



# Question Paper Preview

## Notations :

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

<b>Question Paper Name :</b>	LIFE SCIENCES 10th Sep 2024 Shift 1
<b>Subject Name :</b>	LIFE SCIENCES
<b>Creation Date :</b>	2024-09-10 14:14:17
<b>Duration :</b>	180
<b>Total Marks :</b>	300
<b>Display Marks:</b>	Yes
<b>Change Font Color :</b>	No
<b>Change Background Color :</b>	No
<b>Change Theme :</b>	No
<b>Help Button :</b>	No
<b>Show Reports :</b>	No
<b>Show Progress Bar :</b>	No

## Group 1

<b>Group Number :</b>	1
<b>Group Id :</b>	26544894
<b>Group Maximum Duration :</b>	0
<b>Group Minimum Duration :</b>	180
<b>Show Attended Group? :</b>	No
<b>Edit Attended Group? :</b>	No
<b>Break time :</b>	0
<b>Group Marks :</b>	300

## Paper I

<b>Section Id :</b>	265448187
<b>Section Number :</b>	1
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	42
<b>Number of Questions to be attempted :</b>	42
<b>Section Marks :</b>	100

Maximum Instruction Time : 0  
Sub-Section Number : 1  
Sub-Section Id : 265448578  
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 26544814156 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

The level of teaching that emphasizes memorizing facts and definitions is the:  
విషయాలను, నిర్వచనాలను కంఠస్థము చేయుటను నొక్కి చెప్పు బోధనా స్థాయి:

Options :

1. ✘ Reflective level  
ప్రతిబింబించు స్థాయి

2. ✘ Understanding level  
అవగాహనా స్థాయి

3. ✔ Memory level  
జ్ఞాపక స్థాయి

4. ✘ Application level  
అనువర్తింపు స్థాయి

Question Number : 2 Question Id : 26544814157 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Adolescent learners, compared to adult learners, typically place a greater emphasis on:

వయోజన అభ్యాసకులతో పోలిస్తే, కౌమారదశ అభ్యాసకులు సాధారణంగా దీనిపై ఎక్కువ దృష్టిపెడతారు:

Options :

1. ✘ Self-directed learning and goal setting  
స్వీయ నిర్దేశ అభ్యాసం, లక్ష్య నిర్ణయం

2. ✔ Peer approval and social acceptance  
తోటి వారి ఆమోదము, సామాజిక సమ్మతి

3. ✖ Abstract thinking and complex problem-solving  
అమూర్త ఆలోచన, క్లిష్ట సమస్య పరిష్కారము

4. ✖ Prior Knowledge and experience  
పూర్వ జ్ఞానము మరియు అనుభవము

Question Number : 3 Question Id : 26544814158 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Which of the following factors relating to the teacher can significantly impact the learning environment?

అధ్యాపకునికి సంబంధించిన ఈ క్రింది అంశాలలో ఏ అంశము అభ్యాస పర్యావరణాన్ని గణనీయంగా ప్రభావం చేయగలదు?

Options :

1. ✖ Teacher's preferred mode of transportation  
అధ్యాపకుడు ప్రాధాన్యత ఇచ్చే రవాణా పద్ధతి

2. ✔ Teacher's passion for the subject matter  
అధ్యాపకునికి విషయంపై ఉన్న అభిరుచి

3. ✖ Teacher's ability to travel long distances  
అధ్యాపకునికి చాలా దూరం ప్రయాణం చేయగల సమర్థత

4. ✖ Teacher's knowledge of current events  
వర్తమాన వ్యవహారాలపై అధ్యాపకుని పరిజ్ఞానము

Question Number : 4 Question Id : 26544814159 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

A teaching method where the instructor delivers information through lectures and demonstrations is considered:

బోధకుడు ఉపన్యాసాలు, ప్రదర్శనలు ద్వారా సమాచారము బట్వాడా చేసే బోధనా పద్ధతిని ఇలా అంటారు:

**Options :**

1. ✘ Learner-centered  
అభ్యాసక కేంద్రీకృత
2. ✘ Collaborative learning  
సహాయక అభ్యాసము
3. ✔ Teacher-centered  
ఉపాధ్యాయ కేంద్రీకృత
4. ✘ Project-based learning  
ప్రాజెక్టు ఆధారిత అభ్యాసము

**Question Number : 5 Question Id : 26544814160 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Traditional teaching support systems often rely heavily on:

సంప్రదాయక బోధనా మద్దతు పద్ధతులు తరచుగా వీనిపై ఎక్కువగా ఆధారపడతాయి:

**Options :**

1. ✘ Interactive online platforms and simulations  
పరస్పర చర్య ఆన్‌లైన్ వేదికలు మరియు అనుకరణాలు
2. ✔ Blackboards, textbooks, and physical models  
నల్లబల్లలు, పాఠ్యాంశపుస్తకాలు, భౌతిక నమూనాలు
3. ✘ Virtual reality tools and augmented reality experiences  
వర్చువల్ రియాల్టీ పరికరాలు, వృద్ధి చెందిన రియాల్టీ అనుభవాలు
4. ✘ Collaborative online learning environments  
సహాయక ఆన్‌లైన్ అభ్యాసక పర్యావరణాలు

Question Number : 6 Question Id : 26544814161 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

'Systematic investigation to establish facts and knowledge' is the definition of:  
'నిజాలు, జ్ఞానము ఏర్పాటుకు క్రమబద్ధమైన శోధన' ఈ దిగువ దానికి నిర్వచనం

Options :

1. ✘ Learning  
అభ్యాసము
2. ✘ Problem-solving  
సమస్య పరిష్కారము
3. ✔ Research  
పరిశోధన
4. ✘ Evaluation  
మూల్యాంకనము

Question Number : 7 Question Id : 26544814162 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

When studying the lived experiences of a specific community, a researcher might employ a:

ఒక ప్రత్యేక సమాజం చూసిన నిజమైన అనుభవాలను అధ్యయనం చేయుటకు పరిశోధకుడు ఉపయోగించగలిగినది:

Options :

1. ✘ Positivist approach with standardized surveys  
ప్రామాణికరణబడిన సర్వేలతో పాజిటివిస్ట్ దృక్పథము
2. ✔ Post-positivist approach through in-depth interviews  
వివరణాత్మకమైన ఇంటర్వ్యూల ద్వారా పోస్ట్ పాజిటివిస్ట్ దృక్పథము
3. ✘

Both approaches equally  
రెండు దృక్పథాలు సమానంగా

Both of the approaches are not employed.

రెండు దృక్పథాలను ఉపయోగించరు

4. ✘

**Question Number : 8 Question Id : 26544814163 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

In an experiment, the independent variable is the one that is:

ఒక ప్రయోగములో స్వతంత్ర చలాంశము ఏదనగా:

**Options :**

Measured or observed

1. ✘ కొలవగలిగేది, పరిశీలన చేయకలిగేది.

Manipulated by the researcher

2. ✔ పరిశోధకుడు తారుమారు చేయగలిగినది

Held constant for control

3. ✘ నియంత్రణకై నిలకడగా ఉండేవి

Not directly relevant to the study

4. ✘ అధ్యయనానికి ప్రత్యక్షంగా సంబంధించినది కాదు

**Question Number : 9 Question Id : 26544814164 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Sharing your research findings with a wider audience through presentations or publications falls under the step of:

పరిశోధనా ఫలితాలను విస్తృత ప్రేక్షకులలో, నివేదికల ద్వారా ప్రచురణల ద్వారా పంచుకొను దశ:

**Options :**

Formulating the research hypothesis

1. ✘ పరిశోధనా పరికల్పనను తయారుచేయుట

Interpreting the results

2. ✘ ఫలితాలను అన్వయించుట

Writing the research report

3. ✘ పరిశోధనా రిపోర్టును వ్రాయుట

Disseminating research findings

4. ✔ పరిశోధనా ఫలితాలను వ్యాప్తి చేయుట

Question Number : 10 Question Id : 26544814165 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Reference management software can help with:

రిఫరెన్సు నిర్వహణ నిర్వహణా సాఫ్ట్‌వేర్ దీనికి సహాయపడును:

Options :

Generating random citations without checking sources

1. ✘ వనరులను తనికీ చేయకుండా యాదృచ్ఛిక అను లేఖనాలు ఉత్పత్తి చేయుట

Organizing and formatting your references in a specific style

2. ✔ ఒక ప్రత్యేకశైలిలో రిఫరెన్సులను వ్యవస్థీకరణ, ఫార్మాటింగు చేయుట

Automatically paraphrasing sources to avoid plagiarism

గ్రంథచౌర్యము నివారించుటకు స్వయంగా అధార సమాచారాన్ని పెరాగ్రాఫ్‌లలో సంక్షిప్తకరించుట

3. ✘

Finding sources for your research

4. ✘ పరిశోధనకు వనరులను వెతుకుట

Sub-Section Number :

2

Sub-Section Id :

265448579

Question Shuffling Allowed :

No

Question Id : 26544814166 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

## Question Numbers : (11 to 15)

Question Label : Comprehension

Note : Answer the questions 11-15 by reading the following passage:

గమనిక: క్రింద ఇవ్వబడిన సమాచారం ఆధారంగా 11-15 ప్రశ్నలకు సమాధానాలు వ్రాయండి.

In the smaller cities the presence of this significant landmark is almost invariable. There is ever the lone and lorn tower, belfry, or spire painted in dark sad colours, seen from afar off, rising from the decayed little town below; often of some antique, original shape that pleases, and yet with a gloomy misanthropical air, as of total abandonment. They are rusted and abraded. From their ancient jaws we hear the husky, jangling chimes, musical and melancholy, the disorderly rambling notes and tunes of a gigantic musical box. Towards the close of some summer evening, as the train flies on, we see the sun setting on the grim walls of some dead city, and on the clustered houses. Within the walls are the formal rows of trees planted in regimental order which fringe and shelter them; while rises the dark, copper-coloured tower, often unfinished and ragged, but solemn and funereal, or else capped by some quaint lantern, from whose jaws presently issue the muffled tones of the chimes, halting and broken, and hoarse and wheezy with centuries of work. Often we pass on; sometimes we descend, and walk up to the little town and wander through its deserted streets. We are struck with wonder at some vast and noble church, cathedral-like in its proportions, and nearly always original—such variety is there in these antique Belgian fanes—and facing it some rustic mouldering town-hall of surprising beauty.



చిన్న పట్టణాలలో గణనీయమైన కొండ గుర్తు ఉనికి దాదాపు మార్పులేనిది. అక్కడ ఎప్పుడూ ఒంటరి దిక్కుమాలిన బురుజు, గంటగూడు లేదా నల్లని విచార రంగులతో పెయింట్ చేయబడిన మతస్థల గుడి గోపురము ఉంటుంది. దీనిని దూరం నుండి చూపవచ్చు. దిగువన ఉన్న క్షీణించిన చిన్న పట్టణం నుండి పైకి లేస్తూ కనిపిస్తుంది. తరచుగా అప్లౌడకరమైన ఒక పురాతన అసలు రూపంలో ఉంటుంది. అయినా పూర్తిగా వదలి వేసినట్లు, దిగులుగా మానవ సంబంధంకాని గాలితో ఉంటుంది. అవి తుప్పు పట్టి, రాపిడి జరిగినట్లు ఉంటాయి. వాటి పురాతన దవడల నుండి మనము జీరగాఉండి గలగలలాడే మేకతాళాలు, విచారకరమైన సంగీతము, బ్రహ్మాండమైన సంగీత పెట్టె నుండి క్రమరహిత అల్లకల్లోల స్వరరాగాలు వినవచ్చును. వేసవి చివరి సాయంత్రము వాన ఎగురుతూ ఉంటే మనం, సూర్యుడు మృతపట్టణ భయంకర గోడలపై, గుంపు గృహాలపై అస్తమిస్తున్నట్లు చూడవచ్చును. ఆ గోడల లోపల అక్కడ ఉన్న సిపాయి దళక్రమములో పాతిన లాంఛన చెట్ల వరుసలు ఉన్నాయి. అవి వంగి ఆశ్రయం కలిగిస్తాయి. అటులే చీకటిపడి, రాగి రంగులోని బురుజు తరచు పూర్తికాని, రగిలిపోయిన, కాని గంభీరమైన మరియు చావు ఉర్రేగింపు లేదా కప్పబడిన విచిత్రమైన కుండలో పెట్టిన దీపంలా ఉంటుంది. ఆ దీపపు దవడలు ప్రస్తుతం గంటల మూగబోయిన రాగాలు, ఆగిపోయే, విరిగినట్లుగా కమ్మినగొంతులో గుర్రు గుర్రు శబ్దాలు, శతాబ్దాల పనిగా వినిపిస్తుంది. అటు మనం వెడుతున్నప్పుడు, దిగి ఆ చిన్న పట్టణం వరకు నడుస్తాము. ఎడారి బారిన వీధులగుండా సంచరిస్తాము. మనం ఆశ్చర్యంలో విశాలమైన కీర్తిగల, పొందికలో పెద్ద గుడి కంటే చర్చి వద్ద ఇరుక్కుపోతాము. అది ఎప్పుడూ “ప్రథమం” ది. అటు వంటి పురాతన బెల్లియం గదులలో కనుపిస్తుంది. వాటి ఎదురుగా తుప్పుపట్టిన మట్టిలో కలసిపోతున్న ఆశ్చర్యపరచే సుందర టౌన్ హాల్ ఉంది.

## Sub questions

Question Number : 11 Question Id : 26544814167 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

A regular and significant feature of smaller cities, according to the author is a

\_\_\_\_\_.

రచయిత ప్రకారము చిన్న పట్టణాల క్రమ, గణనీయ లక్షణం.

## Options :

- 1. ✘ Watch tower  
కాపలా బురుజు
- 2. ✘ Light house  
లైట్ హౌసు
- 3. ✔ Bell tower  
గంట బురుజు

- Clock tower  
గడియార బురుజు
4. ✘

Question Number : 12 Question Id : 26544814168 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

The word that means, 'erode' in the above paragraph is \_\_\_\_\_.  
పై పారాగ్రాఫ్‌లో "erode" అని అర్థమిచ్చే పదము.

Options :

1. ✘ Gloomy
2. ✓ Abrased
3. ✘ Muffled
4. ✘ Ragged

Question Number : 13 Question Id : 26544814169 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

The phrase, 'fringe and shelter' in the above context means "trees  
that \_\_\_\_\_."

పై సందర్భములో "ఫ్రింజ్ మరియు షెల్టర్" అంటే చెట్లు \_\_\_\_\_.

Options :

1. ✓ Border and cover the walls
2. ✘ Encircle the house
3. ✘ Run around a group of houses
4. ✘ Creep over the walls

Question Number : 14 Question Id : 26544814170 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

In the above context, the phrase 'solemn and funereal' ring in a/an \_\_\_\_\_ mood.

పై సందర్భములో "సాలెమ్ మరియు ఫునెరల్" ఈ మానసికస్థితి లో మోగుతాయి.

Options :

1. ✘ Blissful
2. ✘ Enthusiastic
3. ✘ Spirited
4. ✔ Dismal

Question Number : 15 Question Id : 26544814171 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

The train passed through a/an \_\_\_\_\_ city.

రైలు \_\_\_\_\_ వంటి నగరం గుండా పయనించింది.

Options :

1. ✘ Crowded and crammed
2. ✔ Old and abandoned
3. ✘ New and upcoming
4. ✘ Busy and bustling

Sub-Section Id :

265448580

Question Shuffling Allowed :

Yes

Question Number : 16 Question Id : 26544814172 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

The message sent by the sender in the form of words, pictures and gestures etc is \_\_\_\_\_ by the receiver.

ఒక వార్త మాటలలో, బొమ్మలలో, సంజ్ఞలు మొదలగు వానిలో పంపితే, వార్త అందుకున్న వాడు దానిని ఈ విధంగా చేస్తాడు.

Options :

1. ✘ Encoded
2. ✔ Decoded
3. ✘ Encrypted
4. ✘ Scripted

Question Number : 17 Question Id : 26544814173 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

\_\_\_\_\_ communication cannot be fully relied upon in inter-cultural communication because of differences in cultures which may lead to misinterpretation.

సంస్కృతుల మధ్య సమాచారంలో \_\_\_\_\_ సమాచారం మనం పూర్తిగా ఆధారపడలేము, ఎందుకంటే సంస్కృతుల మధ్య భేదాల వలన అది తప్పు వివరణకు దారితీస్తుంది.

Options :

1. ✘ Verbal  
శాబ్దిక
2. ✘ Written  
లిఖిత
3. ✔

Non-verbal

అశాబ్దిక

Listening

4. ✘ శ్రవణ

Question Number : 18 Question Id : 26544814174 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

A teacher should be \_\_\_\_\_ towards students in order to have a positive classroom communication.

క్రియాత్మక తరగతి సందేశము కావాలంటే, ఉపాధ్యాయుడు తమ విద్యార్థులతో ఇలా ఉండాలి.

Options :

1. ✔ Empathetic

2. ✘ Prejudiced

3. ✘ Biased

4. ✘ Stern

Question Number : 19 Question Id : 26544814175 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

A noisy room that interferes with the smooth flow of communication can be considered as a \_\_\_\_\_ barrier.

సందడితో కూడిన తరగతి గది సందేశ ప్రవాహంలో జోక్యం చేసుకొంటుంది. దీనిని ఈ అడ్డంకి అంటారు.

Options :

1. ✘ Psychological

2. ✘ Physiological

3. ✘ Social

4. ✔ Physical

**Question Number : 20 Question Id : 26544814176 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Theatre, music and dance formats belong to \_\_\_\_\_ media.

థియేటరు, సంగీతము, నృత్యము ఈ మాధ్యమానికి సంబంధించినది.

**Options :**

1. ✘ Digital

2. ✔ Traditional

3. ✘ Electronic

4. ✘ Social

**Question Number : 21 Question Id : 26544814177 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Complete the series with next coming number: 999, 1000, 501, 168, 43, \_\_\_\_\_

క్రమములో తరువాత వచ్చే సంఖ్య తో పూరించండి: 999, 1000, 501, 168, 43, \_\_\_\_\_

**Options :**

1. ✘ 10

2. ✘ 8.6

3. ✔ 9.6

4. ✘ 11

Question Number : 22 Question Id : 26544814178 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

A's father, pointing towards a person B, said "She is the sister of my mother's only sibling" How is the person related to A?

A యొక్క తండ్రి, B అనే వ్యక్తి వైపు చూపిస్తూ, "ఆమె నా తల్లి యొక్క ఏకైక తోబుట్టువు యొక్క సోదరి" అని చెప్పాడు, ఆ వ్యక్తి A తో ఎలా సంబంధం కలిగి ఉన్నాడు?

Options :

1. ✘ Mother
2. ✘ Aunt
3. ✘ Sister
4. ✔ Grandmother

Question Number : 23 Question Id : 26544814179 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

In a race, A gives B a HeadStart of 200 m and still beats him by 100 m. If A's speed is  $10/7$  times B's speed what is the length of the race?

ఒక రేసులో, A, B కి 200 మీటర్ల హెడ్‌స్టార్ట్ ఇస్తుంది మరియు అయినప్పటికీ అతనిని 100 మీటర్లతో ఓడించింది. A వేగం B వేగం కంటే  $10/7$  రెట్లు ఉంటే రేసు పొడవు ఎంత?

Options :

1. ✘ 1.5 km
2. ✘ 2.0 km
3. ✔ 1.0 km
4. ✘ 3.0 km

Question Number : 24 Question Id : 26544814180 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

'A' sold a watch at a profit of 10%. If he had bought it at 10% less and sold it for Rs. 13 less he would have made a profit of 15%. What is the cost price of watch ?

A ఒక వాచ్‌ను 10% లాభంతో విక్రయించాడు. అతను 10% తక్కువకు కొనుగోలు చేసి రూ. 13 తక్కువకు అమ్మితే అతను 15% లాభం పొందాడు. దాని ధర ఎంత?

Options :

1. ✓ 200

2. ✗ 300

3. ✗ 400

4. ✗ 480

Question Number : 25 Question Id : 26544814181 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

A sum of money compounded annually amounts to Rs. 5,120 in 3 years and Rs. 7,290 in 6 years. Find its annual rate of interest.

సంవత్సరానికి లెక్కించే చక్రవడ్డీతో కలిపిన మొత్తం రూ. 3 సంవత్సరాలలో 5,120 6 సంవత్సరాలలో 7,290 అయితుంది. వార్షిక వడ్డీ రేటును కనుగొనండి.

Options :

1. ✗ 7.5%

2. ✗ 10%

3. ✓ 12.5%

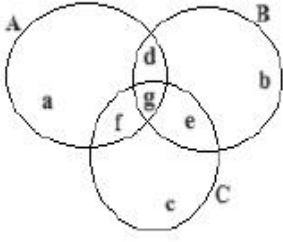
4. ✗ 15%

Question Number : 26 Question Id : 26544814182 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0



Consider the Venn diagram with three sets A, B and C like as follows, with  $a=10$ ,  $b=3$ ,  $c=12$ ,  $d=5$ ,  $e=8$ ,  $f=6$ ,  $n(A)=30$ ,  $n(B)=25$ ;  $n(C)=35$ . Then  $g = ?$



ఈ క్రింద చూపిన విధంగా A,B,C అనే మూడు సెట్లు కలిగిన 'వెన్' చిత్రపటంలో  $a=10$ ,  $b=3$ ,  $c=12$ ,  $d=5$ ,  $e=8$ ,  $f=6$ ,  $n(A)=30$ ,  $n(B)=25$ ;  $n(C)=35$  అయితే  $g = ?$

Options :

1. ✘ 6
2. ✘ 8
3. ✔ 9
4. ✘ 12

Question Number : 27 Question Id : 26544814183 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Statements:

నివేదికలు:

No building is a wall.

ఏ భవనమూ ఒక గోడ కాదు.

Some walls are rooms.

కొన్ని గోడలు గదులు.

All buildings are rocks.

అన్ని భవనాలు రాళ్ళు

Conclusions:

ముగింపు అభిప్రాయం:

- I. No building is a room.  
ఏ భవనమూ గది కాదు.
- II. Some rooms are buildings.  
కొన్ని గదులు భవనాలు.
- III. Some rocks which are not buildings being walls is a possibility.  
భవనాలు కాని కొన్ని రాళ్ళు, గోడలయ్యే అవకాశం ఉంది.

**Options :**

1. ✘ Only III follows
2. ✘ Either I or II follows.
3. ✘ Only I and III follows
4. ✔ Only III and either I or II follows.

**Question Number : 28 Question Id : 26544814184 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The distinction between Savikalpaka (determinate) and Nirvikalpaka (indeterminate) is made with respect to which of the following pramanas?  
సావికల్పక, నిర్వికల్పక మధ్య బేధాన్ని ఈ దిగువ ప్రమాణాన్ని బట్టి నిర్ణయిస్తారు?

**Options :**

1. ✘ Anumana (inference)
2. ✔ Pratyaksa (perception)
3. ✘ Arthapatti (postulation)
4. ✘ Upamdana (comparison)

**Question Number : 29 Question Id : 26544814185 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

In a certain code language, if SP is coded as UR and LO is coded as NQ then TV is coded as  
ఒక కోడ్ భాషలో SPను UR గాను, LO ను NQ గాను క్రోడీకరించినట్లయితే TV ని యిలా క్రోడీకరిస్తారు.

**Options :**

1. ✘ VW

2. ✘ WV

3. ✘ VN

4. ✔ VX

Question Number : 30 Question Id : 26544814186 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Match the following lists with correct ones:

సరియైన వాటితో జతపరచుము:

List-I

జాబితా-I

a. Pratyksha

ప్రత్యక్ష

b. Anumiti

అనుమాన

c. Upamana

ఉపమాన

d. Anumana

అనుమాన

List-II

జాబితా - II

i. Perception

అర్థం చేసుకొన్నది

ii. Presumption

ఊహ

iii. Comparison

పోలిక

iv. Inference

భావన

Options :

1. ✘ a-i, b-ii, c-iii, d-iv

2. ✘ a-iv, b-ii, c-i, d-iii

3. ✔ a-i, b-iv, c-iii, d-ii

4. ✘ a-iv, b-iii, c-ii, d-i

Sub-Section Number :

4

Sub-Section Id :

265448581

Question Shuffling Allowed :

No

Question Id : 26544814187 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (31 to 35)

Question Label : Comprehension

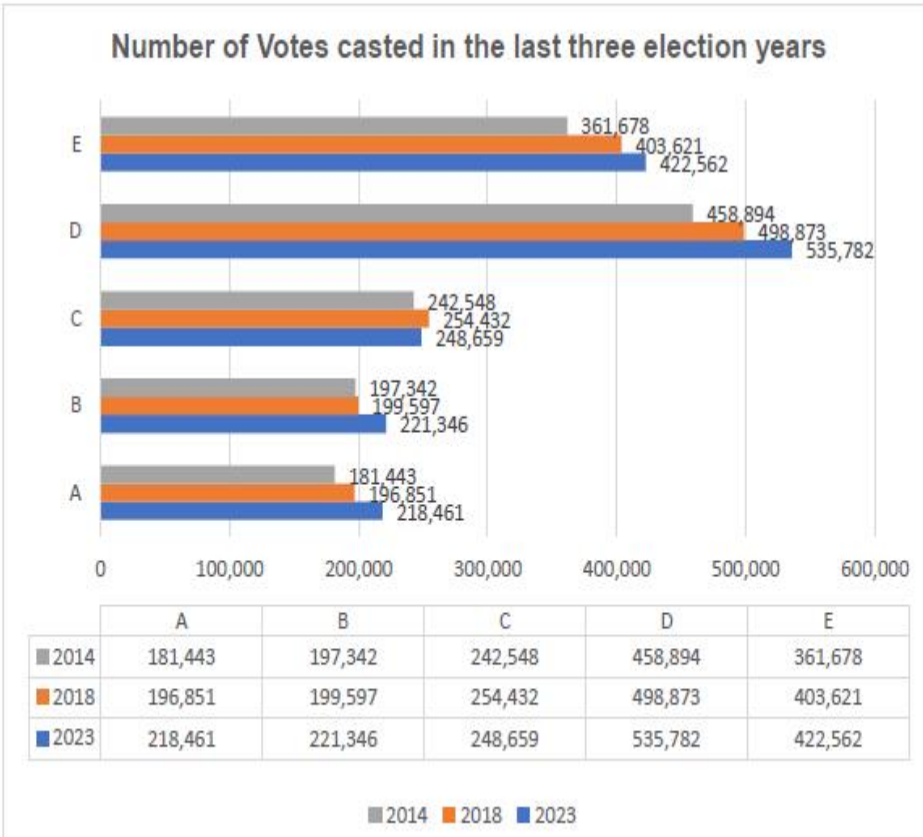
Note: Answer the questions Q.31 to Q. 35 on the basis of the information given below.

గమనిక: క్రింద ఇవ్వబడిన సమాచారం ఆధారంగా Q.31 నుండి Q. 35 ప్రశ్నలకు సమాధానాలు వ్రాయండి.

The number of votes cast in an election in five Assembly constituencies: A, B, C, D and E in the state of Telangana during the last three election years 2014, 2018 and 2023 are presented in the following Bar diagram.

గత మూడు ఎన్నికలు 2014, 2018 మరియు 2023లో తెలంగాణ రాష్ట్రంలోని ఐదు అసెంబ్లీ

నియోజకవర్గాలు A, B, C, D మరియు E లలో జరిగిన ఎన్నికల్లో పోలైన ఓట్ల సంఖ్య క్రింది బార్ రేఖాచిత్రంలో ప్రదర్శించబడింది.



Sub questions

Question Number : 31 Question Id : 26544814188 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

What is the total number of votes cast in the five constituencies in the year 2018?

2018 లో ఐదు నియోజకవర్గాల్లో పోలైన మొత్తం ఓట్ల సంఖ్య ఎంత?

Options :

14,41,905

1. ✘

2. ✔

15,53,374

3. ✘ 15,43,374

4. ✘ 16,46,810

**Question Number : 32 Question Id : 26544814189 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

What is the least number of votes polled in the given five constituencies in the year 2023?

2023 సంవత్సరంలో ఇచ్చిన ఐదు నియోజకవర్గాల్లో తక్కువ పోలైన ఓట్ల సంఖ్య ఎంత?

**Options :**

1. ✘ 1,97,342

2. ✘ 1,81,443

3. ✔ 2,18,461

4. ✘ 1,99,597

**Question Number : 33 Question Id : 26544814190 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

In which constituency the number of voters decreased when compared with 2018 and 2023?

2018, 2023తో పోలిస్తే ఏ నియోజకవర్గంలో ఓటర్ల సంఖ్య తగ్గింది?

**Options :**

1. ✘ A

2. ✘ B

3. ✔ C

4. ✘ D

Question Number : 34 Question Id : 26544814191 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

In which constituency the number of voters increased more when compared with 2018 and 2023?

2018 మరియు 2023తో పోలిస్తే ఏ నియోజకవర్గంలో ఓటర్ల సంఖ్య పెరిగింది?

Options :

1. ✘ A

2. ✘ B

3. ✘ C

4. ✔ D

Question Number : 35 Question Id : 26544814192 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

The total number of votes polled in the C, D and E in 2018?

2018లో C, D, E ఊ మొత్తం ఓటర్ల సంఖ్య ఎంత ?

Options :

1. ✔ 11,56,926

2. ✘ 11,63,126

3. ✘ 12,46,926

4. ✘ 15,53,923

Sub-Section Number :

5

Sub-Section Id :

265448582

Question Shuffling Allowed :

Yes

Question Number : 36 Question Id : 26544814193 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Which of the following is open source?

ఈ దిగువ వానిలో ఎవరైన స్వేచ్ఛగా ఉపయోగించగల వనరు ఏది?

Options :

1. ✘ MS Word
2. ✘ Windows
3. ✔ Mozilla Firefox
4. ✘ Acrobat Reader

Question Number : 37 Question Id : 26544814194 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

What should you do to ensure secure online transactions?

అన్‌లైన్ వ్యవహారాల పరిరక్షణకు చేయవలసినది?

Options :

1. ✘ Lock your computer  
కంప్యూటరు కు తాళం వేయుట
2. ✔ Give credit card or bank details only on safe websites  
క్రెడిటుకార్డు, బాంకు వివరాలు క్షేమకరమైన వెబ్‌సైట్‌లకే ఇచ్చుట
3. ✘ Use anti-virus  
యాంటీవైరస్ ఉపయోగించుట
4. ✘ Do not use pirated software  
అనధీకృత సాఫ్ట్‌వేర్‌ను వాడకుండుట

Question Number : 38 Question Id : 26544814195 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

What should a strong password consist of?  
బలమైన పాస్‌వర్డ్ ఎలా ఉండాలి?

Options :

1. ✘ Only letters  
అక్షరాలు మాత్రమే
2. ✘ Numbers and special characters  
అంకెలు, ప్రత్యేక కారెక్టర్లు
3. ✘ Name of a person  
వ్యక్తి పేరు
4. ✔ Letters, numbers and special characters  
అక్షరాలు, అంకెలు, ప్రత్యేక కారెక్టర్లు

Question Number : 39 Question Id : 26544814196 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Internal communication within institutions is done through  
సంస్థల లోపల అంతర్గత సందేశం దీని ద్వారా పంపిస్తారు

Options :

1. ✔ LAN
2. ✘ WAN
3. ✘ EBB
4. ✘ MMS



Question Number : 40 Question Id : 26544814197 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

HTML is used to create  
దీనిని సృష్టించుటకు HTML వాడెదరు

Options :

1. ✘ Machine language program  
యాంత్రిక భాష ప్రోగ్రాము
2. ✘ High level program  
ఉన్నత స్థాయి ప్రోగ్రాము
3. ✔ Web page  
వెబ్ పేజీ
4. ✘ Web server  
వెబ్ సర్వరు

Question Number : 41 Question Id : 26544814198 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

A source of renewable power which can be developed with minimum cost is:  
కనిష్ట వ్యయంతో నవీకరణ శక్తి వనరును అభివృద్ధి చేయలిగినది

Options :

1. ✔ Biomass power  
బయోమాస్ శక్తి
2. ✘ Tidal power  
టైడల్ శక్తి
3. ✘ Wind mills  
గాలి మరలు
4. ✘

Geothermal energy  
ఉష్ణ సంబంధ శక్తి

Question Number : 42 Question Id : 26544814199 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes  
Correct Marks : 2 Wrong Marks : 0

In which part of India, the tropical Western Ghats are situated?  
ఇండియాలో ఏ ప్రాంతమందు ఉష్ణమండల పడమటి కనుమలు కలవు?

Options :

1. ✘ Punjab  
పంజాబ్
2. ✔ Kerala  
కేరళ
3. ✘ Madhya Pradesh  
మధ్య ప్రదేశ్
4. ✘ Rajasthan  
రాజస్థాన్

Question Number : 43 Question Id : 26544814200 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes  
Correct Marks : 2 Wrong Marks : 0

Sustainable Development Goals (SDGs) are formally known as...  
కొనసాగించగలిగే అభివృద్ధి లక్ష్యాలు అనగా:

Options :

1. ✔ Transforming Our World: 2030 Agenda  
మన ప్రపంచాన్ని మార్చుట: 2030 అజెండా
2. ✘ Sustainable Living for All: 2022 Agenda  
అందరికీ స్థిరమైన జీవనం: 2022 అజెండా

Life of Dignity for All: 2022 Agenda

3. ✖ అందరికీ గౌరవంతో కూడిన జీవితం: 2022 అజెండా

One Planet, One People: 2030 Agenda

4. ✖ ఒకగ్రహం, ఒకే జనం: 2030 అజెండా

Question Number : 44 Question Id : 26544814201 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Among the following fuels of energy, which are the most environments friendly?

ఈ దిగువ శక్తి ఇంధనాలలో, ఏవి ఎక్కువ పర్యావరణ సహకారిగా ఉంటాయి?

Options :

Biogas

1. ✖

CNG

2. ✖

Hydrogen

3. ✔

Ethanol

4. ✖

Question Number : 45 Question Id : 26544814202 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

One of the anthropogenic sources of gaseous pollutants chlorofluorocarbons in air is....

ఈ క్రింది వానిలో మానవజన్య వాయు కలుషాలలోని ఒకటి క్లోరోఫ్లోరోకార్బన్లుకు

మూలము:

Options :

Cement Industry

సిమెంటు పరిశ్రమ

1. ✖

Fertiliser industry

ఎరువుల పరిశ్రమ

2. ✖

3. ✓ Foam industry  
ఫోమ్ పరిశ్రమ

4. ✘ Pesticide industry  
పురుగు మందుల పరిశ్రమ

Question Number : 46 Question Id : 26544814203 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Which is the first Engineering College of India?  
ఇండియాలో మొదట ఇంజనీరింగు కాలేజీ ఏది?

Options :

1. ✓ Thompson College

2. ✘ P.S.G. College of Technology

3. ✘ JNTU

4. ✘ VIT

Question Number : 47 Question Id : 26544814204 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Prime Minister Research Fellowship is for students pursuing a Ph.D. programme in:  
పి. హెచ్. డి ప్రోగ్రాములో ప్రధానమంత్రి పరిశోధనా ఉపకారవేతనం ఏ దిగువ విద్యార్థులకు  
సంబంధించినది:

Options :

1. ✘ State and Central Universities

2. ✓ Central Universities, IISc, IITs, NITs, IISERs, and IIIT

3. ✘ IISc, IITs, NITs, IISERs, IIITs, State and Central Universities

4. ✖ IITs and IISc

Question Number : 48 Question Id : 26544814205 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

The purpose of value education is best served by focussing on విలువలతో కూడిన విద్య ఉద్దేశం ఈ క్రింది వానిలో దేనిపై దృష్టి పెట్టటం వలన నెరవేరుతుంది?

Options :

1. ✖ Cultural practices prevailing in the society.  
సమాజంలో ఉన్న సాంస్కృతిక ఆచరణలు
2. ✖ Norms of conduct lay down by a social group.  
సామాజిక సమూహము ఏర్పదచిన ప్రవర్తనా నియమావళి
3. ✔ Concern for human values.  
మానవ విలువలకు ఆందోళన
4. ✖ Religious and moral practices and instructions.  
మతసంబంధ, నైతిక ఆచరణలు, సూచనలు

Question Number : 49 Question Id : 26544814206 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Why Environmental Education is considered essential for children? పిల్లలకు పర్యావరణ విద్య ముఖ్యము ఎందువలన అంటే?

Options :

1. ✖ Environmental education is only relevant to adults.  
పర్యావరణ విద్య పెద్దవారికి మాత్రమే సంబంధించినది
2. ✔ Early exposure to environmental education can shape lifelong attitudes and behaviours.  
ప్రారంభంలోనే పర్యావరణ విద్య ఉండటం వలన జీవిత వైఖరులు, నడవడాల పంథాను మార్చవచ్చు.

3. ✘ Children are too young to understand complex environmental concepts.  
క్లిష్టమైన పర్యావరణ భావనలను అర్థం చేసుకొనుటకు పిల్లలు మరీ చిన్నవారు

4. ✘ Children are not affected by environmental issues.  
పర్యావరణ సమస్యల ప్రభావం పిల్లలపై లేదు.

Question Number : 50 Question Id : 26544814207 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Good Governance' and 'Participating Civil Society for Development' were stressed  
in World Bank Report of....

“సుపరిపాలన” ‘అభివృద్ధిలో పాల్గొనే పౌరసమాజము’ లను ఈ దిగువ ప్రపంచ బాంకు  
రిపోర్టులలో నొక్కి చెప్పారు.

Options :

1. ✔ 1992

2. ✘ 1997

3. ✘ 2000

4. ✘ 2003

## Paper II

Section Id :	265448188
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	100
Number of Questions to be attempted :	100
Section Marks :	200
Maximum Instruction Time :	0
Sub-Section Number :	1

Sub-Section Id :

265448583

Question Shuffling Allowed :

Yes

Question Number : 51 Question Id : 26544814208 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Which of the following statements are correct?

- i. Polarity of water makes it an excellent solvent
- ii. Water has high tensile strength
- iii. Cohesive property of water
- iv. Water has high dielectric constant

Options:

Options :

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

Question Number : 52 Question Id : 26544814209 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

The peptide bond in a protein is

Options :

1. ✘ Planar but rotates to three preferred dihedral angles
2. ✘ Nonplanar but rotates to three preferred dihedral angles
3. ✔ Planar and usually found in trans configuration
4. ✘ Nonplanar and fixed in a trans conformation

**Question Number : 53 Question Id : 26544814210 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Choose the correct statement about peptides in the Ramachandran Plot

**Options :**

1. ✘ Peptides that are unstructured will have all the backbone dihedral angles in the disallowed region
2. ✘ It is not possible to conclude whether peptide adopts helix or beta sheet conformation
3. ✔ The occurrence of beta turn conformation in a peptide can be deduced
4. ✘ The sequence of a peptide can be deduced

**Question Number : 54 Question Id : 26544814211 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

**Assertion:** Amino acids tend to be least soluble in water at their isoelectric point.

**Reason:** The net charge on an amino acid is a function of the pH of the solution.

Options:

**Options :**

1. ✘ Both Assertion and Reason are true and Reason is the correct explanation of Assertion.
2. ✔ Both Assertion and Reason are true and Reason is not the correct explanation of Assertion.
3. ✘ Assertion is true but Reason is false



4. ✘ Assertion is false and Reason is true.

Question Number : 55 Question Id : 26544814212 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Which of the following statements about B-DNA structure is incorrect?

Options :

1. ✘ With in double helix there are 10 bases per turn of the helix.

2. ✘ The double helix contains antiparallel chains

3. ✔ The amount of Adenine plus Thymine is equal to the amount of Guanine plus Cytosine.

4. ✘ Separation of the two strands of the double helix requires untwisting of the helix.

Question Number : 56 Question Id : 26544814213 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Glucose and Mannose are epimers. This means that

Options :

1. ✘ They are mirror images of each other

2. ✘ One is an aldose, the other is a ketose

3. ✘ They rotate plane polarized light in opposite directions

4. ✔ They differ only in the configuration of one carbon atom

Question Number : 57 Question Id : 26544814214 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Which of the following statements are correct?

- i. Double bonds in unsaturated fatty acids are generally in the cis configuration
- ii. In polyunsaturated fatty acids, double bonds are almost never conjugated
- iii. Sphingoglycolipids are involved in biological recognition
- iv. Prostaglandins contain a five membered ring of carbon atoms
- v. Prostaglandins regulate the synthesis of the intracellular messenger cAMP

Options:

Options :

- 1. ✘ i and iv
- 2. ✘ i, ii and iii
- 3. ✘ iii, iv and v
- 4. ✔ i, ii, iii and iv

Question Number : 58 Question Id : 26544814215 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Michaelis-Menten equation states that

Options :

- 1. ✘ Rate of enzyme reaction is independent of substrate concentration
- 2. ✘ Rate of non-enzyme reaction is proportional to substrate concentration
- 3. ✘  $K_m$  is the enzyme-substrate complex association constant
- 4. ✔

Enzyme-substrate complex formation is essential in enzyme reaction

**Question Number : 59 Question Id : 26544814216 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following statements are correct about retrotransposons

- i. They transpose via RNA intermediates
- ii. They contain genes for ribosomal proteins
- iii. They possess a gene for RNA-dependent RNA polymerase
- iv. They are found only in bacteria
- v. They may contain introns

Options:

**Options :**

- 1. ✘ i,iv and v
- 2. ✘ ii,iii and iv
- 3. ✔ i and v
- 4. ✘ iii, iv and v

**Question Number : 60 Question Id : 26544814217 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following accurately describes the Na<sup>+</sup>/K<sup>+</sup>-ATPase pump's role in cellular physiology?

- i. Facilitates passive diffusion of ions
- ii. Uses ATP to pump ions against gradients
- iii. Regulates water movement
- iv. Operates independently of energy

Options:

**Options :**

1. ✘ i Only
2. ✔ ii Only
3. ✘ i and iii
4. ✘ ii and iii

**Question Number : 61 Question Id : 26544814218 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Which of the following accurately describes the mechanism by which bacteria respond to oxidative stress?

- | Column I  | Column II   |
|---|---|
| a. Activation of heat shock proteins to repair damaged DNA.                     | i. Activation of mechanisms to repair damaged DNA.                      |
| b. Upregulation of antioxidant enzymes to neutralize reactive oxygen species.   | ii. Production of molecules to neutralize harmful oxidative agents.     |
| c. Inhibition of protein synthesis to conserve energy.                          | iii. Reduction in metabolic activity to save resources.                 |
| d. Increased production of osmoprotectants to maintain cell membrane integrity. | iv. Strengthening of cell structures to withstand environmental stress. |

Options:

**Options :**

1. ✔ a-i, b-ii, c-iii, d-iv
2. ✘ a-ii, b-i, c-iv, d-iii
3. ✘ a-iii, b-ii, c-i, d-iv
4. ✘ a-iv, b-iii, c-ii, d-i

**Question Number : 62 Question Id : 26544814219 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

**Assertion:** Peroxisomes play a crucial role in detoxification reactions, particularly the breakdown of hydrogen peroxide.

**Reason:** Their main function is to store calcium ions and regulate intracellular calcium levels.

**Options :**

1. ✘ Both the Assertion and Reason are correct, and the Reason is the correct explanation for the Assertion.
2. ✘ Both the Assertion and Reason are correct, but the Reason is not the correct explanation for the Assertion.
3. ✔ The Assertion is correct, but the Reason is incorrect.
4. ✘ Both the Assertion and Reason are incorrect.

**Question Number : 63 Question Id : 26544814220 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following accurately describes the function of the Anaphase-Promoting Complex/Cyclosome (APC/C) in the regulation of the cell cycle?

1. The APC/C initiates \_\_\_\_\_ during the S phase.
2. The APC/C degrades cyclins and other regulatory proteins to \_\_\_\_\_ through the cell cycle.

Options:

**Options :**

1. ✔ DNA replication; allow progression
2. ✘ Chromosome condensation; halt progression
3. ✘

DNA repair; initiate mitosis

4. ✘ Protein synthesis; maintain arrest

**Question Number : 64 Question Id : 26544814221 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

What is the function of an operator in an operon system?

**Options :**

1. ✘ It serves as the site where RNA polymerase binds to initiate transcription.

2. ✘ It codes for the structural genes within the operon.

3. ✔ It acts as a switch, controlling the access of RNA polymerase to the genes in the operon.

4. ✘ It is responsible for the synthesis of regulatory proteins that control gene expression.

**Question Number : 65 Question Id : 26544814222 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

During which stage of prophase I in Meiosis does synapsis occur, leading to the formation of tetrads?

**Options :**

1. ✘ Leptotene

2. ✔ Zygotene

3. ✘ Pachytene

4. ✘ Diplotene

**Question Number : 66 Question Id : 26544814223 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

How transposons are typically arranged in the genome?

**Options :**

1. ✘ Within exons, interrupting coding sequences.

2. ✘ Exclusively in promoter regions.

3. ✔ Scattered throughout the genome, including within genes and intergenic regions.

4. ✘ Confined to specific transposon clusters.

**Question Number : 67 Question Id : 26544814224 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Which organelle in plant cells is responsible for maintaining turgor pressure and providing structural support?

**Options :**

1. ✘ Mitochondria

2. ✘ Golgi apparatus

3. ✔ Vacuole

4. ✘ Endoplasmic reticulum

Question Number : 68 Question Id : 26544814225 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

**Assertion:** Okazaki fragments are formed during DNA synthesis.

**Reason:** DNA synthesis extends from 5' to 3' direction only.

Options :

1. ✓ Both the Assertion and Reason are correct, and the Reason is the correct explanation for the Assertion.
2. ✗ Both the Assertion and Reason are correct, but the Reason is not the correct explanation for the Assertion.
3. ✗ The Assertion is correct, but the Reason is incorrect.
4. ✗ Both the Assertion and Reason are incorrect.

Question Number : 69 Question Id : 26544814226 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Which of the following statements is false about DNA Pol V of *E. coli*

Options :

1. ✗ It belongs to  $\gamma$ -family of DNA Polymerase
2. ✗ It catalyzes translesion DNA synthesis
3. ✓ It has 5' to 3' exonuclease activity
4. ✗ It catalyzes error-prone replication



Question Number : 70 Question Id : 26544814227 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Which of the following enzymes is responsible for Mitochondrial DNA replication

Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.

Options :

1. DNA Polymerase  $\alpha$
2. DNA Polymerase  $\beta$
3. DNA Polymerase  $\delta$
4. DNA Polymerase  $\lambda$

Question Number : 71 Question Id : 26544814228 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Which of the statements are correct? Spliceosomes

- i. Are composed of RNA and protein
- ii. Recognize RNA sequences that signal for removal of introns
- iii. Can produce different mRNA molecules by splicing at alternate site
- iv. Mediate splicing at alternate site

Options:

Options :

1. ✘ i and ii
2. ✘ i and iii
3. ✘ iii and iv

4. ✓ i,ii and iii

**Question Number : 72 Question Id : 26544814229 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The Shine-Dalgarno sequence is responsible for

**Options :**

1. ✗ Binding of RNA polymerase to gene during transcription
2. ✗ Binding of DNA polymerase to origin of replication during DNA replication
3. ✓ Binding of ribosomes to mRNA during initiation of translation
4. ✗ Binding of snurps during splicing

**Question Number : 73 Question Id : 26544814230 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

A gene encodes a protein with 150 amino acids. There is one intron of 1000 bp, a 5' Untranslated region of 100 bp and a 3' Untranslated region of 200 bp. What would be the length of final processed mRNA

**Options :**

1. ✗ 1750
2. ✓ 750
3. ✗ 650
4. ✗ 450

Question Number : 74 Question Id : 26544814231 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Which statement is false about genetic control in prokaryotes

Options :

1. ✘ RNA polymerase must bind to a promoter on the DNA to begin RNA synthesis
2. ✔ Most of the gene expressions are regulated at translation level
3. ✘ An active repressor protein inhibits RNA Polymerase from binding to DNA
4. ✘ Repressors control gene transcription by binding to operator sites

Question Number : 75 Question Id : 26544814232 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Which of the following mechanisms is not involved in virus-induced cell transformation?

Statements:

- i. Insertional mutagenesis
- ii. Activation of oncogenes
- iii. Inhibition of tumor suppressor genes
- iv. Direct inhibition of viral replication

Options:

Options :

1. ✘ i and ii
2. ✔ i and iv
3. ✘ ii and iii

4. ✘ iii and iv

**Question Number : 76 Question Id : 26544814233 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which photoreceptor in plants is primarily responsible for regulating flowering time in response to day length?

Statements:

I. Phytochrome A

II. Phytochrome B

Options:

**Options :**

1. ✘ I only

2. ✔ II only

3. ✘ Both I & II

4. ✘ Neither I nor II

**Question Number : 77 Question Id : 26544814234 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Match the COVID-19 vaccines listed in Column I with the correct platform they utilize for delivery of genetic material, listed in Column II.

Column I:

- a. Pfizer-BioNTech (BNT162b2)
- b. Moderna (mRNA-1273)
- c. AstraZeneca (AZD1222)
- d. Johnson & Johnson (Janssen)

Column II:

- i. Utilizes a viral vector platform for delivery of genetic material.
- ii. Utilizes messenger RNA (mRNA) for delivery of genetic material.
- iii. Utilizes an inactivated virus for delivery of genetic material.
- iv. Utilizes a protein subunit for delivery of genetic material

Options:

**Options :**

- 1. ✓ a-i, b-ii, c-iv, d-iii
- 2. ✗ a-iii, b-i, c-ii, d-iv
- 3. ✗ a-iv, b-i, c-iii, d-ii
- 4. ✗ a-ii, b-i, c-iii, d-iv

**Question Number : 78 Question Id : 26544814235 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which sequence of the following techniques in antibody engineering involving the use of transgenic mice engineered to produce human antibodies and subsequently immunized with the target antigen to generate fully human monoclonal antibodies is correct?

- I. Hybridoma technology
- II. Phage display
- III. Combinatorial antibody libraries
- IV. Humanization

Options:

**Options :**

- 1. ✗ II, III, IV and I

2. ✘ I, III, IV and II

3. ✘ III, I, II and IV

4. ✔ IV, I, II and III

**Question Number : 79 Question Id : 26544814236 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following is not a characteristic of G-protein coupled receptors (GPCRs)?

**Options :**

1. ✘ They are involved in transmitting signals from extracellular ligands to intracellular signaling pathways.

2. ✘ They consist of seven transmembrane  $\alpha$ -helices.

3. ✘ They possess an extracellular ligand-binding domain.

4. ✔ They are exclusively found in prokaryotic cells.

**Question Number : 80 Question Id : 26544814237 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

What is the primary function of quorum sensing in bacteria?

**Options :**

1. ✔ Regulation of gene expression in response to environmental changes.

2. ✘ Coordination of population-wide behaviours in response to cell density.

3. ✘ Control of DNA replication during cell division.

4. ✘ Production of antibiotics to inhibit competing bacterial species.

**Question Number : 81 Question Id : 26544814238 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following best describes the function of tumor suppressor genes?

**Options :**

1. ✘ They promote uncontrolled cell growth and division.
2. ✔ They repair damaged DNA to prevent mutations.
3. ✔ They inhibit cell cycle progression and prevent tumor formation.
4. ✘ They induce apoptosis in healthy cells.

**Note: For this question, ambiguity is found in question/answer. Candidate will get full marks for this question if any of the correct options are chosen.**

**Question Number : 82 Question Id : 26544814239 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which structural feature characterizes toll-like receptors (TLRs)?

**Options :**

1. ✘ Seven-transmembrane domains
2. ✔ Extracellular ligand-binding domain
3. ✘ Intracellular kinase domain
4. ✘ Nuclear localization signal

Question Number : 83 Question Id : 26544814240 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

In *Drosophila* development, several molecules act as morphogens, forming concentration gradients that specify cell fates in various developmental processes. Match the morphogens in Column 1 with their primary developmental roles in Column 2:

**Column 1: Morphogens**

- a. Wingless (Wg)
- b. Hedgehog (Hh)
- c. Decapentaplegic (Dpp)
- d. Bicoid (Bcd)

**Column 2; Development role**

- i. Anterior-posterior axis formation
- ii. Dorsal-ventral patterning
- iii. Segment polarity (via Wnt pathway)
- iv. Segment polarity(via Hedgehog signaling)

Options:

Options :

- 1. ✓ a - iii, b - iv, c - ii, d - i
- 2. ✗ a - iv, b - i, c - iii, d - ii
- 3. ✗ a - ii, b - iii, c - iv, d - i
- 4. ✗ a - iii, b - i, c - ii, d - iv

Question Number : 84 Question Id : 26544814241 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0



In the context of programmed cell death (apoptosis), protein family contains members that promote cell survival by inhibiting apoptosis through binding and sequestering pro-apoptotic proteins. Arrange the following protein families involved in programmed cell death (apoptosis) in the correct sequence based on their roles:

- I. Bcl-2 family
- II. Caspase family
- III. p53 family
- IV. Tumor necrosis factor (TNF) family

**Options:**

**Options :**

1. ✓ IV, III, II, I
2. ✗ I, II, III, IV
3. ✗ II, IV, III, I
4. ✗ I, IV, II, III

**Question Number : 85 Question Id : 26544814242 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Which of the following signaling pathways plays a central role in regulating vulva development in *C. elegans* by coordinating cell fate specification and cell proliferation?

**Options :**

1. ✗ Wnt/ $\beta$ -catenin signaling pathway
2. ✓ Notch signaling pathway
3. ✗ Hedgehog signaling pathway
4. ✗ Transforming growth factor-beta (TGF- $\beta$ ) signaling pathway

**Question Number : 86 Question Id : 26544814243 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

During limb development in vertebrates, which signaling pathway plays a crucial role in establishing the proximal-distal axis of the limb?

**Options :**

1. ✘ Wnt/ $\beta$ -catenin signaling pathway
2. ✘ Sonic hedgehog (Shh) signaling pathway
3. ✔ Fibroblast growth factor (FGF) signaling pathway
4. ✘ Transforming growth factor-beta (TGF- $\beta$ ) signaling pathway

**Question Number : 87 Question Id : 26544814244 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following floral organ identity genes is responsible for specifying the identity of the third whorl (stamens) in the ABC model of flower development in *Arabidopsis thaliana*?

**Options :**

1. ✘ AP1 (APETALA1)
2. ✘ AP2 (APETALA2)
3. ✔ AG (AGAMOUS)
4. ✘ SEP3 (SEPALLATA3)

**Question Number : 88 Question Id : 26544814245 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Embryonic stem cells are derived from which stage of embryonic development?

**Options :**

1. ✓ Blastocyst
2. ✗ Morula
3. ✗ Gastrula
4. ✗ Zygote

**Question Number : 89 Question Id : 26544814246 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

In frog early development, what is the primary organizing center that initiates the formation of the body axis?

**Options :**

1. ✓ Spemann-Mangold organizer
2. ✗ Nieuwkoop center
3. ✗ Hensen's node
4. ✗ Primitive streak

**Question Number : 90 Question Id : 26544814247 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Which cell surface molecule on the sperm is responsible for binding to the zona pellucida of the egg during fertilization?

**Options :**

1. ✘ Integrin
2. ✘ Cadherin
3. ✔ ZP3 receptor
4. ✘ Selectin

**Question Number : 91 Question Id : 26544814248 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

**Assertion:** C<sub>4</sub> and CAM pathways are more efficient than the C<sub>3</sub> pathway in minimizing photorespiration.

**Reason:** C<sub>4</sub> plants spatially separate carbon fixation from the Calvin cycle, while CAM plants temporally separate these processes.

**Options :**

1. ✔ Both the Assertion and Reason are correct, and the Reason is the correct explanation for the Assertion.
2. ✘ Both the Assertion and Reason are correct, but the Reason is not the correct explanation for the Assertion.
3. ✘ The Assertion is correct, but the Reason is incorrect.
4. ✘ Both the Assertion and Reason are incorrect.

**Question Number : 92 Question Id : 26544814249 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Match the following mechanisms of loading and unloading of photoassimilates with their corresponding descriptions

Loading/Unloading	Description
a. Symplastic Loading	i. Energy-dependent processes move sugars from the phloem into sink cells, often against a concentration gradient.
b. Active Unloading	ii. Photoassimilates move through plasmodesmata directly from cell to cell without crossing membranes.
c. Apoplastic Loading	iii. Sugars are released from the phloem into sink tissues without the use of energy, driven by concentration gradients.
d. Passive Unloading	iv. Sucrose is transported across cell membranes into the phloem via membrane transporters, involving the apoplast pathway.

Options

**Options :**

- ✘ a-iii, b-iv, c-i, d-ii
- ✔ a-ii, b-i, c-iv, d-iii
- ✘ a-i, b-ii, c-iii, d-iv
- ✘ a-iv, b-iii, c-ii, d-i

**Question Number : 93 Question Id : 26544814250 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following statements about cryptochromes and phototropins is correct?

**Options :**

- ✘ Cryptochromes are primarily involved in phototropism, while phototropins regulate the circadian rhythm.

Cryptochromes are blue-light photoreceptors found in plants and animals, whereas phototropins are specifically found in plants.

2. ✘

Phototropins are responsible for the opening and closing of stomata in response to blue light, whereas cryptochromes regulate chloroplast movement.

3. ✘

Both cryptochromes and phototropins function as blue-light photoreceptors in plants, but cryptochromes are more involved in photomorphogenesis and phototropins in light-induced gene expression.

4. ✔

**Question Number : 94 Question Id : 26544814251 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Arrange the following steps in the correct order of biosynthesis of terpenes

1. Formation of isopentenyl pyrophosphate (IPP) and dimethylallyl pyrophosphate (DMAPP) via the non-mevalonate pathway (DOXP/MEP pathway) in plastids.
2. Conversion of IPP and DMAPP into various terpenes catalyzed by terpene synthases.
3. Exclusive synthesis of terpenes in the cytoplasm of plant cells through the mevalonate pathway.
4. Synthesis of monoterpenes and sesquiterpenes through distinct biochemical pathways.

Options

**Options :**

1. ✘ 1, 2, 3, 4

2. ✘ 3, 1, 2, 4

3. ✔ 1, 2, 4, 3

4. ✘ 1, 3, 2, 4

**Question Number : 95 Question Id : 26544814252 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Which of the following is a primary form of nitrogen assimilation in plants?

**Options :**

1. ✘ Ammonium uptake from soil
2. ✔ Nitrate reduction to ammonia
3. ✘ Urea hydrolysis
4. ✘ Atmospheric nitrogen fixation

**Question Number : 96 Question Id : 26544814253 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Which of the following is a common chemical defense mechanism used by plants against pathogens?

**Options :**

1. ✘ Activation of guard cells
2. ✘ Production of cell wall-degrading enzymes
3. ✔ Synthesis of phytoalexins
4. ✘ Enhanced water uptake

**Question Number : 97 Question Id : 26544814254 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Which of the following is a common adaptive response of plants to heat stress?

**Options :**

1. ✘ Increased leaf senescence
2. ✘ Closure of stomata
3. ✘ Decreased synthesis of antioxidants
4. ✔ Production of osmoprotectants like proline

**Question Number : 98 Question Id : 26544814255 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Which of the following is a primary electron acceptor in photosystem II (PSII) during the light-dependent reactions of photosynthesis?

**Options :**

1. ✘ Chlorophyll b
2. ✘ P680 reaction centre
3. ✔ Plastoquinone (PQ)
4. ✘ Rubisco

**Question Number : 99 Question Id : 26544814256 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

When a person runs at a velocity of 100 m/s and comes to rest after 30 minutes, then, then which of the following is the correct statement?

**Options :**

1. ✔ The glucose in the body oxidizes into  $\text{CO}_2$  and  $\text{H}_2\text{O}$
2. ✘ The glucose in the body oxidizes into  $\text{CO}_2$



3. ✘ The lactose in the muscles oxidizes into CO<sub>2</sub> and H<sub>2</sub>O
4. ✘ Respiration is inhibited

**Question Number : 100 Question Id : 26544814257 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The maximum volume of air expired from the lungs by a person after taking a maximum deep inspiration is

**Options :**

1. ✘ About 500 ml of air
2. ✘ About 3000 ml of air
3. ✘ About 1000 ml - 1200 ml of air
4. ✔ About 4600 ml – 5000 ml of air

**Question Number : 101 Question Id : 26544814258 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which statement is incorrect with reference to the structure of the mammalian heart?

**Options :**

1. ✘ Interauricular septum has a small oval patch called Fossa Ovalis, which is formed by the closing of a small pore (Foramen ovalis) in the embryo
2. ✘ The right auriculoventricular aperture is guarded by a Tricuspid valve
3. ✘ The left auriculoventricular aperture is guarded by a Mitral valve

4. ✓ The Auriculoventricular valves are connected to the papillary muscles through muscle filaments called the Bundle of His

**Question Number : 102 Question Id : 26544814259 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The phenomenon in which active transport and return of the molecules such as glucose, water, amino acids and Ca, Na, K salts into the blood at the proximal convoluted tubule is known as:

**Options :**

1. ✗ Reabsorption of water and salts
2. ✗ Ultrafiltration into Bowman's capsule
3. ✓ Selective reabsorption
4. ✗ Tubular secretion

**Question Number : 103 Question Id : 26544814260 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

According to the accepted concept of hormone action, if receptor molecules are removed from target organs, then

**Options :**

1. ✗ the target organs will continue to respond to the hormone without any difference
2. ✗ the target organs will continue to respond to the hormone but will require higher concentration
3. ✗

the target organs will continue to respond to the hormone but in the opposite way

4. ✓ the target organs will not respond to the hormone

**Question Number : 104 Question Id : 26544814261 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Which one of the following statements regarding test tube baby is correct?

**Options :**

1. ✓ Fertilization of the egg is effected outside the body and the fertilized egg is then placed in the mother's uterus where gestation is completed
2. ✗ Fertilization of the egg and growth of the embryo are effected in a large test tube
3. ✗ A premature baby is reared in an incubator
4. ✗ Fertilization of the egg is effected in the female genital tract. The fertilized egg is then taken out and cultured in a large test tube

**Question Number : 105 Question Id : 26544814262 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Myopia is an eye defect in which

**Options :**

1. ✗ the diameter of the eye ball is normal, but the image is formed at the blind spot
2. ✓ the diameter of the eye ball is longer than usual, causing the image to be formed slightly in front of the retina

3. ✘ the diameter of eye ball is normal, but the image is formed slightly behind the retina due to a faulty lens

4. ✘ the irregular curvature of the cornea causes only some portions of objects to be seen properly

**Question Number : 106 Question Id : 26544814263 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

In a specific plant species, two genes, P and Q, interact to determine flower color. The dominant allele of gene P (P) produces a yellow pigment, while the recessive allele (p) produces no pigment. The dominant allele of gene Q (Q) can convert the yellow pigment produced by gene P into an orange pigment. The recessive allele (q) does not affect the pigment.

A plant with genotype PPQQ has orange flowers, and a plant with genotype ppqq has white flowers. If two heterozygous plants (PpQq) are crossed, what is the expected phenotypic ratio of the offspring?

**Assertion (A):** When two heterozygous plants (PpQq) are crossed, the expected phenotypic ratio of the offspring is 9 orange: 3 yellow: 4 white.

**Reason (R):** The interaction between the P and Q genes results in the dominant Q allele converting the yellow pigment produced by the dominant P allele into an orange pigment, while the recessive p allele produces no pigment.

**Options :**

1. ✔ Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.

2. ✘ Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.

3. ✘ Assertion is true, but Reason is false.

4. ✘

Assertion is false, but Reason is true.

**Question Number : 107 Question Id : 26544814264 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

In a tetrad analysis of *Neurospora crassa*, two linked genes A and B are studied.

The following tetrad types were observed:

Parental ditype (PD): 80

Non-parental ditype (NPD): 10

Tetratype (TT): 30

Given these observations, what is the approximate map distance between genes A and B?

**Options :**

1. ✘ 10 map units
2. ✘ 20 map units
3. ✔ 30 map units
4. ✘ 40 map units

**Question Number : 108 Question Id : 26544814265 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

In an interrupted mating experiment with *E. coli*, the Hfr strain (*his<sup>+</sup> leu<sup>+</sup> thr<sup>+</sup> lac<sup>+</sup> gal<sup>+</sup>*) is mated with an F- strain (*his<sup>-</sup> leu<sup>-</sup> thr<sup>-</sup> lac<sup>-</sup> gal<sup>-</sup>*). Mating is interrupted at various times, and the following results are obtained based on the appearance of the donor alleles in the recipient cells:

- 5 minutes: *leu<sup>+</sup>*
- 10 minutes: *thr<sup>+</sup>*
- 15 minutes: *lac<sup>+</sup>*
- 20 minutes: *gal<sup>+</sup>*
- 25 minutes: *his<sup>+</sup>*

Based on these results, what is the correct order of gene transfer from the Hfr donor to the F- recipient?

**Options :**

1. ✓ leu, thr, lac, gal, his
2. ✘ thr, leu, lac, gal, his
3. ✘ leu, thr, gal, lac, his
4. ✘ his, leu, thr, gal, lac

**Question Number : 109 Question Id : 26544814266 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

In a genetic study aimed at determining the linkage between a genetic marker and a disease locus, the following LOD scores were calculated at different recombination fractions ( $\theta$ ):

$$\theta = 0.0, \text{ LOD} = -2.1$$

$$\theta = 0.1, \text{ LOD} = 1.5$$

$$\theta = 0.2, \text{ LOD} = 2.7$$

$$\theta = 0.3, \text{ LOD} = 1.2$$

$$\theta = 0.4, \text{ LOD} = -0.5$$

Based on these LOD scores, what is the most likely recombination fraction between the genetic marker and the disease locus, and does this indicate significant linkage?

**Options :**

1. ✘  $\theta = 0.1$ , significant linkage
2. ✓  $\theta = 0.2$ , significant linkage
3. ✘  $\theta = 0.2$ , no significant linkage
4. ✘  $\theta = 0.4$ , no significant linkage

**Question Number : 110 Question Id : 26544814267 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Which type of chromosomal translocation involves the exchange of genetic material between non-homologous chromosomes without any net gain or loss of genetic material?

**Options :**

1. ✘ Robertsonian translocation
2. ✔ Reciprocal translocation
3. ✘ Inversion
4. ✘ Deletion

**Question Number : 111 Question Id : 26544814268 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

In a study of non-homologous recombination in human cells, researchers observed that double-strand breaks (DSBs) were repaired by joining DNA ends with little to no sequence homology. This process often resulted in small insertions or deletions at the junction sites. Which pathway is primarily responsible for this type of DNA repair?

**Options :**

1. ✘ Homologous recombination (HR)
2. ✔ Non-homologous end joining (NHEJ)
3. ✘ Mismatch repair (MMR)
4. ✘ Base excision repair (BER)

**Question Number : 112 Question Id : 26544814269 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

In a cross between a variegated-leaf plant (female) and a green-leaf plant (male), what will be the expected phenotype of the offspring with regard to leaf colour?

**Options :**

1. ✓ All offspring will have variegated leaves.
2. ✗ All offspring will have green leaves.
3. ✗ Offspring will exhibit a 3:1 ratio of variegated to green leaves.
4. ✗ Offspring leaf colour cannot be predicted due to random segregation of chloroplasts.

**Question Number : 113 Question Id : 26544814270 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

In a study of height in a particular human population, the heritability ( $h^2$ ) of height was found to be 0.8. Which of the following statements is most accurate?

**Options :**

1. ✗ 80% of an individual's height is determined by their genes.
2. ✓ 80% of the variation in height in this population is due to genetic differences.
3. ✗ 20% of an individual's height is determined by environmental factors.
4. ✗ 20% of the variation in height in this population is due to environmental differences.

**Question Number : 114 Question Id : 26544814271 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**



Which of the following statements accurately describes Kingdom Archeabacteria?

**Options :**

1. ✘ They are multicellular organisms with eukaryotic cells.
2. ✘ Their cells have a well-defined nucleus.
3. ✘ They possess peptidoglycan in their cell wall.
4. ✔ They are unicellular organisms with prokaryotic cells.

**Question Number : 115 Question Id : 26544814272 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following statements is NOT accurate based on the definitions of tissues, organs, and organ systems?

**Options :**

1. ✘ Tissues are made up of cells that have a similar function, origin, and specific function.
2. ✔ Each organ in a plant or animal body is composed of a single type of tissue to perform its specific function.
3. ✘ Organ systems are collections of organs that work together to perform one or more functions in the body.
4. ✘ The respiratory system is a network of organs, tissues, and structures that deliver oxygen to cells and remove carbon dioxide.

**Question Number : 116 Question Id : 26544814273 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following statements about a phylogeny, or evolutionary tree, is correct?

**Options :**

1. ✘ The tips of the tree represent the common ancestors of the taxa.
2. ✘ The nodes on the tree represent groups of descendant taxa (often species).
3. ✔ A phylogeny represents the evolutionary relationships among a set of organisms or groups of organisms, called taxa.
4. ✘ Phylogenies do not provide information about the common ancestors of different taxa.

**Question Number : 117 Question Id : 26544814274 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following correctly identifies the major habitat types found in the subcontinent of India?

**Options :**

1. ✘ Tropical rainforests, deserts, tundras, and coral reefs.
2. ✘ Temperate forests, grasslands, polar ice caps, and mangroves.
3. ✘ Alpine tundras, temperate grasslands, boreal forests, and chaparral.
4. ✔ Tropical rainforests, deciduous forests, deserts, and mangroves.

**Question Number : 118 Question Id : 26544814275 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following statements about Myristica swamps is correct?

**Options :**

1. ✘ Myristica swamps are unique to the Western Ghats of India and are not found anywhere else in the world.
2. ✘ Myristica swamps are characterized by the dominance of coniferous trees and are found primarily in temperate regions.
3. ✔ Myristica swamps are rare and significant, found primarily in the Western Ghats of India, but similar swamps can also be found in parts of Southeast Asia.
4. ✘ Myristica swamps are widespread across the Indian subcontinent, particularly in arid and semi-arid regions.

**Question Number : 119 Question Id : 26544814276 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Correct Marks : 2 Wrong Marks : 0**

Which of the following statements about intestinal parasites is incorrect?

**Options :**

1. ✘ Roundworms can grow up to 20 cm long and spread from infected soil or feces.
2. ✔ Pinworms are a type of flatworm that lives in the intestines and spreads by laying eggs in their host's body.
3. ✘ Hookworms are intestinal parasites that attach to the host's intestinal walls and can cause anemia.
4. ✘ Tapeworms are flat worms that live in the intestines and spread by laying eggs in their host's body.

Question Number : 120 Question Id : 26544814277 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Which of the following is NOT considered a major driver of biodiversity change?

Options :

1. ✘ Habitat destruction and fragmentation
2. ✘ Climate change and global warming
3. ✘ Introduction of invasive species
4. ✔ Increased genetic diversity within species

Question Number : 121 Question Id : 26544814278 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Character displacement occurs primarily to:

Options :

1. ✘ Increase genetic drift within a population.
2. ✘ Enhance the reproductive success of individuals.
3. ✔ Minimize niche overlap and avoid competitive exclusion.
4. ✘ Promote interspecies hybridization.

Question Number : 122 Question Id : 26544814279 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

In classical metapopulation theory, what maintains the stability of the metapopulation as a whole?

**Options :**

1. ✘ Independent cycling of each local population.
2. ✔ A balance between local extinction and recolonization rates.
3. ✘ The constant rate of individual reproduction.
4. ✘ The absence of demographic stochasticity.

**Question Number : 123 Question Id : 26544814280 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following scenarios best exemplifies interspecific competition, and why does it not represent intraspecific competition?

**Options :**

1. ✘ Two male lions in a pride compete for dominance and mating rights within the same group.
2. ✔ Different species of trees in a dense forest compete for sunlight by growing taller or spreading their leaves more widely.
3. ✘ A flock of sparrows competes for food resources within the same habitat.
4. ✘ Several individuals of the same deer species compete for access to water in a drought-stricken region.

**Question Number : 124 Question Id : 26544814281 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following statements best explains why Ecotones are critical for both biodiversity and ecosystem health?

### Options :

1. ✓ 

Ecotones act as a buffer zone that can protect nearby ecosystems by trapping pollutants and preventing their spread.
2. ✘ 

Ecotones are areas where competition between species is minimized, allowing for higher population densities of a single species.
3. ✘ 

Ecotones provide consistent climate conditions, which can help species adapt to changing environments without needing to migrate.
4. ✘ 

Ecotones are strictly marine environments where terrestrial and marine species rarely interact.

**Question Number : 125 Question Id : 26544814282 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following scenarios most accurately distinguishes between primary and secondary succession

### Options :

1. ✘ 

A forest regenerating after a fire represents primary succession because it involves the establishment of a new community on previously uncolonized land.
2. ✘ 

The formation of a new island from volcanic activity represents secondary succession because it involves the recolonization of a disturbed habitat.
3. ✓ 

A newly exposed glacial landscape developing a community of plants represents primary succession because it starts with bare substrate and no prior biological influence.
4. ✘ 

An abandoned agricultural field developing into a forest represents primary succession because it involves the growth of new species in an altered habitat.

**Question Number : 126 Question Id : 26544814283 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following statements best explains the interconnected impact of climate change on biodiversity loss, and why is it crucial to understand this relationship for policy-making?

**Options :**

1. ✘ Climate change and biodiversity loss are independent issues; addressing one will not significantly affect the other.
2. ✔ Human activities, such as burning fossil fuels and altering land cover, contribute to climate change, which in turn exacerbates biodiversity loss by altering habitats and ecosystems.
3. ✘ The primary threat to biodiversity is water degradation; thus, climate change policies should focus solely on water conservation to mitigate biodiversity loss.
4. ✘ Stratospheric ozone depletion has no significant link to biodiversity loss, so policies should prioritize ozone protection separately from climate and biodiversity concerns.

**Question Number : 127 Question Id : 26544814284 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following is a correct sequence?

**Options :**

1. ✔ Archaeozoic - Proterozoic - Palaeozoic – Mesozoic - Coenozoic
2. ✘ Mesozoic – Archaeozoic – Proterozoic – Palaeozoic - Coenozoic
3. ✘ Palaeozoic – Archaeozoic – Coenozoic – Mesozoic - Proterozoic

Archaeozoic – Palaeozoic – Proterozoic – Mesozoic - Coenozoic

4. ✘

**Question Number : 128 Question Id : 26544814285 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Given;

I - Natural selection

II - Variation and their inheritance

III - Survival of the fittest

IV - Struggle for the existence

According to Darwinism, which sequence correctly depicts the process leading to the origin of new species?

**Options :**

1. ✘ III, IV, I, II

2. ✘ I, II, III, IV

3. ✔ IV, II, III, I

4. ✘ II, III, I, IV

**Question Number : 129 Question Id : 26544814286 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following pairs represent analogous organs

**Options :**

1. ✘ Wings of insects and feathers of birds

2. ✘ Forelimbs of horse and hands of human beings

3. ✘ Fins of fish and Oars of penguins



4. ✓ Wings of bats and feather of birds

**Question Number : 130 Question Id : 26544814287 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

“Being all Mammals, Whale, Dolphin, Bat, Monkey and Horse have some important common characteristics, but they also exhibit conspicuous differences.”  
This is due to the phenomenon of

**Options :**

1. ✗ Normalization
2. ✗ Mutations leading to genetic drift
3. ✓ Divergent evolution
4. ✗ Convergent evolution

**Question Number : 131 Question Id : 26544814288 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The present giraffe have a longer neck compared to its ancestors because of

**Options :**

1. ✓ Speciation
2. ✗ Natural Selection
3. ✗ Isolation
4. ✗ Inheritance of acquired characters

**Question Number : 132 Question Id : 26544814289 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The correct sequence of stages in the evolution of modern man, *Homo sapiens* is

**Options :**

1. ✘ Neanderthal man, Australopithecus man, Cro-Magnon man, Modern man
2. ✔ Australopithecus man, Homo erectus, Neanderthal man, Cro-Magnon man, Modern man
3. ✘ Homo erectus, Australopithecus man, Neanderthal man, Cro-Magnon man, Modern man
4. ✘ Australopithecus man, Neanderthal man, Cro-Magnon man, Homo erectus, Modern man

**Question Number : 133 Question Id : 26544814290 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

In a maze, a rat finds food repeatedly in the same location. Subsequently, when more rats are introduced into the maze with the first, the first rat goes straight to the food without exploring the maze, and the other rats follow. Soon all of the rats know where the food is without exploring the maze itself. What kind of learning does this demonstrate?

**Options :**

1. ✘ Latent learning
2. ✘ Innate behavior
3. ✘ Non – associative learning
4. ✔ Imprinting

**Question Number : 134 Question Id : 26544814291 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

In a lizard population of 100 individuals, 20 are heterozygous (Aa) for a particular gene. Due to a catastrophic event, the population undergoes a bottleneck, reducing its size to only 10 individuals. What is the probability that the allele frequency of the A allele changes in the new population?

**Options :**

1. ✓ 0.2
2. ✗ 0.5
3. ✗ 0.8
4. ✗ 1.0

**Question Number : 135 Question Id : 26544814292 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Pathogen-free plant can be obtained through

**Options :**

1. ✓ Bud or shoot tip propagation on culture medium
2. ✗ Embryo culture
3. ✗ Grafting
4. ✗ Cell suspension culture

**Question Number : 136 Question Id : 26544814293 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

The below given table shows few examples of industrial products made by bacteria :

List of products	Bacteria
a. Polymixin B	i. <i>Leuconostoc</i>
b. Dextran	ii. <i>Corynebacterium</i>
c. Glutamic acid	iii. <i>Bacillus polymyxa</i>
d. Cobalamin	iv. <i>Propioni bacterium</i>

The correct matching is

**Options :**

1. ✘ a-i, b-ii, c-iii, d-iv
2. ✔ a-iii, b-i, c-ii, d-iv
3. ✘ a-ii, b-iv, c-ii, d-iii
4. ✘ a-iii, b-iv, c-i, d-iv

**Question Number : 137 Question Id : 26544814294 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which among the following options best represents the sequence of events leading to the phenomenon of introgression?

**Options :**

1. ✘ Stabilization, repeated hybridization
2. ✔ Hybridization, back crossing and stabilization
3. ✘ Hybridization, stabilization, back crossing, mutation
4. ✘ Only back crossing and hybridization

**Question Number : 138 Question Id : 26544814295 Question Type : MCQ Option Shuffling : No**

**Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

**Assertion (A)** : Starch is not the part of growth medium for animal cell culture

**Reason (R)** : A normal cell need no external factors for its survival, it is anchorage independent and can give infinite number of cell lines.

**Options :**

1. ✘ Assertion is false and Reason is true

2. ✘ Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.

3. ✔ Assertion is true, but Reason is false.

4. ✘ Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

**Question Number : 139 Question Id : 26544814296 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Identify the sequence of events in construction of biosensor

- Cross-linking
- Entrapment of enzyme
- Response
- Enzyme reaction

Options:

**Options :**

1. ✘ d, b, a, c

2. ✘ a, b, c, d

3. ✔ b, a, d, c

4. ✘ c, a, d, b

Question Number : 140 Question Id : 26544814297 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Given below are some terms and concepts related to phytoremediation in column A and B

Column A	Column B
a. Excluders	i. Can absorb and transfer heavy metals to aerial parts without phytotoxicity symptoms
b. Heavy metal protein transporter	ii. <i>Salix</i> Sp. And <i>Populus</i> Sp.
c. Hyperaccumulators	iii. Transgenesis
d. High biomass non-accumulators	iv. Can restrict heavy metal ions to the roots and detoxify them

Options :

- ✘ a-i, b-iv, c-ii, d-iii
- ✔ a-iv, b-iii, c-i, d-ii
- ✘ a-iii, b-iv, c-ii, d-i
- ✘ a-ii, b-iii, c-iv, d-i

Question Number : 141 Question Id : 26544814298 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Identify the incorrect statement

Options :

- ✘ 2,4-dichlorophenoxyacetic acid is the most commonly used chemical analog of indole-3-acetic acid
- ✘ In somatic embryogenesis, embryo initiation needs a high concentration of 2,4-D

3. ✘ Crown-gall disease depends on the presence of Ti-plasmid in *Agrobacterium tumefaciens*

4. ✔ *Agrobacterium tumefaciens* is responsible for hairy root formation in plants.

Question Number : 142 Question Id : 26544814299 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Match Group - I with Group – II

- | Group - I                  | Group - II           |
|----------------------------|----------------------|
| a. Insect resistant cotton | i. Bt gene           |
| b. Golden Rice             | ii. PG encoding gene |
| c. Flavr-Savr tomato       | iii. Beta carotene   |
| d. Herbicide tolerance     | iv. Glyphosate       |

Options :

1. ✘ a-iii, b-i, c-ii, d-iv

2. ✔ a-i, b-iii, c-ii, d-iv

3. ✘ a-i, b-iv, c-iv, d-ii

4. ✘ a-iv, b-ii, d-iii, c-i

Question Number : 143 Question Id : 26544814300 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

As cancer progress, several genome rearrangements including translocation, deletion, duplications etc. occur. If these rearrangements are to be identified, which of the following techniques would be most suitable?

Options :

1. ✘ Flow cytometry

2. ✘ RAPD

3. ✔ Multi-color-FISH

4. ✘ Microarray

**Question Number : 144 Question Id : 26544814301 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Resolving power of a microscope is a function of

**Options :**

1. ✘ Wavelength of light used

2. ✘ Numerical aperture of lens system

3. ✘ Refractive index

4. ✔ Wavelength of light used and numerical aperture of lens system

**Question Number : 145 Question Id : 26544814302 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Which among is the cell line of human embryogenic lung?

**Options :**

1. ✘ HEK-293T

2. ✔ MRC-5

3. ✘ HeLa



4. ✘ WISH -CCL-25

Question Number : 146 Question Id : 26544814303 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Assertion (A) : PAGE is used to separate protein fragments based on size

Reason (R) : When current is applied ions separate out and migrate towards the attractive electrodes

Options :

- Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion
1. ✔
2. ✘ Assertion is false and Reason is true
3. ✘ Assertion is true, but Reason is false
- Both Assertion and Reason are true and Reason is the correct explanation of Assertion.
4. ✘

Question Number : 147 Question Id : 26544814304 Question Type : MCQ Option Shuffling : No  
Display Question Number : Yes

Correct Marks : 2 Wrong Marks : 0

Match List-I with List-II

List I (Test type)	List II (concept)
a. Kruskal-Wallis test	i Parametric test to compare means of more than two population groups
b. Z-test	ii Non- parametric test to compare means of more than two population groups
c. ANOVA test	iii Non-parametric test to test the goodness of fit.
d. Chi-square test	iv Testing the difference between means of two sample groups

Choose the correct answer form the options given below:

Options :

1. ✓ a-ii, b-iv, c-i, d-iii

2. ✗ a-ii, b-iii, c-iv, d-i

3. ✗ a-iii, b-i, c-ii, d-iv

4. ✗ a-i, b-ii, c-iii, d-iv

**Question Number : 148 Question Id : 26544814305 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Amplified fragment length polymorphism (AFLP)

P. Is a PCR- based tool

Q. Uses restriction enzymes to cut genomic DNA

R. Involves ligation of adaptors to the sticky ends of the restriction fragments

S. Involves amplification using primers complementary to the adaptor.

**Options :**

1. ✗ P and Q

2. ✗ R and S

3. ✗ P, Q and S

4. ✓ P, Q, R and S

**Question Number : 149 Question Id : 26544814306 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

Culture freshly prepared form isolated tissue is known as

**Options :**

1. ✗ Organ culture

2. ✓ Primary culture
3. ✗ Cell line
4. ✗ Histotypic culture

**Question Number : 150 Question Id : 26544814307 Question Type : MCQ Option Shuffling : No Display Question Number : Yes**

**Correct Marks : 2 Wrong Marks : 0**

X-ray crystallography is

P. Based on the elastic scattering of X-rays

Q. Non-destructive analytical techniques

R. Used in determining the arrangement of atoms within a crystal

S. Based on Bragg's Law

Options:

**Options :**

1. ✗ P and Q
2. ✗ R and S
3. ✗ P,Q and S
4. ✓ P,Q, R and S.