

Andhra Pradesh State Council of 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 :	Applied Life Sciences 18th Oct 2022 Shift 1
Duration :	120
Total Marks :	140
Display Marks:	No
Share Answer Key With Delivery Engine :	Yes
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
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Research Methodology

Section Id :	549470339
Section Number :	1
Mandatory or Optional :	Mandatory
Number of Questions :	59
Section Marks :	70
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Is Section Default? :	null

Question Number : 1 Question Id : 54947024100 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A teacher can motivate the students by _____.

Options :

1. Giving suitable prizes
2. Giving proper guidance
3. Giving examples
4. Delivering speech in the class

Question Number : 2 Question Id : 54947024101 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The aim of education should be _____.

Options :

1. ✘ To develop vocational skills in the students
2. ✘ To develop social awareness in the students
3. ✘ To Prepare the students for examinations
4. ✔ To prepare the students for practical life

Question Number : 3 Question Id : 54947024102 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The quality of school education is exclusively depending upon _____.

Options :

1. ✘ Infrastructural facilities

2. ✘ Finance

3. ✘ Internal support

4. ✔ The quality of teacher education

Question Number : 4 Question Id : 54947024103 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following, which one is not predominant in modern teaching method?

Options :

1. ✘ Activity based teaching

2. ✘ Learner- centered method

3. ✔ Teacher – centric

Smart board

4. ✖

Question Number : 5 Question Id : 54947024104 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following aspects, which is not figured in Choice Based Credit System?

Options :

Students to pursue courses of their choice

1. ✖

Students confine their basic course

2. ✔

Students learn extra courses

3. ✖

Students acquire more than the required credits

4. ✖

Question Number : 6 Question Id : 54947024105 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The major disadvantage in computer based testing is _____.

Options :

1. ✘ Efficiency
2. ✘ Automatic scoring with instant feedback
3. ✘ Less human error
4. ✔ Factual knowledge

Question Number : 7 Question Id : 54947024106 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The most important trait of a student is _____.

Options :

1. ✘ Sense of responsibility
2. ✔ Obedience

To speak truth

3. ✖

Co-operation

4. ✖

Question Number : 8 Question Id : 54947024107 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following, which one is not considered as characteristic of research?

Options :

Testing Hypothesis

1. ✖

Systematic work

2. ✖

Establishing cause and effect relationship

3. ✖

It is not a process

4. ✔

Question Number : 9 Question Id : 54947024108 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ type of research that test the validity of already made hypothesis.

Options :

1. ✘ Descriptive
2. ✔ Confirmatory
3. ✘ Explanatory
4. ✘ Exploratory

Question Number : 10 Question Id : 54947024109 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the post- positivist approach of research, the following types of research got emphasized except _____ research.

Options :

1. ✘ Phenomenological

2. ✘ Ethnographic

3. ✘ Action

4. ✔ Experimental

Question Number : 11 Question Id : 54947024110 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The research outcomes of which type of research cannot be generalized to other situations?

Options :

1. ✔ Descriptive

2. ✘ Historical

3. ✘ Experimental

4. ✘ Fundamental

Question Number : 12 Question Id : 54947024111 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which salient feature is not figured in the qualitative research?

Options :

Naturalist approach

1. ✘

Objective measurements

2. ✔

It deals with human behavior

3. ✘

Non-numeric data

4. ✘

Question Number : 13 Question Id : 54947024112 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which one is not covered in the quantitative research approaches?

Options :

Simulation

1. ✘

Inferential

2. ✘

Experimental

3. ✘

Naturalist

4. ✔

**Question Number : 14 Question Id : 54947024113 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The fundamentals of integrity, credibility and transparency are important in _____.

Options :

Business

1. ✘

Entertainment

2. ✘

Research Ethics

3. ✔

Diplomacy

4. ✖

Is Section Default? :

null

Question Id : 54947024114 Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (15 to 21)

Read the following passage carefully and answer the questions from 15 to 21:

Many people believe that science and religion are contrary to each other. But his notation is wrong. As a matter of fact, both are correlated to each other. There is no doubt that the method of science and religion are different.

The method of science is observation, experimentation and experience. Science takes it recourse to progressive march towards perfection. The rules of religion are faith, intuition and spoken word of the enlightened. In general, while science is inclined towards reason and rationality, spiritualism is the essence of religion.

In earlier times when man appeared on Earth, he was over-awed at the sight of violent and powerful aspects of nature. In certain cases, the usefulness of different natural objects of nature overwhelmed man. Thus began the worship of forces of nature — fire, the sun, the rivers, the rocks, the trees, the snakes etc. The holy scriptures were written by those who had developed harmony between external nature and their inner self. Their objective was to ennoble, elevate and liberate the human spirit and mind. But the priestly class took upon itself the monopoly of scriptural knowledge and interpretation to its own advantage.

Thus, the entire human race was in chains. Truth was flouted and progressive, liberal and truthful ideas or ideas expressing doubt and scepticism were suppressed and their holders punished. It was in these trying circumstances the science emerged as a savior of mankind. But its path was not smooth and safe. The scientists and free thinkers were tortured. This was the fate of Copernicus, Galileo, Bruno and others. But side by side science gained ground.

Sub questions

Question Number : 15 Question Id : 54947024115 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the reasons for man to worship the forces of nature?

Options :

The holy scriptures advocate the worship of forces of nature

1. ✘

The worship elevates and liberates the human spirit and mind

2. ✔

The worship makes man believe in faith and intuition

3. ✘

Forces of nature teach us spiritualism

4. ✘

Question Number : 16 Question Id : 54947024116 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

According to the passage both science and religion :

Options :

Emerged out of the fear of man

1. ✘

Emerged from the desire of man to worship the forces of nature

2. ✘

Employee different methods of enquiry

3. ✔

Work at the cross-purpose of each other

4. ✘

**Question Number : 17 Question Id : 54947024117 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

What was the objective of the authors of the holy scriptures?

Options :

To teach man the methods of worshipping nature

1. ✘

To educate and raise the human spirit and mind

2. ✘

Work at the cross-purpose of each other

3. ✘

To develop harmony between external nature and their inner self

4. ✓

Question Number : 18 Question Id : 54947024118 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

According to the passage, at present juncture there is a need to:

Options :

Free man from all sorts of bondages

1. ✘

Judiciously mix the principles of science and true spirit of religion

2. ✓

Teach people to workshop the forces of nature

3. ✘

Encourage spiritualism as much as possible

4. ✘

Question Number : 19 Question Id : 54947024119 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Why it is said in the passage that, “science emerged as a saviour of mankind”?

Options :

Science takes recourse to progressive march towards perfection

1. ✖

Science is inclined towards reason and rationality

2. ✖

Man was bound in chains by religious orthodoxy

3. ✔

The free thinkers and enlightened men were tortured

4. ✖

**Question Number : 20 Question Id : 54947024120 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Truth was :

Options :

Flouted

1. ✖

Progressive

2. ✖

Both flouted and progressive

3. ✓

Intuition

4. ✘

Question Number : 21 Question Id : 54947024121 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Find the synonym of the word 'belief' used in paragraph 2.

Options :

Observation

1. ✘

Experience

2. ✘

Enlightened

3. ✘

Faith

4. ✓

Is Section Default? : null

Question Number : 22 Question Id : 54947024122 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The major components of communication except _____.

Options :

The actual message being sent

1. ✘

With confused ideas

2. ✔

The encoding of the message

3. ✘

The decoding of the message

4. ✘

Question Number : 23 Question Id : 54947024123 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Interpersonal communication of exchange of ideas between two or more persons in the form of the following except _____.

Options :

Voice

1. ✘

2. ✘ Facial expression

3. ✘ Body language and gestures

4. ✔ Self-talk

Question Number : 24 Question Id : 54947024124 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Written communication refers to _____.

Options :

1. ✔ Verbal

2. ✘ Non- verbal

3. ✘ Wordless

4. ✘ Unstructured

Question Number : 25 Question Id : 54947024125 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The interaction analysis with observing classroom language in order to find out _____.

Options :

The text book effectiveness

1. ✘

Learning and teaching

2. ✔

Students behavior

3. ✘

How the language works

4. ✘

Question Number : 26 Question Id : 54947024126 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What type of problem is arising from expression?

Options :

1. ✘ Perception
2. ✘ Cultural
3. ✔ Semantic
4. ✘ Wrong presumption

Question Number : 27 Question Id : 54947024127 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The communication word derived from _____.

Options :

1. ✘ French
2. ✔ Latin
3. ✘ German

Greek

4. ✘

Question Number : 28 Question Id : 54947024128 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following, which is not considered as mass media?

Options :

Socialization

1. ✘

Education

2. ✘

Entertainment

3. ✘

Interpretation

4. ✔

Question Number : 29 Question Id : 54947024129 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The following aspects are covered in the analytical reasoning except _____.

Options :

Blood relations

1. ✘

Statements and assumptions

2. ✔

Conditions and grouping

3. ✘

Ranking and time sequence test

4. ✘

**Question Number : 30 Question Id : 54947024130 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Find out the wrong term in the following number series: 3,7, 15, 30,63.

Options :

30

1. ✔

63

2. ✘

15

3. ✘

3

4. ✖

Question Number : 31 Question Id : 54947024131 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What comes next in the following series: 3W, 7V, 11U, 15T.

Options :

19Z

1. ✖

20P

2. ✖

22Q

3. ✖

19S

4. ✔

Question Number : 32 Question Id : 54947024132 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following, which one is the greatest one?

Options :

1. ✘ $3/12$

2. ✘ $6/12$

3. ✔ $9/12$

4. ✘ $8/12$

Question Number : 33 Question Id : 54947024133 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The ratio of market prices of Wheat and Paddy is 2:3 and the ratio of quantities consumed in a family is 5 : 4. Find out the ratio of expenditure of wheat and paddy

Options :

1. ✘ 8: 15

2. ✘ 6:5

3. ✘ 1:1

4. ✓ 5: 6

Question Number : 34 Question Id : 54947024134 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Suppose the average of fifty numbers is 28. If two numbers , namely 25 and 35 are discarded, the average of the remaining numbers is nearly _____.

Options :

1. ✘ 27.29

2. ✓ 27.92

3. ✘ 29.27

4. ✘ 29.72

Question Number : 35 Question Id : 54947024135 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Calculate the simple interest on Rs. 5200 for 2 years at 6% per annum Rs._____.

Options :

1. ✓ 624
2. ✘ 600
3. ✘ 650
4. ✘ 450

Question Number : 36 Question Id : 54947024136 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the nature of the logical argument?

Options :

1. ✘ True or false
2. ✓ Valid or invalid
3. ✘ Verifiable or unverifiable

Justified or unjustified

4. ✘

Question Number : 37 Question Id : 54947024137 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The origin of 'Fallacy' comes from the _____.

Options :

Latin

1. ✔

Greek

2. ✘

German

3. ✘

Sweden

4. ✘

Question Number : 38 Question Id : 54947024138 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the essence of 'Stipulative' definition ?

Options :

Always true

1. ✘

Sometimes false and sometimes true

2. ✘

Always false

3. ✘

Neither true nor false

4. ✔

Question Number : 39 Question Id : 54947024139 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The deduction logic is to be carried on from _____ aspect.

Options :

Universal to particular

1. ✔

Particular to universal

2. ✘

Particular to particular

3. ✖

Universal to universal

4. ✖

Question Number : 40 Question Id : 54947024140 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

_____ reasoning can be regarded as an instrument that enables mankind to grasp 'unknown' with the help of 'known'.

Options :

Demonstrative

1. ✖

Inductive

2. ✔

Speculative

3. ✖

Deductive

4. ✖

Question Number : 41 Question Id : 54947024141 Display Question Number : Yes Is Question Mandatory : No Calculator : None

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

‘Pratyaksha’ means _____.

Options :

Inference

1. ✘

Implication

2. ✘

Perception

3. ✔

Transcendental

4. ✘

Question Number : 42 Question Id : 54947024142 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

‘Vyapati’ refers to _____.

Options :

Fallacies

1. ✘

Inference

2. ✘

Implication

3. ✘

Invariable relation

4. ✔

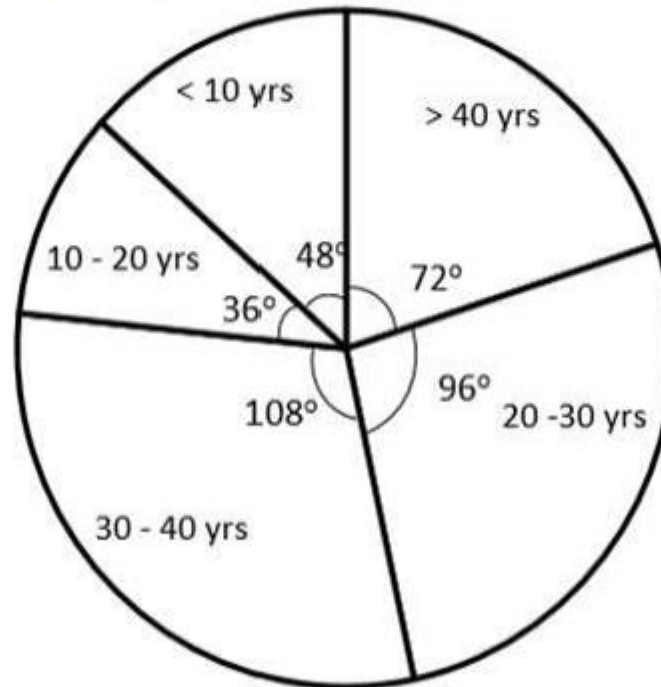
Is Section Default? :

null

Question Id : 54947024143 Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Question Numbers : (43 to 45)

Note:

Study the following Pie-chart carefully and answer the questions 43 – 45. It gives data on how the people of a town in different age groups are represented.



Sub questions

Question Number : 43 Question Id : 54947024144 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The number of children whose age is less than 10 years is

Options :

1. ✘ 5625
2. ✘ 5600
3. ✘ 6200
4. ✔ 6000

Question Number : 44 Question Id : 54947024145 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The number of people in the age group (20 – 40) is

Options :

1. ✘ 26000
2. ✔ 25500
3. ✘ 25000

26500

4. ✘

Question Number : 45 Question Id : 54947024146 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The number of people whose age is above 40 years is

Options :

9000

1. ✔

8500

2. ✘

9125

3. ✘

8000

4. ✘

Is Section Default? : null

Question Id : 54947024147 Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (46 to 49)

Note:

Study the following table carefully and answer the questions 46 – 49. It gives the data on promotion of employees in different banks during 2017-22.

Bank / Year	Luck Bank	Maha Bank	Nag Bank	Oris Bank	Punj Bank	Del Bank
2017	48	46	52	44	37	39
2018	50	47	50	32	44	46
2019	46	40	50	42	38	35
2020	38	48	36	51	35	39
2021	32	44	46	45	48	40
2022	52	39	47	41	46	43

Sub questions

Question Number : 46 Question Id : 54947024148 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the ratio of total employees who got promoted by Luck Bank and Maha Bank over all the years together?

Options :

133:132

1. ✓

132:133

2. ✘

133:134

3. ✘

132:134

4. ✘

Question Number : 47 Question Id : 54947024149 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the average number of employees promoted by Oris Bank over all the years together ?

Options :

44

1. ✘

39.50

2. ✘

35

3. ✘

42.50

4. ✔

Question Number : 48 Question Id : 54947024150 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the total number of employees who got promoted in all the banks together in the year 2019 ?

Options :

1. ✓ 251
2. ✘ 234
3. ✘ 243
4. ✘ 266

Question Number : 49 Question Id : 54947024151 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Number of employees promoted by Punj Bank in the year 2020 forms approximately what percent of the total number of employees promoted by all the banks together in that year ?

Options :

- 1. ✘ 30 %
- 2. ✘ 90 %
- 3. ✔ 14 %
- 4. ✘ 19 %

Is Section Default? : null

Question Number : 50 Question Id : 54947024152 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In the following devices, which device enables the users to verify a person's identity?

Options :

- 1. ✘ Barcode reader
- 2. ✔ Finger print scanner

3. ✘
Scanner

4. ✘
Keyboard

**Question Number : 51 Question Id : 54947024153 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

What does WWW stand for ?

Options :

1. ✘
Microsoft

2. ✔
World Wide Web

3. ✘
Where Why What

4. ✘
Web Website World

**Question Number : 52 Question Id : 54947024154 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

'e-mail' stands for _____.

Options :

Electronic mail

1. ✓

Electromagnetic mail

2. ✘

Engine mail

3. ✘

Electric mail

4. ✘

**Question Number : 53 Question Id : 54947024155 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

In the Audio and Video compression, the term RGB means _____.

Options :

Red, Grey, Blue

1. ✘

2. ✓ Red, Green, Blue

3. ✘ Red, Green, Block

4. ✘ Red, Grey, Black

Question Number : 54 Question Id : 54947024156 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

URL stands for _____.

Options :

1. ✘ Universal Resource Location

2. ✘ Universal Response Location

3. ✘ Unified Response Location

Uniform Resource Locators

4. ✓

Question Number : 55 Question Id : 54947024157 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The central government initiative of ATL to create scientific temperament, innovation amongst Indian students .What is the full form of ATL?

Options :

Atal Tinkering Lab

1. ✓

Applied Tech. Lab

2. ✘

Alternative Tech Lab

3. ✘

Atal Tech. Lab

4. ✘

Question Number : 56 Question Id : 54947024158 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The MHRD's initiative to create digital learning environment for design is known as --

Options :

1. ✘ e- Acharya

2. ✔ e- Kalpa

3. ✘ e- Yantra

4. ✘ e- Vidwan

Question Number : 57 Question Id : 54947024159 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The world leaders met at United Nations Headquarters in September 2000 focuses on the available benefits with reference to _____ aspects.

Options :

1. ✘ Artificial Intelligence

Nuclear Technology

2. ✘

Information and Communication

3. ✔

Solid waste treatment technology

4. ✘

**Question Number : 58 Question Id : 54947024160 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

In the following, which one is not covered in the Millennium development goals?

Options :

Human Rights

1. ✔

Primary Education

2. ✘

Reduction of child mortality

3. ✘

Ensure environmental sustainability

4. ✘

**Question Number : 59 Question Id : 54947024161 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

In the following aspects, what is conservation?

Options :

Saving of plants and animals from natural death

1. ✘

Political practices that support traditions

2. ✘

Preservation and wise use of natural resources

3. ✔

Precipitation patterns to be maintained

4. ✘

**Question Number : 60 Question Id : 54947024162 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which one is considered as non-renewable energy source?.

Options :

1. ✘ Wind

2. ✘ Solar

3. ✘ Tidal

4. ✔ Coal

Question Number : 61 Question Id : 54947024163 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which one is Green House gas?

Options :

1. ✘ Oxygen

2. ✔ Carbon dioxide

Nitrogen

3. ✘

Methane

4. ✘

**Question Number : 62 Question Id : 54947024164 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

What is the main reason for Acid Rain to occur?

Options :

Deforestation

1. ✘

Forest fires

2. ✘

Industrial burning of coal and other fossil fuels

3. ✔

Use of fertilizers and pesticides in agriculture

4. ✘

Question Number : 63 Question Id : 54947024165 Display Question Number : Yes Is Question Mandatory : No Calculator : None

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

Which Act gives rights to citizens to file cases against violations of environmental norms?

Options :

1. ✘ Water
2. ✘ Forest
3. ✘ Air
4. ✔ Environmental protection

Question Number : 64 Question Id : 54947024166 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Whose name is figured on the commission ' Education System in India' in 1964?

Options :

1. ✘ Radhakrishnan

Mudilier

2. ✘

Kothari

3. ✔

Sadler

4. ✘

Question Number : 65 Question Id : 54947024167 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which country has the most number of Universities in the world as on the year 2021?

Options :

China

1. ✘

India

2. ✔

USA

3. ✘

Australia

4. ✘

Question Number : 66 Question Id : 54947024168 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What are the three cardinal principles of 'SWAYAM'?

Options :

Access, Equity and Quality

1. ✔

Quality, Career and Skills

2. ✘

Innovation, Collaboration and Diversification

3. ✘

Affordability, Equity and Quality

4. ✘

Question Number : 67 Question Id : 54947024169 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

According to National Skill qualification Framework (NSQF) learning outcome levels are---

Options :

Skills, Experience Aptitude

1. ✘

Skills, Achievement and Aptitude

2. ✘

Knowledge , Skills, Experience

3. ✘

Knowledge, Skills and Aptitude

4. ✔

Question Number : 68 Question Id : 54947024170 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

How many life skills are there?

Options :

9

1. ✘

2. ✓ 10

3. ✘ 12

4. ✘ 14

Question Number : 69 Question Id : 54947024171 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

According to Indian Value system 'VASUDHIVAKUTUMBAKAM' reflects
'Learning to --

Options :

1. ✘ Know

2. ✘ Do

3. ✓ Live together

Be

4. ✖

Question Number : 70 Question Id : 54947024172 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The Indian GST is based on the Canadian model and was made on the recommendations of the _____ committee.

Options :

R Rangarajan

1. ✖

G S Balla

2. ✖

Vijay Kelkar

3. ✔

Y V Reddy

4. ✖

Applied Life Sciences

Section Id :

549470340

Section Number :	2
Mandatory or Optional :	Mandatory
Number of Questions :	70
Section Marks :	70
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Is Section Default? :	null

Question Number : 71 Question Id : 54947024173 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If the pH of a solution is 8, then

Options :

1. ✘ The solution is said to be acidic
2. ✘ The hydrogen ion concentration is 10^{-6} M
3. ✘ The solution has 100 times more hydroxyl ions than a solution of pH 7
4. ✔ The hydrogen ion concentration is 10^{-8} M

Question Number : 72 Question Id : 54947024174 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is NOT a second messenger?

Options :

1. ✘ Ca^{2+}
2. ✔ Na^+
3. ✘ cAMP
4. ✘ Inositol 1,4,5- triphosphate

Question Number : 73 Question Id : 54947024175 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The K_m of an Enzyme-catalyzed reaction

Options :

1. ✔ Describes the affinity of an enzyme for its substrate
2. ✘ Is dependent on the enzyme concentration
3. ✘ Equals the catalytic rate when all the substrate sites are full
4. ✘ Equals the substrate concentration when the rate of reaction is maximum

Question Number : 74 Question Id : 54947024176 Display Question Number : Yes Is Question Mandatory : No Calculator : None

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

N-acetylglucosamine is a repeating unit of

Options :

1. ✘ Hemicellulose
2. ✘ Cellulose
3. ✘ Pectin
4. ✔ Chitin

Question Number : 75 Question Id : 54947024177 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The histones that lies in the linker regions of adjacent nucleosomes in a chromosomes is

Options :

1. ✘ H2A & H2B
2. ✘ H3
3. ✘ H4

4. ✓ H1

Question Number : 76 Question Id : 54947024178 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The branched DNA structure formed by the first-strand exchange during crossing over is called

Options :

1. ✘ Zinc finger
2. ✘ Chiasma
3. ✘ Kink
4. ✓ Holliday junction

Question Number : 77 Question Id : 54947024179 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Depolarization of axonal membrane results from

Options :

1. ✘ Influx of K^+

2. ✓ Influx of Na^+
3. ✘ Efflux of Na^+
4. ✘ Efflux of K^+

Question Number : 78 Question Id : 54947024180 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Imagine that an organism has 150 different 'V' genes 12 'J' genes and 3 'V-J' joints for L-chains and can make 5000 different H chains. The number of different antibodies that could be produced by this organism is

Options :

1. ✘ 3.6×10
2. ✘ 4.5×10^4
3. ✓ 2.7×10^6
4. ✘ 3.6×10^6

Question Number : 79 Question Id : 54947024181 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Identify the correct statement with reference to *lac* repressor

Options :

1. ✓ It binds to DNA
2. ✗ It is produced when the bacterial cell is exposed to lactose
3. ✗ Its production uses the promoter of *lac Z* gene
4. ✗ It does not change its shape in the presence of inducer

Question Number : 80 Question Id : 54947024182 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The uptake of cholesterol by mammalian cells is an example of

Options :

1. ✓ Receptor mediated endocytosis
2. ✗ Endocytosis
3. ✗ Phagocytosis

4. ✘ Pinocytosis

Question Number : 81 Question Id : 54947024183 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Acetylcholine belongs to category of single molecules known as

Options :

1. ✘ Second messengers

2. ✘ Onco proteins

3. ✘ Photoreceptors

4. ✔ Neuro transmitters

Question Number : 82 Question Id : 54947024184 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The frequency of producing a mutant (a^-) in a bacterium is 2×10^{-6} per generation and that of mutant (b^-) is 8×10^{-5} . The frequency of producing an (a^-b^-) is a single event is

Options :

1. ✘ 0.4×10^{-10}
2. ✘ 4×10^{-10}
3. ✘ 2.5×10^{-10}
4. ✔ 1.6×10^{-10}

Question Number : 83 Question Id : 54947024185 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The major drawback in the biological control of insect pests is that

Options :

1. ✔ The new organism/predator introduced may not survive in the new environment
2. ✘ The method is costlier than other methods
3. ✘ The method is less effective than other methods
4. ✘ The method may turn out to be less environmental-friendly

Question Number : 84 Question Id : 54947024186 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A linkage group corresponds to a

Options :

1. ✘ Independently assorting genes
2. ✔ Chromosome
3. ✘ Set of independently segregating alleles
4. ✘ Set of non-complementing alleles

Question Number : 85 Question Id : 54947024187 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following hormones act through intracellular receptors?

Options :

1. ✔ Thyroid hormones
2. ✘ Growth hormone
3. ✘ Glucagon

4. ✘ Vasopressin

Question Number : 86 Question Id : 54947024188 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Papova viruses

Options :

1. ✘ Are RNA viruses

2. ✘ Can integrate into the host chromosome at a specific site

3. ✔ Can transform non-permissive cells

4. ✘ Produce late proteins that cause transformation

Question Number : 87 Question Id : 54947024189 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Probiotics are

Options :

1. ✘ First formed microbes

2. ✘ Carcinogenic microbes
3. ✘ Microbial food allergins
4. ✔ Live microbial food supplements

Question Number : 88 Question Id : 54947024190 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The ability of cells to respond to a specific inductive signals is known as

Options :

1. ✔ Competence
2. ✘ Regional specificity of induction
3. ✘ Juxtacrine signalling
4. ✘ Instructive interaction

Question Number : 89 Question Id : 54947024191 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Theta-mode of replication is present in

Options :

1. ✓ *E. coli*, *B. subtilis*
2. ✗ *E. coli*, Phage λ
3. ✗ Phage ϕ x 174, Phage λ
4. ✗ *B. subtilis*, Phage λ

Question Number : 90 Question Id : 54947024192 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Non-disjunction in meiosis I leads to the formation of

Options :

1. ✗ 2 gametes with normal and 2 with $(n + 1)$ chromosomes
2. ✓ 2 gametes with $(n + 1)$ and 2 with $(n - 1)$ chromosomes
3. ✗ 2 gametes with normal and 2 with $(n - 1)$ chromosomes

4. ✘ 1 gamete with $(n + 1)$, 2 with normal and 1 with $(n - 1)$ chromosomes

Question Number : 91 Question Id : 54947024193 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Differences in refractive indices and densities in live unstained cells form the key factors in

Options :

1. ✔ Phase contrast microscopy
2. ✘ Fluorescence microscopy
3. ✘ Scanning electron microscopy
4. ✘ Confocal microscopy

Question Number : 92 Question Id : 54947024194 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The regulatory subunit of a protein kinase that induces entry into mitosis is

Options :

1. ✘ E₂F

2. ✘ p^{53}

3. ✘ Cyclin E

4. ✔ Cyclin B

Question Number : 93 Question Id : 54947024195 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The distance between 'a' and 'b' loci is 10 cm. What percentage of progeny resulting from the test cross of a double heterozygote (AB/ab) is expected to be Aa bb

Options :

1. ✘ 2.25%

2. ✔ 5%

3. ✘ 10%

4. ✘ 45%

Question Number : 94 Question Id : 54947024196 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Renaturation of DNA occurs under conditions of

Options :

1. ✓ High temperature, high salt
2. ✗ High temperature, low salt
3. ✗ Low temperature, high salt
4. ✗ Low temperature, low salt

Question Number : 95 Question Id : 54947024197 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The common microorganism used for the industrial production of citric acid is

Options :

1. ✓ *Aspergillus niger*
2. ✗ *Lactobacillus bulgaris*
3. ✗ *Pencillium citrinum*

4. ✘ *Rhizoptis nigricam*

Question Number : 96 Question Id : 54947024198 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The synthesis of nitrate from ammonia is

Options :

1. ✘ Ammonification

2. ✘ Denitrification

3. ✔ Nitrification

4. ✘ Nitrogen fixation

Question Number : 97 Question Id : 54947024199 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

B-cell is able to make cell surface and secreted types of antibodies using

Options :

1. ✘ Different gene pool

2. ✓ Alternate splicing
3. ✘ Different H-chain class but the same L-chain
4. ✘ Different L- chain class but the same H-chain

Question Number : 98 Question Id : 54947024200 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Soft ionization method used for peptide mass finger printing is

Options :

1. ✘ MALDI
2. ✓ MS
3. ✘ NMR spectroscopy
4. ✘ Circular dichroism

Question Number : 99 Question Id : 54947024201 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The molecules mediating signal transduction following antigen binding to cell surface immunoglobulin on a B-cell are called

Options :

1. ✘ Ig Fc
2. ✔ Ig-alpha and Ig-beta
3. ✘ MHC
4. ✘ CD4

Question Number : 100 Question Id : 54947024202 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Gene for yellow skin colour in mice is example for

Options :

1. ✔ Lethal genes
2. ✘ Pleiotropic genes
3. ✘ Pseudo alleles

Epistatic gene

4. ✘

Question Number : 101 Question Id : 54947024203 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The 3-D structure of a protein can be determined by

Options :

1. ✘ Nuclear Magnetic Resonance
2. ✘ X-ray Crystallography
3. ✔ Both Nuclear Magnetic Resonance and X-ray Crystallography
4. ✘ Fluorimetry

Question Number : 102 Question Id : 54947024204 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The computational methodology that tries to find the best matching between two molecules, a receptor and ligand are called

Options :

1. ✘ Molecular fitting

2. ✘ Molecular matching

3. ✔ Molecular docking

4. ✘ Molecule affinity checking

Question Number : 103 Question Id : 54947024205 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which one of the following is not used for disaggregation of monolayers in animal tissue culture?

Options :

1. ✘ EDTA

2. ✘ Trypsin

3. ✘ Collagenase

4. ✔ Separase

Question Number : 104 Question Id : 54947024206 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The diploid number of chromosomes in a honey bee species is 22. The number of bivalents during meiosis in the males of this species is

Options :

1. ✘ 21
2. ✘ 11
3. ✘ 10
4. ✔ 0

Question Number : 105 Question Id : 54947024207 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The bioplastic substance among the following is

Options :

1. ✘ Polystyrene
2. ✘ Polypropylene

3. ✘ Dextran

4. ✔ Polyhydroxy butyric acid

Question Number : 106 Question Id : 54947024208 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Magnetic resonance imaging uses magnetic properties of

Options :

1. ✘ Calcium nuclei

2. ✘ Carbon nuclei

3. ✔ Hydrogen nuclei

4. ✘ Nitrogen nuclei

Question Number : 107 Question Id : 54947024209 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

High concentration of glucose in the culture medium of yeast leads to the production of ethanol without increase in biomass. This phenomenon is called

Options :

1. ✘ Warburg effect
2. ✔ Crabtree effect
3. ✘ Simpson's effect
4. ✘ Olivosky's effect

Question Number : 108 Question Id : 54947024210 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Pick up the wrong statement

Options :

1. ✘ Active chromatin is acetylated
2. ✘ Inactive chromatin is methylated
3. ✘ Deacetylation allows methylation
4. ✔ Active chromatin is deacetylated

Question Number : 109 Question Id : 54947024211 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Suppose a cistron has 1500 deoxy ribonucleotides in sequence. The maximum number of mutons this cistron could have is

Options :

1. ✘ 500
2. ✘ 750
3. ✔ 1500
4. ✘ 4500

Question Number : 110 Question Id : 54947024212 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The calcium ion pores in plasma membrane and endoplasmic reticulum are opened by the second messenger named

Options :

1. ✘ Diacylglycerol
2. ✔ Inositol triphosphate

3. ✘ cAMP

4. ✘ Phosphotidyl inositol bisphosphate

Question Number : 111 Question Id : 54947024213 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In which of the following, fresh medium is continuously added to the culture and the used culture medium containing metabolic products is removed at the same rate?

Options :

1. ✘ Cryostat

2. ✘ Fed-batch fermenter

3. ✔ Chemostat

4. ✘ Continuous fermenter

Question Number : 112 Question Id : 54947024214 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The microbe widely used in the removal of industrial wastes

Options :

1. ✘ *Trichoderma viridis*
2. ✘ *Pseudomonas putida*
3. ✔ *Aspergillus niger*
4. ✘ *Pseudomonas denitrificans*

Question Number : 113 Question Id : 54947024215 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The multicellular organism used in the production of single cell protein is

Options :

1. ✘ *Spirulina maxima*
2. ✘ *Chlorella pyridinoidosa*
3. ✘ *Scenedesmus accutus*
4. ✔ *Chaetomium cellulolyticum*

Question Number : 114 Question Id : 54947024216 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

An open reading frame has

Options :

1. ✘ No start codon
2. ✘ No stop codon
3. ✔ No start and stop codon
4. ✘ Both start and stop codons

Question Number : 115 Question Id : 54947024217 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The process of communication by extracellular signals does not include

Options :

1. ✘ Proteolytic cleavage of a hormone immediately prior to interaction with its receptor
2. ✔ Detection of hormone by its receptor

3. ✘ Phosphorylation of a hormone initiated by binding to its receptor

4. ✘ A change in the metabolism of the target all

Question Number : 116 Question Id : 54947024218 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The component left undegraded during biogas production is

Options :

1. ✘ Cellulose

2. ✘ Hemi-cellulose

3. ✘ Lipids

4. ✔ Lignin

Question Number : 117 Question Id : 54947024219 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The regulatory subunit of a protein kinase that induces entry into mitosis is

Options :

1. ✓ Cyclin B

2. ✘ Cyclin E

3. ✘ E₂F

4. ✘ p⁵³

Question Number : 118 Question Id : 54947024220 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Koshland's concept of ES complex formation is characterized by

Options :

1. ✘ Rigid and pre-shaped active site

2. ✓ Substrate inducible, flexible active site

3. ✘ Rigid substrate of substrate

4. ✘ Flexible structure of substrate

Question Number : 119 Question Id : 54947024221 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The light emitted by luminescent bacteria is mediated by the enzyme

Options :

1. ✘ Coenzyme Q
2. ✔ Luciferase
3. ✘ Lactose dehydrogenase
4. ✘ Carboxylase reductase

Question Number : 120 Question Id : 54947024222 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

What is the value of A_{260} of a DNA solution whose concentration is 40 $\mu\text{g/ml}$?

Options :

1. ✘ 1.4
2. ✘ 1.2
3. ✔ 0.8

0.32

4. ✘

Question Number : 121 Question Id : 54947024223 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Which of the following is not appropriate about feeder layers in stem cell culture?

Options :

1. ✘ Helps the other cells to divide
2. ✘ Will not divide
3. ✘ Mainly used for culture of embryonic stem cells
4. ✔ Divides indefinitely

Question Number : 122 Question Id : 54947024224 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

If the pH of a solution of the form HA which dissociates to $H^+ + A^-$ equals the pKa, then

Options :

1. ✘ The pH of the solution is 7
2. ✘ The solution has a lesser capacity for buffering than at any other pH
3. ✘ If acid is added to the solution, protons released by the added acid will be taken up by the HA form of the compound
4. ✔ The concentration of the acid form of the compound (HA) equals the concentration of the dissociated form of the compound (A^-)

Question Number : 123 Question Id : 54947024225 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The radiolabelled compound commonly used to study DNA synthesis in cultures is

Options :

1. ✔ $[^3H]$ thymidine
2. ✘ $[^{14}C]$ uridine
3. ✘ $[\gamma^{32p}]$ d ATP
4. ✘ $[\alpha-32p]$ d ATP

Question Number : 124 Question Id : 54947024226 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Signal transduction pathways are stimulated by

Options :

1. ✘ Antagonists
2. ✘ Second messengers
3. ✔ Agonists
4. ✘ Interferons

Question Number : 125 Question Id : 54947024227 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The phenomenon where gene expression is influenced by its parental origin is called

Options :

1. ✘ Feedback inhibition
2. ✘ Gene attenuation

3. ✓ Gene imprinting

4. ✘ Chromatin remodelling

Question Number : 126 Question Id : 54947024228 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The usual frequency range of ultrasound used for scanning human body is

Options :

1. ✓ 1-15 MHz

2. ✘ 15-30 MHz

3. ✘ 30-45 MHz

4. ✘ 45-70 MHz

Question Number : 127 Question Id : 54947024229 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The predominant microbial species that colonizes the human skin

Options :

1. ✘ *Candida albicans*
2. ✘ *Streptococcus pneumoniae*
3. ✔ *Staphylococcus epidemidis*
4. ✘ *Bacterioidis fragilis*

Question Number : 128 Question Id : 54947024230 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Biofouling can effectively be prevented by

Options :

1. ✘ Magnetic resonance imaging
2. ✘ UV exposure
3. ✘ Gamma ray exposure
4. ✔ Ultrasonication

Question Number : 129 Question Id : 54947024231 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The therapeutic substance isolated from the sponge *Luffariella variabilis* is

Options :

1. ✘ Dictyostatin
2. ✘ Lasonolide
3. ✘ KRN 7000
4. ✔ Manoalide

Question Number : 130 Question Id : 54947024232 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Retroviruses

Options :

1. ✘ Have double-stranded linear DNA
2. ✔ Can make DNA from RNA
3. ✘ Cause reverse movement of T-cells

Induce B-cells to attack T-cells

4. ✖

Question Number : 131 Question Id : 54947024233 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The physiologically receptive state during which external DNA is transiently bound to the bacterial cell surface and has greater chance of being absorbed is known as

Options :

1. ✔ Competence

2. ✖ Turgid

3. ✖ Plasmolytic

4. ✖ Recombinant

Question Number : 132 Question Id : 54947024234 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In a series of 2-point mapping crosses, the distances between genes were calculated to be a-b 13 mU, a-c 16 mU, a-d 17 mU, b-c 29 mU, b-d mU. The gene sequence is

Options :

1. ✖ acbd

2. ✘ adbc

3. ✔ dbac

4. ✘ bcad

Question Number : 133 Question Id : 54947024235 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

A plant of the genotype Aa Bb is self-fertilized. The proportion of the progeny plants which are not double heterozygotes is

Options :

1. ✘ $\frac{1}{4}$

2. ✘ $\frac{1}{3}$

3. ✘ $\frac{1}{2}$

4. ✔ $\frac{3}{4}$

Question Number : 134 Question Id : 54947024236 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

In a conjugation experiment involving F^x bacterium of the genotype $h^+ l^+ m^+ x^+$ and an auxotrophic recipient for these genes, mating was interrupted with the following results in recipient cells; 90% were x^+ , 80% m^+ , 20% h^+ and none were l^+ . Sequence of these genes relative to the origin of the F factor is

Options :

1. ✓ $x m h l$
2. ✗ $l m h x$
3. ✗ $l x m h$
4. ✗ $x l m h$

Question Number : 135 Question Id : 54947024237 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The following combination of molecular markers are PCR based

Options :

1. ✗ RFLP, AFLP and SSR

2. ✓ AFLP, SSR and RAPD
3. ✗ RFLP, RAPD and SSR
4. ✗ RAPD, RFLP and SSR

Question Number : 136 Question Id : 54947024238 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

The ability of the immune system to respond to a large variety of antigens is explained by

Options :

1. ✓ Clonal selection
2. ✗ Stabilizing selection
3. ✗ Directional selection
4. ✗ Disruptive selection

Question Number : 137 Question Id : 54947024239 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Rhodopsin is a

Options :

1. ✘ Steroid signal
2. ✘ Protein signal
3. ✘ Non-peptide neurotransmitter
4. ✔ Photoreceptor

Question Number : 138 Question Id : 54947024240 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

SiRNA silences the gene expression by

Options :

1. ✘ Interfering transcription
2. ✔ Degrading the target mRNA
3. ✘ Interfering translation

Transport of mRNA from nucleus to cytosol

4. ✖

Question Number : 139 Question Id : 54947024241 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Dopamine is a

Options :

1. ✖ Protein signal

2. ✖ Photo receptor

3. ✖ Steroid signal

4. ✔ Non-peptide neurotransmitter

Question Number : 140 Question Id : 54947024242 Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

rRNA component present only in the smaller subunits of prokaryotic ribosome is

Options :

1. ✖ 5s

2. ✖ 5.8s

3. ✔ 16s

4. ✖ 18s