Telangana State Council Higher Education

Notations :

1.Options shown in green color and with ✔ icon are correct.

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

Question Paper Name :	Agriculture and Medical English 30th Jul 2022 Shift 1
Subject Name :	Agriculture and Medical (English)
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Total Marks :	160
Display Marks:	No
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	Yes
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No

Show Progress Bar :	No

Agriculture and Medical (English)

Group Number :	1
Group Id :	10561510
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 :	10561528
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 :	10561528

Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 1056151441 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 organism the reproduction is synonymous with growth?

Options :

1. ✔ Unicellular alga

2. ✖ Yeast

3. ✖ Mules

4. ✖ Hydra

Question Number : 2 Question Id : 1056151442 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the character of the organism from which first antibiotic was discovered?

Options :

1. ✖

Exogenous production of sexual spores

Endogenous production of asexual spores

2. ✖

Presence of two nucleated cells during sexual reproduction

3. ✔

Synthesizes its own food

4. ✖

Question Number : 3 Question Id : 1056151443 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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)	Bioremediation	I)	Iodine
B)	Intense green plantation	II)	Controls soil pollution
C)	Biofertilizer	III)	Prevents chemical pollution
D)	Sea weeds	IV)	Controls greenhouse effect

The correct match is:

Options :

1. ✔

A	B	C	D
II	IV	III	I

A	B	C	D
II	III	IV	I

2. ✖

A	B	C	D
IV	I	III	II

3. ✖

A	B	C	D
I	IV	II	III

4. ✖

Question Number : 4 Question Id : 1056151444 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 another character of an aquatic organism having r-phycoerythrin predominately in its body?

Options :

The structure of stored food resembles the energy stored food of an animal

1. ✔

2. ✖

Fertilization takes place between similar gametes

Cell wall consisting of cellulose and pectin only

3. ✖

Flagellated spermatium

4. ✖

Question Number : 5 Question Id : 1056151445 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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		List-III	
A)	Hepaticopsida	i)	Fern	I)	Horn-like Saprophytes
B)	Anthoceratopsida	ii)	Moss	II)	Gemmae
C)	Bryopsida	iii)	Liverworts	III)	False indusium
D)	Pteropsida	iv)	Hornworts	IV)	Protonema

The correct match is:

Options :

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

1. ✔

2. ✖

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

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

3. ✖

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

4. ✖

Question Number : 6 Question Id : 1056151446 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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)	Solitary cyme	I)	*Ipomoea*
B)	Monochasial cyme	II)	*Bougainvillea*
C)	Polychasial cyme	III)	*Datura*
D)	Dichasial cyme	IV)	*Solanum*
E)	Cymule	V)	*Nerium*

The correct match is:

Options :

1. ✖

A	B	C	D	E
III	IV	I	V	II

A	B	C	D	E
III	I	IV	V	II

2. ✖

A	B	C	D	E
II	V	III	IV	I

3. ✖

A	B	C	D	E
III	IV	V	I	II

4. ✔

Question Number : 7 Question Id : 1056151447 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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) Valvate corolla	I) Gulmohur
B) Funnel shaped corolla	II) Vexillary
C) Papilionaceous flower	III) *Calotropis*
D) Imbricate aestivation	IV) *Datura*

The correct match is:

Options :

A	B	C	D
III	II	IV	I

1. ✖

A	B	C	D
III	IV	II	I

2. ✔

A	B	C	D
I	IV	II	III

3. ✖

A	B	C	D
I	II	IV	III

4. ✖

Question Number : 8 Question Id : 1056151448 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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)	*Viola*	I)	Transfer of pollen from one flower to stigma of another flower
B)	Abiotic pollination	II)	Anemophily
C)	Xenogamy	III)	*Vallisneria*
D)	Epihydrophily	IV)	Chasmogamy and cleistogamy

The correct match is:

Options :

A	B	C	D
I	II	III	IV

1. ✖

A	B	C	D
IV	II	I	III

2. ✔

A	B	C	D
IV	I	II	III

3. ✖

A	B	C	D
II	IV	I	III

4. ✖

Question Number : 9 Question Id : 1056151449 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 character of aleurone layer from the following:

A) Presence of glycosidic bonds.
B) Consists of amino acids.
C) Bonds between base and acid form polymers.
D) It separates endosperm with embryo in maize.

Options :

A, B, C only

1. ✖

A, C, D only

2. ✖

B, C, D only

3. ✔

A, B, D only

4. ✖

Question Number : 10 Question Id : 1056151450 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 cohorts in calyciflorae and heteromerae of Bentham and Hooker classification respectively are :

Options :

1. ✔ 5 and 3

2. ✖ 3 and 5

3. ✖ 3 and 3

4. ✖ 3 and 4

Question Number : 11 Question Id : 1056151451 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 sequence of plants having bulb, corm, rhizome and cladophylls.

Options :

1. ✖ *Ruscus*, *Gloriosa*, *Colchicum* and *Lilium*

2. ✖ *Gloriosa*, *Ruscus Colchicum* and *Lilium*

3. ✖ *Lilium*, *Gloriosa*, *Colchicum* and *Ruscus*

Lilium, *Colchicum*, *Gloriosa* and *Ruscus*

4. ✔

Question Number : 12 Question Id : 1056151452 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 show the presence of chromatophores?

Options :

Photosynthetic autotrophic eubacteria

1. ✔

Heterotrophic bacteria

2. ✖

Chemosynthetic autotrophic bacteria

3. ✖

Branched filamentous bacteria

4. ✖

Question Number : 13 Question Id : 1056151453 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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)	Tonoplast	I)	Modification of proteins
B)	Stroma	II)	Enzymes for catabolism
C)	Cisternae of golgi apparatus	III)	Connection between adjacent cells
D)	Plasmodesmata	IV)	Osmoregulation
		V)	Enzymes for anabolism

The correct match is:

Options :

A	B	C	D
IV	V	I	III

1. ✔

A	B	C	D
IV	III	II	I

2. ✖

A	B	C	D
V	II	I	III

3. ✖

A	B	C	D
II	V	IV	I

4. ✖

Question Number : 14 Question Id : 1056151454 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes 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) : Lysosomes are capable of digesting proteins, lipids and nucleic acids.

Reason (R) : Lysosomes are rich in hydrolytic enzymes.

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 : 15 Question Id : 1056151455 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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)	Glut - 4	I)	Hormone
B)	Insulin	II)	Enzyme
C)	Trypsin	III)	Glucose transport
D)	Collagen	IV)	Intercellular substance

The correct match is:

Options :

A	B	C	D
III	I	II	IV

1. ✔

A	B	C	D
III	II	I	IV

2. ✖

A	B	C	D
II	III	I	IV

3. ✖

A	B	C	D
IV	I	III	II

4. ✖

Question Number : 16 Question Id : 1056151456 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 correct on lipids?

Options :

Glycerol is a simple lipid which is a trihydroxy propane

1. ✖

Gingelly oil remain as oil in winter months due to its higher melting point

2. ✔

Fats have higher melting points than oils

3. ✖

Lecithin is a phospholipid in cell membrane

4. ✖

Question Number : 17 Question Id : 1056151457 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 amount of DNA in the cell undergoing a mitotic cell division is doubled during the S-phase.

Reason(R) : It happens due to the doubling of the chromosome number in the S-Phase of Interphase.

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 : 18 Question Id : 1056151458 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 tissues are present in dicot stem but absent in monocot stem?

Options :

Collenchymatous outer cortex and starch sheath

1. ✔

Sclerenchymatous hypodermis and starch sheath

2. ✖

3. ✖

Large central pith and closed vascular bundles

Epidermis and conjoint vascular bundles

4. ✖

Question Number : 19 Question Id : 1056151459 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 free floating hydrophyte from the following.

Options :

Lemna

1. ✔

Hydrilla

2. ✖

Utricularia

3. ✖

Vallisneria

4. ✖

Question Number : 20 Question Id : 1056151460 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 sequence of plants showing the characters given below.

A) Sunken stomata
B) Poorly developed mechanical tissue
C) Plants with mucilage

Options :

Casuarina, Hydrilla, Aloe

1. ✔

Tribulus, Aloe, Hydrilla

2. ✖

Aloe, Tribulus, Hydrilla

3. ✖

Casuarina, Aloe, Opuntia

4. ✖

Question Number : 21 Question Id : 1056151461 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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) : Under anaerobic and aerobic condition lactic acid and pyruvic acid formed respectively in skeletal muscle whereas in yeast during fermentation ethanol is formed.

Reason(R) : Metabolic pathways give variety of products based on conditions.

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 : 1056151462 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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) Half leaf experiments proved that O_2 is required for photosynthesis.
B) Ingenhousz showed that aquatic plant produces bubbles of oxygen in light.
C) Bell jar experiment of Hill indicated that plants restore the air whatever breathing by animals.
D) Sach's experiment showed that chlorophyll is located in special bodies in leaves.

Options :

A, B only

1. ✖

C, D only

2. ✖

A, C only

3. ✔

B, D only

4. ✖

Question Number : 23 Question Id : 1056151463 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 movement of electrons from P_{680} to pheophytin and pheophytin to P_{700} are respectively:

Options :

1. ✔

Uphill and Downhill

Downhill and Uphill

2. ✖

Uphill and Uphill

3. ✖

Downhill and Downhill

4. ✖

Question Number : 24 Question Id : 1056151464 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 C_4 plants?

A) C_4 plants lack photorespiration and have lesser biomass production.
B) Bundle sheath cells contain large number of chloroplasts.
C) Mesophyll cells consists of RuBisCO enzyme.
D) The primary CO_2 acceptor is a 4-carbon molecule.

Options :

A, B, C only

1. ✖

A, B, D only

2. ✖

A, C, D only

3. ✔

B, C, D only

4. ✖

Question Number : 25 Question Id : 1056151465 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 photorespiration?

A) Synthesis of neither sugars nor ATP occur in photorespiration.
B) Photorespiration does occur in C_4 plants due to concentration of O_2 at the active site of RuBisCO.
C) In photorespiration, 2 molecules of PGA are formed from a RuBP molecule.
D) In C_3 plants, photorespiration is responsible for decreased productivity.

Options :

A, B only

1. ✖

B, D only

2. ✖

B, C only

3. ✔

4. ✖

A, D only

Question Number : 26 Question Id : 1056151466 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 substances in a sequence those are formed in EMP pathway, due to the transfer of a group between a pair of substrates with the activity of enzymes.

A) Fructose 1, 6 – bisphosphate
B) Fructose – 6 – phosphate
C) Glucose – 6 – phosphate
D) Phosphoenol pyruvate
E) 3 – Phosphoglyceric acid

The correct answer is :

Options :

D, E, A only

1. ✖

C, B, A, E only

2. ✖

C, A, E only

3. ✔

B, A, D only

4. ✖

Question Number : 27 Question Id : 1056151467 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 incorrect statement from the following:

Options :

1. ✖ Ubiquinones also receive reducing equivalents from Complex II

2. ✖ In coupled reaction of GDP formation, ATP is synthesised

3. ✖ The first member of the TCA cycles is Oxaloacetic acid

4. ✔ Pyruvic acid will be moved into the TCA Cycle or Krebs Cycle

Question Number : 28 Question Id : 1056151468 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 (compound)		List –II (Enters the respiratory pathway as)
A)	$C_6H_{12}O_6$	I)	PGAL
B)	CH_2-OH $\vert$ $CH-OH$ $\vert$ CH_2-OH	II)	Glucose – 6 – phosphate
C)	$CH_3-(CH_2)_{14}-COOH$	III)	Pyruvate
D)	$COOH$ $\vert$ CH_2 $\vert$ NH_2	IV)	Acetyl CoA

The correct match is:

Options :

A	B	C	D
II	III	IV	I

1. ✖

A	B	C	D
II	I	IV	III

2. ✔

A	B	C	D
IV	I	II	III

3. ✖

A	B	C	D
IV	III	II	I

4. ✖

Question Number : 29 Question Id : 1056151469 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 decapitation is practiced to encourage growth of lateral buds in Tea plantation and in hedge making.

Reason (R) : Cytokinins help to overcome the apical dominance.

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 : 30 Question Id : 1056151470 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 character was not a part of Mendel' s experiments?

Options :

1. Seed shape ✖

2. Pod shape ✖

3. Flower position ✖

4. Seed size ✔

Question Number : 31 Question Id : 1056151471 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 phenotypic results are obtained when a pea plant with round and yellow seeds is crossed to another pea plant with wrinkled and yellow seeds.

Round and Yellow	Round and green	Wrinkled and green	Wrinkled and Yellow
3	1	1	3

Identify the genotypes of the plants involved in the cross.

Options :

1. Rr Yy × rrYY ✖

2. Rr Yy × rrYy ✔

3. Rr YY × rr Yy ✖

4. RRYy × rrYy ✖

Question Number : 32 Question Id : 1056151472 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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)	Free phosphate moiety polymer	I)	From RNA to DNA
B)	Free OH group end	II)	5^1 end of the polynucleotide chain
C)	The right handed fashion coiling	III)	3^1 end of the polynucleotide chain
D)	The flow of information of gene in Retroviruses	IV)	Helix has 3.4 nm pitch

The correct match is:

Options :

A	B	C	D
I	IV	II	III

1. ✖

A	B	C	D
IV	III	II	I

2. ✖

A	B	C	D
II	IV	III	I

3. ✖

A	B	C	D
II	III	IV	I

4. ✔

Question Number : 33 Question Id : 1056151473 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes 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) : RNA molecule is stable because it participate in reactions.

Reason (R) : RNA act as genetic material and also as a catalyst.

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 : 34 Question Id : 1056151474 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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) : Each operon has its specific operator and specific repressor.

Reason (R) : Lac operator is present only in the Lac operon and it interacts specifically with Lac repressor only.

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 : 35 Question Id : 1056151475 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 first recombinant DNA was constructed using plasmid of the following bacterium

Options :

Escherichia coli

1. ✖

Salmonella typhimurium

2. ✔

Agrobacterium tumifaciens

3. ✖

Streptococcus pneumoniae

4. ✖

Question Number : 36 Question Id : 1056151476 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 enzymes are used to digest the cell wall of a bacterium, green plant and fungi respectively

A) Lysozyme
B) Cellulase
C) Chitinase

Options :

B, A, C

1. ✖

A, C, B

2. ✖

3. ✖

C, A, B

A, B, C

4. ✔

Question Number : 37 Question Id : 1056151477 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 foreign DNA is ligated at Pst site of pBR_{322} plasmid then introduced into *E. coli* cells. Which of the following statements identifies the chimaeric vector *E. coli* cells?

Options :

Growth of *E. coli* cells on ampicillin containing medium but not on tetracycline containing medium but not on ampicillin containing medium

1. ✖

Growth of *E.coli* cells on tetracycline containing medium but not on ampicillin containing medium

2. ✔

Growth of *E. coli* cells on both ampicillin and tetracycline media

3. ✖

Using ampicillin resistant gene as selectable marker

4. ✖

Question Number : 38 Question Id : 1056151478 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 statement from the following:

Options :

1. ✖ Gene therapy involves ELISA technique to treat non-functional gene.

2. ✔ A and B chains of human insulin was produced separately in *E. coli;* these were extracted and combined by disulphide bond to form human insulin.

3. ✖ Parentage dispute will be solved by RNA interference technique.

4. ✖ Transgenic papaya is resistant to *Pseudomonas* pathogen.

Question Number : 39 Question Id : 1056151479 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 (Varieties of cereal)		List –II (Developed in)	
A)	1R8	I)	Mexico
B)	Semidwarf wheat	II)	India
C)	Taichung Native -1	III)	Philippines
D)	Ratna	IV)	Taiwan
		V)	U. S. A

The correct match is :

Options :

A	B	C	D
III	V	I	IV

1. ✖

A	B	C	D
II	III	IV	I

2. ✖

A	B	C	D
III	I	IV	II

3. ✔

A	B	C	D
V	I	IV	II

4. ✖

Question Number : 40 Question Id : 1056151480 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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) : Baculoviruses are used as biological control agents in plants and animals.

Reason(R) : They have species specific narrow spectrum insecticidal application.

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

Zoology

Section Id :	10561529
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	40
Number of Questions to be attempted :	40

Section Marks :	40
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	10561529
Question Shuffling Allowed :	Yes

Question Number : 41 Question Id : 1056151481 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Theory and practice of identification, nomenclature and classification of organisms is called

Options :

1. ✖ Morphology

2. ✖ Anatomy

3. ✔ Taxonomy

4. ✖ Ecology

Question Number : 42 Question Id : 1056151482 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Assertion (A) : Species is an ecological unit.

Reason (R) : They are reproductively isolated from the individuals of other species.

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 : 1056151483 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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)	Habitat loss	I)	Passenger pigeon
B)	Over-exploitation	II)	Plant-pollination mutualism
C)	Invasion of alien species	III)	Loss of biodiversity
D)	Co-extinction	IV)	Nile perch
		V)	Niche specialisation

The correct match is

Options :

1. ✖

A	B	C	D
I	II	IV	III

2. ✖

A	B	C	D
V	II	III	IV

3. ✔

A	B	C	D
III	I	IV	II

4. ✖

A	B	C	D
IV	III	V	II

Question Number : 44 Question Id : 1056151484 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 lowest level of organisation among eumetazoans is

Options :

1. ✖ Cellular level

2. ✔ Tissue level

3. ✖ Organ level

4. ✖ Organ – system level

Question Number : 45 Question Id : 1056151485 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Study the following and pick up the correct statements:

I) Most of the adult gastropods exhibit asymmetry
II) In schizocoelomates, 4d cell forms the mesoderm
III) Cnidarians are eucoelomates
IV) Nematodes are acoelomates

Options :

I, II only

1. ✔

II, III only

2. ✖

III, IV only

3. ✖

I, IV only

4. ✖

Question Number : 46 Question Id : 1056151486 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 :

Gland		Type	
A)	Pancreas	I)	Holocrine gland
B)	Mammary gland	II)	Endocrine gland
C)	Sebaceous gland	III)	Merocrine gland
D)	Thyroid gland	IV)	Unicellular gland
		V)	Apocrine gland

The correct match is

Options :

1. ✖

A	B	C	D
III	V	IV	II

A	B	C	D
II	I	V	III

2. ✖

A	B	C	D
III	V	I	II

3. ✔

A	B	C	D
IV	II	III	I

4. ✖

Question Number : 47 Question Id : 1056151487 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Pick up the wrongly matched pair.

Options :

Astrocytes – Blood brain barrier

1. ✖

Oligodendrocytes – Form neurilemma

2. ✔

Microglia – Phagocytic cells

3. ✖

Ependymal cells – Movement of cerebrospinal fluid

4. ✖

Question Number : 48 Question Id : 1056151488 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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)	*Obelia*	I)	Sea anemone
B)	*Adamsia*	II)	Sea pen
C)	*Pennatula*	III)	Sea fan
D)	*Gorgonia*	IV)	Sea fur

The correct match is

Options :

A	B	C	D
IV	I	III	II

1. ✖

A	B	C	D
IV	II	I	III

2. ✖

A	B	C	D
IV	I	II	III

3. ✔

A	B	C	D
I	IV	III	II

4. ✖

Question Number : 49 Question Id : 1056151489 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Study the following and pick up the incorrect statement.

Options :

In *Pheretima,* integumentary nephridia are found in 4^{th}, 5^{th} and 6^{th} segments only

1. ✔

Tubifex is an oligochaete found in fresh water

2. ✖

Trichinella is a round worm included in class Aphasmidia

3. ✖

Cestodes exhibit pseudometamerism

4. ✖

Question Number : 50 Question Id : 1056151490 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 statements regarding unisexual annelids.
I) These are bristle worms
II) Gonoducts are present
III) Head is distinct with sense organs
IV) Internal fertilisation

The correct statements are

Options :

I, III only

1. ✔

II, IV only

2. ✖

I, II only

3. ✖

III, IV only

4. ✖

Question Number : 51 Question Id : 1056151491 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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) : *Ascidia* is included in Urochordata.

Reason (R) : Tail of its larva contains the notochord.

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 : 1056151492 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Study the following table and pick up the correct combinations.

S.No	Group	Salient feature	Example
I)	Cyclostomata	Tongue with horny teeth	*Myxine*
II)	Pisces	Dicondylic skull	*Petromyzon*
III)	Chondrichthyes	Claspers in male	*Scoliodon*
IV)	Osteichthyes	Presence of operculum	*Torpedo*

Options :

1. ✔ I, III

2. ✖ II, IV

3. ✖ I, II

4. ✖ III, IV

Question Number : 53 Question Id : 1056151493 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 statements about the endoskeleton of birds.
I) Skull is dicondylic.
II) Ribs are single headed.
III) Clavicles along with interclavicle form furcula.
IV) Heterocoelous vertebrae.

Identify correct statements from the above.

Options :

I, II only

1. ✖

III, IV only

2. ✔

I, III only

3. ✖

II, IV only

4. ✖

Question Number : 54 Question Id : 1056151494 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 find out correct statements.
I) Elephantiasis is transmitted by female *Anopheles*.
II) Malaria is transmitted by female *Culex*.
III) Oriental sore is caused by *Leishmania tropica*.
IV) African sleeping sickness is caused by *Trypanosoma gambiense*.

Options :

I, II, III, IV

1. ✖

I, II, IV only

2. ✖

I, II, III only

3. ✖

III, IV only

4. ✔

Question Number : 55 Question Id : 1056151495 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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) : *Entamoeba histolytica* is an obligate anaerobe.

Reason (R) : Mitochondria are absent in it.

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 : 56 Question Id : 1056151496 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Pick up the mismatched pair(s).
I) Lymphangitis – Inflammation in lymph glands
II) Lymphadenitis – Inflammation in lymph vessels
III) Lymphoedema – Swelling of limbs etc
IV) Exflagellation – Microgametes of *Plasmodium*

Options :

I, II only

1. ✔

II, III only

2. ✖

III, IV only

3. ✖

IV only

4. ✖

Question Number : 57 Question Id : 1056151497 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 man, *Epidermophyton* causes

Options :

Typhoid

1. ✖

Cholera

2. ✖

Ring worm

3. ✔

Common cold

4. ✖

Question Number : 58 Question Id : 1056151498 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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)	Cocaine	I)	Euphoria
B)	Nicotine	II)	Sleeplessness
C)	Amphetamines	III)	Sedative
D)	Morphine	IV)	Increases heart rate
		V)	Decrease heart rate

The correct match is

Options :

A	B	C	D
I	IV	II	III

1. ✔

A	B	C	D
I	II	IV	III

2. ✖

A	B	C	D
IV	V	III	I

3. ✖

A	B	C	D
V	II	III	IV

4. ✖

Question Number : 59 Question Id : 1056151499 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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)	Eurythermal	I)	Tolerate wide range of salinity
B)	Euryhaline	II)	Tolerate narrow range of salinity
C)	Stenothermal	III)	Corals
D)	Stenohaline	IV)	Homeotherms

The correct match is

Options :

A	B	C	D
III	I	IV	II

1. ✖

A	B	C	D
III	II	IV	I

2. ✖

A	B	C	D
I	IV	III	II

3. ✖

A	B	C	D
IV	I	III	II

4. ✔

Question Number : 60 Question Id : 1056151500 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a pond, there were 20 frogs last year and through reproduction 8 new frogs were added, taking current population to 28. The birth rate is (offspring per frog per year)

Options :

0.1

1. ✖

0.4

2. ✔

2.5

3. ✖

10

4. ✖

Question Number : 61 Question Id : 1056151501 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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) : Expiration is a passive process.

Reason (R) : In this process, muscles of diaphragm and external intercostal muscles relax.

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 : 1056151502 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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)	Asthma	I)	Iron particles
B)	Emphysema	II)	Alveoli filled with fluid
C)	Pneumonia	III)	Spasm of smooth muscles of bronchi
D)	Siderosis	IV)	Quarry dust
		V)	Coalesce of alveolar walls

The correct match is

Options :

1. ✖

A	B	C	D
I	II	V	III

2. ✖

A	B	C	D
III	V	II	IV

3. ✖

A	B	C	D
II	V	III	I

4. ✔

A	B	C	D
III	V	II	I

Question Number : 63 Question Id : 1056151503 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

One of the following is not the function of lymphatic system.

Options :

1. ✔ Supply of oxygen to different tissues

2. ✖ Destroys the invading harmful microbes

3. ✖ Transports digested fats into the blood

4. ✖ Transports wastes collected from ECF to blood

Question Number : 64 Question Id : 1056151504 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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)	Angina pectoris	I)	Insufficient pumping of blood
B)	Heart failure	II)	Accumulation of calcium and cholesterol
C)	Heart attack	III)	Chest pain
D)	CAD	IV)	Localised death of heart tissue
		V)	Elevated blood pressure

The correct match is

Options :

1. ✖

A	B	C	D
IV	III	I	II

2. ✖

A	B	C	D
III	IV	I	II

3. ✖

A	B	C	D
III	II	I	IV

4. ✔

A	B	C	D
III	I	IV	II

Question Number : 65 Question Id : 1056151505 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 :

Excretory organs		Examples
A) Protonephridium	I)	Terrestrial arthropods
B) Malpighian tubules	II)	Crustaceans
C) Pericardial glands	III)	Amphibians
D) Antennary glands	IV)	Rotifers
	V)	Adult molluscs

The correct match is

Options :

A	B	C	D
IV	I	V	III

1. ✖

A	B	C	D
IV	I	V	II

2. ✔

A	B	C	D
III	I	IV	V

3. ✖

A	B	C	D
II	V	I	IV

4. ✖

Question Number : 66 Question Id : 1056151506 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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) : Renal calculi are hard crystalline structures formed in urinary tract.

Reason (R) : They are formed when the concentration of oxalates is high in urine.

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 : 1056151507 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Fibrous membrane that held the thick filaments of A – band of a myofibril is

Options :

1. Z – line ✖

2. M – line ✔

3. H – disc ✖

4. I – band ✖

Question Number : 68 Question Id : 1056151508 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Gyroscope of the body is

Options :

1. Cerebrum ✖

2. Medulla oblongata ✖

Cerebellum

3. ✔

Thalamus

4. ✖

Question Number : 69 Question Id : 1056151509 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 an axon is repolarised then it develops __(I)__ charge in the outside and __(II)__ charge in the inside

Options :

I	II
Positive (+)	Positive (+)

1. ✖

I	II
Negative (–)	Negative (–)

2. ✖

I	II
Positive (+)	Negative (–)

3. ✔

4. ✖

I	II
Negative (–)	Positive (+)

Question Number : 70 Question Id : 1056151510 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 :

	Gland		Hormone
A)	Thyroid gland	I)	Prolactin
B)	Hypothalamus	II)	Melatonin
C)	Pituitary gland	III)	Calcitonin
D)	Epiphysis cerebri	IV)	Thymosin
		V)	Somatocrinin

The correct match is

Options :

A	B	C	D
IV	V	I	II

1. ✖

A	B	C	D
III	V	II	I

2. ✖

3. ✖

A	B	C	D
II	I	V	IV

A	B	C	D
III	V	I	II

4. ✔

Question Number : 71 Question Id : 1056151511 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Breakdown of muscle proteins, redistribution of body fat, round face, buffalo hump on the back are the symptoms of

Options :

Cushing's disease

1. ✔

Addison's disease

2. ✖

Myxedema

3. ✖

Goiter

4. ✖

Question Number : 72 Question Id : 1056151512 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 contains the enzyme lysozyme?

Options :

1. ✖ Gastric juice

2. ✖ Bile juice

3. ✔ Saliva

4. ✖ Pancreatic juice

Question Number : 73 Question Id : 1056151513 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 statements regarding immune system and choose correct statements.

I) MHC class – I molecules present on all nucleated cells.
II) MHC class – II molecules found on the surface of pathogens.
III) B – Cells are involved in cell mediated immunity.
IV) Cytotoxic T- Lymphocytes release enzymes called perforins.

Options :

1. ✖ I, II only

2. ✖ II, III only

3. ✖ II, IV only

4. ✔ I, IV only

Question Number : 74 Question Id : 1056151514 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 a sequence with regard to flow of milk to the outside.

A)	Mammary tubule	B)	Lactiferous duct
C)	Mammary duct	D)	Alveoli
E)	Mammary ampulla		

Options :

$D \rightarrow E \rightarrow A \rightarrow C \rightarrow B$

1. ✖

$D \rightarrow A \rightarrow C \rightarrow E \rightarrow B$

2. ✔

$D \rightarrow C \rightarrow E \rightarrow A \rightarrow B$

3. ✖

$D \rightarrow A \rightarrow E \rightarrow C \rightarrow B$

4. ✖

Question Number : 75 Question Id : 1056151515 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 :

	Pathogen		STD
A)	Human papilloma virus	I)	Gonorrhea
B)	*Treponema*	II)	Cervical cancer
C)	*Neisseria*	III)	AIDS
D)	Human immune deficiency virus	IV)	Syphilis
		V)	Genital herpes

The correct match is

Options :

A	B	C	D
II	I	V	III

1. ✖

A	B	C	D
II	IV	I	III

2. ✔

A	B	C	D
III	IV	I	II

3. ✖

A	B	C	D
I	II	IV	III

4. ✖

Question Number : 76 Question Id : 1056151516 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 one parent is with A blood group (homozygous) and the other parent is with B blood group (heterozygous), then which of the following blood groups are not expected in their children?

Options :

A, AB

1. ✖

2. ✔

B, O

B, AB

3. ✖

AB, O

4. ✖

Question Number : 77 Question Id : 1056151517 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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) : In honey bees, males have no father and they cannot have sons, but they do have grand fathers and grand sons.

Reason (R) : They develop directly by parthenogenesis from unfertilised ova.

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 : 78 Question Id : 1056151518 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 technology, the DNA is fragmented by the enzyme

Options :

Restriction endonuclease

1. ✔

Reverse transcriptase

2. ✖

DNase

3. ✖

RNase

4. ✖

Question Number : 79 Question Id : 1056151519 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes 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 which celled stage, the embryos are recovered non-surgically and transferred to surrogate mother in MOET?

Options :

1. ✖ 6 – 8

2. ✔ 8 – 32

3. ✖ 32 – 64

4. ✖ 64 – 128

Question Number : 80 Question Id : 1056151520 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 first clinical gene therapy was administered to cure the deficiency of

Options :

1. ✖

Sickle cell anaemia

Diabetes mellitus

2. ✖

Severe Combined Immuno Deficiency

3. ✔

Diabetes insipidus

4. ✖

Physics

Section Id :	10561530
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 :	10561530
Question Shuffling Allowed :	Yes

Question Number : 81 Question Id : 1056151521 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 forces has the highest strength?

Options :

1. ✖ Gravitational force

2. ✖ Electromagnetic force

3. ✔ Strong nuclear force

4. ✖ Frictional force

Question Number : 82 Question Id : 1056151522 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 physical quantity is given as $y = A^{1/2} B^{1/3}$. While measuring above quantity, the percentage of errors given for A and B are 2% and 3% respectively. The maximum percentage error while measuring y is

Options :

1. ✖ 6

2. ✖ 4

3. ✖ 5

4. ✔ 2

Question Number : 83 Question Id : 1056151523 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 car travelled half the distance with a velocity 'V' and it covered the remaining half distance with a velocity '$\left(\frac{V}{2}\right)$' in the first half time and with velocity '2V' in the second half time. The average velocity of the car for the whole journey is

Options :

1. ✖ $\frac{10V}{14}$

2. ✔

$\frac{10V}{9}$

$\frac{7V}{4}$

3. ✖

$\frac{10V}{7}$

4. ✖

Question Number : 84 Question Id : 1056151524 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 aeroplane travels at the speed of 400 km/h. It ejects its products of combustion at the speed of 1200 km/h with respect to an observer on the ground. The speed of ejected product of combustion relative to the aeroplane is

Options :

800 km/h

1. ✖

1600 km/h

2. ✔

1200 km/h

3. ✖

0

4. ✖

Question Number : 85 Question Id : 1056151525 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 vector is given as $\vec{A} = 4\hat{i} + 7\hat{j}$. What would be the angle, the vector $\vec{A}$ makes with y – axis

Options :

1. $\theta = \text{Cos}^{-1}\left(\frac{7}{\sqrt{11}}\right)$ ✖

2. $\theta = \text{Cos}^{-1}\left(\frac{4}{\sqrt{11}}\right)$ ✖

3. $\theta = \text{Cos}^{-1}\left(\frac{7}{\sqrt{65}}\right)$ ✔

4. $\theta = \text{Cos}^{-1}\left(\frac{4}{\sqrt{65}}\right)$ ✖

Question Number : 86 Question Id : 1056151526 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 initially at rest is thrown vertically up with some speed and reaches height H. The ball is thrown with the same speed at an angle 45° with horizontal. The horizontal distance covered by the ball is

Options :

H

1. ✖

2 H

2. ✔

3 H

3. ✖

4 H

4. ✖

Question Number : 87 Question Id : 1056151527 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 motion of a rocket is based on the principle of conservation of

Options :

1. ✖ mass

2. ✖ kinetic energy

3. ✔ linear momentum

4. ✖ angular momentum

Question Number : 88 Question Id : 1056151528 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 momentum of a body is doubled, the kinetic energy becomes

Options :

1. ✖ doubled

2. ✖

halved

four times

3. ✔

three times

4. ✖

Question Number : 89 Question Id : 1056151529 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 objects I and II of mass 0.8 kg and 0.6 kg collide elastically. If before collision, the object II was at rest and object I was moving. Find the ratio of the final velocity of object I and object II.

Options :

6 : 7

1. ✖

4 : 3

2. ✖

1: 8

3. ✔

4. ✖

1: 16

Question Number : 90 Question Id : 1056151530 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 of two objects A and B are 100 g and 300 g respectively. Their velocities are $\overrightarrow{v_A} = \left(\hat{i} + 7\hat{j}\right)$ m / s and $\overrightarrow{v_B} = \left(\hat{j} - 6\hat{i}\right)$ m / s. What will be the velocity of centre of mass in m/s ?

Options :

1. $-\frac{4}{17}\hat{i} + \frac{5}{2}\hat{j}$ ✖

2. $-\frac{17}{4}\hat{i} + \frac{5}{2}\hat{j}$ ✔

3. $-\frac{17}{4}\hat{i} + \frac{2}{5}\hat{j}$ ✖

4. $-\frac{4}{17}\hat{i} + \frac{2}{5}\hat{j}$ ✖

Question Number : 91 Question Id : 1056151531 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A body is executing simple harmonic motion. At time t, the positon and acceleration of the body are $x(t) = x_0$ m and $a(t) = a_0$ m/s^2, respectively. If $x_0 = a_0$, then the angular velocity (in rad/s)

Options :

1. 1 ✔

2. 0.5 ✖

3. 1.5 ✖

4. 2.5 ✖

Question Number : 92 Question Id : 1056151532 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 statement about gravitational constant (G) and acceleration due to gravity (g) is "TRUE"?

Options :

1. ✖ The values of 'G' and 'g' depend on location

2. ✖ The values of 'G' and 'g' does not depend on location

3. ✔ The value of 'G' is the same everywhere in the universe, but the value of 'g' is not

4. ✖ The value of 'g' is the same everywhere in the universe, but the value of 'G' in not

Question Number : 93 Question Id : 1056151533 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 copper wire (Young's modulus : 110×10^9 N/m^2) having the length of 2 m and the cross sectional area of 0.5 cm^2 is stretched to increase its length by 0.1 %. The required force is

Options :

1. ✖

2750 N

27500 N

2. ✖

55000 N

3. ✖

5500 N

4. ✔

Question Number : 94 Question Id : 1056151534 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

480 m^3 of air is being removed from a room in 20 mins via duct. If air is moving outside with speed of 2.5 m/s. The shape and dimension of the duct should be

A) a square with each side length 0.4 m
B) a rectangle with dimensions 25 cm × 64 cm
C) a square with each side length 1.26 m
D) a rectangle with dimensions 90 cm ×177 cm

Options :

(A) only is correct

1. ✖

(C) only is correct

2. ✖

(A) and (B) only are correct

3. ✔

(C) and (D) only are correct

4. ✖

Question Number : 95 Question Id : 1056151535 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 radius of a soap bubble is increased from 1 cm to 4 cm. If the surface tension of the soap solution is 0.021 Nm^{-1}, then the work done to increase the radius is

Options :

$4.68\times 10^{-4}J$

1. ✖

$7.92\times 10^{-4}J$

2. ✔

$8.34\times 10^{-4}J$

3. ✖

5.88×10^{-4} J

4. ✖

Question Number : 96 Question Id : 1056151536 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 much heat is required to convert 10 g of ice at −5 °C to water at 10 °C ?
(Given specific heat of ice = 0.5 cal / g.°C, specific heat of water = 1.0 cal / g.°C,
Latent heat of fusion = 80 cal /g)

Options :

1000 cal

1. ✖

925 cal

2. ✔

900 cal

3. ✖

950 cal

4. ✖

Question Number : 97 Question Id : 1056151537 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 sphere, a cube and a thin circular plate, all made of the same material and having the same mass are initially heated to a temperature of 900 °C. Which one of the following will cool first ?

Options :

Plate only

1. ✔

Sphere only

2. ✖

Cube only

3. ✖

All the three (Plate, Sphere and Cube)

4. ✖

Question Number : 98 Question Id : 1056151538 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

During adiabatic expansion, the increase in the volume is associated with

Options :

1. ✖

increase in pressure and decrease in T

decrease in pressure and increase in T

2. ✖

increase in pressure and T

3. ✖

decrease in pressure and T

4. ✔

Question Number : 99 Question Id : 1056151539 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 moles of a monoatomic gas undergoes an isobaric process. If the gas temperature is increased by 20 °C then the heat absorbed by the gas is (Take R = 8.3 J/K.mol)

Options :

630 J

1. ✖

430 J

2. ✖

3. ✔

830 J

960 J

4. ✖

Question Number : 100 Question Id : 1056151540 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Consider an ideal gas in which each molecule has mass 'm' and rms speed v. If the mass of each molecule is doubled to 2m and the rms speed is reduced to $v/3$, then the ratio of initial pressure to final pressure of the gas is

Options :

$\frac{4}{9}$

1. ✖

$\frac{9}{2}$

2. ✔

$\frac{3}{4}$

3. ✖

$\frac{3}{2}$

4. ✖

Question Number : 101 Question Id : 1056151541 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 waves with displacement y_1 and y_2 travel in the same medium. y_1 and y_2 are given as

$y_1 = [4\sin(20\pi t - 4\pi x)]$ cm

$y_2 = [3\sin(20\pi t - 4\pi x)]$ cm

Their intensities are I_1 and I_2, respectively, then ratio $\frac{I_1}{I_2}$ is

Options :

1. $\frac{16}{9}$ ✔

2. $\frac{9}{16}$ ✖

3. $\frac{3}{4}$ ✖

4. $\frac{4}{3}$ ✖

Question Number : 102 Question Id : 1056151542 Question Type : MCQ Option Shuffling : Yes

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

Correct Marks : 1 Wrong Marks : 0

Critical angle of light passing from glass to air is minimum for light with wavelength

Options :

1. ✖ 670 nm

2. ✖ 550 nm

3. ✖ 590 nm

4. ✔ 460 nm

Question Number : 103 Question Id : 1056151543 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 yellow light source forms the interference pattern on the screen in the Young's double slit experiment. If it is replaced with green light source, then the fringe pattern

Options :

1. ✖

expands

contracts

2. ✔

disappears

3. ✖

remains the same

4. ✖

Question Number : 104 Question Id : 1056151544 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 electric filed in a region is given by $\vec{E}=\left(4\hat{i}+5\hat{j}+3\hat{k}\right)$ V/m. Let θ_1 and θ_2 be the net flux passing through a square area of side 2 cm parallel to y–z plane and x – z plane respectively. The ratio θ_1/θ_2 is

Options :

0.80

1. ✔

1.25

2. ✖

1.33

3. ✖

0.60

4. ✖

Question Number : 105 Question Id : 1056151545 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 parallel plate capacitor of capacitance 8 μF is connected to a 20 V battery and is allowed to charge completely. The battery is then disconnected and a dielectric material of dielectric constant 8 is introduced between the plates of the capacitor. The energy dissipated in this process is

Options :

1600 μJ

1. ✖

1400 μJ

2. ✔

1500 μJ

3. ✖

1200 μJ

4. ✖

Question Number : 106 Question Id : 1056151546 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Resistance of wire at 20 °C is 10 Ω. At what temperature, resistance becomes 30 Ω (The temperature coefficient of resistance $\alpha = 0.0125/°C$)

Options :

1. ✖ 220 °C

2. ✖ 100 °C

3. ✔ 180 °C

4. ✖ 300 °C

Question Number : 107 Question Id : 1056151547 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 current of 2A flows through a 2 Ω resistor when connected across a battery. The same battery supplied a current of 0.5 A when connected across a 9 Ω resistor. The internal resistance of the battery is

Options :

1. $0.5\,\Omega$ ✖

2. $\frac{1}{4}\Omega$ ✖

3. $\frac{1}{3}\Omega$ ✔

4. 1Ω ✖

Question Number : 108 Question Id : 1056151548 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 wire carrying the current of 5A and length of 20 cm is bent to form a semi-circle.
The magnetic induction (in tesla) at centre of semi-circle is
[use $\pi = \sqrt{10}$]

Options :

1. $\frac{150\,\mu_0}{4\pi}$ ✖

2. $\frac{250\,\mu_0}{4\pi}$ ✔

$\frac{350\,\mu_0}{4\pi}$

3. ✖

$\frac{450\,\mu_0}{4\pi}$

4. ✖

Question Number : 109 Question Id : 1056151549 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 current of 30 mA is required in a galvanometer for full scale deflection. The galvanometer has the coil of resistance $30\,\Omega$. If a maximum current of 3A is to be passed through the galvanometer then the resistance that should be added as shunt is

Options :

$0.2\,\Omega$

1. ✖

$0.3\ \Omega$

2. ✔

$0.8\,\Omega$

3. ✖

4. ✖

1.2 Ω

Question Number : 110 Question Id : 1056151550 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A short bar magnet of magnetic moment 0.05 J/T is placed with its axis perpendicular to the earth's field direction. The resultant field is inclined at 45° with earth's field on its axis at a distance of 5.0 cm from the center of the magnet. The magnitude of earth's field at this point is

(Take $\frac{\mu_0}{4\pi} = 10^{-7}$ SI unit)

Options :

0.5G

1. ✖

0.8G

2. ✔

0.3G

3. ✖

0.6G

4. ✖

Question Number : 111 Question Id : 1056151551 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 circular loop of radius 1.0 cm is placed in a magnetic field, that varies as function of time as B(t) = (0.007 t) T. The direction of field is perpendicular to the plane of loop. The magnitude of induced emf at time t = 4s is

Options :

1. $2.0\times10^{-5}\,\mathrm{V}$ ✖

2. $6.5\times10^{-6}\,\mathrm{V}$ ✖

3. $2.2\times10^{-6}\,\mathrm{V}$ ✔

4. $2\pi\times10^{-5}\,\mathrm{V}$ ✖

Question Number : 112 Question Id : 1056151552 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 bulb and capacitor are connected in series to a source of alternating current. If frequency is increased, while keeping the voltage of the source constant, then

Options :

1. ✔ Bulb will give more intense light

2. ✖ Bulb will give less intense light

3. ✖ Bulb will give light of same intensity as before

4. ✖ Bulb light will fluctuate

Question Number : 113 Question Id : 1056151553 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 frequency of the electromagnetic wave is 3×10^{17} Hz, then it corresponds to which part of electromagnetic spectrum

Options :

1. ✖ Visible

2. ✔ X-ray

Microwave

3. ✖

Gamma ray

4. ✖

Question Number : 114 Question Id : 1056151554 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a photoelectric effect, the maximum energy of the photoelectron is attained with exposure of 2000 Å light. If the maximum kinetic energy of the photoelectron is 3 eV, the threshold wavelength will be
(use hc=1240 ev.nm)

Options :

387.5 nm

1. ✔

402.5 nm

2. ✖

339.5 nm

3. ✖

445.5 nm

4. ✖

Question Number : 115 Question Id : 1056151555 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 particle of mass 4×10^{-27} kg is moving with velocity 3×10^{5} m/s. The de Broglie wavelength associated with the particle is
(Use $h = 6.6\times10^{-34}$ Js)

Options :

1. 5.5×10^{-3} Å ✔

2. 4.0×10^{-2} Å ✖

3. 4.5×10^{-3} Å ✖

4. 6.0×10^{-2} Å ✖

Question Number : 116 Question Id : 1056151556 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the radius of electron orbit in hydrogen atom when electron is in first excited state?

Options :

4.06 Å

1. ✖

2.12 Å

2. ✔

1.06 Å

3. ✖

3.06 Å

4. ✖

Question Number : 117 Question Id : 1056151557 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 nuclear radius of a nucleus with nucleon number 16, is 3×10^{-15}m. Then the nuclear radius of a nucleus with nucleon number 128 is

Options :

3×10^{-15} m

1. ✖

1.5×10^{-15} m

2. ✖

4.5×10^{-15} m

3. ✖

6×10^{-15} m

4. ✔

Question Number : 118 Question Id : 1056151558 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 voltage of peak value 20 V is connected in series with a silicon diode (V_b=0.7 V) and a load resistor (380 Ω). If the forward junction resistance of the diode is 6 Ω, then, peak diode current and peak load voltage are

Options :

25 mA; 10 V

1. ✖

50 mA; 19 V

2. ✔

52 mA; 19 V

3. ✖

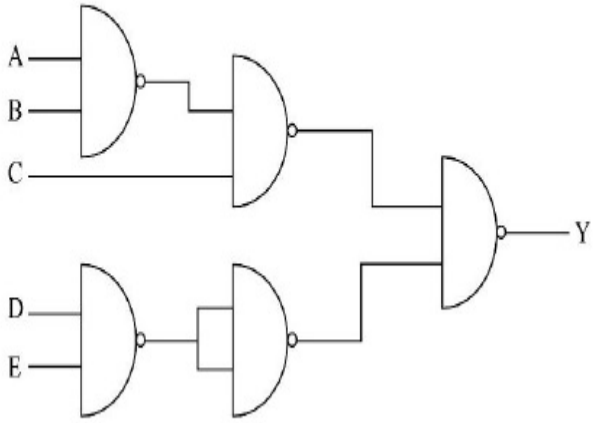
116 mA; 44 V

4. ✖

Question Number : 119 Question Id : 1056151559 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 following logic circuit, C = D = E = 0; for what values of A and B the output Y = 1



Options :

only for A = 0, B = 0

1. ✖

only for A = 0, B = 1

2. ✖

only for B = 1, A = 0

3. ✖

for any values of A and B

4. ✔

Question Number : 120 Question Id : 1056151560 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes 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 transmitting antenna at the top of a hill has a height 72 m and the height of the receiving antenna is 128 m. The maximum distance between them for satisfactory communication in LOS mode is
(Use Radius of earth = 6.4×10^6 m)

Options :

1. $20.8\sqrt{10}$ km ✖

2. $22.4\sqrt{10}$ km ✔

3. $25.2\sqrt{10}$ km ✖

4. $24.8\sqrt{10}$ km ✖

Chemistry

Section Id :	10561531
Section Number :	4
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	40

Number of Questions to be attempted :	40
Section Marks :	40
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	10561531
Question Shuffling Allowed :	Yes

Question Number : 121 Question Id : 1056151561 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 hydrogen atom, the degeneracy of the level with energy $\frac{-R_H}{9}$ is

Options :

1. 3 ✖

2. 4 ✖

3. 9 ✔

4. 16 ✖

Question Number : 122 Question Id : 1056151562 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following sets of quantum numbers is not possible?

Options :

1. ✖ $n = 1, l = 0, m_l = 0, m_s = -1/2$

2. ✖ $n = 2, l = 1, m_l = 0, m_s = -1/2$

3. ✔ $n = 2, l = 2, m_l = 0, m_s = +1/2$

4. ✖ $n = 3, l = 1, m_l = 0, m_s = +1/2$

Question Number : 123 Question Id : 1056151563 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 elements that have only one electron in 5s orbital in the ground state is

Options :

1. ✖ Rb, In

2. ✔

Rb, Mo, Ag

Rb, Pd, Mo

3. ✖

Rb, Pd

4. ✖

Question Number : 124 Question Id : 1056151564 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 oxidation state and covalency of Al in $\left[AlCl(H_2O)_5\right]^{2+}$ respectively?

Options :

+1, 3

1. ✖

+3, 6

2. ✔

+3, 5

3. ✖

+1, 6

4. ✖

Question Number : 125 Question Id : 1056151565 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The correct order of the bond angles in NH_3, $\overset{+}{N}H_4$ and NH_2^- is

Options :

1. ✔ $\overset{+}{N}H_4 > NH_3 > NH_2^-$

2. ✖ $\overset{+}{N}H_4 < NH_3 < NH_2^-$

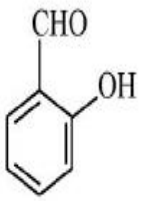
3. ✖ $NH_3 > \overset{+}{N}H_4 > NH_2^-$

4. ✖ $\overset{+}{N}H_4 < NH_2^- < NH_3$

Question Number : 126 Question Id : 1056151566 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

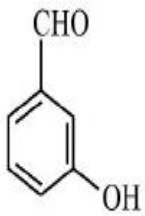
The molecules that can form intramolecular hydrogen bonding are



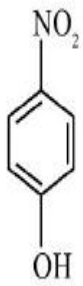
(a)

(b)

(c)



(d)



(e)

Options :

a, d only

1. ✖

a, b, c, d only

2. ✖

a, e only

3. ✖

a only

4. ✔

Question Number : 127 Question Id : 1056151567 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 gases, the gas with the highest van der Waal's force of attraction is

Options :

1. ✖

CO_2

NH_3

2. ✔

CH_4

3. ✖

N_2O

4. ✖

Question Number : 128 Question Id : 1056151568 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 equations is correct for a real gas at very low pressure?

Options :

1. ✖ $z = 1 - \frac{bP}{RT}$

2. ✖ $z = 1 + \frac{bP}{RT}$

3. ✔ $z = 1 - \frac{na}{RTV}$

4. $z = 1 + \frac{na}{RTV}$ ✖

Question Number : 129 Question Id : 1056151569 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 moles of methane are required to produce 22 g of $CO_2(g)$ after combustion?

Options :

1. 1 ✖

2. 0.25 ✖

3. 0.5 ✔

4. 2 ✖

Question Number : 130 Question Id : 1056151570 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Oxidation number of the central metal atom in the compound $K\left[Co(CN)(CO_2)(Cl)\right]$ is

Options :

1. ✖ 3

2. ✖ 2

3. ✔ 1

4. ✖ 0

Question Number : 131 Question Id : 1056151571 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 free expansion of an ideal gas under adiabatic conditions, the correct option is

Options :

1. ✖

q	ΔT	W
$\neq 0$	0	0

2. ✔

q	ΔT	W
0	0	0

3. ✖

q	ΔT	W
0	< 0	$\neq 0$

4. ✖

q	ΔT	W
> 0	> 0	0

Question Number : 132 Question Id : 1056151572 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 equilibrium constant K_c of the following reaction is 9 at a temperature T.

$$A(g) + B(g) \rightleftharpoons C(g) + D(g)$$

Assuming that the initial concentration of all the gases is 1 mole, what will be the concentration of A and C, respectively, at equilibrium?

Options :

0.5 ; 1.5

1. ✔

$\left(1-\frac{3}{\sqrt{10}}\right) ; \left(1+\frac{3}{\sqrt{10}}\right)$

2. ✖

3. ✖

0.5; 0.5

1.5; 1.5

4. ✖

Question Number : 133 Question Id : 1056151573 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 strongest reducing agent among the given options is

Options :

H_3PO_3

1. ✖

$H_2S_2O_7$

2. ✖

H_3PO_2

3. ✔

$H_4P_2O_7$

4. ✖

Question Number : 134 Question Id : 1056151574 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

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

Correct Marks : 1 Wrong Marks : 0

The correct order of the calorific value of the given fuels is

Options :

1. ✖ $LPG < CH_4 < Syngas < H_2$

2. ✖ $CH_4 < LPG < Syngas < H_2$

3. ✔ $Syngas < LPG < CH_4 < H_2$

4. ✖ $Syngas < CH_4 < LPG < H_2$

Question Number : 135 Question Id : 1056151575 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 increasing order of $E^{\circ}_{(M^+/M)}$ values of alkali metals is

Options :

1. ✖ $Na < Li < K$

2. ✖ $K < Na < Li$

$Li < Na < K$

3. ✖

$Li < K < Na$

4. ✔

Question Number : 136 Question Id : 1056151576 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The complete set of Lewis acids among the given compounds is
$SiCl_4, H_3BO_3, FeCl_3, H_2O, CO_2, NH_3$

Options :

H_3BO_3, CO_2

1. ✖

$SiCl_4, H_3BO_3, FeCl_3, CO_2$

2. ✔

H_2O, NH_3

3. ✖

$SiCl_4, FeCl_3, CO_2$

4. ✖

Question Number : 137 Question Id : 1056151577 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 set of option in the following about diamond is

Options :

1. ✖

Hybridisation	Bond length	Bond nature	Uses
sp^3	1.22 Å	Covalent	As abrasive

2. ✖

Hybridisation	Bond length	Bond nature	Uses
sp^3	1.34 Å	Covalent	To make tungston filaments

3. ✖

Hybridisation	Bond length	Bond nature	Uses
sp^2	1.54 Å	Ionic	As abrasive

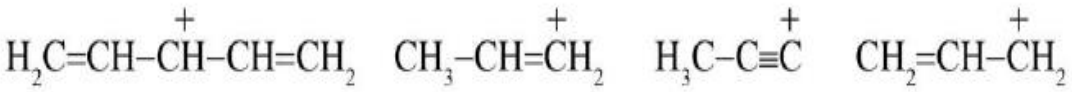
4. ✔

Hybridisation	Bond length	Bond nature	Uses
sp^3	1.54 Å	Covalent	As abrasive

Question Number : 138 Question Id : 1056151578 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 stability order of the following carbocations is



I II III IV

Options :

1. ✖ I > II > III > IV

2. ✖ IV > I > II > III

3. ✔ I > IV > II > III

4. ✖ II > III > I > IV

Question Number : 139 Question Id : 1056151579 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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) : Polythene formation is driven by a catalyst at ambient temperature and low pressure.

Reason (R) : Ethylene polymerization follows Le-Chatellier's Principle.

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 : 140 Question Id : 1056151580 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 statement for the formation of nitronium ion intermediate for an electrophilic aromatic nitration is

Options :

1. ✖ Both H_2SO_4 and HNO_3 serve as acids

2. ✔ H_2SO_4 serves as acid and HNO_3 as base

3. ✖ H_2SO_4 serves as base and HNO_3 as acid

4. ✖

Both H_2SO_4 and HNO_3 serve as bases

Question Number : 141 Question Id : 1056151581 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 Schottky defects present in NaCl per cm^3 at room temperature is

Options :

1. 10^3 ✖

2. 10^{23} ✖

3. 10^{16} ✖

4. 10^6 ✔

Question Number : 142 Question Id : 1056151582 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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.

	Gas	Henry's law constant $[K_H$/k bar at 298 K$]$
A)	Ar	I) 140
B)	CO_2	II) 70
C)	N_2	III) 40
D)	He	IV) 1.67

The correct match is

Options :

1. ✖

A	B	C	D
II	IV	I	III

2. ✖

A	B	C	D
I	II	III	IV

3. ✖

A	B	C	D
III	I	II	IV

4. ✔

A	B	C	D
III	IV	II	I

Question Number : 143 Question Id : 1056151583 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 substance which loses its water of crystallisation [ex: $CuSO_4 \cdot 2H_2O$] on exposure to the atmosphere is called

Options :

1. ✖ hygroscopic

2. ✖ deliquescent

3. ✔ efflorescent

4. ✖ isomorphous

Question Number : 144 Question Id : 1056151584 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The total charge on one gram ion of N^{3-} is approximately

Options :

1. ✔ 2.9×10^5 C

2. ✖ 2.7×10^4 C

3. ✖

1.3×10^4 C

1.9×10^5 C

4. ✖

Question Number : 145 Question Id : 1056151585 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 reaction $A + B \longrightarrow C + D$
the following data was collected. The order of the reaction is

[A] mol/L	[B] mol/L	Initial rate mol L^{-1} s^{-1}
0.25	0.4	1.1×10^{-1}
0.25	0.2	1.1×10^{-1}
0.75	0.2	10×10^{-1}

Options :

3

1. ✔

2

2. ✖

1

3. ✖

0

4. ✖

Question Number : 146 Question Id : 1056151586 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 suitable conditions when the adsorption equilibrium is attained.

Options :

ΔG	ΔH	ΔS
0	$-T\Delta S$	$\frac{\Delta H}{T}$

1. ✖

ΔG	ΔH	ΔS
$-ve$	$T\Delta S$	$\frac{-\Delta H}{T}$

2. ✖

ΔG	ΔH	ΔS
$-$ ve	$-T\Delta S$	$\frac{+\Delta H}{T}$

3. ✖

ΔG	ΔH	ΔS
0	$T\Delta S$	$\frac{\Delta H}{T}$

4. ✔

Question Number : 147 Question Id : 1056151587 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 increasing order of electronegativity for the following elements.

N, P, S, Br

Options :

1. $P < S < Br < N$ ✔

2. $N < S < Br < P$ ✖

3. $P < N < S < Br$ ✖

4. $S < Br < N < P$ ✖

Question Number : 148 Question Id : 1056151588 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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.

Column – I (Compound of S)		Column – II (Hybridization of S)	
A)	SF_6	I)	sp^3d
B)	SO_2	II)	sp^3
C)	SCl_4	III)	sp^2
D)	H_2SO_4	IV)	sp^3d^2

The correct match is

Options :

A	B	C	D
IV	III	I	II

1. ✔

A	B	C	D
III	IV	II	I

2. ✖

A	B	C	D
IV	I	III	II

3. ✖

A	B	C	D
IV	III	II	I

4. ✖

Question Number : 149 Question Id : 1056151589 Question Type : MCQ Option Shuffling : Yes

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

Correct Marks : 1 Wrong Marks : 0

Total number of lone pairs of electrons present in $HClO_4$ is

Options :

1. ✖ 6

2. ✖ 7

3. ✔ 8

4. ✖ 9

Question Number : 150 Question Id : 1056151590 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 products P, Q and R of the following reaction are

$2XeF_2 + 2H_2O \longrightarrow P + Q + R$

Options :

1. ✖

P	Q	R
2XeO	$2H_2$	$2F_2$

P	Q	R
2XeF	2HF	O_2

2. ✖

P	Q	R
2Xe	$2H_2$	$2F_2O$

3. ✖

P	Q	R
2Xe	4HF	O_2

4. ✔

Question Number : 151 Question Id : 1056151591 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 pair of ions in the presence of a weak ligand will have the same spin only magnetic moments?

Options :

1. ✖ Sc^{3+} and Cu^{2+}

2. ✖ Ti^{2+} and Co^{2+}

3. ✔ V^{2+} and Co^{2+}

V^{2+} and Ni^{2+}

4. ✖

Question Number : 152 Question Id : 1056151592 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 the following coordination complexes are

$Ni(CO)_4$	$[CoCl(NH_3)_5]^{2+}$	$[PtCl_4]^{2-}$
I	II	III

Options :

1. ✖

I	II	III
Tetrahedral	Octahedral	Tetrahedral

2. ✖

I	II	III
Square planar	Octahedral	Square planar

3. ✔

I	II	III
Tetrahedral	Octahedral	Square planar

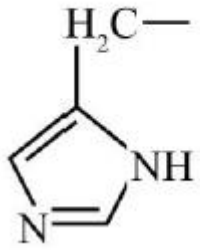
4. ✖

I	II	III
Tetrahedral	Trigonal bipyramidal	Square planar

Question Number : 153 Question Id : 1056151593 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Given sub-structure belongs to which amino acid



Options :

Proline

1. ✖

Arginine

2. ✖

Tyrosine

3. ✖

Histidine

4. ✔

Question Number : 154 Question Id : 1056151594 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 two halogen atoms are attached to the same carbon atom, then it is called

Options :

Vicinal dihalide

1. ✖

Geminal dihalide

2. ✔

α, γ −Dihalide

3. ✖

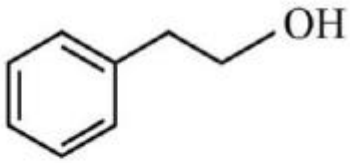
α, β − Dihalide

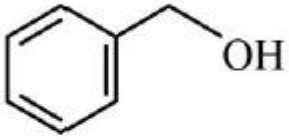
4. ✖

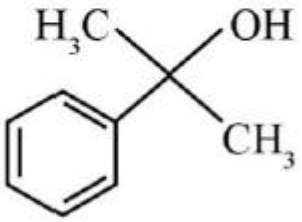
Question Number : 155 Question Id : 1056151595 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

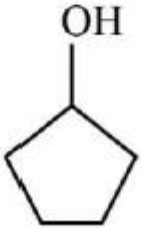
Correct Marks : 1 Wrong Marks : 0

The appropriate reagents in the following reactions are

A) Styrene $\longrightarrow$ 

B) Benzoic acid $\longrightarrow$ 

C) Methyl benzoate $\longrightarrow$ 

D) Cyclopentanone $\longrightarrow$ 

Options :

1. ✖

A	B	C	D
H_3O^+	$LiAlH_4$	CH_3MgI	$LiAlH_4$

2. ✔

A	B	C	D
$BH_3 / H_2O_2 / NaOH$	$LiAlH_4$	CH_3MgI	$NaBH_4$

3. ✖

A	B	C	D
$BH_3 / H_2O_2 / NaOH$	$NaBH_4$	$(CH_3)_2Cd$	$NaBH_4$

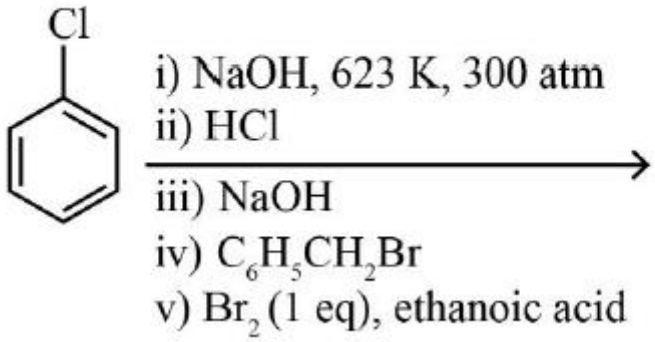
4. ✖

A	B	C	D
$BH_3 / H_2O_2 / NaOH$	$LiAlH_4$	$(CH_3)_2Zn$	BH_3

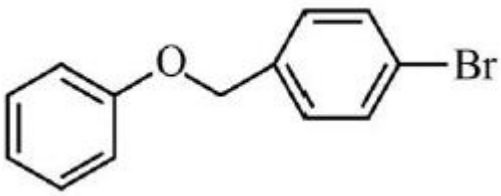
Question Number : 156 Question Id : 1056151596 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

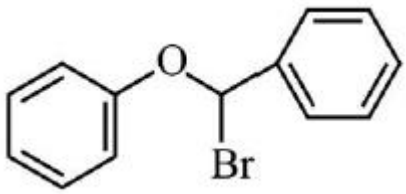
Correct Marks : 1 Wrong Marks : 0

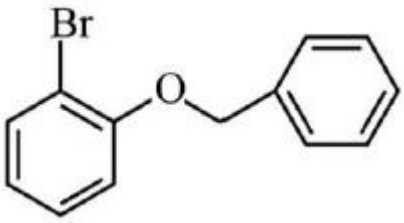
The major product of the following reaction is



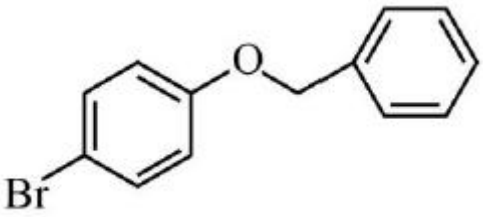
Options :

1. ✖ 

2. ✖ 

3. ✖ 

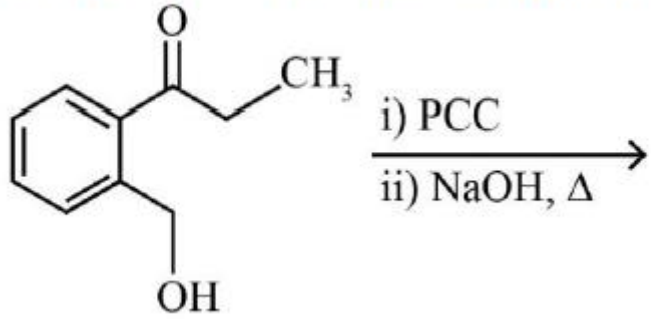
4. ✔



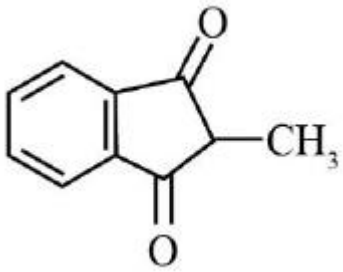
Question Number : 157 Question Id : 1056151597 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

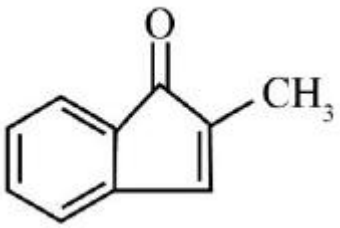
The major product of the following reaction sequence is



Options :

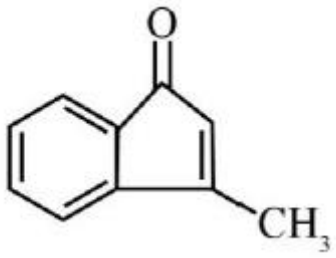


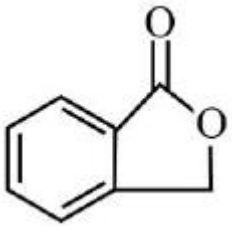
1. ✖



2. ✔

3. ✖



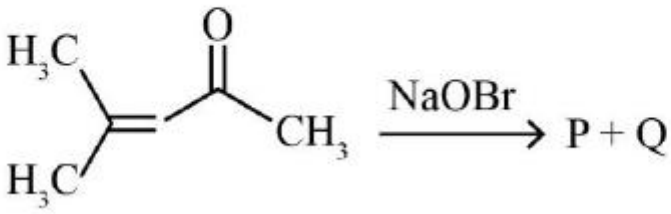


4. ✖

Question Number : 158 Question Id : 1056151598 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

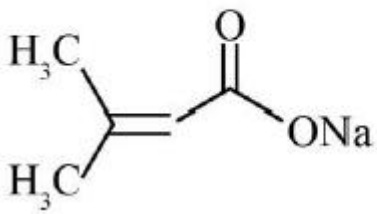
Correct Marks : 1 Wrong Marks : 0

The products P and Q in the following reaction are



Options :

P Q

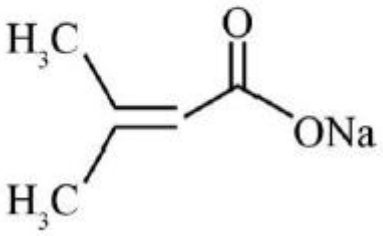


CH_2Br_2

1. ✖

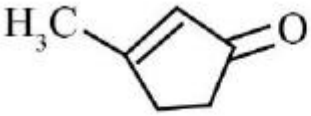
2. ✔

P Q



$CHBr_3$

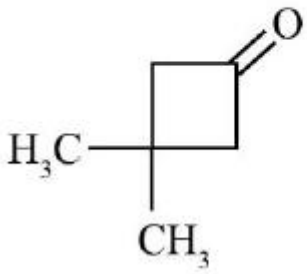
P Q



$CHBr_3$

3. ✖

P Q



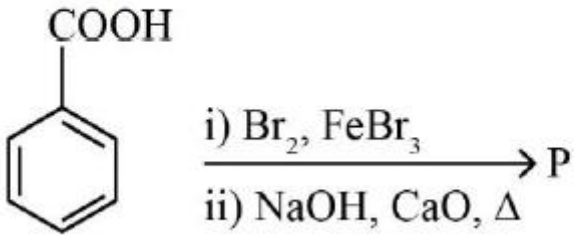
CH_2Br

4. ✖

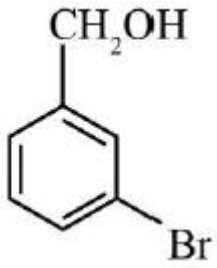
Question Number : 159 Question Id : 1056151599 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

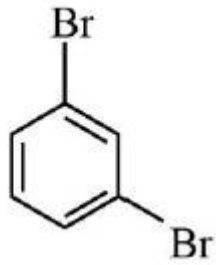
The major product of the following reaction is



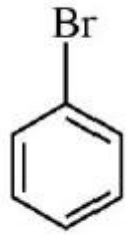
Options :



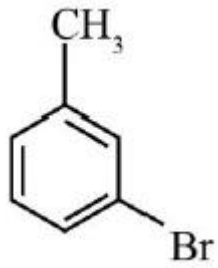
1. ✖



2. ✖



3. ✔



4. ✖

Question Number : 160 Question Id : 1056151600 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes 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 decreasing order of the basic strength is

Options :

1. ✖ $PhNH_2 > EtNH_2 > Et_2NH > NH_3$

2. ✔ $Et_2NH > EtNH_2 > NH_3 > PhNH_2$

3. ✖ $NH_3 > EtNH_2 > Et_2NH > PhNH_2$

4. ✖ $Et_2NH > EtNH_2 > PhNH_2 > NH_3$