

Note : Write answers to the questions on the objective answer sheet provided. Four possible answers A, B, C and D to each question are given. Which answer you consider correct, fill the circle in front of A, B, C or D with pen ink to each question on the answer sheet provided.

Q.1	QUESTIONS	(A)	(B)	(C)	(D)
1.	Basic unit of classification is	Genus	Order	Family	Species
2.	When a last member of a particular species dies, the species is said to be	Established	Extinct	Threatened	Endangered
3.	Member of the same species living in the same place is called.	Habitat	Biosphere	Community	Population
4.	A related group of genera comprises.	Phylum	Class	Family	Order
5.	The smallest taxon of taxonomy is.	Kingdom	Species	Order	Family
6.	To which kingdom belong to viruses.	Monera	Protista	Fungi	None of these
7.	A family is a group of related.	Genera	Orders	Species	Classes
8.	The kingdom of bacteria is.	Fungi	Monera	Protista	Plantae
9.	In which kingdom, would you classify unicellular eukaryotes?	Fungi and Protists	Fungi and Monera	Only protista	Only fungi
10.	The branch of biology which deals with classification is?	Taxonomy	Systematic	Botany	Genetics
11.	Who proposed the kingdom Protista?	Ernst Hackel	Robert Whittaker	Margulis	Schwartz
12.	Cellular organization is absent in.	Viruses	Bacteria	Algae	Protozoans

A B C D				A B C D				A B C D				A B C D				A B C D			
1	A	B	C	D	4	A	B	C	D	7	A	B	C	D	10	A	B	C	D
2	A	B	C	D	5	A	B	C	D	8	A	B	C	D	11	A	B	C	D
3	A	B	C	D	6	A	B	C	D	9	A	B	C	D	12	A	B	C	D

نوٹ: معروضی سوال نامے کو توجہ سے پڑھیں اور ہر MCQ کی درست آپشن A, B, C, D کو پین کی سیاہی یا مارکر سے اس طرح پُر کریں کہ سیاہی دائرے سے باہر نہ نکلے۔ ایک سے زیادہ دائروں کو پُر کرنے یا کاٹ کر پُر کرنے کی صورت میں مذکورہ جواب غلط تصور ہوگا۔



علمِ کدُنیا

(PART – I)**2. Write short answers to any FIVE (5) questions:****10**

- (i) Define Binomial nomenclature.
- (ii) What are Endangered Species?
- (iii) Define Biodiversity. Describe briefly the meaning of biodiversity.
- (iv) Define Phylum.
- (v) Define Genus.
- (vi) Difference between Fauna and Flora.
- (vii) Define Monera.
- (viii) Define Algae and fungi

3. Write short answers to any FIVE (5) questions:**10**

- (i) What is basic unit Classification?
- (ii) Define taxon.
- (iii) Give importance of biodiversity.
- (iv) What was the work of Robert Whittaker? Give his basis of classification?
- (v) Write the name of national animal of Pakistan.
- (vi) What is two kingdom system of classification?
- (vii) What is Extinct species.
- (viii) Status of viruses.

4. Write short answers to any FIVE (5) questions:**10**

- (i) Who is Carolus Linnaeus.
- (ii) Write impact of human beings on biodiversity.
- (iii) Write a short note about Houbara bustard.
- (iv) What is vulnerable species?
- (v) Define Protista.
- (vi) What is difference between taxonomy and systematics?
- (vii) What is deforestation?
- (viii) What are multicellular organisms?

(PART – II)**Note: - Attempt any TWO questions.****5. (a) What is meant by binomial nomenclature? Describe its rules and significance.****5****(b) Write the impact of human beings on Biodiversity.****4****6. (a) Describe the characteristics of kingdom Monera with example.****5****(b) What is meant by taxonomy? Write taxonomic Hierarchy in order****4****7. (a) Write a note of Kingdom Protista and Kingdom Plantae.****5****(b) What is classification? Describe its aims and basis.****4**

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(PART-I)

2 write short answers to any Five Question.

Q Define Binomial nomenclature?

A Binomial nomenclature is the method of giving scientific names of living organisms. As the word binomial suggests the scientific name of a species consist of two names. the first is Genus name and second one is the name of species.

Q What are Endangered species?

A Due to human activities the biodiversity in Pakistan is facing a great loss. Here are a few endangered species in Pakistan.

Indus dolphin

Marco polo sheep

Houbara bustard.

Q Define Biodiversity - - - - -
- - - - - meaning of biodiversity?

A The term biodiversity has been derived from bio and diversity. diversity mean variety within a species and among species. Biodiversity measure of the variety of organisms present in different ecosystems.

Q Define phylum?

A Phylum is a taxonomic ranking that comes third in hierarchy of classification after domain and Kingdom. organisms in a phylum share a set a characteristics that distinguishes them from organisms in another phylum.

Q Define Genus?

A A genus is a group of related species.

Q Difference between fauna and flora?

The main difference between flora and fauna is that flora refers to plant life whereas fauna refers to animal life. flora makes food with help of solar.

Q Define Monera?

A It includes prokaryotic organisms. they are made of prokaryotic cells. Monerans are unicellular although some types form chain clusters or colonies of cells.

Q Define Algae and fungi?

A Algae is unicellular. colonial or simple multicellular. They resemble plant cell with cell walls and chlorophyll in chloroplasts. fungi it includes eukaryotic multicellular heterotrophs which are absorptive in their nutritional mode mushrooms.

3 write short answers to any five Question

Q what is basic unit classification?

A Species is the basic unit of classification. Species is a group of organisms which can interbreed freely among them and produce fertile offspring.

Q Define taxon?

A The groups into which organisms are classified are known as taxonomic categories or taxa (singular taxon). The taxa form a ladder called taxonomic hierarchy.

Q: Give importance of biodiversity?

A Biodiversity provides food for human. A significant of drugs are derived directly or indirectly from biological source. A wide range of industrial materials

building materials fibers
dyes resins gums rubber
and oil are derived
directly from plants.

Q: what was the work of
Robert -----?

Robert Whittaker introduced the
five kingdom classification
system. This system is based
on . The level of cellular
organization prokaryotic unicellular
eukaryotic and multicellular
eukaryotic.

- The principal modes of
nutrition photosynthesis
absorption and ingestion.

Q write the name of national
animals of Pakistan?

A The markhor is the official
national animal of Pakistan
respectively also the national
birds of Pakistan. Coincidentally
chukor or its other
named called chukor
partridge.

Q what is two kingdom system — — — — ?

A Kingdom plantae:-

It include eukaryotic multi-cellular autotrophs plants are autotrophs in nutritional mode. making their own food by photosynthesis.

Kingdom animalia:-

It include eukaryotic multi-cellular consumers. Animals live mostly by ingesting food and digesting. It with specialized cavities.

Q what is Extinct species?

Many plant and animals species have gone extinct in pakistan. examples of endangered and extinct animals and species are Lion tiger cheetah rhinoceros swamp deer etc.

Q Status of viruses?

A Ultramicroscopic non-cellular organisms that replicates

itself inside the cells of living hosts.

Q write short answers

Q who is carolus Linnaeus.

A Grouped species according to similar physical characteristics.

Q write impact of human beings on biodiversity?

A Human population began to grow rapidly. Today around 600 million people live on earth. To improve the living conditions for 600 million human, we are imposing serious threats to the survival of biodiversity.

Q write a short note about Houbara bustard?

A The houbara bustard also called as African houbara is a large bird in the bustard family. It is dull brown with black markings on the wings with greyish

neck and black ruff along the side of the neck. Males and females appear very similar, but males are large and heavier.

Q What is vulnerable species?

A A vulnerable species is one which has been categorized by the International Union for Conservation of Nature as likely to become endangered unless the circumstances that are threatening vulnerability are mainly caused by habitat loss or destruction of the species' home.

Q Define prokaryota?

A It includes eukaryotic unicellular and multi-cellular organisms.

Q What is difference b/w taxonomy and systematics?

The group into which organisms are classified

are known as taxonomic categories or taxa. The taxa form ladders called taxonomic hierarchy.

Systematics:-

which deal with the classification and also traces the evolutionary history of organisms is known as Systematics.

Q What is deforestation:-

A Deforestation mean cutting down of trees for the conversion of a forest to non-forest land.

Q What are multicellular organisms?

A Multicellular organisms are organisms consist of more than one cell. In contrast unicellular organisms.

(PART II)

Note: Attempt any two Question

5a) what is meant by binomial

A Binomial Nomenclature:-

Binomial nomenclature is the method of giving scientific names to living organisms.

As the word binomial suggest the scientific name of species Swedish biologist Carolus Linnaeus first introduced and adopt the system of binomial nomenclature. His system spread rapidly and became popular. Many of his names are in use today.

Some of the rules which are universally adopted and while suggesting and

documenting scientific names are

- 1 Scientific names are usually printed in italics such as *homo sapiens*. when handwritten they are underlined.
- 2 The first term always begins with capital letter with species names is never capitalized.
- 3 The scientific name is generally written in full when it is first used. But when several species from the same genus are being listed.

b) write the impact of human _____

- 4 1000 years ago there were about 5 million people on earth with the advancement in agriculture and industry. Human population began to grow rapidly

Today around 600 million people live on earth. To improve the living condition for 600 million human, we are imposing threats to the survival of biodiversity. Habitat loss, deforestation, over-hunting, introduction or removal of species.

6a) Describe the characteristics of Kingdom _____

A Kingdom Monera:-

It includes prokaryotic organisms i.e. they are made of prokaryotic cells. Monerans are unicellular, although some types form chains, clusters or colonies of cells. Prokaryotic cells are radically different from eukaryotic cells. Most are heterotrophic but some perform photosynthesis because they have chlorophyll in

cytoplasm. within this Kingdom there are two different kinds of organisms i.e. bacteria and cyanobacteria.

b) what is meant by taxonomy.

A The group into which organisms are classified are known as taxonomic categories or taxa. singular taxon. The taxa form a ladder called taxonomic hierarchy. organisms are divided into five Kingdoms. So Kingdom is the largest taxon. On the basis of similarities each Kingdom is further divided into smaller taxa in the following way.

Division ~~from~~ plants and fungi. A phylum is a group of related classes.

Class:-

A class is a group of related orders.

Order:-

An group is a group of related families.

Family:-

A family is a group of genera.

Genus:-

A genus is a group of related species.

Species

A species consist of similar organisms.

7a) write a note of Kingdom

A Kingdom protista:-

It includes eukaryotic unicellular and simple multicellular organisms. There are three main types of protista.

Algae:- are unicellular colonial or simple multicellular.

They resemble plant cell with cell wall and chlorophyll in chloroplasts. simple multicellular mean that they do not have multicellular cell organs and do not form embryos during their life cycles.

Protozoans:- resemble animals whose cell lack chlorophyll and cell walls.

Some Protista are fungi like.

Kingdom Plantae:-

It includes eukaryotic multicellular autotrophs. plants are autotrophs in nutritional mode. making their own food by photosynthesis. They have multicellular sex organs and form embryos during their life cycle.

b) what is Classification -

Aims and Principles:-

There is a large collection of very dissimilar forms of organisms found on earth.

over 1.5 million types of animals and over 0.5 million

types of plants are known to biologists and these

are only a small percentage of the total types of estimated to live on earth.

They range in complexity from small and simple

bacteria to large and complex human beings.

Some of them live in the sea. Some on land

some walk, some fly.

Biological classification is a method by which biologist divide organisms into group and subgroup.

Aims of classification.

The main aims of both these branches are to determine similarities and differences among organisms so that they can be studied easily.

To find the evolutionary relationships among organisms.
basis of classification:-

Classification is based on relationship (against) amongst organisms and such relationship is got through similarities in characteristics.

These similarities suggest that all organisms are related to one another at some point in their evolutionary histories.
