✔

only A and C are correct

4. ✘

Question Number : 102 Question Id : 1056152342 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Light from a point source in air falls on a spherical glass surface of refractive index 1.5. The distance of the light source from the glass surface is 150 cm. If the image is formed at a distance of 150 cm from the glass surface, in the direction of incident light, then the radius of the curvature of the surface is

Options :

20 cm

1. ✘

40 cm

2. ✘

30 cm

3. ✔

15 cm

4. ✘

Question Number : 103 Question Id : 1056152343 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

In a Young's double slit experiment the intensity ratio between bright and dark fringes is found to be 36. The ratio of amplitude of bright and dark fringes is

Options :

36 : 16

1. ✘

7 : 5

2. ✓

6 : 1

3. ✗

36 : 5

4. ✗

Question Number : 104 Question Id : 1056152344 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Charges on two identical metal balls is Q and 3Q. They are kept at same distance after an initial contact. What is the ratio of initial to the final force?

Options :

4 : 3

1. ✗

3 : 4

2. ✓

2 : 3

3. ✗

4. ✗

3 : 2

Question Number : 105 Question Id : 1056152345 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Three capacitors each of $4\ \mu\text{F}$ are to be connected in such a way that the effective capacitance is $6\ \mu\text{F}$. This can be done by connecting them

Options :

all in series

1. ✘

all in parallel

2. ✘

two in parallel and one in series

3. ✘

two in series and one in parallel

4. ✔

Question Number : 106 Question Id : 1056152346 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

The resistance of a wire (its temperature coefficient = 0.001 K^{-1}) is 4Ω at 27°C . If its temperature is increased twice the initial value, the final resistance of the wire is

Options :

4.1 Ω

1. ✘

4.5 Ω

2. ✘

4.9 Ω

3. ✘

5.2 Ω

4. ✔

Question Number : 107 Question Id : 1056152347 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A battery of emf 10 V and some internal resistance is connected to a resistor of 17Ω .

If the current in the circuit is 0.5 A then the internal resistance of the battery is

($\mu_0 = 4\pi \times 10^{-7}$, charge of electron $e = 1.6 \times 10^{-19}$ coulombs)

Options :

0.6 Ω

1. ✘

2.5 Ω

2. ✘

3.5 Ω

3. ✘

3.0 Ω

4. ✔

Question Number : 108 Question Id : 1056152348 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A long straight wire carries a current of 20 A. The maximum force experienced by an electron moving at a speed of 100 km/s, at a distance of 6.4 cm from the wire is

Options :

10^{-18} N

1. ✔

10^{-19} N

2. ✘

5×10^{-17} N

3. ✘

8×10^{-18} N

4. ✘

Question Number : 109 Question Id : 1056152349 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The magnetic field at a centre of solenoid is B. The solenoid is cut into two equal parts. For the same current, what is B at the centre of new solenoid?

Options :

1. ✓ B

2. ✗ 2B

3. ✗ 4B

4. ✗ $\frac{B}{2}$

Question Number : 110 Question Id : 1056152350 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A short bar magnet has a magnitude of magnetic field 10^{-10} T, at a point on its axis at a distance 10 m from it. The magnetic moment of the magnet is ($\mu_0 = 4\pi \times 10^{-7}$)

Options :

2.0 Am²

1. ✘

1.0 Am²

2. ✘

0.5 Am²

3. ✔

1.5 Am²

4. ✘

Question Number : 111 Question Id : 1056152351 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A rod of length 2 m has a translational velocity of 1 m/s in a direction making an angle 30° with its length. The plane along which the rod is moving is normal to the magnetic field of induction of 2 T. The e.m.f induce between the two ends of the rod is

Options :

0.5 V

1. ✘

1 V

2. ✘

1.5 V

3. ✘

2 V

4. ✔

Question Number : 112 Question Id : 1056152352 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A cell phone charger consists of a stepdown transformer to convert AC voltage of 120 V to AC voltage of 5.0 V. If the secondary coil contains 30 turns and charger supplies 720 mA, calculate the current in the primary coil.

Options :

12 mA

1. ✘

30 mA

2. ✔

85 mA

3. ✘

160 mA

4. ✘

Question Number : 113 Question Id : 1056152353 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Let \vec{E} and \vec{B} are electric and magnetic field in an electromagnetic wave. Identify the correct option.

Options :

$$\vec{E} = E_0 \sin \omega \left(t - \frac{x}{c} \right) \hat{j}, \vec{B} = B_0 \sin \omega \left(t - \frac{x}{c} \right) \hat{k}$$

1. ✓

$$\vec{E} = E_0 \sin \omega \left(t - \frac{y}{c} \right) \hat{j}, \vec{B} = B_0 \sin \omega \left(t - \frac{z}{c} \right) \hat{k}$$

2. ✗

$$\vec{E} = E_0 \sin \omega \left(t - \frac{x}{c} \right) \hat{i}, \vec{B} = B_0 \sin \omega \left(t - \frac{x}{c} \right) \hat{i}$$

3. ✗

$$\vec{E} = E_0 \sin^2 \omega \left(t - \frac{x}{c} \right) \hat{j}, \vec{B} = B_0 \sin^2 \omega \left(t - \frac{x}{c} \right) \hat{k}$$

4. ✗

Question Number : 114 Question Id : 1056152354 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

If the velocity of a particle is reduced to half what is the percentage increase in its deBroglie wavelength?

Options :

1. ✓ 100

2. ✘ 200

3. ✘ 400

4. ✘ 50

Question Number : 115 Question Id : 1056152355 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If a source of power 100 kW produces 1.5×10^{20} photons/sec. The radiation belongs to spectrum called as ($h = 6.63 \times 10^{-34}$ J/s)

Options :

Gamma rays

1. ✘

X – rays

2. ✓

Ultraviolet rays

3. ✘

Microwave rays

4. ✘

Question Number : 116 Question Id : 1056152356 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The frequency of the line in the Balmer series of hydrogen spectrum corresponding to the transitions from $n = 5$ is
(R Rydberg constant)

Options :

$2.1 \times 10^7 R$

1. ✘

$6.3 \times 10^7 R$

2. ✓

$4.5 \times 10^7 R$

3. ✘

$$1.5 \times 10^7 \text{ R}$$

4. ✘

Question Number : 117 Question Id : 1056152357 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An electron and proton are produced by breaking of a neutron. If the mass of neutron, electron and proton are $1.675 \times 10^{-27} \text{ kg}$, $9 \times 10^{-31} \text{ kg}$ and $1.6730 \times 10^{-27} \text{ kg}$ respectively, find the amount of energy released in this process.
(consider velocity of light as $3 \times 10^8 \text{ m/s}$)

Options :

0.66 MeV

1. ✘

0.59 MeV

2. ✘

0.62 MeV

3. ✔

0.68 MeV

4. ✘

Question Number : 118 Question Id : 1056152358 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following statement is correct

Options :

p- type junction can be obtained by doping with pentavalent atoms

1. ✘

The junction barrier in a p-n junction diode is decreased under reverse bias

2. ✘

The minority carriers in n – type semiconductor are electrons

3. ✘

The product of number of electrons and number of holes in a semiconductor is constant

4. ✔

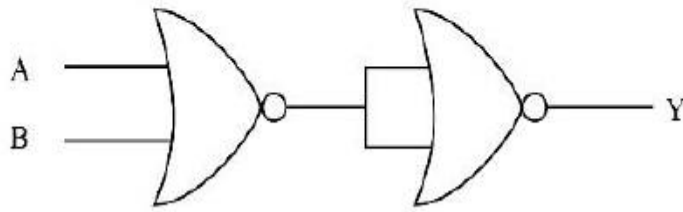
Question Number : 119 Question Id : 1056152359 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Identify the logic operation which the following circuit is performing



Options :

1. ✓ OR

2. ✗ AND

3. ✗ NOT

4. ✗ NAND

Question Number : 120 Question Id : 1056152360 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The atmospheric region which acts as 'radio mirror' is

Options :

1. ✗

Troposphere only

Stratosphere only

2. ✘

Ionosphere only

3. ✔

Troposphere and stratosphere

4. ✘

Chemistry

Section Id :	10561551
Section Number :	4
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	40
Number of Questions to be attempted :	40
Section Marks :	40
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	10561551
Question Shuffling Allowed :	Yes

Question Number : 121 Question Id : 1056152361 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

The complete set of correct statements from the following is

- a) The value of Rydberg constant calculated for hydrogen atom by Bohr model is in agreement with that of experimentally determined value.
- b) Bohr theory successfully explained the fine spectrum of hydrogen atom.
- c) The value of Rydberg constant for hydrogen is 13.6 eV.
- d) Bohr's theory can explain chemical bond formation.

Options :

a, b and c only

1. ✘

b and c only

2. ✘

a and c only

3. ✔

c and d only

4. ✘

Question Number : 122 Question Id : 1056152362 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

The number of revolutions made by an electron in the 1st orbit of hydrogen atom per minute is approximately

Options :

3.9×10^{15}

1. ✘

3.9×10^{16}

2. ✘

3.9×10^{17}

3. ✔

3.9×10^{14}

4. ✘

Question Number : 123 Question Id : 1056152363 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The IUPAC symbol and the electronic configuration of the element 'Unq' are respectively, _____ and _____.

Options :

Rf and $[Rn]5f^{14} 6d^2 7s^2$

1. ✔

No and $[Rn] 5f^{14} 6d^4 7s^2$

2. ✘

Db and $[Rn] 5f^{14} 6d^2 7s^2$

3. ✘

Lr and $[Rn] 5f^{14} 6d^2 7s^2$

4. ✘

Question Number : 124 Question Id : 1056152364 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

An anomalous pair in Mendeleev's periodic table is

Options :

Co and Zn

1. ✘

Co and Ni

2. ✔

K and Ca

3. ✘

4. ✘

Ni and Cu

Question Number : 125 Question Id : 1056152365 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

The formal charges on oxygen atoms of ozone are

Options :

+1, -2, +1

1. ✘

-2, 0, +2

2. ✘

+1, 0, -1

3. ✔

-1, +2, -1

4. ✘

Question Number : 126 Question Id : 1056152366 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

The hybridization of 'N' atomic orbitals in NO_2 , NO_2^+ , NO_2^- respectively, are

Options :

$\text{sp}^2, \text{sp}^2, \text{sp}^2$

1. ✘

$\text{sp}^2, \text{sp}, \text{sp}^3$

2. ✘

$\text{sp}^2, \text{sp}, \text{sp}^2$

3. ✔

$\text{sp}^3, \text{sp}, \text{sp}^3$

4. ✘

Question Number : 127 Question Id : 1056152367 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In the periodic table, the number of elements that exist as gases under normal conditions is

Options :

8

1. ✘

10

2. ✘

11

3. ✔

13

4. ✘

Question Number : 128 Question Id : 1056152368 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An unknown gas is kept at 1 atm at 300 K and allowed to diffuse through a membrane. The rate of diffusion is 'r' L/min. At the same temperature, O₂ kept at 2 atm has the rate of diffusion ' $\frac{r}{2}$ ' L/min. The unknown gas is

Options :

H₂O

1. ✘

He

2. ✘

Ar

3. ✘

4. ✔

CH₄

Question Number : 129 Question Id : 1056152369 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

What is the percentage composition of a solution (X) obtained by mixing 200 g of a 20 % and 300 g of a 30 % solution by weight?

Options :

20 %

1. ✘

30 %

2. ✘

26 %

3. ✔

50 %

4. ✘

Question Number : 130 Question Id : 1056152370 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

The equivalent weights of KMnO_4 in acidic, neutral and basic media are, respectively

Options :

31.6, 52.6, 158

1. ✓

52.6, 31.6, 158

2. ✗

158, 31.6, 52.6

3. ✗

158, 52.6, 31.6

4. ✗

Question Number : 131 Question Id : 1056152371 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Given the standard enthalpy change of formation [ΔH_f° in kJ mol^{-1}] for $\text{C}_3\text{H}_8(\text{g})$, $\text{CO}_2(\text{g})$ and $\text{H}_2\text{O}(\text{l})$ are -105 , -394 and -286 , respectively. The $\Delta_r H^\circ$ of complete combustion of propane in oxygen is approximately (in kJ. mol^{-1})

Options :

574

1. ✗

2221

2. ✘

-2221

3. ✔

2431

4. ✘

Question Number : 132 Question Id : 1056152372 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Assertion (A) : For the ammonia formation from its constituent elements, the reaction at equilibrium will shift in the forward direction with increasing pressure.

Reason (R) : Increasing pressure shifts the equilibrium towards the side of the reaction with fewer number of gaseous molecules.

The correct option among the following is

Options :

(A) is true, (R) is true and (R) is the correct explanation for (A)

1. ✔

(A) is true, (R) is true but (R) is not the correct explanation for (A)

2. ✘

(A) is true but (R) is false

3. ✘

(A) is false but (R) is true

4. ✘

Question Number : 133 Question Id : 1056152373 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Which of the following are Lewis acids?

BF_3 , H_2O , H^+ , SO_3

Options :

H^+ , SO_3 only

1. ✘

BF_3 , H^+ , H_2O only

2. ✘

BF_3 , H^+ , SO_3 only

3. ✔

BF_3 , H_2O , SO_3 only

4. ✘

Question Number : 134 Question Id : 1056152374 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

How many water molecules are directly bonded with the metal in $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$?

Options :

1

1. ✘

4

2. ✔

5

3. ✘

3

4. ✘

Question Number : 135 Question Id : 1056152375 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

The correct order of melting points of alkaline earth metals is

Options :

Ca > Sr > Mg

1. ✓

Ca > Mg > Sr

2. ✘

Mg > Ca > Sr

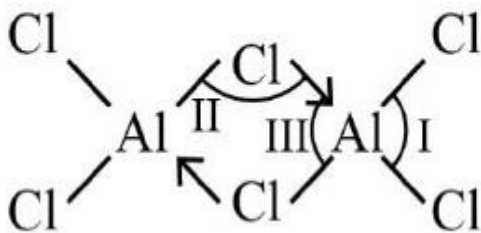
3. ✘

Sr > Ca > Mg

4. ✘

Question Number : 136 Question Id : 1056152376 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

The correct order of bond angles of dimeric AlCl_3 structure is



Options :

II > I > III

1. ✘

I > II > III

2. ✓

3. ✘ $I > III > II$

4. ✘ $II > III > I$

Question Number : 137 Question Id : 1056152377 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

The compound that cannot undergo hydrolysis is

Options :

1. ✔ CCl_4

2. ✘ $SiCl_4$

3. ✘ $GeCl_4$

4. ✘ $PbCl_4$

Question Number : 138 Question Id : 1056152378 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

The total number of aromatic (benzenoid compounds) isomers for the molecular formula of C_7H_8O is

Options :

1. ✘ 2

2. ✘ 4

3. ✔ 5

4. ✘ 6

Question Number : 139 Question Id : 1056152379 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Two independent reactions of 3-hexyne with " H_2 / Ni-catalyst" and H_2 / Lindlar's catalyst, respectively, gives

Options :

1. ✘

Hexane and trans-3-Hexene

cis-3-Hexene and Hexane

2. ✘

Hexane and cis-3-Hexene

3. ✔

cis-3-Hexene and trans-3-Hexene

4. ✘

Question Number : 140 Question Id : 1056152380 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following sets only contains meta directing groups?

Options :

-NO₂, -CN, -CHO

1. ✔

-CHO, -Cl, -CH₃

2. ✘

3. ✘

$-\text{NH}_2$, $-\text{NHCOCH}_3$, $-\text{OCH}_3$

$-\text{SO}_3\text{H}$, $-\text{CH}_3$, $-\text{CN}$

4. ✘

Question Number : 141 Question Id : 1056152381 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

In NaCl structure, the correct statements among the following are

- A) All octahedral and tetrahedral sites are occupied.
- B) Only octahedral sites are occupied.
- C) Only tetrahedral sites are occupied.
- D) All octahedral and tetrahedral sites are not occupied.
- E) There are six 'Cl' atoms around every 'Na' and there are six 'Na' atoms around every 'Cl'.

Options :

A, B, C, E

1. ✘

B, E only

2. ✔

B only

3. ✘

A, E only

4. ✘

Question Number : 142 Question Id : 1056152382 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following mixture shows positive deviation from Raoult's law?

Options :

Benzene + toluene

1. ✘

Ethanol + Acetone

2. ✔

n-Hexane + n-Heptane

3. ✘

Chloroform + acetone

4. ✘

Question Number : 143 Question Id : 1056152383 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For a dilute solution, Raoult's law states that

Options :

The lowering of vapour pressure is equal to the mole fraction of solute

1. ✘

The relative lowering of vapour pressure is equal to the mole fraction of solute

2. ✔

The relative lowering of vapour pressure is proportional to the amount of solvent in solution

3. ✘

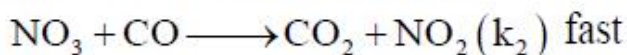
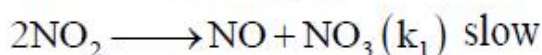
The vapour pressure of the solution is equal to the mole fraction of the solvent

4. ✘

Question Number : 144 Question Id : 1056152384 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The reaction $\text{NO}_2 + \text{CO} \longrightarrow \text{NO} + \text{CO}_2$ takes place in two steps.



What is the rate law of this reaction?

Options :

$$R = K_1 [\text{NO}_2]^3$$

1. ✘

$$R = K_2 [\text{NO}_3][\text{CO}]$$

2. ✘

$$R = K_1 [\text{NO}_2]$$

3. ✘

$$R = K_1 [\text{NO}_2]^2$$

4. ✔

Question Number : 145 Question Id : 1056152385 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Which of the following statements is /are correct?

- A) Catalyst can change $\Delta_r G$ of a reaction.
- B) Catalyst can change the rate of a reaction.
- C) Catalyst can change the activation energy of a reaction.

Options :

A and B only

1. ✘

2. ✘

A, B and C

B and C only

3. ✓

A and C only

4. ✘

Question Number : 146 Question Id : 1056152386 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following statements is true for physisorption?

Options :

It involves chemical bond formation

1. ✘

It is irreversible in nature

2. ✘

Enthalpy of adsorption is low ($20 - 40 \text{ kJ mol}^{-1}$)

3. ✓

4. ✘

It is highly specific in nature

Question Number : 147 Question Id : 1056152387 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Which of the following molecules has the lowest N–N bond length?

Options :

1. ✓ N_2O

2. ✗ N_2O_3

3. ✗ N_2O_4

4. ✗ N_2O_5

Question Number : 148 Question Id : 1056152388 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

In general, the molecular oxygen has least reactivity with

Options :

1. ✓ Pt

2. ✗ Fe

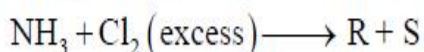
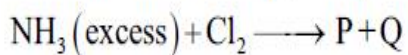
3. ✗ Mg

4. ✗ Li

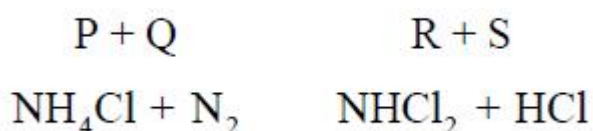
Question Number : 149 Question Id : 1056152389 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

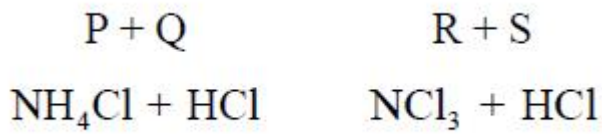
The major products $[(P+Q) \text{ and } (R+S)]$ in the following unbalanced reactions are



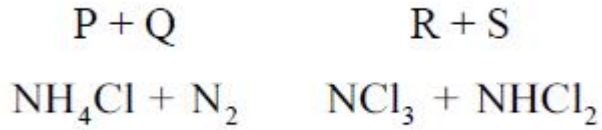
Options :



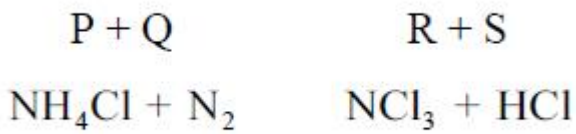
1. ✗



2. ✘



3. ✘



4. ✔

Question Number : 150 Question Id : 1056152390 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Which of the following element is radio active in natural form?

Options :

Ar

1. ✘

Xe

2. ✘

Kr

3. ✘

Rn

4. ✓

Question Number : 151 Question Id : 1056152391 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The transition metal catalyst used in the Haber process is

Options :

Cr_2O_3

1. ✗

V_2O_5

2. ✗

Finely divided iron

3. ✓

Mn_2O_3

4. ✗

Question Number : 152 Question Id : 1056152392 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A complex $[ML_6]^{2+}$ with $3d^2$ electronic configuration requires λ nm of radiation to push an electron to the closest excited electronic state. The average energy of the d-orbital in spherical crystal field is $\frac{hC}{\lambda_1}$. The energy of T_{2g} state in $[ML_6]^{2+}$ is

Options :

$$\frac{hC}{\lambda\lambda_1}(5\lambda - 2\lambda_1)$$

1. ✘

$$\frac{hC}{\lambda\lambda_1}(5\lambda + 3\lambda_1)$$

2. ✘

$$\frac{hC}{5\lambda\lambda_1}(5\lambda + 3\lambda_1)$$

3. ✘

$$\frac{hC}{5\lambda\lambda_1}(5\lambda - 2\lambda_1)$$

4. ✔

Question Number : 153 Question Id : 1056152393 Question Type : MCQ Option Shuffling : Yes
 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

D-glucose and D-fructose can be differentiated by

Options :

Fehling solution

1. ✘

Tollens reagent

2. ✘

Benedict test

3. ✘

$\text{Br}_2/\text{H}_2\text{O}$

4. ✔

Question Number : 154 Question Id : 1056152394 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following is more reactive towards $\text{S}_{\text{N}}1$ reaction?

Options :

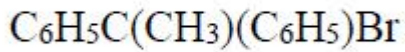
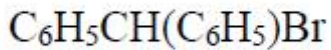
$\text{C}_6\text{H}_5\text{CH}_2\text{Br}$

1. ✘

$\text{C}_6\text{H}_5\text{CH}(\text{CH}_3)\text{Br}$

2. ✘

3. ✘



4. ✓

Question Number : 155 Question Id : 1056152395 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The correct order of the boiling points of the following compounds is

n- Pentane	Ethanol	tert. Butylalcohol	Diethyl ether
I	II	III	IV

Options :

I > III > II > IV

1. ✘

III > II > I > IV

2. ✓

III > I > II > IV

3. ✘

II > III > I > IV

4. ✘

Question Number : 156 Question Id : 1056152396 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

The correct order of the pKa of the following compounds is

ortho-Cresol	Phenol	para - Nitrophenol	meta-Nitrophenol
I	II	III	IV

Options :

I > II > III > IV

1. ✘

I > III > IV > II

2. ✘

I > II > IV > III

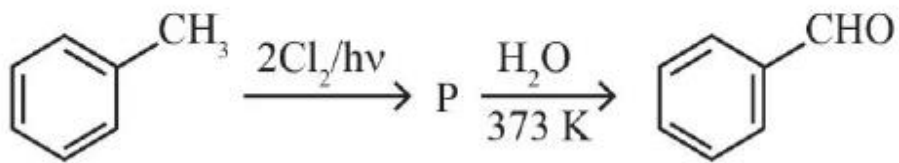
3. ✔

II > I > III > IV

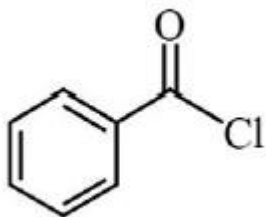
4. ✘

Question Number : 157 Question Id : 1056152397 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

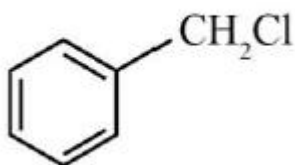
The intermediate P formed in the following conversion is



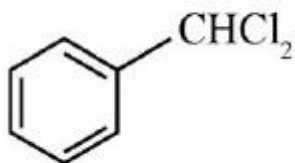
Options :



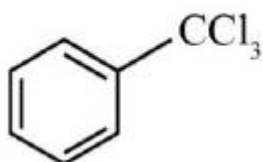
1. ✘



2. ✘



3. ✔

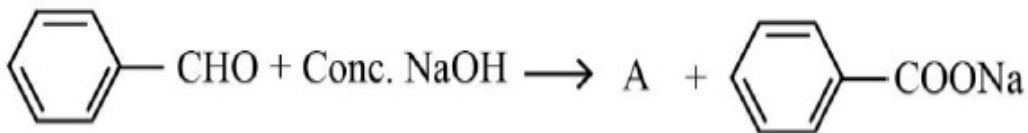


4. ✘

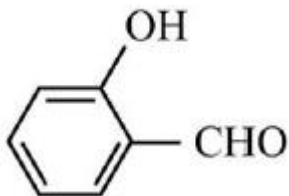
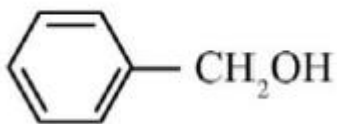
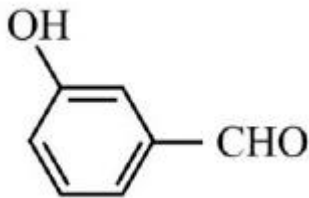
Question Number : 158 Question Id : 1056152398 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

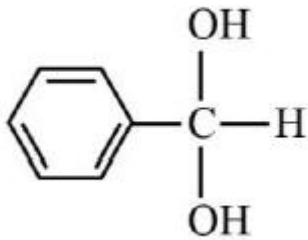
Identify the product, 'A' in the reaction given below



Options :

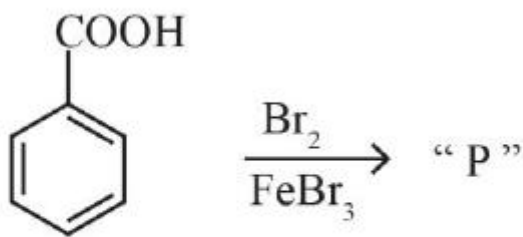


4. ✘



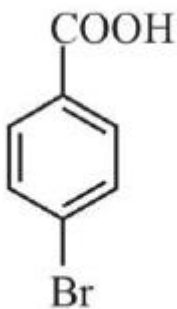
Question Number : 159 Question Id : 1056152399 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0



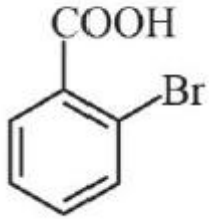
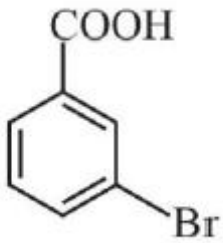
Major product "P" formed in the above reaction is

Options :

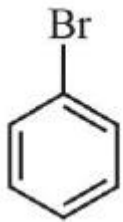


1. ✘

2. ✔



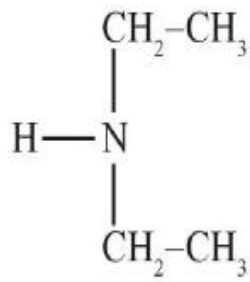
3. ✖



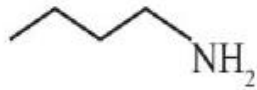
4. ✖

Question Number : 160 Question Id : 1056152400 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

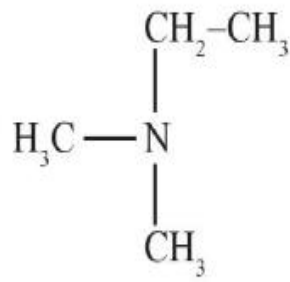
The correct order of boiling points of the following amines is



I



II



III

Options :

I > II > III

1. ✘

II > I > III

2. ✔

III > I > II

3. ✘

II > III > I

4. ✘