Telangana State Council Higher Education

Notations :

Help Button:

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2.Options shown in red color and with * icon are incorrect.

Question Paper Name :	Agriculture and Medical English 30th Jul 2022 Shift 2					
Subject Name :	Agriculture and Medical (English)					
Creation Date :	2022-07-30 19:41:42					
Duration :	180					
Total Marks :	160					
Display Marks:	No					
Calculator :	None					
Magnifying Glass Required? :	No					
Ruler Required? :	No					
Eraser Required? :	No					
Scratch Pad Required? :	No					
Rough Sketch/Notepad Required? :	No					
Protractor Required? :	No					
Show Watermark on Console? :	Yes					
Highlighter:	No					
Auto Save on Console?	Yes					
Change Font Color :	No					
Change Background Color :	No					
Change Theme :	No					
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No

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:

Sub-Section Id: 10561532

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:

Spirogyra

Saccharomyces

2. 🗱

Amoeba

3. 🗱

Chlamydomonas

4. 💥

 ${\bf Question\ Number: 2\ Question\ Id: 1056151602\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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

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

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) Trichoderma

- D) Cell wall with silica
- iv) Conidia
- IV) Mineral absorption

The correct match is:

Options:

A

В

C

D

ii II

i IV

iv III

iii I

1. 🗸

A

B

C

D

ii III

i IV

iii II

iv I

2. 💥

A

В

C

D

ii II

iv III

i IV

iii I

3. 🗱

A

В

C

D

ii I

iii II

iv III

i IV

4. **

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

Correct Marks: 1 Wrong Marks: 0

Choose the <u>incorrect</u> 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. **

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

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)

(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

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 °C.
- D) In *Hibiscus* anther is dithecous.
- E) In rice pollen grains are viable for months.

The correct answer is:

Options:

A, B, C only
1. ✓

A, B, D only

B, D, E only

C, D, E only

4. 🗱

2. **

3. 🗱

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

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:

2. **

3. **

(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)

(A) is true but (R) is false

(A) is false but (R) is true

(A) is false but (R) is true

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

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. **

 ${\bf Question\ Number: 15\ Question\ Id: 1056151615\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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.
- 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

A, C, D only

3. 💥

A, D, C only

4. 🗱

 ${\bf Question\ Number: 16\ Question\ Id: 1056151616\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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	В	C	D
	III	I	II	IV
1. 🕷				
	A	В	C	D
	III	I	IV	II
2. 🗸				
	A	В	C	D
	III	IV	I	II

A B C D

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:

4. 💥

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

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

(A) is true but (R) is false 3. *

(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

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. **

 ${\bf Question\ Number: 21\ Question\ Id: 1056151621\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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

: N.A Think Time : N.A Minimum Instruction Time : 0 $\,$

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 cervices 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

- 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:

3. 🗱

4. 🗸

- (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
- (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

Assertion (A): Photosystem-I participates in both cyclic and non-cyclic

photophosphorylation events.

Reason (R) : Both ATP and NADPH + H⁺ 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 CO₂ acceptor molecule in C₃ pathway.

Options:

- 2, Ribulose -5- phosphate
- 1. 🗸
- 6, Ribulose, 1-5- bisphosphate
- 2. **
- 2. Ribose 5-P
- 3. **
- 2, Fructose 1,6 bisphosphate
- 4. *

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) CO₂ saturation in C₄ plants is
- I) $450 \,\mu l \, L^{-1}$
- B) CO₂ saturation in C₃ plants is
- II) 10% of full sunlight
- C) Light saturation occurs at
- III) Reduces the CO₂ availability
- D) Water stress closes stomata
- IV) $360 \mu l L^{-1}$

The correct match is:

Options:

1. **

A		В		C		D	
I		II		III		IV	
	A		В		C		D
	IV		I		II		III
2. 🗸							
	A		В		C		D
	IV		III		II		Ι
3. 🗱							
	A		В		C		D
	III		I	I	V		II

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 ---- 2 - phosphoenolpyruvate

1. 💥

4. **

2. 🗸

1, 3-bis - phosphoglyceric acid ------ 3 - phosphoglyceric acid

Fructose −6 − phosphate → Fructose 1,6 − bisphosphate

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 → Succinic acid

1. *

Malic acid → Oxaloacetic acid

2. **

Succinic acid → Fumaric acid

3. **

4. 🗸

Cis – aconitic acid → 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 NAD+ is very vigorous.
- C) Only 2 molecules of ATP are net gained from a glucose molecule.
- D) Occurs in anaerobic microbes.

Options:

A

1. **

B

2. 🗸

C

3. **

D

4. *

Display Question Number: Yes 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) Supresses the internode elongation in deep water rice plants.

Options:

A, B, C only

1. *

B, C, D only

2. 🗸

A, C, D only

3. **

A, B, D only

4. 💥

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

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	В	C	D
	2,1	2,1	1, 2	0, 3
1. 🗸				
	A	В	C	D
	1, 2	1, 2	2,1	0, 3
2. 🗱				
			lla.	-
	A	В	C	D
	2, 1	2,1	2,1	2,1
3. 🗱				

Question Number : 31 Question Id : 1056151631 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

D

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

B C

3, 0 1, 2 1, 2 0, 3

A

4. 💸

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

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:

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

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

2. 💥

1. 🗸

(A) is true but (R) is false

3. **

(A) is false but (R) is true

4. 💸

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 : $\mathbf{0}$

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. *

UCA

2. **

UGA

3. 🗸

UAC

4. *

 ${\bf Question\ Number: 35\ Question\ Id: 1056151635\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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:

(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

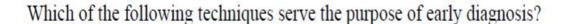
4. 💸

 ${\bf Question\ Number: 38\ Question\ Id: 1056151638\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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



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

Options:

A. C

1. 🕷

A.D

2. 🗱

A.B

3. 🗸

B, C

4. **

 ${\bf Question\ Number: 39\ Question\ Id: 1056151639\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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

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

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. **

 ${\bf Question\ Number: 40\ Question\ Id: 1056151640\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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

: N.A Think Time : N.A Minimum Instruction Time : 0 $\,$

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 con	rrect explanation of (A)	
(A) is true. (R) is true but (R) is not the co	orrect explanation of (A)	
(A) is true but (R) is false		
(A) is false but (R) is true 4. ✓		
Zoolog	J Y	
Section Id :	10561533	
Section Number :	2	
Section type: Online		
Mandatory or Optional: Mandatory		

40

40

Number of Questions :

Number of Questions to be attempted :

Section Marks: 40

Enable Mark as Answered Mark for Review and

Clear Response:

Yes

1

Maximum Instruction Time: 0

Sub-Section Number :

Sub-Section Id: 10561533

Question Shuffling Allowed : 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:

Haemostasis

1. 🍍

Osmoregulation

2. 💥

Homeostasis

3. 🗸

Biogenesis

4. 💥

 ${\bf Question\ Number: 42\ Question\ Id: 1056151642\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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:

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

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

(A) is true but (R) is false

(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. 38 Metazoans 2. ** Eumetazoans 3. 🗱

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:

Radial

4. *

1. *	Coelom / Symmetry Pseudocoelom	Phylum Platyhelminthes	Example Ascaris
2. **	Coelom / Symmetry Bilateral	Phylum Cnidaria	Example <i>Hydra</i>
3. 🗸	Coelom / Symmetry Eucoelom	Phylum Annelida	Example Pheretima
	Coelom / Symmetry	Phylum	Example

Question Number: 46 Question Id: 1056151646 Question Type: MCQ Option Shuffling: Yes

Ctenophora Obelia

Display Question Number: Yes 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-II List-II

- A) Moist surface of pharynx I) Non ciliated columnar epithelium
- B) Larger ducts of salivary II) Transitional epithelium glands
- 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:

A B C D

IV III II I

1. **

A B C D

IV III V I

2. 🗸

A B C D

I V III IV

3. **

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:

Ependymal cells

1. *

Astrocytes

2. **

Schwann cells

3. 🗱

Microglial cells

4. 🗸

 ${\bf Question\ Number: 48\ Question\ Id: 1056151648\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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)	Corallium
B)	Anthozoa	II)	Beroe
C)	Hydrozoa	III)	Euplectella
D)	Nuda	IV)	Obelia
		V)	Chalina

The correct match is

Optio	ns:			
	A	В	C	D
	V	Ι	IV	III
1. *				
	A	В	C	D
2. 🗱	II	IV	I	V
	A	В	C	D
3. 🗸	V	I	IV	II
	A	В	C	D
4. **	III	V	IV	I
T.				

Question Number: 49 Question Id: 1056151649 Question Type: MCQ Option Shuffling: Yes Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time

: N.A Think Time: N.A Minimum Instruction Time: 0 Correct Marks: 1 Wrong Marks: 0 Lepisma is commonly known as **Options:** Jelly fish 1. * Cuttle fish 2. 🗱 Devil fish 3. 💥 Silver fish 4. 🗸 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:** Ophiura 1. ✔ Saccoglossus 2. **

```
Balanus
       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 <u>incorrect</u> 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	Torpedo
IV)	Osteichthyes	Absence of air bladder	Catla

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	Co	ommon name
A)	Hemidactylus	I)	Flying lizard
B)	Bungarus	II)	Flying fox
C)	Draco	III)	Wall lizard
D)	Pteropus	IV)	Pond snake
		V)	Krait

The correct match is

Options:

•				
	A	В	C	D
	III	V	I	IV
1. 🗱				
	A	В	C	D
	II	I	V	III
2. 🗱				
	A	В	C	D
- ^	III	V	Ι	II
3. 🗸				
		alte e	Kev.	222000
	A	В	C	D
	IV	III	II	I
4. 🗱				

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:

Plasmodium

1. 🗸

Wuchereria

2. **

Entamoeba

3. **

Nosema

4. **

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:

Sporozoites and gametes

1. *

```
Gametocytes and gametes
2. **
      Gametocytes and sporozoites
3. 🗸
      Sporozoites only
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. 🗸
```

 ${\bf Question\ Number: 57\ Question\ Id: 1056151657\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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)	Salmonella
C)	Common cold	III)	Papilloma virus
D)	Ring worm	IV)	Haemophilus
		V)	Microsporum

The correct match is

Options:

	A	В	C	D
	II	IV	III	I
1. 🗱				
	A	В	C	D
	II	IV	I	V
2. 🗸				
	A	В	C	D
- **	V	I	IV	II
3. **				

A	В	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:

Cannabis sativa

1. 🗸

Erythrozylum coca

2. **

Papaver somniferum

3. **

Atropa belladona

4. 💥

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. **

 ${\bf Question\ Number: 60\ Question\ Id: 1056151660\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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.
               : 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 CO2, Low temperature

1. **

Low pH, High CO2, High temperature

2. 🗸

High pH, Low CO2, High temperature

3. 💥

Low pH, High CO₂, Low temperature

4. **

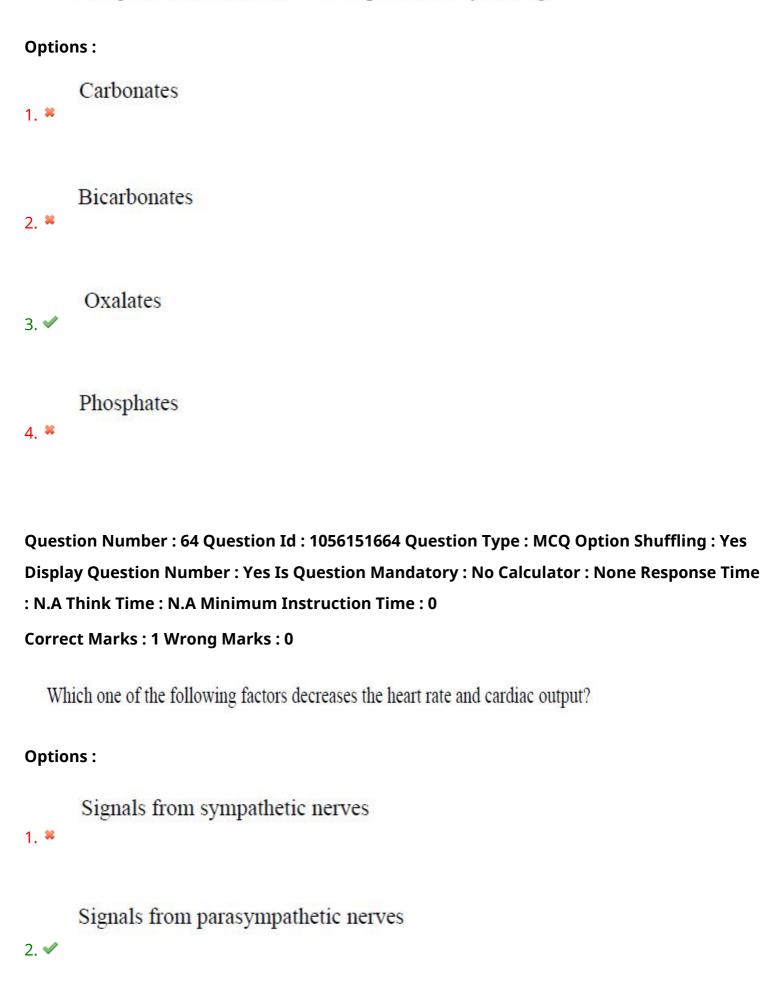
Question Number: 63 Question Id: 1056151663 Question Type: MCQ Option Shuffling: Yes

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



3. **

Adrenal medullary hormones

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:

(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. 🗸

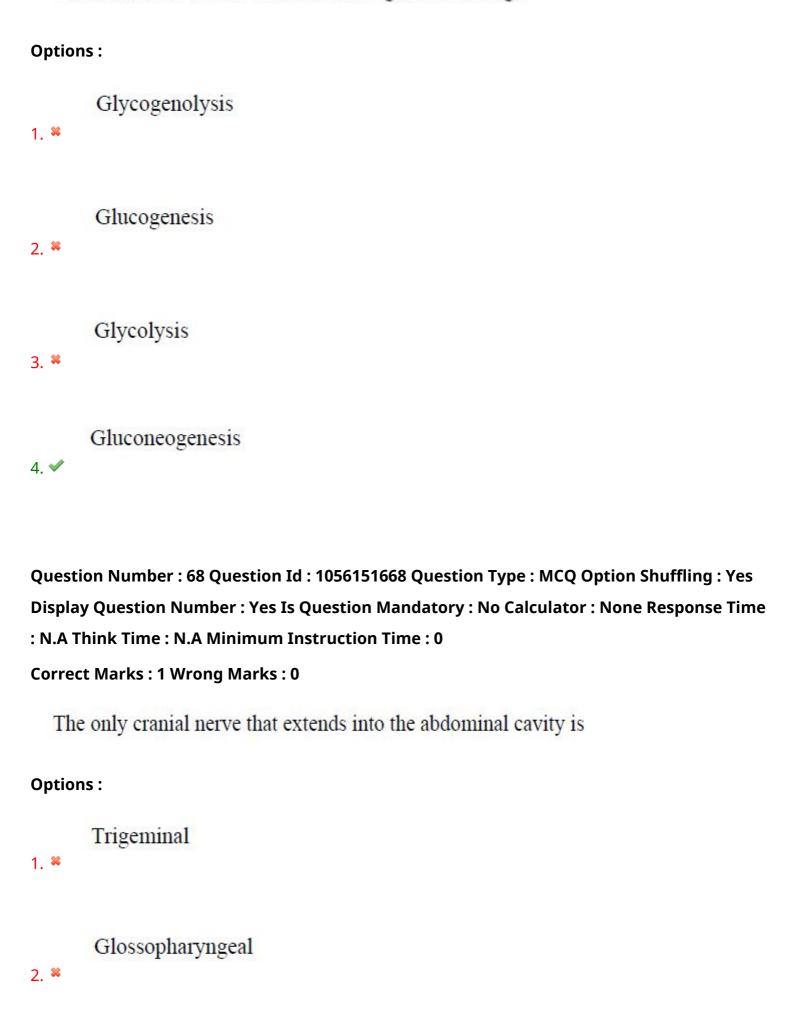
Question Number: 67 Question Id: 1056151667 Question Type: MCQ Option Shuffling: Yes

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



3. **

Vagus

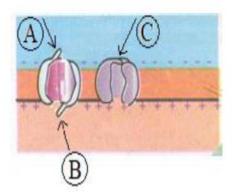
4. 🗸

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:

3. 🗱

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

1. ❖

A – Na⁺ Activation gate, B – Na⁺ Inactivation gate, C – K⁺ Activation gate 2. ✓

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

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:

1. *

2. **

4. **

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

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:** Somatotropin 1. 🗸 Somatostatin 2. 💥 Thyroxine 3. ** Adrenalin 4. 🗱 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: Ig A 1. 🗸 Ig G 2. 🗱

3. **

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:

1. 🗸

2. **

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. * В

2. **

3. **

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

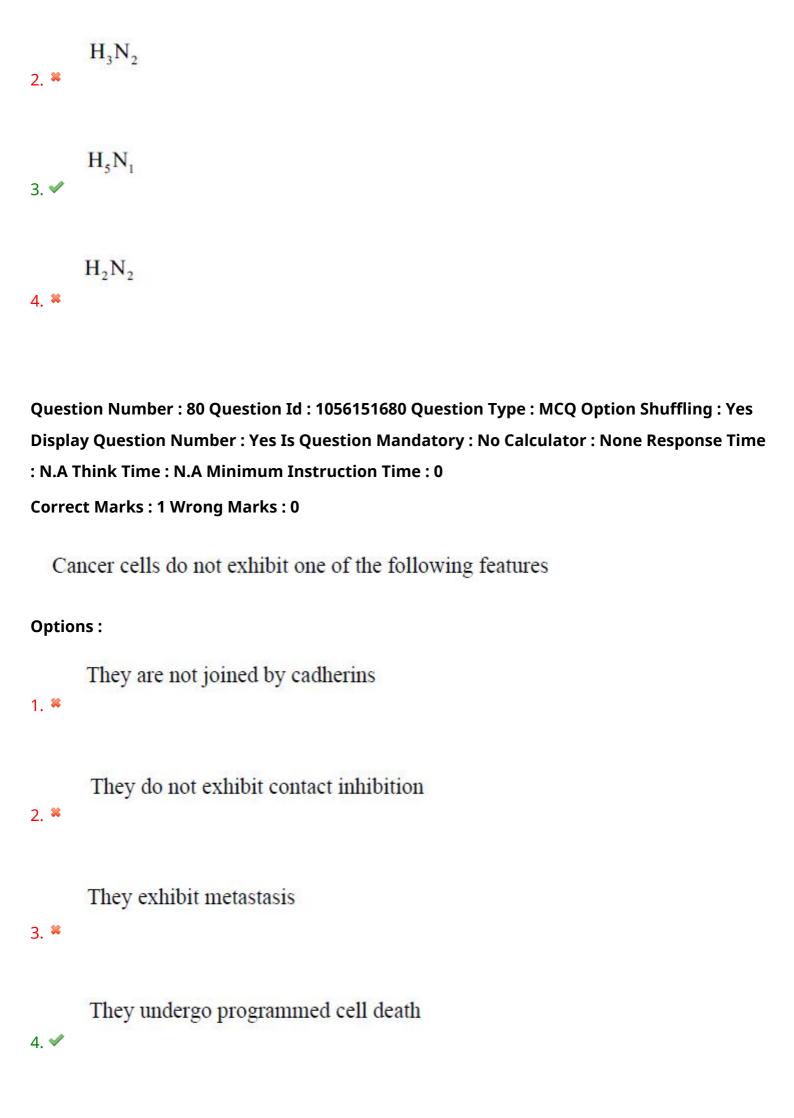
4. **

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 ₁ N ₁ 1. ₩



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

Yes Clear Response:

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 β -decay process

Options:

Strong nuclear force

1. *

Weak nuclear force

2. 🖋

Electromagne	etic	force
	80500	STATE OF STATE OF

3. **

Gravitational force

4. **

 ${\bf Question\ Number: 82\ Question\ Id: 1056151682\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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:

1. *

3. 💥

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

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

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:

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

1 m/s

2. **

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

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

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:

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

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

3. *

$$3\sqrt{3}$$
 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:

1

1. 🕷

9

6

3. 🗱

5

4. 📽

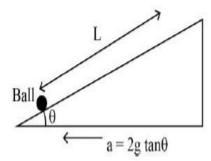
Display Question Number: Yes Is Question Mandatory: No Calculator: None Response Time

: 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 3

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

2. *

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

3. ❤

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

4. 3

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:

In an elastic collision of two bodies, the momentum and energy of each body is conserved

1. 🗱

Total energy of a system is always conserved, no matter what internal and external forces on the body are present

2. **

Work done in the motion of a body over a closed loop is zero for every force in nature

3. 🗱

In an inelastic collision, the final kinetic energy is always less than the initial kinetic energy of the system

4. 🗸

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. 🗸

 ${\bf Question\ Number: 90\ Question\ Id: 1056151690\ Question\ Type: MCQ\ Option\ Shuffling: Yes}$

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

0.30 J

2. **

0.40 J

3. 🗱

4. 💥

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:

Half

1. 🕷

Double

2. **

Same

3. **

Zero

4. 🗸

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 cm². 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 cm²

1. *

2. **

```
1960 cm<sup>2</sup>
3. ✓
98 cm<sup>2</sup>
```

4. **

196 cm²

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 g/cm³ have radius of 30 mm and 55 mm respectively. Ball A is dropped in a liquid of density 0.75 g/cm³ and viscosity $\eta = 1.5$ and ball B is dropped in another liquid of density 1.2 g/cm³ and viscosity $\eta = 2.2$. The terminal velocity of ball A is α times that of ball B. The value of α 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°C to 75°C. The time it takes to cool from 74°C to 54°C is

[consider the room temperature as 30°C]

Options:

97 s

1. 🗸

 $70 \, \mathrm{s}$

2. **

 $102 \, s$

3. **

82 s

4. **

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:

21

1. **

4I

2. 🗸

81

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. 🗱

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 mases 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:

8:1

1. 🗸

1:8

2. 🗱

4:1

3. **

1:4

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. 🕷

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°?

Options:

60°

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 (θ) with electric field, the potential energy of the electric dipole is

Options:

PE
$$(1 - \cos \theta)$$

$$-PE(1-\cos\theta)$$

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 μ F capacitor is charged by a 2.0 V battery. It is then disconnected from the battery and is connected to another uncharged 5.0 μ F capacitor. The loss in the electrostatic energy in the process is

Options:

 $10 \mu J$

1. **

 $5 \mu J$

2. 🗸

 $7.5 \mu J$

3. **

0

4. **

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 Ω and 6 Ω at 50 °C and 100 °C, respectively. The temperature at which the resistance is 7 Ω is

Options:

145 °C

1. 🤋

200 °C

2. **

150 °C

3. 🗸

155 °C

4. 🗱

 $Question\ Number: 107\ Question\ Id: 1056151707\ Question\ Type: MCQ\ Option\ Shuffling: Yes$

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

: N.A Think Time : N.A Minimum Instruction Time : $\mathbf{0}$

Correct Marks: 1 Wrong Marks: 0

Two resistors of 3Ω and 6Ω are connected in parallel. If the total current through the resistors is 15 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:

5 A; 10 A; 60 V

1. **

2. **

3. 🗱

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 💥

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:

$$6 \times 10^{-9} \text{ N/m}$$

1. *

$$12 \times 10^{-9} \text{ N/m}$$

2. 💥

$$6 \times 10^{-7} \text{ N/m}$$

3. **

$$12 \times 10^{-7} \text{ N/m}$$

4. ❤

Display Question Number: Yes 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 filed.

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 cm², length 1.0 m, is 2×10^{-4} T. The magnetic energy stored in the solenoid is

Options:

$$7 \mu J$$

1. ❤

$$12 \mu J$$

2. **

$$5 \mu J$$

3. **

4. **

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 rad/s is applied to a series LCR circuit in which $C = 100 \ \mu F$, $L = 20 \ mH$ and $R = 8.5 \ \Omega$. The phase difference between the voltage across the source and current.

Options:

$$tan^{-1}(0.5)$$

1. *

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

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 Shuffling : Yes

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

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

Correct Marks: 1 Wrong Marks: 0

If the 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. **

$$-1%$$

3. 🗸

4. **

 $Question\ Number: 116\ Question\ Id: 1056151716\ Question\ Type: MCQ\ Option\ Shuffling: Yes$

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
```

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 2.7×10¹⁴ J is

Options:

2 g

1. **

3 g

2. 🗸

9 g

3. 💥

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 $hc = 1242 \text{ eV} \cdot nm$, with h = Planck's constant and c = 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:

2.0

1. 💥

0.5

2. 🗸

0.75

3. **

0.25

4. 🗱

Chemistry

Section Id: 10561535

Section Number: 4

Section type: Online

Mandatory or Optional: Mandatory

Number of Questions: 40

Number of Questions to be attempted: 40

Section Marks: 40

Enable Mark as Answered Mark for Review and

Yes Clear Response :

Maximum Instruction Time: 0

Sub-Section Number: 1

Sub-Section Id: 10561535

Question Shuffling Allowed : 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?

$$^{13}C_6$$
; $^{24}Mg_{12}$

Options:

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:

$$\Delta x.\Delta p \ge h/4\pi$$

$$\Delta x.\Delta p > h/4\pi$$

2. 💥

$$\Delta x.\Delta p < h/4\pi$$

3. **

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

4. **

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. **

2. 🗸

3. 💥

$$C1 \le F \le S \le O$$

4. **

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:

$$Al_2O_3$$
, In_2O_3

1. **

2. **

3. 🗱

$$Al_2O_3$$
, Ga_2O_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, NH₃(l), H₂O, CH₂Cl₂, cyclohexane

Options:

1. **

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 ICl₅ and ICl₄, respectively, are

Options:

Square pyramidal and Square pyramidal

1. **

Square pyramidal and Tetrahedral

2. 💥

Square pyramidal and Square planar

3. 🗸

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:

0.15, 1.6

1. 🗸

0.01, 1.1

2. **

0.20, 0.8

0.03, 0.95

4. **

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 [NaNO₂ is another product] is

Options:

4

1. *

3

2. 🗱

8

5

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:

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. *

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 3.0×10^5 at 27 °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:

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

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

(A) is true but (R) is false

(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:** Be, Mg 1. * Sr. Ba 2. 🗸 Mg, Ca 3. ** Be, Sr 4. ** 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. : Boron has a very strong crystalline lattice. Reason (R) The correct option among the following is **Options:**

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

(A) is true, (R) is true but (R) is not the correct explanation for (A) 2. * (A) is true but (R) is false 3. 🗱 (A) is false but (R) is true 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:** (A) is true, (R) is true and (R) is the correct explanation for (A) (A) is true, (R) is true but (R) is not the correct explanation for (A) 2. 🗸 (A) is true but (R) is false 3. 💥

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:

3−Hydroxy−5−methylbenzonitrile 2. ✓

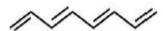
5-Cyano-3-methylphenol

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 σ and π bonds present in the given compound, respectively, are



Options:

7 & 4

18 & 4

2. **

1. **

17 & 4

3. 🗸

8 & 4

4. 💥

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:

1. 🗱

2. 💥

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

ર 💥

$$(3\sqrt{3}:4\sqrt{2})$$

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:

0.01 M Na₂SO₄

0.01 M KNO₃

0.01 M Urea 3. *

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:

11.2 L of H₂

11.2 L of O₂

2. 💥

3. **

22.4 L of H₂

5.6 L of O₂

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^{-1} . The rate constant for this reaction is 1×10^{-2} mole L^{-1} s⁻¹. When the concentration of the reactants is increased to 0.2 mole L^{-1} , the value of the rate constant [assume constant T]

Options:

Increases by 2 times

1. *

Increases by 4 times

2. **

Remains the same

3. 🗸

Increases by 9 times

4. 💥

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:

A, B, C, D

1. 🏁

A and D only

2. **

B and D only

3. **

B only

4. 🖋

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

HNO₂ 1. 🗱 N₂O₅ 2. ** NCl₅ NO, 4. 💥 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:** KI, Borate buffer and Na2SO4 1. * ZnI2, Borate buffer and Na2S2O3 2. ** KI, Borate buffer and Na₂S₂O₃

Options:

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:

- (A) is true, (R) is true and (R) is the correct explanation for (A)
- (A) is true, (R) is true but (R) is not the correct explanation for (A)
- (A) is true but (R) is false
- (A) is false but (R) is true
 4. ✓

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:** He 1. 🗸 Ar 2. 💥 Xe 3. ** Pu 4. ** 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:** Fe 1. ** Co

2. 💥

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 $\left[\operatorname{Cr}\left(\operatorname{C}_{2}\operatorname{O}_{4}\right)_{3}\right]^{3-}$ complex ion?

Options:

0

1. 🗸

1

2. 💥

2

3. **

3

4. **

Display Question Number: Yes 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:

Alanine

1. 🕷

Arginine

2. 🗸

Serine

3. 🕯

Tyrosine

4. 🕷

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

$$OH \longrightarrow OH \longrightarrow OH$$

Options:

1. *

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. 3

2. ❤

3. **

4. **

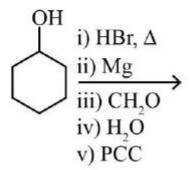
Question Number : 156 Question Id : 1056151756 Question Type : MCQ Option Shuffling : Yes

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

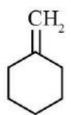
: N.A Think Time : N.A Minimum Instruction Time : 0

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.

$$\underbrace{\text{CO, HCl}}_{\text{anhyd. AlCl}_3/\text{CuCl}}
\underbrace{\text{CHO}}_{\text{CHO}}$$

Options:

Stephan reaction

1. *

3. 🗸

Etard reaction

Gatterman - Koch reaction

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.

 $CH_3COOC_2H_5$ CH_3COCI $(CH_3CO)_2O$ CH_3CONH_2 (II) (III) (IV)

Options:

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

$$\begin{array}{c}
O \\
| \\
C-CH_{2}CH_{2}CH_{3} & \text{i) KMnO}_{4}, KOH, \Delta \\
& \text{ii) H}_{3}O^{+} \\
& \text{iii) Br}_{2}, FeBr_{3}
\end{array}$$

Options:

1 🕷

$$\bigcup_{CO_2H}$$

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 CHCl3 and ethanolic KOH gives

Options:

4. 🗱

$$C\equiv N$$

4. **