

# Telangana State Council Higher Education

## Notations :

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

<b>Question Paper Name :</b>	Agriculture and Medical English 30th Jul 2022 Shift 2
<b>Subject Name :</b>	Agriculture and Medical (English)
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<b>Total Marks :</b>	160
<b>Display Marks:</b>	No
<b>Calculator :</b>	None
<b>Magnifying Glass Required? :</b>	No
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<b>Protractor Required? :</b>	No
<b>Show Watermark on Console? :</b>	Yes
<b>Highlighter :</b>	No
<b>Auto Save on Console?</b>	Yes
<b>Change Font Color :</b>	No
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Show Progress Bar :

No

## Agriculture and Medical (English)

Group Number :	1
Group Id :	10561511
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 :	10561532
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 :	10561532

Question Shuffling Allowed :

Yes

Question Number : 1 Question Id : 1056151601 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 organism shows reproduction by “fragmentation” as a common feature?

Options :

1. ✓ *Spirogyra*

2. ✗ *Saccharomyces*

3. ✗ *Amoeba*

4. ✗ *Chlamydomonas*

Question Number : 2 Question Id : 1056151602 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 lists:

List - I	List - II	List - III
A) HIV	i) Shelter	I) Auxospores
B) Mycobiont	ii) TMV	II) RNA
C) Deuteromycetes	iii) Pennales	III) <i>Trichoderma</i>
D) Cell wall with silica	iv) Conidia	IV) Mineral absorption

The correct match is:

Options :

1. ✓

A	B	C	D
ii II	i IV	iv III	iii I

2. ✗

A	B	C	D
ii III	i IV	iii II	iv I

3. ✗

A	B	C	D
ii II	iv III	i IV	iii I

4. ✗

A	B	C	D
ii I	iii II	iv III	i IV

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

Correct Marks : 1 Wrong Marks : 0

Choose the incorrect statement among the following:

- A) Pteridology is the study of vascular cryptogams.
- B) Reciprocal relation between plants and environment is called palynology.
- C) Biophysics and molecular biology are pertinent to both plant and animal science.
- D) It is possible to produce disease free plants in large number with tissue and organ culture.

Options :

A, B only

1. ✘

B, D only

2. ✔

A, C only

3. ✘

B, C only

4. ✘

Question Number : 4 Question Id : 1056151604 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 having multicellular, jacketed and sessile sex organ?

Options :

*Selaginella*

1. ✓

*Cycas*

2. ✗

*Gnetum*

3. ✗

*Pinus*

4. ✗

Question Number : 5 Question Id : 1056151605 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 unbranched tree hosts heterocystous symbiont in its modified roots?

Options :

*Pinus*

1. ✗

*Cycas*

2. ✓

*Ginkgo*

3. ✗

*Cedrus*

4. ✘

**Question Number : 6 Question Id : 1056151606 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 inflorescence consists of many male flowers that develop in monochasial pattern around a single female flower?

**Options :**

Verticellaster

1. ✘

Hypanthodium

2. ✘

Polychasial cyme

3. ✘

Cyathium

4. ✔

**Question Number : 7 Question Id : 1056151607 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 flower of *Canna* exhibits asymmetrical symmetry.

Reason(R) : The floral parts in *Canna* flower can be divided into two equal halves by only one vertical plane passing through the centre of flower.

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 : 8 Question Id : 1056151608 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 statement from the following:

- A) In *Loranthus*, ovule is not covered by any integuments.
- B) In Sunflower, single ovule is seen in the ovary.
- C) Pollen banks store selected pollen at  $-196^{\circ}\text{C}$ .
- D) In *Hibiscus* anther is dithecous.
- E) In rice pollen grains are viable for months.

The correct answer is:

Options :

1. ✓ A, B, C only

2. ✗ A, B, D only

3. ✗ B, D, E only

4. ✗ C, D, E only

Question Number : 9 Question Id : 1056151609 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) : Apomictics do not show segregation of characters in their progeny and therefore have huge potential in hybrid seed industry.

Reason (R) : Apomictic seeds are produced without fertilization.

The correct option among the following is:

**Options :**

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

1. ✓

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

2. ✗

(A) is true but (R) is false

3. ✗

(A) is false but (R) is true

4. ✗

**Question Number : 10 Question Id : 1056151610 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 parts of a flower represents the symbols (C),  $\underline{G}$  and  $\overline{G}$  respectively?

**Options :**

Polygamous corolla, inferior ovary and superior ovary

1. ✗

Gamopetalous corolla, superior ovary and inferior ovary

2. ✓

Gamosepalous calyx, inferior ovary, superior ovary

3. ✗

Gamosepalous calyx, superior ovary, inferior ovary

4. ✗

**Question Number : 11 Question Id : 1056151611 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 with respect to Solanaceae?

- A) Gamosepalous and persistent calyx.
- B) Epipetalous stamens alternating with the petals.
- C) Free petals in valvate or twisted aestivation.
- D) Bicarpellary, syncarpous and bilocular ovary with parietal placentation.

**Options :**

A, B only

1. ✓

A, C only

2. ✗

3. ✗

A, D only

B, C only

4. ✘

**Question Number : 12 Question Id : 1056151612 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 not true about bacterial cell?

**Options :**

Possess genetic material not bounded by nuclear membrane.

1. ✘

Small circular DNA molecules are present in the cytoplasm.

2. ✘

Pili and fimbriae are extracellular structures for motility.

3. ✔

The cell envelop is composed of glycocalyx, cell wall and plasma membrane.

4. ✘

**Question Number : 13 Question Id : 1056151613 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 are the differences between plant cell and animal cell among the following?

- A) Cell wall
- B) Cell membrane
- C) Ribosomes
- D) Centriole
- E) Large central vacuole
- F) Plastids

Options :

A, B, F only

1. ✘

B, C, D, E only

2. ✘

A, B, E, F only

3. ✘

A, D, E, F only

4. ✔

Question Number : 14 Question Id : 1056151614 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 the functions of RER and SER that are actively involved in the cell respectively?

**Options :**

Synthesis of proteins and lipids

1. ✓

Synthesis of lipids and proteins

2. ✗

Digestion of lipids and proteins

3. ✗

Conversion of stored lipids and proteins

4. ✗

**Question Number : 15 Question Id : 1056151615 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:

- A) Protein threads exist throughout as rigid rods.
- B) By dehydration, glycosidic bond is formed.
- C) Adult human haemoglobin has 4 subunits.
- D) Paper does not turn into blue colour with Iodine.

**Options :**

A, B, D only

1. ✗

B, C, D only

2. ✓

A, C, D only

3. ✘

A, D, C only

4. ✘

**Question Number : 16 Question Id : 1056151616 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**

Assume that a DNA molecule is having three full helical turns and each turn with three guanines. How many double bonds are possible between purines and pyrimidines in the above mentioned DNA molecule?

**Options :**

9

1. ✘

18

2. ✘

21

3. ✓

4. ✖

Question Number : 17 Question Id : 1056151617 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 lists:

List-I		List-II	
A)	Anaphase I	I)	Diad of a cell is formed
B)	Telophase I	II)	Haploid daughter cells are formed
C)	Anaphase II	III)	Homologous chromosomes get separated
D)	Telophase II	IV)	Splitting of centromere in the chromosome

The correct match is:

Options :

A	B	C	D
III	I	II	IV

1. ✖

A	B	C	D
III	I	IV	II

2. ✔

A	B	C	D
III	IV	I	II

3. ✖

A	B	C	D
III	II	I	IV

4. ✘

**Question Number : 18 Question Id : 1056151618 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 student observed transverse sections of 2 plant parts under microscope. In that T.S of 'A' has many vascular bundles arranged in a ring, while T.S of 'B' has many scattered vascular bundles. Identify the materials 'A' and 'B' in the same order.

**Options :**

Monocotyledonous root, Dicotyledonous stem

1. ✘

Monocotyledonous stem, Dicotyledonous root

2. ✘

Monocotyledonous stem, Dicotyledonous stem

3. ✘

Dicotyledonous stem, Monocotyledonous stem

4. ✔

**Question Number : 19 Question Id : 1056151619 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) : Adaptation enable the organisms to survive in stressful habitat.

Reason (R) : Adaptations are not fixed genetically but take long evolutionary time to stabilize.

The correct option among the following is:

**Options :**

1. ✓ (A) is true. (R) is true and (R) is the correct explanation of (A)
2. ✘ (A) is true. (R) is true but (R) is not the correct explanation of (A)
3. ✘ (A) is true but (R) is false
4. ✘ (A) is false but (R) is true

Question Number : 20 Question Id : 1056151620 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 characters related to xerophytes from the following:

- A) Stunted stems
- B) Reduced leaves
- C) Single layered epidermis
- D) Well developed vascular bundles
- E) More air cavities

Options :

A, B, E only

1. ✘

A, B, D only

2. ✔

B, C, E only

3. ✘

A, C, E only

4. ✘

Question Number : 21 Question Id : 1056151621 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) : Active site of an enzyme is a crevice or pocket into which the substrate fits.

Reason (R) : In tertiary structure of protein chain when folds upon itself, the chain criss-crosses itself, and many crevices are formed.

The correct option among the following is:

**Options :**

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

1. ✓

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

2. ✗

(A) is true but (R) is false

3. ✗

(A) is false but (R) is true

4. ✗

**Question Number : 22 Question Id : 1056151622 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 absorption spectrum of chlorophyll – 'a' shows one-to-one overlap with the action spectrum of photosynthesis.

Reason (R) : Higher rate of photosynthesis occurs at blue and red wavelengths corresponding to the absorption spectrum of chlorophyll-'a'.

The correct option among the following is:

**Options :**

1. ✖ (A) is true. (R) is true and (R) is the correct explanation of (A)
2. ✖ (A) is true. (R) is true but (R) is not the correct explanation of (A)
3. ✖ (A) is true but (R) is false
4. ✔ (A) is false but (R) is true

**Question Number : 23 Question Id : 1056151623 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) : Photosystem-I participates in both cyclic and non-cyclic photophosphorylation events.

Reason (R) : Both ATP and NADPH + H<sup>+</sup> are synthesized due to cyclic and non-cyclic electron flow through photosystem-I.

The correct option among the following is:

**Options :**

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

1. ✘

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

2. ✘

(A) is true but (R) is false

3. ✔

(A) is false but (R) is true

4. ✘

**Question Number : 24 Question Id : 1056151624 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 that is formed by an enzyme catalysing a reaction resulting in interconversion of substrate during regeneration stage of CO<sub>2</sub> acceptor molecule in C<sub>3</sub> pathway.

**Options :**

1. ✓  
2, Ribulose -5- phosphate

2. ✗  
6, Ribulose, 1-5- biphosphate

3. ✗  
2, Ribose 5-P

4. ✗  
2, Fructose – 1,6 - biphosphate

Question Number : 25 Question Id : 1056151625 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 lists :

List - I

List - II

- |   |   |
|---|---|
| A) $\text{CO}_2$ saturation in $\text{C}_4$ plants is | I) $450 \mu\text{l L}^{-1}$                 |
| B) $\text{CO}_2$ saturation in $\text{C}_3$ plants is | II) 10% of full sunlight                    |
| C) Light saturation occurs at                         | III) Reduces the $\text{CO}_2$ availability |
| D) Water stress closes stomata                        | IV) $360 \mu\text{l L}^{-1}$                |

The correct match is :

Options :

1. ✗

A	B	C	D
I	II	III	IV

A	B	C	D
IV	I	II	III

2. ✓

A	B	C	D
IV	III	II	I

3. ✘

A	B	C	D
III	I	IV	II

4. ✘

**Question Number : 26 Question Id : 1056151626 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 ATP releasing reaction in the glycolysis among the following:

**Options :**

2 – phosphoglycerate  $\longrightarrow$  2 – phosphoenolpyruvate

1. ✘

2. ✓

1, 3-bis – phosphoglyceric acid  $\longrightarrow$  3 – phosphoglyceric acid

Fructose – 6 – phosphate  $\longrightarrow$  Fructose 1,6 – biphosphate

3. ✘

Glyceraldehyde –3– phosphate  $\longrightarrow$  Dihydroxyacetone phosphate

4. ✘

Question Number : 27 Question Id : 1056151627 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 which of the following biochemical reactions, complex 'V' of ETS of Kreb's cycle is not operative?

Options :

Succinyl CoA  $\longrightarrow$  Succinic acid

1. ✘

Malic acid  $\longrightarrow$  Oxaloacetic acid

2. ✘

Succinic acid  $\longrightarrow$  Fumaric acid

3. ✘

4. ✔

Cis – aconitic acid  $\longrightarrow$  Isocitric acid

Question Number : 28 Question Id : 1056151628 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 false statement regarding fermentation from the following:

- A) Glucose molecule is partially oxidized.
- B) Oxidation of NADH into  $\text{NAD}^+$  is very vigorous.
- C) Only 2 molecules of ATP are net gained from a glucose molecule.
- D) Occurs in anaerobic microbes.

Options :

1. ✖ A

2. ✔ B

3. ✖ C

4. ✖ D

Question Number : 29 Question Id : 1056151629 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 false regarding ethephon?

- A) A source of ethylene.
- B) It is slowly absorbed and transported within the plant to release ethylene rapidly.
- C) It causes reduced abscission in flowers and fruits of cotton.
- D) Suppresses the internode elongation in deep water rice plants.

Options :

1. ✘ A, B, C only

2. ✔ B, C, D only

3. ✘ A, C, D only

4. ✘ A, B, D only

Question Number : 30 Question Id : 1056151630 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 following characters are observed in 4 different pea plants (A, B, C, D):

A) Seeds round, flowers white, flowers in axial position.

B) Pods inflated, seeds wrinkled, pods green.

C) Seeds green, pods constricted, flowers violet.

D) Flowers white, pods yellow, flower position terminal.

How many characters are dominant and recessive in each plant mentioned above according to the studies of G.J. Mendel respectively?

The correct answer is :

Options :

A	B	C	D
2,1	2,1	1, 2	0, 3

1. ✓

A	B	C	D
1, 2	1, 2	2,1	0, 3

2. ✗

A	B	C	D
2, 1	2,1	2,1	2,1

3. ✗

A	B	C	D
3, 0	1, 2	1, 2	0, 3

4. ✗

Question Number : 31 Question Id : 1056151631 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 correct statements from the following:

- A) The frequency of recombination between gene pairs on different chromosomes is the measure of distance between those genes.
- B) *Drosophila* completes its life cycle in about two weeks.
- C) deVries, Correns, Morgan rediscovered the Mendel's results.
- D) Due to the visualization with staining, the term chromosome was coined.

Options :

A, B only

1. ✘

C, D only

2. ✘

B, D only

3. ✔

A, C only

4. ✘

Question Number : 32 Question Id : 1056151632 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) : Histones are positively charged basic proteins with DNA.

Reason (R) : Histones are rich in basic amino acid residues lysine and arginine.

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 : 33 Question Id : 1056151633 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.

- A) Coding strand in DNA will be coding the m-RNA.
- B) If two RNA molecules are produced simultaneously, they will form a double stranded RNA.
- C) In prokaryotes, the structural gene is polycistronic.
- D) The expressed gene sequences are defined as exons.

Options :

A, B only

1. ✘

A, C only

2. ✘

C, D only

3. ✔

B, C only

4. ✘

Question Number : 34 Question Id : 1056151634 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 non-sense codon?

Options :

1. ✘

UGC

UCA

2. ✘

UGA

3. ✔

UAC

4. ✘

**Question Number : 35 Question Id : 1056151635 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) : Eco RI makes staggered cut to produce sticky ends in a DNA double helix.

Reason (R) : Eco RI cuts the DNA in between G and A at the palindromic sequence 5' GAATTC 3'.

The correct option among the following is:

**Options :**

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

1. ✔

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

2. ✘

(A) is true but (R) is false

3. ✘

(A) is false but (R) is true

4. ✘

Question Number : 36 Question Id : 1056151636 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 plasmid from which bacterium is used as a vector to deliver a piece of DNA into dicot plants?

Options :

*Escherichia coli*

1. ✘

*Agrobacterium tumefaciens*

2. ✔

*Xanthomonas oryzae*

3. ✘

*Xanthomonas axonopodis*

4. ✘

**Question Number : 37 Question Id : 1056151637 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) : Cells multiplied in continuous culture system produce a large biomass leading to high yields of desired proteins.

Reason (R) : The added fresh medium maintains the cells in most active exponential phase.

The correct option among the following is:

**Options :**

1. ✓ (A) is true. (R) is true and (R) is the correct explanation of (A)
2. ✗ (A) is true. (R) is true but (R) is not the correct explanation of (A)
3. ✗ (A) is true but (R) is false
4. ✗ (A) is false but (R) is true

**Question Number : 38 Question Id : 1056151638 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 techniques serve the purpose of early diagnosis?

- A) PCR
- B) ELISA
- C) Analysis of urine
- D) Serum analysis

Options :

A, C

1. ✘

A, D

2. ✘

A, B

3. ✔

B, C

4. ✘

Question Number : 39 Question Id : 1056151639 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 statements from the following:

- A) *Aspergillus* produces acetic acid.
- B) *Lactobacillus* produces lactic acid.
- C) Lipases are used in Laundry.
- D) "Cyclosporin A" is used as blood cholesterol lowering agent.

Options :

A, B only

1. ✘

A, D only

2. ✔

B, C only

3. ✘

A, C only

4. ✘

Question Number : 40 Question Id : 1056151640 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) : Constant agitation of primary effluent in large aeration tanks promotes vigorous growth of useful anaerobic bacteria.

Reason (R) : The microbes consume the major part of the organic matter and reduces the BOD of the primary effluent.

The correct option among the following is:

**Options :**

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

1. ✘

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

2. ✘

(A) is true but (R) is false

3. ✘

(A) is false but (R) is true

4. ✔

## Zoology

<b>Section Id :</b>	10561533
<b>Section Number :</b>	2
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	40
<b>Number of Questions to be attempted :</b>	40

<b>Section Marks :</b>	40
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Maximum Instruction Time :</b>	0
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	10561533
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 41 Question Id : 1056151641 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**

Maintenance of relatively constant internal conditions (steady state) different from the surrounding environment is called

**Options :**

1. ✘ Haemostasis
2. ✘ Osmoregulation
3. ✔ Homeostasis
4. ✘ Biogenesis

**Question Number : 42 Question Id : 1056151642 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) : *Naja naja* is a tautonym.

Reason (R) : Animals in which generic name and species name are the same.

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 : 43 Question Id : 1056151643 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 : An area which is set aside, minimally disturbed for the conservation of the resources of the biosphere is Biosphere reserve.

Statement II : Specific endangered faunal species are well protected in national parks, which permits ecotourism.

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 : 1056151644 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

Multicellular animals that exhibit cellular level organisation are

Options :

Protozoans

1. ✘

Metazoans

2. ✘

Eumetazoans

3. ✘

Parazoans

4. ✓

Question Number : 45 Question Id : 1056151645 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 and find out the correct combinations

Options :

- |      |                                   |                           |                             |
|------|-----------------------------------|---------------------------|-----------------------------|
| 1. ✘ | Coelom / Symmetry<br>Pseudocoelom | Phylum<br>Platyhelminthes | Example<br><i>Ascaris</i>   |
| 2. ✘ | Coelom / Symmetry<br>Bilateral    | Phylum<br>Cnidaria        | Example<br><i>Hydra</i>     |
| 3. ✓ | Coelom / Symmetry<br>Eucoelom     | Phylum<br>Annelida        | Example<br><i>Pheretima</i> |
| 4. ✘ | Coelom / Symmetry<br>Radial       | Phylum<br>Ctenophora      | Example<br><i>Obelia</i>    |

Question Number : 46 Question Id : 1056151646 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) Moist surface of pharynx	I)	Non ciliated columnar epithelium	
B) Larger ducts of salivary glands	II)	Transitional epithelium	
C) Ventricles of Brain	III)	Stratified cuboidal epithelium	
D) Lining of stomach	IV)	Stratified non keratinised squamous epithelium	
	V)	Ciliated columnar epithelium	

The correct match is

Options :

1. ✘

A	B	C	D
IV	III	II	I

2. ✔

A	B	C	D
IV	III	V	I

3. ✘

A	B	C	D
I	V	III	IV

4. ✘

A	B	C	D
V	II	I	IV

Question Number : 47 Question Id : 1056151647 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

Neuroglial cells developed from mesoderm are

Options :

1. ✘ Ependymal cells

2. ✘ Astrocytes

3. ✘ Schwann cells

4. ✔ Microglial cells

Question Number : 48 Question Id : 1056151648 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:

Classes	Examples
A) Demospongiae	I) <i>Corallium</i>
B) Anthozoa	II) <i>Beroe</i>
C) Hydrozoa	III) <i>Euplectella</i>
D) Nuda	IV) <i>Obelia</i>
	V) <i>Chalina</i>

The correct match is

Options :

1. ✘

A	B	C	D
V	I	IV	III

2. ✘

A	B	C	D
II	IV	I	V

3. ✔

A	B	C	D
V	I	IV	II

4. ✘

A	B	C	D
III	V	IV	I

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

Correct Marks : 1 Wrong Marks : 0

*Lepisma* is commonly known as

Options :

1. ✘ Jelly fish

2. ✘ Cuttle fish

3. ✘ Devil fish

4. ✔ Silver fish

Question Number : 50 Question Id : 1056151650 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

Special excretory organs are absent in

Options :

1. ✔ *Ophiura*

2. ✘ *Saccoglossus*

*Balanus*

3. ✘

*Periplaneta*

4. ✘

Question Number : 51 Question Id : 1056151651 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) : *Branchiostoma* is often described as typical chordate.

Reason (R) : It has a myogenic heart.

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 : 52 Question Id : 1056151652 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 incorrect combination(s).

S.No	Group	Salient feature	Example
I)	Cyclostomata	Absence of renal portal system	Lamprey
II)	Gnathostomata	Internal ears with three semi circular canals each	Lancelet
III)	Chondrichthyes	Heterocercal caudal fin	<i>Torpedo</i>
IV)	Osteichthyes	Absence of air bladder	<i>Catla</i>

Options :

I, II

1. ✘

II, IV

2. ✔

II, III

3. ✘

I, IV

4. ✘

Question Number : 53 Question Id : 1056151653 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:

Zoological name	Common name
A) <i>Hemidactylus</i>	I) Flying lizard
B) <i>Bungarus</i>	II) Flying fox
C) <i>Draco</i>	III) Wall lizard
D) <i>Pteropus</i>	IV) Pond snake
	V) Krait

The correct match is

Options :

1. ✘

A	B	C	D
III	V	I	IV

2. ✘

A	B	C	D
II	I	V	III

3. ✔

A	B	C	D
III	V	I	II

4. ✘

A	B	C	D
IV	III	II	I

Question Number : 54 Question Id : 1056151654 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

Digenetic cytozoic parasite is

Options :

1. ✓ *Plasmodium*

2. ✗ *Wuchereria*

3. ✗ *Entamoeba*

4. ✗ *Nosema*

Question Number : 55 Question Id : 1056151655 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 stages of *Plasmodium* are commonly found both in human being and mosquito, in its life cycle?

Options :

1. ✗ Sporozoites and gametes

Gametocytes and gametes

2. ✘

Gametocytes and sporozoites

3. ✔

Sporozoites only

4. ✘

Question Number : 56 Question Id : 1056151656 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

Nocturnal periodicity is exhibited by

Options :

Rhabditiform larva

1. ✘

Wuchereria

2. ✘

Sausage shaped larva

3. ✘

Microfilaria

4. ✔

Question Number : 57 Question Id : 1056151657 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) Typhoid     | I) Rhino virus         |
| B) Pneumonia   | II) <i>Salmonella</i>  |
| C) Common cold | III) Papilloma virus   |
| D) Ring worm   | IV) <i>Haemophilus</i> |
|                | V) <i>Microsporum</i>  |

The correct match is

Options :

1. ✘

A	B	C	D
II	IV	III	I

2. ✔

A	B	C	D
II	IV	I	V

3. ✘

A	B	C	D
V	I	IV	II

4. ✘

A	B	C	D
III	IV	I	V

Question Number : 58 Question Id : 1056151658 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

Marijuana is obtained from

Options :

1. ✓ *Cannabis sativa*
2. ✗ *Erythrozyllum coca*
3. ✗ *Papaver somniferum*
4. ✗ *Atropa belladona*

Question Number : 59 Question Id : 1056151659 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 rules states that with the increase of every 10 °C, the metabolic rate doubles

Options :

Allen's rule

1. ✘

Vant Hoff's rule

2. ✔

Bergman's rule

3. ✘

Jordon's rule

4. ✘

Question Number : 60 Question Id : 1056151660 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  $b = 65$  and  $d = 45$ ;  $N = 100$

Find out  $\frac{dN}{dt}$  in a population.

Options :

200

1. ✘

2000

2. ✓

100

3. ✗

1000

4. ✗

Question Number : 61 Question Id : 1056151661 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) : Inspiration is an active process.

Reason (R) : It takes place by the contraction of muscles of diaphragm and external inter costal muscles.

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 : 62 Question Id : 1056151662 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

Right side shift of oxygen haemoglobin dissociation curve takes place during

Options :

High pH, Low CO<sub>2</sub>, Low temperature

1. ✘

Low pH, High CO<sub>2</sub>, High temperature

2. ✔

High pH, Low CO<sub>2</sub>, High temperature

3. ✘

Low pH, High CO<sub>2</sub>, Low temperature

4. ✘

Question Number : 63 Question Id : 1056151663 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

Clotting of blood in blood banks is prevented by adding

Options :

1. ✘ Carbonates

2. ✘ Bicarbonates

3. ✔ Oxalates

4. ✘ Phosphates

Question Number : 64 Question Id : 1056151664 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 factors decreases the heart rate and cardiac output?

Options :

1. ✘ Signals from sympathetic nerves

2. ✔ Signals from parasympathetic nerves

3. ✘

## Thyroxine

4. ✘

**Question Number : 65 Question Id : 1056151665 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 and select the correct statements in the given options:

- I) Blood flows into the glomerulus through the efferent arteriole.
- II) Glomerulus along with Bowman's capsule forms renal corpuscle.
- III) Vasa recta is a fine branch of afferent arteriole.
- IV) Juxta medullary nephrons have long loop of Henle.

**Options :**

I, II only

1. ✘

II, III only

2. ✘

I, IV only

3. ✘

II, IV only

4. ✔

Question Number : 66 Question Id : 1056151666 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): Deficiency of vasopressin causes diabetes mellitus.

Reason (R): It facilitates the reabsorption of water from the glomerular filtrate.

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 : 67 Question Id : 1056151667 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 liver, lactic acid is converted into glucose through

Options :

Glycogenolysis

1. ✘

Glucogenesis

2. ✘

Glycolysis

3. ✘

Gluconeogenesis

4. ✔

Question Number : 68 Question Id : 1056151668 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 only cranial nerve that extends into the abdominal cavity is

Options :

Trigeminal

1. ✘

Glossopharyngeal

2. ✘

Hypoglossal

3. ✘

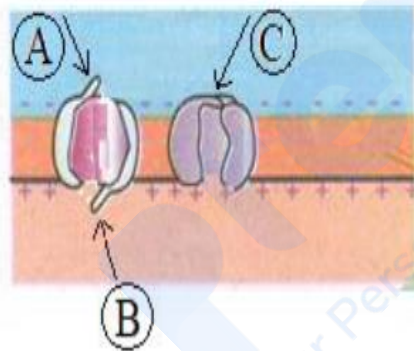
Vagus

4. ✔

Question Number : 69 Question Id : 1056151669 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 following diagram shows depolarisation of nerve fibre. Identify A, B, C in the diagram.



Options :

1. ✘ A – Na<sup>+</sup> Activation gate, B – Na<sup>+</sup> Inactivation gate, C – K<sup>+</sup> Inactivation gate

1. ✘

2. ✔ A – Na<sup>+</sup> Activation gate, B – Na<sup>+</sup> Inactivation gate, C – K<sup>+</sup> Activation gate

2. ✔

3. ✘ A – Na<sup>+</sup> Inactivation gate, B – Na<sup>+</sup> Activation gate, C – K<sup>+</sup> Activation gate

3. ✘

A –  $K^+$  Activation gate, B –  $Na^+$  Inactivation gate, C –  $Na^+$  Activation gate

4. ✖

Question Number : 70 Question Id : 1056151670 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) : Insulin is a hypoglycemic hormone.

Reason (R ) : Insulin converts glucose into glycogen.

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 : 71 Question Id : 1056151671 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

Acromegaly is due to the deficiency of

Options :

1. ✓ Somatotropin

2. ✗ Somatostatin

3. ✗ Thyroxine

4. ✗ Adrenalin

Question Number : 72 Question Id : 1056151672 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

Colostrum contains the following type of antibodies

Options :

1. ✓ I<sub>g</sub> A

2. ✗ I<sub>g</sub> G

I<sub>g</sub> E

3. ✘

I<sub>g</sub> M

4. ✘

Question Number : 73 Question Id : 1056151673 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

Due to infection of HIV, progressive decrease of the following cells takes place in man

Options :

T<sub>H</sub> – cells

1. ✔

T<sub>C</sub> – cells

2. ✘

B – cells

3. ✘

Memory cells

4. ✘

Question Number : 74 Question Id : 1056151674 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 parts of Graafian follicle from outside to inside in a sequence

- (A) Secondary oocyte      (B) Corona radiata      (C) Zona pellucida  
(D) Theca externa      (E) Membrana granulosa      (F) Theca interna  
(G) Antrum

Options :

D - F - E - G - B - C - A

1. ✓

A - C - B - G - E - F - D

2. ✗

B - C - A - D - F - E - G

3. ✗

C - D - B - E - F - G - A

4. ✗

Question Number : 75 Question Id : 1056151675 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) : One of the natural methods of contraception is lactational amenorrhoea.

Reason (R) : Ovulation generally does not occur during active lactation.

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 : 76 Question Id : 1056151676 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 blood sample is mixed with antiserum containing anti-A antibodies and anti-B antibodies separately and if no agglutination of RBC occurs, then the sample blood belongs to the following blood group

**Options :**

A

1. ✗

B

2. ✗

3. ✗

AB

O

4. ✓

**Question Number : 77 Question Id : 1056151677 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**

Male children born to a colour blind mother and a normal father is

**Options :**

100% Normal only

1. ✘

100% Colour blind only

2. ✓

100% Carrier only

3. ✘

50% normal or 50% colour blind

4. ✘

**Question Number : 78 Question Id : 1056151678 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 DNA finger printing, transfer of DNA strands on to the nylon membrane is called

Options :

Western blotting

1. ✘

Southern blotting

2. ✔

Denaturing DNA

3. ✘

Gel electrophoresis

4. ✘

Question Number : 79 Question Id : 1056151679 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 virus which causes Bird flu is

Options :

$H_1N_1$

1. ✘

2. ✘  $\text{H}_3\text{N}_2$

3. ✔  $\text{H}_5\text{N}_1$

4. ✘  $\text{H}_2\text{N}_2$

Question Number : 80 Question Id : 1056151680 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

Cancer cells do not exhibit one of the following features

Options :

1. ✘ They are not joined by cadherins

2. ✘ They do not exhibit contact inhibition

3. ✘ They exhibit metastasis

4. ✔ They undergo programmed cell death

## Physics

Section Id :	10561534
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 :	10561534
Question Shuffling Allowed :	Yes

Question Number : 81 Question Id : 1056151681 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 force that is associated in  $\beta$ -decay process

Options :

Strong nuclear force

1. ✘

Weak nuclear force

2. ✔

## Electromagnetic force

3. ✖

## Gravitational force

4. ✖

**Question Number : 82 Question Id : 1056151682 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 option.

**Options :**

Radius of earth > Size of galaxy > Size of hydrogen atom > Size of proton

1. ✖

Size of galaxy > Radius of earth > Size of hydrogen atom > Size of proton

2. ✔

Size of galaxy > Radius of earth > Size of proton > Size of hydrogen atom

3. ✖

Radius of earth > Size of hydrogen atom > Size of galaxy > Size of proton

4. ✖

**Question Number : 83 Question Id : 1056151683 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 balls A and B of masses  $M_1$  and  $M_2$  (where  $M_1 = 3M_2$ ) are dropped from the same height. The time taken by A and B to reach the ground is  $T_1$  and  $T_2$  respectively. The

ratio  $\frac{T_1}{T_2}$  is

Options :

3 : 1

1. ✘

1 : 9

2. ✘

1 : 3

3. ✘

1 : 1

4. ✔

Question Number : 84 Question Id : 1056151684 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 ball under uniform acceleration travels 6 m in first 2 s and 16 m in the next 2 s. Its initial velocity is

Options :

$$\frac{1}{2} \text{ m/s}$$

1. ✓

$$1 \text{ m/s}$$

2. ✗

$$\frac{8}{3} \text{ m/s}$$

3. ✗

$$\frac{1}{4} \text{ m/s}$$

4. ✗

Question Number : 85 Question Id : 1056151685 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 position of a particle is  $\vec{r} = x\hat{i} + y\hat{j}$  where  $x$  and  $y$  are function of time  $t$  and given  
as  $x = (12 + 5t - t^2)$  m and  $y = (18 - 5t + t^2)$  m. At  $t = 1$  s, the magnitude of the velocity  
vector of the particle is

Options :

$$2\sqrt{3} \text{ m/s}$$

1. ✗

$$3\sqrt{2} \text{ m/s}$$

2. ✓

$$4\sqrt{2} \text{ m/s}$$

3. ✖

$$3\sqrt{3} \text{ m/s}$$

4. ✖

Question Number : 86 Question Id : 1056151686 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 boy drops a ball from the top of a building consisting of several floors. Each floor has the same height. The ball covers one floor from the top in one second. The number of floors, the ball will cover in three seconds is

Options :

4

1. ✖

9

2. ✔

6

3. ✖

5

4. ✖

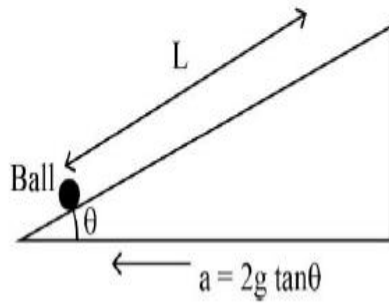
Question Number : 87 Question Id : 1056151687 Question Type : MCQ Option Shuffling : Yes

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 ball is placed on a wedge as shown in the figure. The wedge starts moving to the left with acceleration  $2g \tan \theta$ . The time taken by the ball to cover a distance  $L$  along the plane is  
(Neglect the friction)



Options :

$$t = \frac{2L}{g \sin \theta}$$

1. ✘

$$t = \frac{\sqrt{2L}}{g \sin \theta}$$

2. ✘

$$t = \sqrt{\frac{2L}{g \sin \theta}}$$

3. ✔

$$t = \frac{g \sin \theta}{2L}$$

4. ✘

Question Number : 88 Question Id : 1056151688 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 “CORRECT” ?

Options :

1. ✘  
In an elastic collision of two bodies, the momentum and energy of each body is conserved
2. ✘  
Total energy of a system is always conserved, no matter what internal and external forces on the body are present
3. ✘  
Work done in the motion of a body over a closed loop is zero for every force in nature
4. ✔  
In an inelastic collision, the final kinetic energy is always less than the initial kinetic energy of the system

Question Number : 89 Question Id : 1056151689 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 cricket ball is dropped from a building of height 30 m and the coefficient of restitution between the ground and ball is 0.5. The total distance covered by the ball before it comes to rest is

**Options :**

60 m

1. ✘

10 m

2. ✘

18 m

3. ✘

50 m

4. ✔

**Question Number : 90 Question Id : 1056151690 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 wheel moving with initial angular velocity 20 rad/s, stops after 50 revolutions. The time taken by the wheel to stop is

**Options :**

17.1 sec

1. ✘

15.7 sec

2. ✘

31.4 sec

3. ✔

47.1 sec

4. ✘

Question Number : 91 Question Id : 1056151691 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 block–spring system executes simple harmonic motion. The mass and spring constant are 2 kg and 80 N/m respectively. Initially the block is pulled from equilibrium position by a distance of 10 cm. The total energy of block at 6 cm away from mean position is

Options :

0.26 J

1. ✔

0.30 J

2. ✘

0.40 J

3. ✘

4. ✘

0.15 J

**Question Number : 92 Question Id : 1056151692 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**

When the period of rotation of a satellite from west to east is the same as that of the earth, then the relative velocity of a satellite is equal to

**Options :**

1. ✘ Half

2. ✘ Double

3. ✘ Same

4. ✔ Zero

**Question Number : 93 Question Id : 1056151693 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 perfect rigid body

Options :

Young's modulus is infinite and bulk modulus is zero

1. ✘

Young's modulus is zero and bulk modulus is infinite

2. ✘

Young's modulus and bulk modulus both are zero

3. ✘

Young's modulus and bulk modulus both are infinite

4. ✔

Question Number : 94 Question Id : 1056151694 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 force of 500 N is executed on a hydraulic piston of cross sectional area of  $100 \text{ cm}^2$ .  
The cross-sectional area of other piston which supports a truck of a tonne weight is  
[use  $g = 9.8 \text{ m/s}^2$ ]

Options :

$200 \text{ cm}^2$

1. ✘

2. ✘

$196 \text{ cm}^2$

$1960 \text{ cm}^2$

3. ✓

$98 \text{ cm}^2$

4. ✗

Question Number : 95 Question Id : 1056151695 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 solid spherical balls A and B of density  $10 \text{ g/cm}^3$  have radius of 30 mm and 55 mm respectively. Ball A is dropped in a liquid of density  $0.75 \text{ g/cm}^3$  and viscosity  $\eta = 1.5$  and ball B is dropped in another liquid of density  $1.2 \text{ g/cm}^3$  and viscosity  $\eta = 2.2$ . The terminal velocity of ball A is  $\alpha$  times that of ball B. The value of  $\alpha$  is

Options :

$0.46$

1. ✓

$0.36$

2. ✗

$0.26$

3. ✗

4. ✗

**Question Number : 96 Question Id : 1056151696 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 hot container takes 1 min to cool from  $95^{\circ}\text{C}$  to  $75^{\circ}\text{C}$ . The time it takes to cool from  $74^{\circ}\text{C}$  to  $54^{\circ}\text{C}$  is  
[consider the room temperature as  $30^{\circ}\text{C}$ ]

**Options :**

1. ✓ 97 s

2. ✗ 70 s

3. ✗ 102 s

4. ✗ 82 s

**Question Number : 97 Question Id : 1056151697 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 point source is at temperature  $T$ . The intensity at a point at a distance  $r$  is  $I$ . The temperature is doubled and the distance of point is also doubled. The intensity will become

Options :

2I

1. ✘

4I

2. ✔

8I

3. ✘

16I

4. ✘

Question Number : 98 Question Id : 1056151698 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 internal energy of an ideal gas depends on

Options :

Specific volume

1. ✘

Pressure

2. ✘

Density

3. ✘

Temperature

4. ✔

Question Number : 99 Question Id : 1056151699 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 system of gas at NTP is suddenly compressed to  $\frac{1}{9}$  of its volume. Calculate the final  
temperature of the gas.  
[Take  $\gamma=1.5$ ]

Options :

819 °C

1. ✘

546 °C

2. ✔

1095 °C

3. ✘

273 °C

4. ✘

Question Number : 100 Question Id : 1056151700 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 gases A and B are having molar masses of  $M_1$  and  $M_2$  and temperatures  $T_1$  and  $T_2$  respectively. The rms speed of gas A is twice the rms speed of gas B. If the ratio of  $M_1$  to  $M_2$  is 2:1, then the ratio of  $T_1$  to  $T_2$  is

Options :

1. ✓ 8 : 1

2. ✘ 1 : 8

3. ✘ 4 : 1

4. ✘ 1 : 4

Question Number : 101 Question Id : 1056151701 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 strings A and B of same material of length  $l$  and  $\frac{l}{2}$ , are subjected to tension  $T$  and  $2T$ , respectively. The ratio of fundamental frequency of A to fundamental frequency of B is

Options :

1 : 2

1. ✘

2 : 1

2. ✘

$1 : 2\sqrt{2}$

3. ✔

$1 : \sqrt{2}$

4. ✘

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Question Number : 102 Question Id : 1056151702 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 is incident from medium with refractive index  $\sqrt{2}$  on medium with refractive index 1. For what angle of incidence the angle of refraction is  $90^\circ$ ?

Options :

$45^\circ$

1. ✔

60°

2. ✘

90°

3. ✘

30°

4. ✘

Question Number : 103 Question Id : 1056151703 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 diffraction pattern is formed by monochromatic light through a single slit. If the width of the single slit is reduced, which of the following is true?

Options :

The width of central maximum is unchanged and the intensity of central maximum decreases

1. ✘

The width of central maximum increases and the intensity of central maximum increases

2. ✘

3. ✔

The width of central maximum increases and the intensity of central maximum decreases

The width of central maximum decreases and the intensity of central maximum decreases

4. ✘

**Question Number : 104 Question Id : 1056151704 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 an electric dipole of moment (P) is placed in a uniform electric field (E) and making an angle ( $\theta$ ) with electric field, the potential energy of the electric dipole is

**Options :**

PE (1 - cos  $\theta$ )

1. ✘

- PE (1 - cos  $\theta$ )

2. ✘

- PE cos  $\theta$

3. ✔

PE cos  $\theta$

4. ✘

Question Number : 105 Question Id : 1056151705 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  $5.0 \mu\text{F}$  capacitor is charged by a  $2.0 \text{ V}$  battery. It is then disconnected from the battery and is connected to another uncharged  $5.0 \mu\text{F}$  capacitor. The loss in the electrostatic energy in the process is

Options :

1.  $10 \mu\text{J}$

✘

2.  $5 \mu\text{J}$

✔

3.  $7.5 \mu\text{J}$

✘

4. 0

✘

Question Number : 106 Question Id : 1056151706 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 metal wire is  $5\ \Omega$  and  $6\ \Omega$  at  $50\ ^\circ\text{C}$  and  $100\ ^\circ\text{C}$ , respectively. The temperature at which the resistance is  $7\ \Omega$  is

Options :

1. ✘  $145\ ^\circ\text{C}$
2. ✘  $200\ ^\circ\text{C}$
3. ✔  $150\ ^\circ\text{C}$
4. ✘  $155\ ^\circ\text{C}$

Question Number : 107 Question Id : 1056151707 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 resistors of  $3\ \Omega$  and  $6\ \Omega$  are connected in parallel. If the total current through the resistors is  $15\ \text{A}$ , then the currents through the resistors and the potential difference across the terminals of the parallel combination ( $I_{3\Omega}$ ;  $I_{6\Omega}$ ;  $V$ ) are

Options :

1. ✘  $5\ \text{A} ; 10\ \text{A} ; 60\ \text{V}$

5 A; 10 A ; 30 V

2. ✘

10 A; 5 A; 60 V

3. ✘

10 A; 5 A; 30 V

4. ✔

Question Number : 108 Question Id : 1056151708 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 infinite parallel wires separated by 1 m carry current I in the same direction. The magnetic field at a point 50 cm from each wire is

Options :

$$\frac{\mu_0 I}{2\pi}$$

1. ✘

$$\frac{2\mu_0 I}{3}$$

2. ✘

$$\frac{\mu_0 I}{\pi}$$

3. ✘

0

4. ✓

Question Number : 109 Question Id : 1056151709 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 two parallel current carrying wires A(200 mA) and B(300 mA) are separated by a distance of 1 cm, the force per unit length with each other is  
( $\mu_0 = 4\pi \times 10^{-7}$ )

Options :

1. ✘  $6 \times 10^{-9} \text{ N/m}$

1. ✘

2. ✘  $12 \times 10^{-9} \text{ N/m}$

2. ✘

3. ✘  $6 \times 10^{-7} \text{ N/m}$

3. ✘

4. ✓  $12 \times 10^{-7} \text{ N/m}$

4. ✓

Question Number : 110 Question Id : 1056151710 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) : A bar magnet exerts a torque on itself due to its own field.

Statement (II) : Magnetic field lines can be entirely confined within the core of toroid.

Statement (III) : The net magnetic flux through any closed surface is zero.

Which of the following is correct?

**Options :**

Statement I, II, III are true

1. ✘

Statement I, III are true but Statement II is false

2. ✘

Statement I, II are true but Statement III is false

3. ✘

Statement II, III are true but Statement I is false

4. ✔

**Question Number : 111 Question Id : 1056151711 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 inside a solenoid of cross-section area  $4.4 \text{ cm}^2$ , length  $1.0 \text{ m}$ , is  $2 \times 10^{-4} \text{ T}$ . The magnetic energy stored in the solenoid is

Options :

1. ✓  $7 \mu\text{J}$

2. ✗  $12 \mu\text{J}$

3. ✗  $5 \mu\text{J}$

4. ✗  $8 \mu\text{J}$

Question Number : 112 Question Id : 1056151712 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 ac source with angular frequency  $400 \text{ rad/s}$  is applied to a series LCR circuit in which  $C = 100 \mu\text{F}$ ,  $L = 20 \text{ mH}$  and  $R = 8.5 \Omega$ . The phase difference between the voltage across the source and current.

Options :

1. ✗  $\tan^{-1}(0.5)$

$$\tan^{-1}(2)$$

2. ✓

$$\tan^{-1}(0.25)$$

3. ✗

$$\tan^{-1}(4)$$

4. ✗

Question Number : 113 Question Id : 1056151713 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

It has been experimentally demonstrated that

Options :

EM waves can transport energy but not momentum, however, they do not exert a 'radiation pressure'

1. ✗

EM wave can transport energy but not momentum, however, they do exert a 'radiation pressure'

2. ✗

EM waves can transport both energy and momentum and they also exert a 'radiation pressure'

3. ✓

EM waves can transport both energy and momentum however, they do not exert any 'radiation pressure'

4. ✘

Question Number : 114 Question Id : 1056151714 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

Threshold frequency of incident radiation in a photoelectric experiment

- A) depends on material
- B) depends on wavelength
- C) depends on intensity

Options :

A, B are true, C is false

1. ✘

A is true, B and C are false

2. ✔

A, B, C are true

3. ✘

A, C are true, B is false

4. ✘

Question Number : 115 Question Id : 1056151715 Question Type : MCQ Option

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

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

Correct Marks : 1 Wrong Marks : 0

If the mass and the kinetic energy of the particle is increased each by 1%, the percentage change in the de -Broglie wavelength is

Options :

-2 %

1. ✘

+ 2%

2. ✘

- 1%

3. ✔

+1 %

4. ✘

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Question Number : 116 Question Id : 1056151716 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 ratio between shortest wavelength in Balmer series to shortest wavelength in Brackett series is

Options :

1 : 16

1. ✘

16 : 1

2. ✘

1 : 4

3. ✔

4 : 1

4. ✘

Question Number : 117 Question Id : 1056151717 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 mass equivalent of energy  $2.7 \times 10^{14} \text{ J}$  is

Options :

2 g

1. ✘

3 g

2. ✔

9 g

3. ✘

18 g

4. ✘

Question Number : 118 Question Id : 1056151718 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

Wires P and Q are having same resistance at room temperature. When heated, resistance of 'P' increases, and that of 'Q' decreases, we conclude that

Options :

P and Q are metals of different materials

1. ✘

P is metal and Q is semiconductor

2. ✔

P is semiconductor and Q is metal

3. ✘

P is n – type semiconductor and Q is p- type semiconductor

4. ✘

Question Number : 119 Question Id : 1056151719 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 energy of a photon of a monochromatic light of wavelength 621 nm equals the band gap of a semiconducting material. The minimum energy required to create an electron hole pair is

[Use  $hc = 1242 \text{ eV} \cdot \text{nm}$ , with  $h = \text{Planck's constant}$  and  $c = \text{velocity of light}$ ]

Options :

1.2 eV

1. ✘

2 eV

2. ✔

1.5 eV

3. ✘

1.75 eV

4. ✘

Question Number : 120 Question Id : 1056151720 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 maximum peak -to-peak voltage of an AM-wave is 18V and the minimum peak to peak voltage is 6V of the same wave. What is the modulation factor of the wave?

Options :

1. ✘ 2.0

2. ✔ 0.5

3. ✘ 0.75

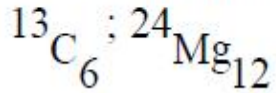
4. ✘ 0.25

## Chemistry

<b>Section Id :</b>	10561535
<b>Section Number :</b>	4
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	40
<b>Number of Questions to be attempted :</b>	40
<b>Section Marks :</b>	40
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Maximum Instruction Time :</b>	0
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	10561535
<b>Question Shuffling Allowed :</b>	Yes

Question Number : 121 Question Id : 1056151721 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 neutrons & protons are there in the following nuclei?



Options :

1. ✓ 7, 6 ; 12, 12

2. ✗ 6, 7 ; 24, 12

3. ✗ 13, 6 ; 24, 12

4. ✗ 6, 6 ; 12, 24

Question Number : 122 Question Id : 1056151722 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 mathematical expression of the uncertainty principle is

Options :

$$\Delta x \cdot \Delta p \geq h/4\pi$$

1. ✓

2. ✘  $\Delta x \cdot \Delta p > h/4\pi$

3. ✘  $\Delta x \cdot \Delta p < h/4\pi$

4. ✘  $\Delta x \cdot \Delta p \leq h/4\pi$

Question Number : 123 Question Id : 1056151723 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 electron affinity of the given elements is

Options :

1. ✘  $F < Cl < O < S$

2. ✔  $O < S < F < Cl$

3. ✘  $S < O < Cl < F$

4. ✘  $Cl < F < S < O$

Question Number : 124 Question Id : 1056151724 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 set of amphoteric oxides is

Options :

1. ✘  $\text{Al}_2\text{O}_3, \text{In}_2\text{O}_3$

2. ✘  $\text{ZnO}, \text{B}_2\text{O}_3$

3. ✘  $\text{ZnO}, \text{Tl}_2\text{O}_3$

4. ✔  $\text{Al}_2\text{O}_3, \text{Ga}_2\text{O}_3$

Question Number : 125 Question Id : 1056151725 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 of the given compounds show hydrogen bonding?

Phenol,  $\text{NH}_3(\text{l})$ ,  $\text{H}_2\text{O}$ ,  $\text{CH}_2\text{Cl}_2$ , cyclohexane

Options :

1. ✘

2

5

2. ✘

4

3. ✔

3

4. ✘

Question Number : 126 Question Id : 1056151726 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 shapes of  $\text{ICl}_5$  and  $\text{ICl}_4^-$ , respectively, are

Options :

1. ✘ Square pyramidal and Square pyramidal

2. ✘ Square pyramidal and Tetrahedral

3. ✔ Square pyramidal and Square planar

## Trigonal bipyramidal and Tetrahedral

4. ✖

Question Number : 127 Question Id : 1056151727 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 balloon filled with helium is pierced with a needle and quickly dropped in a tank of hydrogen gas under identical conditions, the balloon will

Options :

Shrink

1. ✖

Enlarge

2. ✔

Collapse

3. ✖

Remain same

4. ✖

Question Number : 128 Question Id : 1056151728 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

At 300 K and 100 bar pressure, the measured volume of 5 mole of a gas is 2 L. The van der Waals constant  $b$  and compressibility factor  $Z$ , respectively are

**Options :**

1. ✓ 0.15, 1.6

2. ✗ 0.01, 1.1

3. ✗ 0.20, 0.8

4. ✗ 0.03, 0.95

Question Number : 129 Question Id : 1056151729 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 moles of sodium nitrate required to produce 128 g of diatomic oxygen  
[ $\text{NaNO}_2$  is another product] is

**Options :**

1. ✗ 4

2. ✗ 3

5

3. ✘

8

4. ✔

Question Number : 130 Question Id : 1056151730 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

Autooxidation of bleaching powder gives two products A and B. The correct options of A and B are

Options :

A	B
$\text{CaCl}_2$	$\text{O}_2$

1. ✘

A	B
$\text{Ca}(\text{ClO}_3)_2$	$\text{CaCl}_2$

2. ✔

A	B
$\text{CaCl}_2$	$\text{CaO}$

3. ✘

A	B
$\text{CaClO}_3$	$\text{CaO}$

4. ✘

Question Number : 131 Question Id : 1056151731 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

0.5 kg of air at 1 bar occupies 0.3 L. If air slowly expands isothermally into a volume of 3.0 L, the heat (J) absorbed by the air is, approximately,

Options :

115

1. ✘

70

2. ✔

35

3. ✘

230

4. ✘

Question Number : 132 Question Id : 1056151732 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

Water gas shift reaction is carried out in a 10 L vessel at 300 °C. Calculate the equilibrium constant for the reaction, if 40 % of water (by mass) reacts with CO.

Options :

1. ✘

1

0

2. ✘

0.44

3. ✔

0.66

4. ✘

**Question Number : 133 Question Id : 1056151733 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 the formation of ammonia from its constituent elements, the value of  $K_C$  is  $3.0 \times 10^5$  at  $27^\circ\text{C}$ . The value of  $K_P$  at this temperature is approximately

**Options :**

4.8

1. ✘

48

2. ✘

480

3. ✔

4. ✖

Question Number : 134 Question Id : 1056151734 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) : Boiling point of  $H_2O$  is more than that of  $H_2S$ .

Reason (R) : Heat of vaporization of  $H_2O$  is less than that of  $H_2S$ .

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 : 135 Question Id : 1056151735 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 set of metals that can react with water even in cold conditions are

Options :

1. ✘ Be, Mg

2. ✔ Sr, Ba

3. ✘ Mg, Ca

4. ✘ Be, Sr

Question Number : 136 Question Id : 1056151736 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) : Among group 13 elements, boron has unusually high melting point.

Reason (R) : Boron has a very strong crystalline lattice.

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 : 137 Question Id : 1056151737 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) : Graphite conducts electricity along the sheet.

Reason (R) : Graphite is used as a dry lubricant in machines working at high temperatures.

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)

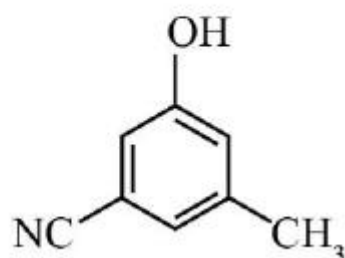
3. ✘ (A) is true but (R) is false

4. ✘

(A) is false but (R) is true

Question Number : 138 Question Id : 1056151738 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 name of the following molecule is



Options :

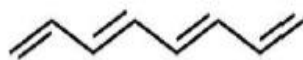
1. ✘ 5-Hydroxy-3-methylbenzonitrile
2. ✔ 3-Hydroxy-5-methylbenzonitrile
3. ✘ 3-Cyano-5-methyl-1-hydroxybenzene
4. ✘ 5-Cyano-3-methylphenol

Question Number : 139 Question Id : 1056151739 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  $\sigma$  and  $\pi$  bonds present in the given compound, respectively, are



Options :

1. ✘ 7 & 4

2. ✘ 18 & 4

3. ✔ 17 & 4

4. ✘ 8 & 4

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Question Number : 140 Question Id : 1056151740 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 statement(s) is /are “not” correct?

- (a) In general benzene contains three double bonds and benzene does not participate in addition reactions.
- (b) Benzoic acid and Salicylaldehyde are not isomers.
- (c) An electron donating substituent in benzene directs the incoming electrophile to the meta position.

Options :

a and c only

1. ✘

b and c only

2. ✔

a and b only

3. ✘

a, b, c

4. ✘

Question Number : 141 Question Id : 1056151741 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

Metallic iron crystallizes in BCC at room temperature and transforms to FCC structure at high temperature. Calculate the ratio of density of iron at low temperature to that of high temperature [ MW and radius of iron atom remained constant]

Options :

(2 : 4)

1. ✘

(3 : 4)

2. ✘

$(3\sqrt{3} : 2\sqrt{2})$

3. ✘

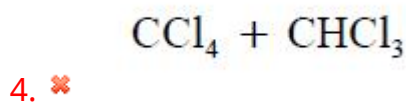
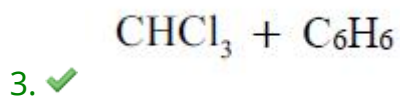
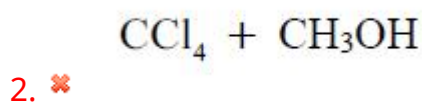
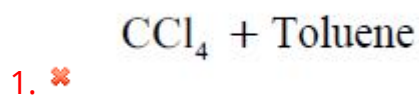
4. ✓  $(3\sqrt{3} : 4\sqrt{2})$

Question Number : 142 Question Id : 1056151742 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 mixture of solutions is an example for  $-Ve$  deviation from Raoult's law?

Options :



Question Number : 143 Question Id : 1056151743 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 aqueous solution that shows the maximum boiling point elevation is [Assume identical conditions]

**Options :**

1. ✓ 0.01 M  $\text{Na}_2\text{SO}_4$
2. ✗ 0.01 M  $\text{KNO}_3$
3. ✗ 0.01 M Urea
4. ✗ 0.01 M Sucrose

**Question Number : 144 Question Id : 1056151744 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**

When 2 moles of electrons are transferred during the electrolysis of water, the volume of the gas liberated at the anode at STP is

**Options :**

1. ✗ 11.2 L of  $\text{H}_2$
2. ✗ 11.2 L of  $\text{O}_2$
3. ✗

22.4 L of H<sub>2</sub>

4. ✓ 5.6 L of O<sub>2</sub>

Question Number : 145 Question Id : 1056151745 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 initial concentration of the reactant is 0.1 mole L<sup>-1</sup>. The rate constant for this reaction is  $1 \times 10^{-2}$  mole L<sup>-1</sup>s<sup>-1</sup>. When the concentration of the reactants is increased to 0.2 mole L<sup>-1</sup>, the value of the rate constant [assume constant T]

Options :

1. ✗ Increases by 2 times

2. ✗ Increases by 4 times

3. ✓ Remains the same

4. ✗ Increases by 9 times

Question Number : 146 Question Id : 1056151746 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 wrong statement about Freundlich isotherm is/are

- A) It can be represented at high pressure as  $\frac{x}{m} = k.p$
- B) The slope of the straight line of 'log p' Vs ' $\log \frac{x}{m}$ ', is 'n'
- C) It explains the adsorption behaviour in an approximate manner
- D) It holds good in the pressure  $(p/p_0)$  range 0 to 1

Options :

- 1. ✘ A, B, C, D
- 2. ✘ A and D only
- 3. ✘ B and D only
- 4. ✔ B only

Question Number : 147 Question Id : 1056151747 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 does not exist among the following is

Options :

1. ✘  $\text{HNO}_2$

2. ✘  $\text{N}_2\text{O}_5$

3. ✔  $\text{NCl}_5$

4. ✘  $\text{NO}_2$

Question Number : 148 Question Id : 1056151748 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 quantitative method of estimating ozone, the following are used

Options :

1. ✘ KI, Borate buffer and  $\text{Na}_2\text{SO}_4$

2. ✘  $\text{ZnI}_2$ , Borate buffer and  $\text{Na}_2\text{S}_2\text{O}_3$

3. ✔ KI, Borate buffer and  $\text{Na}_2\text{S}_2\text{O}_3$

MgI<sub>2</sub>, Borate buffer and Na<sub>2</sub>SO<sub>3</sub>

4. ✖

Question Number : 149 Question Id : 1056151749 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) : Inter halogen compounds of general formula of  $XX'_n$  (n is upto 7) can be formed, in which the halogen X has smaller size than X' halogen.

Reason (R) : X is more electropositive than X'.

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 : 150 Question Id : 1056151750 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 element that is generally found in minerals of radioactive materials is

Options :

1. ✓ He

2. ✗ Ar

3. ✗ Xe

4. ✗ Pu

Question Number : 151 Question Id : 1056151751 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

Among the given transition metals, the element which shows the least number of oxidation states is

Options :

1. ✗ Fe

2. ✗ Co

Zn

3. ✓

Cr

4. ✘

Question Number : 152 Question Id : 1056151752 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 geometrical isomers are possible for  $[\text{Cr}(\text{C}_2\text{O}_4)_3]^{3-}$  complex ion?

Options :

0

1. ✓

1

2. ✘

2

3. ✘

3

4. ✘

Question Number : 153 Question Id : 1056151753 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

Essential amino acid in the following is

Options :

1. ✘ Alanine

2. ✔ Arginine

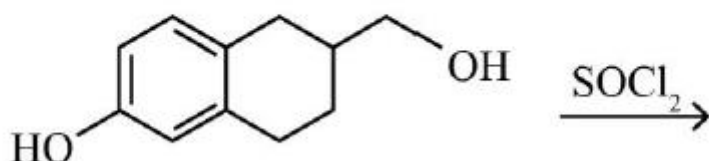
3. ✘ Serine

4. ✘ Tyrosine

Question Number : 154 Question Id : 1056151754 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

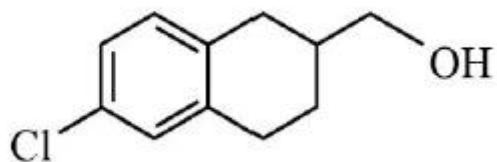
Correct Marks : 1 Wrong Marks : 0

The major product of the following reaction is

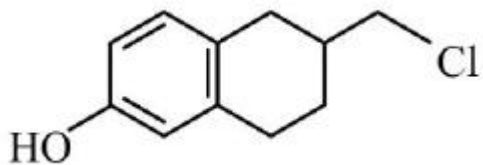


Options :

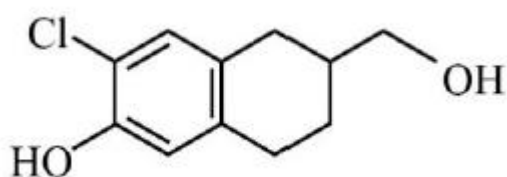
1. ✘



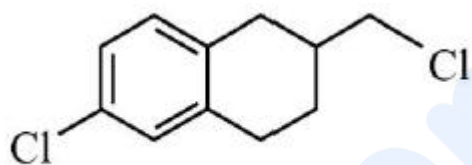
2. ✓



3. ✘



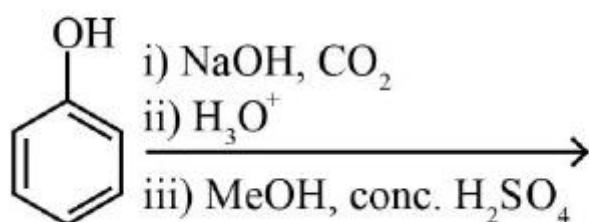
4. ✘



Question Number : 155 Question Id : 1056151755 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

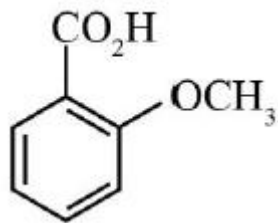
Correct Marks : 1 Wrong Marks : 0

The major product of the following reactions is

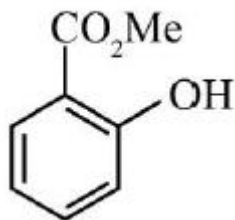


Options :

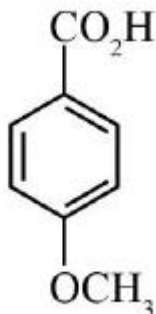
1. ✘



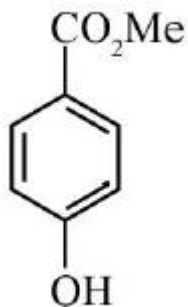
2. ✔



3. ✘



4. ✘



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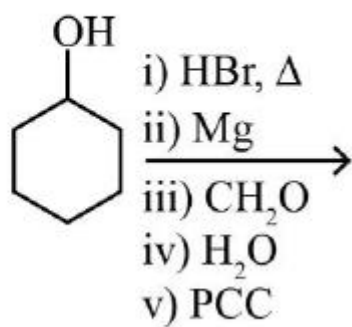
Question Number : 156 Question Id : 1056151756 Question Type : MCQ Option Shuffling : Yes

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

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

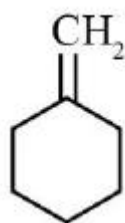
Correct Marks : 1 Wrong Marks : 0

The major product of the following reactions is

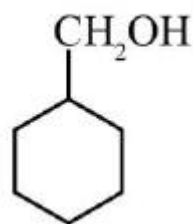


Options :

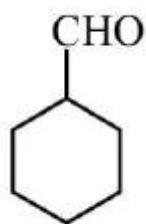
1. ✘



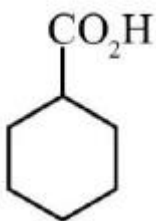
2. ✘



3. ✔



4. ✘



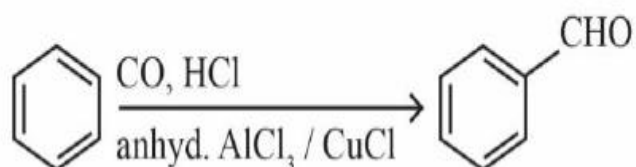
Question Number : 157 Question Id : 1056151757 Question Type : MCQ Option Shuffling : Yes

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 name for the reaction used for the conversion given below.



Options :

1. ✘ Stephan reaction

2. ✘ Etard reaction

3. ✔ Gatterman – Koch reaction

4. ✘ Rosenmund reaction

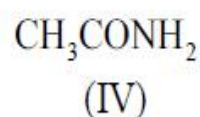
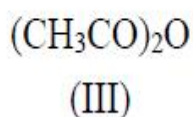
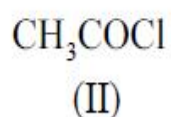
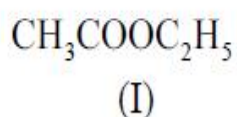
Question Number : 158 Question Id : 1056151758 Question Type : MCQ Option Shuffling : Yes

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 in the decreasing order of ease of hydrolysis.



Options :



1. ✘



2. ✔



3. ✘

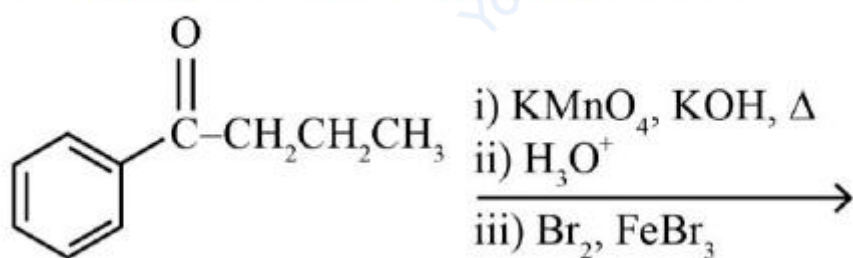


4. ✘

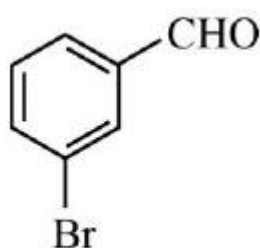
Question Number : 159 Question Id : 1056151759 Question Type : MCQ Option Shuffling : Yes  
 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

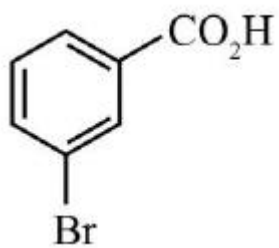
The major product of the following reactions is



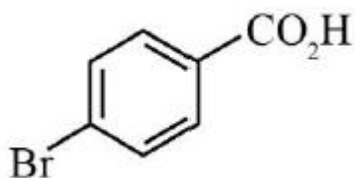
Options :



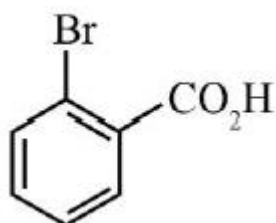
1. ✘



2. ✓



3. ✗



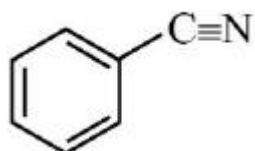
4. ✗

Question Number : 160 Question Id : 1056151760 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

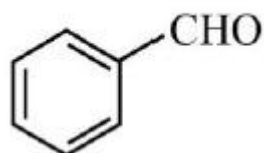
Correct Marks : 1 Wrong Marks : 0

Aniline on reaction with  $\text{CHCl}_3$  and ethanolic  $\text{KOH}$  gives

Options :

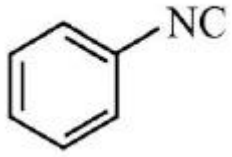


1. ✗



2. ✗

3. ✓



4. ✗

