

# National Testing Agency

**Question Paper Name:** Advances in Animal Diversity and Systematics and Evolution 30th March 2019 Shift 2  
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## Advances in Animal Diversity and Systematics and Evolution

**Group Number :** 1  
**Group Id :** 90958241  
**Group Maximum Duration :** 0  
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**Group Marks:** 100

## Advances in Animal Diversity and Systematics and Evolution

**Section Id :** 90958241  
**Section Number :** 1  
**Section type :** Online  
**Mandatory or Optional:** Mandatory  
**Number of Questions:** 100  
**Number of Questions to be attempted:** 100  
**Section Marks:** 100  
**Display Number Panel:** Yes  
**Group All Questions:** No

**Sub-Section Number:** 1  
**Sub-Section Id:** 90958243  
**Question Shuffling Allowed :** Yes

**Question Number : 1 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

The group of similar animals which breed freely among themselves constitute

- A. Species
- B. Family
- C. Order
- D. Genus

**Options :**

- 1. A
- 2. B
- 3. C
- 4. D

**Question Number : 2 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which Class has the largest number of animals?

- A. Mammals
- B. Fishes
- C. Insects
- D. Reptiles

**Options :**

- 1. A
- 2. B
- 3. C
- 4. D

**Question Number : 3 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Life's basic unit of structure and function is the

- A. gene
- B. cell
- C. organism
- D. species

**Options :**

- 1. A

2. B
3. C
4. D

**Question Number : 4 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which of the following definitions covers a greater number of organisms

- A. Class
- B. Genus
- C. Order
- D. Family

**Options :**

1. A
2. B
3. C
4. D

**Question Number : 5 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which organizational level includes all of the other levels?

- A. biosphere
- B. ecosystem
- C. organism
- D. cell

**Options :**

1. A
2. B
3. C
4. D

**Question Number : 6 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Havesian canals occur in?

- A. Humerus
- B. Pubis
- C. Clavicle
- D. Scapula

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 7 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Who made the first effort to divide the world into Zoogeographical regions?

- A. P.L. Sclater
- B. A.R. Wallace
- C. H. Robinson
- D. Heilprin

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 8 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Ostrich is native bird of

- A. Ethiopian region
- B. Oriental region
- C. Neotropical region
- D. Nearctic region

Options :

- 1. A

2. B
3. C
4. D

Question Number : 9 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Orangutan and gibbons are found in

- A. Ethiopian region
- B. Nearctic region
- C. Oriental regions
- D. Neotropical regions

Options :

1. A
2. B
3. C
4. D

Question Number : 10 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The diversity of species, often estimated from taxonomic, functional, or phylogenetic perspectives, within a local community or site is known as:

- A.  $\alpha$ -Diversity
- B.  $\beta$ -Diversity
- C.  $\gamma$ -Diversity
- D. All of these

Options :

1. A
2. B
3. C
4. D

Question Number : 11 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following regions of India have been designated as biodiversity hotspots? Select the correct answer from the following (1.Eastern Himalaya, 2.Eastern Ghat, 3.Western Ghat, 4.Western Himalaya).

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

**Options :**

- 1. A
- 2. B
- 3. C
- 4. D

**Question Number : 12 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

When did the Indian Government passed Wildlife (Protection) Act –

- A. 1952
- B. 1962
- C. 1972
- D.1982

**Options :**

- 1. A
- 2. B
- 3. C
- 4. D

**Question Number : 13 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which one of the following bio-reserves of India is not included in the world network bio-reserve?

- A. Manas
- B. Sunderbans
- C. Gulf of Mannar
- D. Nanda Devi

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 14 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

From the point of view of natural vegetation and wildlife, India belongs to which of the following categories?

- A. One of twelve mega biodiversity countries of the world
- B. The richest wildlife zone in the world
- C. The country with the greatest forest cover
- D. A country lacking in bio-diversity cover

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 15 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The elephants are found in the hot-wet forests of

- A. Punjab and Haryana
- B. Rajasthan and Gujarat
- C. West Bengal and Jharkhand
- D. Assam and Karnataka

Options :

1. A
2. B
3. C
4. D

Question Number : 16 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What does the term 'MIKE' stands for?

- A. Monitoring of Illegal Killing of Elephants
- B. Monitoring of Illegal Killing in Europe
- C. Monitoring of Illegal Killing of Eagle
- D. Monitoring of Illegal Killing of Endangered Species

Options :

1. A
2. B
3. C
4. D

Question Number : 17 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Who grouped coelenterates and echinoderms under Radiata?

- A. Linnaeus et al.
- B. Augustus and Henneley
- C. Cuvier and Agassiz
- D. Cuvier and Linnaeus

Options :

1. A
2. B
3. C
4. D

Question Number : 18 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0



Actinobacteria are ....bacteria:

- A. Gram positive
- B. Cyanobacteria
- C. Gram negative
- D. None

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 19 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

*Trichoplax adhaerens* is an example of Phylum:

- A. Placozoa
- B. Hemimastigophora
- C. Eubacteria
- D. None

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 20 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Phenetic classification is based on:

- A. Sexual characters
- B. Dendrogram based on DNA characteristics
- C. Ancestral lineage of existing organisms
- D. Observable characters of existing organisms

Options :

- 1. A

2. B
3. C
4. D

**Question Number : 21 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

In classification, the category below the level of family is:

- A. Class
- B. Species
- C. Phylum
- D. Genus

**Options :**

1. A
2. B
3. C
4. D

**Question Number : 22 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which of the following is not possible according to biological nomenclature:

- A. Tautonyms
- B. Synonyms
- C. Bionyms
- D. Autonyms

**Options :**

1. A
2. B
3. C
4. D

**Question Number : 23 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

The original type specimen which has been referred by the author as similar to the type specimen is known as:

- A. Paratype
- B. Holotype
- C. Neotype
- D. Isotype

**Options :**

- 1. A
- 2. B
- 3. C
- 4. D

**Question Number : 24 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

“the great chain of being (Latin: scala nature, "Ladder of Being")” which is a hierarchical structure of all matter and life proposed by

- A. Plato
- B. Aristotle
- C. Darwin
- D. Mayer

**Options :**

- 1. A
- 2. B
- 3. C
- 4. D

**Question Number : 25 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which of the following is not related to “Orthogenesis”?

- A. the general law according to which evolutionary development takes place in a noticeable direction, above all in specialized groups
- B. Internal vital force
- C. Natural selection
- D. Species are not fixed entity rather it can transform

**Options :**

- 1. A
- 2. B

3. C

4. D

Question Number : 26 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is NOT a correct pair?

A. Darwin-On the Origin of Species

B. Simpson-Philosophie Zoologique

C. Mayr-Systematics and origin of Species

D. Dobzhansky-Genetics and origin of species

Options :

1. A

2. B

3. C

4. D

Question Number : 27 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is NOT true for Evolutionary Species concept?

A. Lineage (ancestor-descendant sequence of populations)

B. It is based on reproductive isolation

C. its own unitary evolutionary roles and tendencies

D. it is phyletic lineage

Options :

1. A

2. B

3. C

4. D

Question Number : 28 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If two organisms A and B have a common method of recognizing mates. Recognition species concept A and B are

- A. Sibling Species
- B. Same species
- C. Paraspecies
- D. Two different species

**Options :**

- 1. A
- 2. B
- 3. C
- 4. D

**Question Number : 29 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Introgression is

- A. incorporation of genes of one species into the gene complex of another species
- B. incorporation of partial genes of one species into the gene complex of another species
- C. incorporation of genes of one species
- D. not related to hybridization

**Options :**

- 1. A
- 2. B
- 3. C
- 4. D

**Question Number : 30 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Who is called as the father of modern taxonomy

- A. Charles Darwin
- B. Aristotle
- C. Carolus Linnaeus
- D. AP de Candolle

**Options :**

1. A
2. B
3. C
4. D

Question Number : 31 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the sequence data can be more efficiently used for molecular taxonomy

- A. RNA
- B. protein
- C. DNA
- D. nascent protein

Options :

1. A
2. B
3. C
4. D

Question Number : 32 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which samples are usually used for allozyme study for the purpose of molecular classification?

- A. DNA
- B. RNA
- C. protein
- D. ribosomes

Options :

1. A
2. B
3. C
4. D

Question Number : 33 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

PCR machine maintains

- A. always a high temperature
- B. strictly the required temperature
- C. temperature as well as the pressure
- D. all

**Options :**

- 1. A
- 2. B
- 3. C
- 4. D

**Question Number : 34 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which online software is used for generation of dendrogram

- A. BLAST
- B. primer 3.0
- C. Clustal omega
- D. EMBL

**Options :**

- 1. A
- 2. B
- 3. C
- 4. D

**Question Number : 35 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Isozymes are the

- A. Product of the same gene
- B. product of different gene
- C. can be both a and b
- D. none

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 36 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

When a specific portion of a designated gene is used for molecular taxonomy, the method is called as

- A. single nucleotide polymorphism
- B. micro array
- C. DNA barcoding
- D. agarose electrophoresis

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 37 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Advantage of molecular taxonomy is very high because the variables used are

- A. strictly species specific
- B. may be individual specific
- C. strictly heritable
- D. all

Options :



1. A
2. B
3. C
4. D

Question Number : 38 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Who is known as the father of DNA barcoding?

- A. Dr. Robert
- B. Dr. Paul D.N Hebert
- C. Ernest Rutherford
- D. Albert Einstein

Options :

1. A
2. B
3. C
4. D

Question Number : 39 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

iBOL or the International Barcode of Life project was started by \_\_\_\_\_?

- A. University of Hong Kong
- B. National University of Singapore
- C. University of Guelph
- D. Harvard University

Options :

1. A
2. B
3. C
4. D

Question Number : 40 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The PUBLICATION database, gives access to all the publications related to the specimens that have been\_\_\_\_\_?

- A. Published on internet
- B. Deposited into the BOLD system
- C. Submitted to NCBI
- D. Freely available on journals

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 41 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Who can create an account on the BOLD system?

- A. People of those countries who are participate the iBOL project
- B. A person or any user who wishes to use the BOLD system
- C. Individuals who are working on sequencing only
- D. Only the authorized scientist

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 42 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

By rule all the sequences that are submitted into the BOLD system are automatically locked for\_\_\_\_\_?

- A. 4 years
- B. 3 year
- C. 6 months
- D. 1 year

Options :

1. A
2. B
3. C
4. D

**Question Number : 43 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Establishing relationship between organisms on the basis of morphological traits are often \_\_\_\_\_ which are due to \_\_\_\_\_

- A. clear, multiple genetic factors
- B. lucid, more than one genetic factors
- C. ambiguous, multiple genetic factors
- D. ambiguous, one or two genetic factors

**Options :**

1. A
2. B
3. C
4. D

**Question Number : 44 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Species that are not closely related and that do not share many anatomical similarities can still be placed together on the same phylogenetic tree by comparing their

- A. chloroplast genomes
- B. homologous genes that are highly conserved
- C. mitochondrial genome
- D. homologous genes that are poorly conserved

**Options :**

1. A
2. B
3. C
4. D

**Question Number : 45 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

A cladogram or phylogenetic tree

- A. is an hypothesis about the evolutionary relationships among a group of animal taxa
- B. is a diagram in which the sequence of branching illustrates the historical chronology of evolutionary event
- C. reflects the hierarchical classification of taxonomic groups nested within more inclusive groups.
- D. All of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 46 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

\_\_\_\_\_ is when changes in gene frequencies (evolution) occur because of chance events (sampling errors) that occur when populations are finite in size (small).

- A. Genetic drift
- B. Natural selection
- C. Sexual selection
- D. Mutation

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 47 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is closest relative of man?

- A. chimpanzee
- B. gorilla
- C. orangutan
- D. gibbon.

Options :

1. A
2. B
3. C
4. D

Question Number : 48 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The carrying capacity of a population in an environment depends upon:

- A. Population growth curve
- B. Limiting resources
- C. Dispersion
- D. None of the above

Options :

1. A
2. B
3. C
4. D

Question Number : 49 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In nature most population exhibit the kind of dispersion is:

- A. Regular
- B. Clumped
- C. Random
- D. None of the above

Options :

1. A
2. B
3. C
4. D

Question Number : 50 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Metapopulation dynamics represent a balance between:

- A. Ecological and crude density
- B. Extinction and colonization
- C. Population growth curve and age structure
- D. None of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 51 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In same geographical region, if new species evolve from a single ancestral species than speciation is known as:

- A. Sympatric speciation
- B. Allopatric speciation
- C. Parapatric speciation
- D. None of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 52 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of these would not cause allopatric speciation:

- A. Bacteria are grown in different petri dishes
- B. A few Iguanas are carried to an island during storm
- C. A mutation makes some monkeys unable to mate other monkey in the same forest
- D. A mountain range arise in the middle

**Options :**

1. A
2. B
3. C
4. D

**Question Number : 53 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

The reproductive isolating factors that occur when an egg and sperm are incompatible is referred to as:

- A. Temporal isolation
- B. Ecological isolation
- C. Behavioural isolation
- D. Gametic isolation

**Options :**

1. A
2. B
3. C
4. D

**Question Number : 54 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which of these is an example of postzygotic reproductive barrier:

- A. Zygote inviability
- B. Hybrid disadvantage
- C. Hybrid sterility
- D. All of the above

**Options :**

1. A
2. B
3. C
4. D

**Question Number : 55 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Diversified group of organisms are studied in:

- A. Systematics
- B. Modern Systematics
- C. Both
- D. None

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 56 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Phylogenetic tree are

- A. Branching diagram
- B. Circular diagram
- C. Evolutionary tree
- D. Both 1 and 3

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 57 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following is not a function of DNA polymerase

- A. Exonuclease activity
- B. Adding nucleotide to the DNA strand
- C. Synthesis of polypeptide chain
- D. Proof reading activity

Options :

- 1. A



2. B
3. C
4. D

**Question Number : 58 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Gene sequencing entails the evolutionary relationship in terms of.....

- A. Chromosome analysis
- B. DNA hybridization
- C. Similarity and dissimilarity of bases acquisition
- D. PCR based analysis

**Options :**

1. A
2. B
3. C
4. D

**Question Number : 59 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Substitution score matrices are used to show score for

- A. proteins
- B. Amino acids
- C. Nucleotide base pairs
- D. Carbohydrates

**Options :**

1. A
2. B
3. C
4. D

**Question Number : 60 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Evolution is

- A. Progressive development of a race
- B. History and development of race along with variations
- C. History of race
- D. Development of race

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 61 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Evolutionary convergence is development of

- A. Common set of characters in group of different ancestry
- B. Dissimilar characters in closely related groups
- C. Common set of characters in closely related groups
- D. Random mating.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 62 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Who gave theory of biogenesis?

- A. Spallanzani
- B. Aristotle
- C. Louis Pasteur
- D. Anaximenes

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 63 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Eukaryotes were evolved

- A. 1.5 billion years ago
- B. 2.5 billion years ago
- C. 4.5 billion years ago
- D. 3.5 billion years ago

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 64 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

First photoautotroph organism were

- A. Bryophytes
- B. Algae
- C. Cyanobacteria
- D. Bacteria

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 65 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

\_\_\_\_\_ speciation occurs when geographic isolation creates a reproductive barrier

- A. sympatric
- B. parapatric
- C. allopatric
- D. polypatric

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 66 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Role of isolation in evolution is

- A. maintenance of an existing species
- B. evolutionary divergence
- C. origin of new species
- D. elimination of a species

Options :

1. A
2. B
3. C
4. D

Question Number : 67 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Founder flush theory is related to

- A. parapatric speciation
- B. sympatric speciation
- C. allopatric speciation
- D. all of the above

Options :

1. A
2. B
3. C
4. D

Question Number : 68 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Post-zygotic isolation mechanism prevents the following

- A. development
- B. reproduction
- C. Survival
- D. all

Options :

1. A
2. B
3. C
4. D

Question Number : 69 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Genetic drift is found in

- A. small population with or without mutated genes
- B. large population with random mating
- C. plant population
- D. animal population

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 70 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following does NOT tend to promote speciation?

- A. Founder effect
- B. reproductive isolation
- C. natural selection
- D. gene flow

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 71 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A phylogenetic tree that is "rooted" is one

- A. that extends back to the origin of life on Earth
- B. at whose base is located the common ancestor of all taxa depicted on that tree
- C. that illustrates the rampant gene swapping that occurred early in life's history
- D. that indicates our uncertainty about the evolutionary relationships of the taxa depicted on the tree

Options :

1. A
2. B
3. C
4. D

Question Number : 72 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which term is most appropriately associated with *clade*?

- A. monophyletic
- B. paraphyletic
- C. polyphyletic
- D. monophyletic and paraphyletic both

Options :

1. A
2. B
3. C
4. D

Question Number : 73 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What sort of characters are useful in constructing phylogenetic trees?

- A. homologous traits
- B. analogous traits
- C. shared derived traits
- D. A and C

Options :

1. A
2. B
3. C
4. D

Question Number : 74 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

On a phylogenetic tree, which term refers to lineages that diverged from the same place?

- A. sister taxa
- B. basal taxa
- C. rooted taxa
- D. dichotomous taxa

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 75 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A synapomorphy, or shared derived trait, is evidence of what?

- A. Paraphyly
- B. Monophyly
- C. Superphyly
- D. Polyphyly

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 76 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Development of 'evolutionary schemes' of different animals is based on:

- A. Darwin's concept of the 'Origin of Species'
- B. Linnéaeus classification of life based on their similarities and differences
- C. Lamarck's Law
- D. None of the above

Options :

- 1. A
- 2. B



3. C

4. D

**Question Number : 77 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

**Paleozoic era persisted on the earth from:**

A. 543 to 251 Million Years

B. 900 to 543 Million Years

C. 65 to 17 Million Years

D. None of the above

**Options :**

1. A

2. B

3. C

4. D

**Question Number : 78 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

**Evolution due to accumulation of genetic and phenotypic differences in a species, which leads to the formation of new species and occurs due to separation of two populations by a geographic barrier is:**

A. Divergent Evolution

B. Convergent Evolution

C. Parallel Evolution

D. None of the above

**Options :**

1. A

2. B

3. C

4. D

**Question Number : 79 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Maximum extinction of animals occurred at

- A. Cretaceous-Tertiary Boundary
- B. Precambrian-Cambrian Boundary
- C. Mesozoic-Tertiary Boundary
- D. None of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 80 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An example of a monophyletic clade is:

- A. *Homo sapiens*
- B. *Rana tigrina*
- C. *Hibiscus rosa-sinesis*
- D. None of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 81 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The relation between dragonflies, mayflies, and beetles is called:.

- A. Dichotomous
- B. Polytomous
- C. Monotomous
- D. None of them

Options :

1. A
2. B
3. C
4. D

Question Number : 82 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Speciation and adaptation, or evolution of one species from one species is called;

- A. Microevolution
- B. Megaevolution
- C. Adaptive Radiation
- D. None of the above

Options :

1. A
2. B
3. C
4. D

Question Number : 83 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In a scientific context what does the term 'survival of the fittest' mean?

- A. The organisms which are best adapted to their environment will survive the longest
- B. The organisms which are best adapted to their environment will survive the longest and have a greater number of offspring who are likely to inherit their advantageous traits
- C. The organisms which can procreate the earliest have the best chance of survival
- D. Good-growing organisms live longer than slow-growing organisms

Options :

1. A
2. B
3. C
4. D

Question Number : 84 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Homo erectus differed from cro-magnon man in

- A. Small jaw
- B. Drawing paintings
- C. Large jaw
- D. Making tools

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 85 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Neanderthal man differs from modern man in

- A. Receding jaws
- B. Protruding Jaws
- C. Could make good tools
- D. Could make good pictures

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 86 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Fire was first used for protection and cooking by

- A. Java man
- B. Neanderthal man
- C. Packing man
- D. Cro magnon man

Options :

1. A
2. B
3. C
4. D

Question Number : 87 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Cranial capacity was highest in

- A. Cro magnon man
- B. Neanderthal man
- C. Java man
- D. Peking man

Options :

1. A
2. B
3. C
4. D

Question Number : 88 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Two homologous genes (or proteins) found in different species are called

- A. Homologous genes
- B. Paralogous genes
- C. Orthologous genes
- D. All of the above.

Options :

1. A
2. B
3. C
4. D

Question Number : 89 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which is NOT an advantage of comparing molecular dataset over other type?

- A. All molecular set has only four bases thus molecular data we can be generated quickly
- B. Molecular characters are ambiguous
- C. Single information can provide information on many different characters.
- D. Molecular data can be easily converted to numerical form

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 90 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is software for EST data set processing?

- A. PartiGene
- B. SimiTri
- C. BLAST
- D. Perl

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 91 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is standard sequence comparison tool?

- A. BLAST
- B. SimiTri
- C. Clustar 3.0
- D. All of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 92 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one is TRUE to be called species diversity?

- A. Species diversity is the diversity between different species.
- B. Species diversity does not include genetic diversity.
- C. Species diversity is limited to only morphological differences between populations of a species.
- D. Species diversity is not part of the biodiversity.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 93 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is the TRUE characteristic of a stable ecosystem?

- A. A stable ecosystem has low species diversity
- B. It has low resistance to external disturbance
- C. It is not capable of returning to stability after a disturbance
- D. A stable ecosystem shows several interactions between species diversity and environment.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 94 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which is TRUE about trophic cascade?

- A. Trophic cascade is an ecological concept according to which there is an increase or decrease in abundance of animal or plant population of a trophic level.
- B. Other food levels in the food web of a community are not affected.
- C. Trophic cascade does not affect ecosystem.
- D. Trophic cascade does not affect abundance of population in food web.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 95 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following statements is TRUE regarding keystone species?

- A. Keystone species are usually herbivores.
- B. Keystone species are usually predators.
- C. Keystone species are the most abundant species in an ecosystem.
- D. Keystone species are non-essential species in an ecosystem.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 96 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0



Which of the following statements is FALSE regarding keystone species?

- A. Without a keystone species, many ecosystems would fail to exist.
- B. Keystone species populations are typically small compared to other species in an ecosystem.
- C. A herbivore species cannot be a keystone species.
- D. Sea otters, lions, and sea stars are also considered important keystone species.

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 97 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What are the major threats to biodiversity?

- A. Climate change
- B. Over-harvesting
- C. Invasive specie
- D. All of the above

Options :

- 1. A
- 2. B
- 3. C
- 4. D

Question Number : 98 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Why Dodo, an extinct flightless bird species, is an example of threat to biodiversity?

- A. Because this bird was killed by human settlers on the island.
- B. Because this bird could not escape from its native island.
- C. Because humans acted like an invasive species on the island
- D. All of the above.

**Options :**

1. A
2. B
3. C
4. D

**Question Number : 99 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

How do invasive species affect native species?

- A. By removing native species
- B. By competing with native species
- C. By destroying habitat
- D. All of the above

**Options :**

1. A
2. B
3. C
4. D

**Question Number : 100 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Which animal is an example of over-harvesting?

- A. Tendua
- B. Pigeon
- C. One-horned rhinoceros
- D. Earthworms

**Options :**

1. A
2. B
3. C
4. D