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10th class Biology

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Biology

Chapter No.

10

Topic:

Gaseous Exchange

Short Questions

1) Define cellular respiration.
Cellular respiration is a process in which C-H bonds in food are broken by oxidation reduction reaction and the energy is transformed into ATP.

2. What are lenticels?
There are certain pores in the layer

of bark these are called
lenticles.

3. What is glottis and
epiglottis?

• Glottis:

The air goes from
the pharynx into larynx
is called glottis.

• Epiglottis:

The glottis is guarded
by flap of tissue are
called epiglottis.

4. How Sound is Produced?

The vibration in
vocal cords and the movement
of lips, cheek, tongue and
jaws produce specific sound
which results in speech.

5. What is wind pipe?

Larynx continuous
to the trachea, which
is also called wind
pipe.

It is about 12 cm long
tube lies in front of
oesophagus.

6. Define bronchi and bronchioles.

• Bronchi:

On entering the chest
cavity, the trachea divides
into two smaller tube
are called bronchi.

• Bronchioles:

The bronchi continue
dividing the lungs until
they make several fine
tubes called bronchioles.

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7. What is diaphragm?

A thick muscular structure called diaphragm is present between the lungs.

8. Difference b/w acute and chronic bronchitis.

Acute

The acute bronchitis usually lasts about two weeks and patients recover with no permanent damage to the bronchi or bronchitis.

Chronic

In chronic bronchitis, the bronchi develop chronic inflammation. It usually lasts for three months to two years.

9. Write the symptoms of bronchitis.

Symptoms of bronchitis include a cough, mild wheezing, fever, chills and shortness of breath, (especially when doing hard job).

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10. Write the name of bacteria which cause pneumonia.

The most common cause of pneumonia is a "Streptococcus Pneumoniae."

Some viral (influenza virus) and fungal infection may also lead to pneumonia.

11. What is asthma?

Asthma is a form of allergy in which the inflammation of the bronchi, more mucus production and narrowing of the airways.

12. Write the treatment of asthma.

The chemical with ability to dilate the bronchi and bronchioles are used in the treatment of asthma. Such medicines are given in form of

inhalers.

13. Define passive smoking.

The inhalation of smoke from another's smoking is also a cause of lung cancer. The smoke from the burning end of cigarette is more dangerous than the smoke from the filter end.

14. What is nicotine?

Nicotine is a powerful poison and was widely used as an insecticide in the past. When inhaled through tobacco smoking, it reaches our circulatory system and not only harden the walls of the arteries but also damages the brain tissue.

15. Write four bad effects of smoking.

- The carbon monoxide present in tobacco smoke lessens the oxygen carrying capacity of haemoglobin.
- Smokers are at greater risk of developing infection particularly.
- Smoking also affects the social life of person. Smokers may face social unacceptance.

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Biology

Chapter No-11

Homeostasis

Short Questions

(i)

Q Define osmoregulation and thermoregulation.

Definition:

Osmoregulation:

It is maintenance of the amount of water and salts in body fluids.

Example :-

Blood and tissue fluids.

Thermoregulation:-

It is maintenance of internal body temperature is called thermoregulation.

Example :-

Optimum temperature.

(ii)

Q. Define guttation.

Definition:-Guttation:-

The appearance of drops of water on the tips or edges of leaves is called guttation.

(iii)

Q. What is transpiration and dew?

Definition :-Transpiration:-

Transpiration is the loss of water from plant surface in the form of vapours.

Dew :-

Guttation is not to be confused with dew, which condenses from the atmosphere onto the plant surface.

Q.

(iv)

Write the waste materials that are removed by plants.

Plants deposit many metabolic wastes in their bodies as harmless insoluble material. *e.g.* calcium oxalate. It is deposited in the form of crystals in the leaves and stems of many plants. *e.g.* in tomato.

(v)

Q. What are succulent organ?

Definition:-Succulent organ:-

Some xerophytes have special parenchyma cell in stems or roots in which they have store large quantities of water. This makes their stems or roots wet and juicy, called succulent organ.

Example:-

Cacti (singular cactus).

(vi)

Q₂ Define Osmosis.

Osmosis :-

Osmosis is the movement of water from hypotonic solutions to hypertonic solutions, through semipermeable membrane.

(vii)

Q₂ Write the main organs which work for homeostasis.

- Lungs remove excess carbon dioxide and keep it in balance.
- Skin performs role in the maintenance of body temperature and also removes excess water and salts.
- The kidney filters excess water, salts, urea, uric acid etc. from the blood and forms urine.

(viii)

Q₂ What is urinary system?
Urinary system :-

The excretory system of humans is also

called urinary system.

(ix)

Q₂ Define hilus.

Hilus :-

The concave side of kidney faces vertebral column. There is a depression, called hilus.

(x)

Q₂ What is renal cortex and renal medulla.

Renal cortex :-

Renal cortex is the outer part of kidney and it is dark red in color.

Renal medulla :-

Renal medulla is the inner part of kidney and it is pale red in color.

(xi)

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Q. What is renal pelvis?

Renal pelvis:-

Renal medulla consists of several cone shaped area called pyramids. Renal pyramids project into a funnel-shaped cavity called renal pelvis.

—(xii)—

Q. Define glomerulus and Bowman's capsule.

Glomerulus :-

Glomerulus is a network of capillaries.

Bowman's capsule:-

Bowman's capsule is a cup-shaped structure that enclosed glomerulus.

—(xiii)—

Q. What is lithotripsy?

Lithotripsy :-

Lithotripsy is another

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method for the removal of kidney stones. In this method, non-electrical shock waves from outside are bombarded on the stones in the urinary system. Waves hit the dense stones and break them. Stones become sand-like and are passed through urine.

—(xiv)—

Q. Define kidney stones.

Kidney stones:-

Such large crystals cannot pass in urine and form hard deposits called kidney stones.

—(xv)—

Q. What is the symptoms of kidney failure?

Symptoms :-

Kidney failure is the high level of urea

- Other wastes in blood.
- weight loss
- frequent urination
- Blood in urine.

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Chapter NO: 12.

Coordination And

Control

Q1: Write the types of coordination

There are two types of coordination in organisms:-

- i) Nervous coordination brought about by nervous system
- ii) Chemical coordination brought about by endocrine system

Q2: Define receptors.

The organs, tissues or cells which are specifically built to detect particular type of stimuli are called receptors.

Forexample:-

Sound waves are detected by ears

QNo3 What is stimulus?

We can define a stimulus as any change in environment (external and internal), which can provoke a response in organism.

For examples:

Heat, cold, pressure etc.

QNo4 Define nerve impulse.

A nerve impulse is a wave of electrochemical changes that travels along the length of neurons.

QNo5 What are schwann cells?

Schwann cells are special neuroglial cells located at regular intervals along axons.

QNo6 Define saltatory impulses.

Myelin sheath is an insulator so the membrane coated

with this sheath does not

conduct nerve impulse. In such a neuron, impulses "jump" over the areas of myelin going from node to node. Such impulses are called saltatory (jumping) impulses.

10:7 What is ganglion?

In certain parts of body, the cell bodies of many neurons form a group enveloped by a membrane. This is called ganglion.

10:8 Define meninges.

Inside cranium, brain is covered by three layers called meninges. Meninges protect brain and also provide nutrients and oxygen to brain tissue through their capillaries.

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QNo:9 What is hippocampus?

Hippocampus is a structure that is deep in the cerebrum. It functions for the formation of new memories. People with a damaged hippocampus cannot remember things that occurred after the damage but can remember things that had occurred before damage.

QNo:10 What is grey and white matter?

Grey matter:-

The nervous tissue containing cell bodies and non myelinated processes of the neurons is called grey matter.

White matter:-

The white matter of nervous system consists of myelinated axons.

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QNo:11 Define midbrain.

Midbrain lies between hindbrain and forebrain and connects the two. It receives sensory information and sends it to the appropriate part of forebrain. Midbrain also controls some auditory reflexes and posture.

QNo:12 Write two functions of spinal cord.

i) It serves as a link b/w body parts and brain. Spinal cord transmits nerve impulses from body parts to brain and from brain to body parts.

ii) Spinal cord also acts as a coordinator, responsible for some simple reflexes.

QNo:13 What is reflex action and reflex arc?

Reflex actions:

Sometimes, the involuntary response produced by the CNS is very quick. Such a response is called reflex action.

Examples:

Withdrawal of hand after touching a hot object.

Reflex arc:

The pathway followed by the nerve impulses for producing a reflex action, is called reflex arc.

QNo:14 The eyes of cat and dog shining in night why?
The eyes of cat and dog look shining in the night. The reason for this is the presence of tapetum behind the eye which is a layer capable

of reflecting light.

QNo:15 Define rhodopsin and idopsin.

Rhodopsin:

Rods contain a pigment called rhodopsin. When light falls on rhodopsin, it breaks for generating a nerve impulse. In the absence of light, the breakdown products are again converted into rhodopsin.

Idopsin:

Cones also contain a pigment, known as idopsin. These are three main types of cones and each type has a specific idopsin.

QNo:16 What is aqueous and vitreous humour?

Aqueous humour:

The anterior

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Chambers contain a clear fluid known as aqueous humour.

Vitreous humour:-

The posterior chamber contain a jelly like fluid known as vitreous humour.

QNo:17 Owl is not able to see during day time why? The reason for this is the deficiency of cones which receive and sense the bright light. But the presence of rods gives it greater power of vision during night. All animals that search for prey during night have this characteristics.

QNo:18 What are middle ear ossicles?

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Middle ear is a chamber after external ear. Three small bones, called middle ear ossicles, are present in a chain in middle ear.

QNo:19 How ears maintain the balance of body? Semicircular canals and vestibule help to maintain the balance of body. Semicircular canals contain sensory nerves which can detect any movement of head. Vestibule can detect any changes in the posture of body. The neurons coming from these two receptors reach cerebellum through the auditory nerve.

QNo:20 Define hormone.

A hormone

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is a specific messenger molecule synthesized and secreted by an endocrine gland.

Forexamples:

- i) insulin
- ii) glucagon

QNo21 What is acromegaly?

If somatotrophin is excessively produced after growing age, internal organs and body extremities along grow large. This condition is known as acromegaly.

QNo22 Define dwarfism.

If the production of this hormone is diminished during growing age, the rate of growth decreases. This condition is called dwarfism.

QNo23 What is oxytocin?

The hormone oxytocin stimulates the contraction of uterus walls in mother for child birth. Moreover, this hormone is necessary for the ejection of milk from breast.

QNo24 What is goitre?

If a person lacks iodine in diet, thyroid gland cannot make its hormone. In this condition, thyroid gland enlarges. This disorder is called goitre.

QNo25 What is calcitonin?

The thyroid gland produces another hormone called calcitonin. It decreases the level of calcium ions in blood and promotes the

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absorption of calcium from blood into bones.

QNo:26 What is emergency hormone?

Adrenal medulla secretes a hormone called adrenaline in response to stress. It prepares our body to overcome emergency situations. Therefore, adrenaline is also termed as emergency hormone.

QNo:27 What is insulin and glucagon?

Insulin:-

Insulin influences the liver to take excess glucose from blood and so the blood glucose concentration falls.

Glucagon:-

Glucagon influences the liver to release glucose in blood and so the blood glucose concentration rises.

QNo:28 Define paralysis and epilepsy.

Paralysis:-

Paralysis is the complete loss of function by one or more muscle group.

Epilepsy:-

Epilepsy is a nervous disorder in which there is abnormal and excessive nerve impulse in brain.

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CHAPTER NO 13

Support AND Movement

(1)

Qno Define Skeleton

The framework of hard and articulated structures that provide support protection and attachment for skeletal muscles in animal's bodies is called skeleton

(2)

Qno What is endoskeleton and exoskeleton

Endoskeleton:-

Skeleton system present inside the body is called endoskeleton

eg:- Skeleton in humans

Exoskeleton:-

Skeleton system present outside the body is called exoskeleton

eg:- skeleton in arthropods

(3)
Qno Define chondrocytes and osteocytes?

Chondrocytes:-

Cartilage is a dense clear blue-white firm connective tissue (but less strong than bone). The cells of cartilage are called chondrocytes.

Osteocytes:-

Bones contain different types of cells. The mature bone cells are called osteocytes.

(4)
Qno Compact and spongy bone.

Compact Bone:-

The hard outer layer of a bone is called compact bone.

Spongy bones:-

The interior of bone is soft and porous. It is called spongy bone.

(5)
Qno Define hinge joint?

Joint that move back and

forth like the hinge on a door are called hinge joints.

Example:-

knee joint and elbow joint.

(6)
Qno What is ball and socket joints.

They allow movement in all direction

example:-

hip joint and shoulder joint.

(7)
Qno What is tendon and Ligment?

Tendons:-

Tendons and ligments are bands of connective tissue (made of collagen)

Ligment:-

ligment are strong but flexible bands and join one bone to another at joints. They prevent dislocation of bones at joints.

(8)
Qno What is origin and insertion?

Origin:-

E

One end of a skeletal muscle is always attached with some immovable bone. This end of muscle is called origin.

Insertion:-

Other end of muscle is attached with a movable bone and is called insertion.

(9)

Qno Define antagonism:-

When one muscle contracts the other relaxes and these muscles do opposite jobs is known as antagonism.

G

(10)

Qno Define biceps and triceps:-

Biceps muscles:-

Biceps is a flexor muscle on the front of upper arm bone.

Triceps muscles:-

Triceps is an extensor muscle on the back of arm.

Qno What is gout

It is characterised by the accumulation of uric crystals in moveable joints. It generally attacks the toe joints.

(11)

Qno What is arthritis and Osteoporosis?

Arthritis:-

Arthritis means "inflammation in joints". It is also very common in old age and in women. It is characterised by pain and stiffness in joints.

Osteoporosis:-

It is a bone disorder in adults especially in old ages. It is very common in women. In osteoporosis, bone density decreases due to more loss of calcium and phosphorus.

(12)

Qno Define rheumatoid arthritis:-

It involves the inflammation of the membrane at joints.

Symptoms:-

Fatigue low-grade fever, pain and stiffness
in joints

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Biology

CHAPTER NO :- 14

REPRODUCTION

SHORT QUESTIONS

(i)

Q: Define sexual and asexual reproduction.

Sexual reproduction:-

Fusion of male and female gametes (sperm and eggs) is called sexual reproduction.

- It produces genetically different organisms.

Asexual reproduction:-

The type

of reproduction in which identical (ایک جیسے) organisms are produced from a single mother cell is called: asexual reproduction.

- It produces genetically identical organisms.

(ii)

Q. Define Cyst:-
Cyst:-

Each spore is covered with a thick wall called cyst. It provides protection to spore during its spreading.

(iii)

Q. What is binary and multiple fission?

Binary fission:-

binary = two fission = pieces
The type of asexual reproduction in which parent organisms is divided into two same organisms is called binary fission.

e.g. prokaryotes (bacteria), unicellular eukaryotes, some invertebrates and protozoans divide through binary fission.

Multiple fission:-

Multiple = many fission = pieces

The type of asexual reproduction used by many unicellular organisms.

e.g. Amoebae

(iv)

Q. What are endospores?
Endospores:

During unfavorable conditions, some species of bacteria also reproduce by spore formation. They also form thick walled spores. These spores are formed inside bacterial cells so they are called endospores.

e.g. clostridium and bacillus species (rod shaped bacteria) reproduce through spore formation during

unfavorable conditions.

(v)

Q. Define parthenogenesis.

Parthenogenesis:-

The type of asexual reproduction in which an unfertilized egg is developed into an organisms.

e.g. some fishes, frogs and insects reproduce through parthenogenesis.

(vi)

Q. What are suckers?

Suckers:-

They are lateral (انقي) stems near to ground level. A sucker grows underground from some distance and then turn up and make a new plant.

e.g. mint, chrysanthemum.

(vii)

Q. Define rhizomes.

Rhizomes:-

They are horizontal underground stems. They have scale leaves. They have enlarged portions called nodes. Buds are formed at nodes. These buds give rise to shoot. Lower surface of rhizome produces roots.

e.g. ginger, ferns, water lilies.

(viii)

Q. What is calluses?

Calluses:-

The tissue cells start mitosis and produce masses of cells called calluses. They are transferred to other medium that contains different hormones for the formation of roots, stem and leaves.

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Q. Define (ix)
Alternation of generation.

Alternation of generation:

The phenomenon in which two generations alternate with each other during life cycle is called alternation of generation.

Q. Write the names of parts of flowers.

Names of parts of flowers:

There are four parts of flowers:

Calyx (non-reproductive)

Corolla (non-reproductive)

Androecium (reproductive)

Gynoecium (reproductive)

Q. (xi)
What is sporophyte and

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gametophyte generation?
Sporophyte generation:

One

generation is diploid and produces spores. It is called sporophyte generation.

Gametophyte generation:

The other

generation is haploid and produces gametes. It is called gametophyte generation.

Q. (xii)
Define pollination.

Pollination:

The transfer of pollen grains from anther to stigma is called pollination.

Q. (xiii)
What is self pollination and cross pollination?
Self pollination:

The transfer of

pollen grains from anther to stigma of same flower on the same plant is called self pollination.

Cross pollination:-

The transfer of pollen grains from one plant's anther to other's plant stigma of same species called cross pollination. It could be done by various agencies like wind, water, birds etc.

====(xiv)====

Q: What is parthenocarpy?

Parthenocarpy:-

In some plants, ovaries develop into fruit without the fertilization inside their ovules. The process is known as parthenocarpy and it results in seedless fruits.

e.g. bananas and seedless varieties of grapes.

====(xv)====

Q Define dormancy.

Dormancy:-

Most seeds go through a period when they do not germinate / grow. This period is called dormancy of seeds. Dormant seeds are ripe seeds but they do not grow. Under favorable conditions seed break the dormancy and grow.

====(xvi)====

Q: What is seed coat?

Seed coat:-

It is formed from the wall of ovule called integument. It could be paper thin such as in peanut and it could be thick and hard such as in coconut. It protects seed from unfavorable conditions.

(xvii)

Q: What is epicotyl and hypocotyl?

Epicotyl:-

The embryonic stem above the point of attachment of cotyledons is called epicotyl.

Hypocotyl:-

The embryonic stem below the point of attachment of cotyledons is called hypocotyl.

(xviii)

Q: Define follicles.

Follicles:-

The outer region of ovary produces egg cells. [From ovaries, egg cell] A cluster of specialized cells called follicles.

(xix)

Q: What is spermatogenesis and oogenesis?

Spermatogenesis:-

The production of sperms (male gametes) in testes is called spermatogenesis.

Oogenesis:-

The production of egg (female gametes) in ovaries is called oogenesis.

(xx)

Q: What is scrotum?

Scrotum:-

Testes are located in a bag of skin that hangs below the body is called scrotum.

(xxi)

Q: Define semen.

Semen:-

Mixture of sperms and gland's secretion is collectively called semen. It is chemically 10% sperms and 90% gland's

secretion.

(xxii)

Q: What is cervix?

Cervix:-

The portion of the uterus that separates it from birth canal is called cervix.

(xxiii)

Q: What is placenta?

Placenta:-

The connection between the embryo and mother uterus is called placenta. It is mean by which transfer of food, oxygen and other materials take place.

(xxiv)

Q: Define STD.

STD:-

STD's stand for sexually transmitted diseases. It is defined as the diseases that are

transmitted through sexual act.

e.g. AIDS is a STD.

(xxv)

Q Write causes of AIDS.

Causes of AIDS:-

The main causes are unprotected sexual activities, use of infected needles or transfusion of infected blood.

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Biology

Chapter no:

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Topic:-

Inheritance

Short Questions

=i=

What are homologous chromosomes?
The body cells have a constant number of paired chromosomes. The two chromosomes of a pair are known as homologous chromosomes.

=ii=

Enlist the nitrogenous base of nucleotids of DNA.

In double helix, the nitrogenous bases of opposite nucleotids from pairs through hydrogen bonds. This

pairing is very specific. The nitrogenous base adenine of one (nucel) nucleotide from pairs with the thymine of opposing nucleotide.

≡≡≡

Define gene and alleles.

Gene:

The chromosomes carry the unit of inheritance is called gene.

Alleles:

The alternate forms of a gene are called alleles.

≡≡≡

Define transcription and translation.

Transcription:

The specific sequence of DNA nucleotides is copied in the form of messenger RNA nucleotides. This process is called

transcription.

Translation:

The mRNA carries the sequence of its nucleotides to ribosomes. The ribosome reads this sequence and joins specific amino acids, according to it, to form protein. This step is known as translation.

≡≡≡

Genotype:

The specific combination of genes in an individual is known as genotype.

Phenotype:

The expression of this genotype in the form of trait (being albino or having normal pigmentation) is known as phenotype.

≡≡≡

How does DNA of chromosomes work?

DNA is the genetic material. It contains the instructions to direct all functions of cells. It performs its role by giving instructions for synthesis of specific proteins.

≡vii≡

Define dominant allele and recessive allele.

Dominant allele.

When in the heterozygous condition one allele masks or prevents the expression of the other, it is called dominant allele.

Recessive allele.

The allele which is not expressed is called recessive allele.

≡viii≡

Define monohybrid and dihybrid cross.

Monohybrid cross.

A cross in which only one trait is studied at a time, is called as a monohybrid cross.

Dihybrid cross.

Mendel studied two contrasting traits at a time. Such crosses are called dihybrid crosses.

≡ix≡

Define co-dominance and incomplete dominance.

Co-dominance.

The situation where two different alleles of a gene pair express themselves completely, instead of showing a dominant recessive relationship.

In-complete dominance.

The situation where, in heterozygous genotypes,

both the alleles express as a blend (mixture) and neither allele is dominant over the other.

☺☺☺

What is punnett square?

The punnett square is a diagram that is used to predict an outcome of a particular cross or breeding experiment.

☺☺☺

What is organic evolution?

Organic evolution is the change in the characteristics of a population or species of organisms over the course of generations.

☺☺☺

Theory of special creations:-

The anti-evolution ideas support that all living things had been created in their current form only a few thousand years ago. It is known

as "theory of special creations".

☺☺☺

• Natural selection:-

Natural selection is the process by which the better genetic variations becomes more common in successive generations of a population.

• Artificial selection:-

Artificial selection means intentional breeding between individuals for certain traits or combination of traits.

☺☺☺

• Breeds:-

In artificial selection, the bred animals are known as breeds.

• Cultivars:-

Bred plants are known as cultivars.

EXVE

Law of Segregation:

During gamete formation, when the gametes of male and female parents, the resulting offspring again gets the genes in pairs. These conclusions were called the Law of Segregation.

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Biology

Chapter No. 16

"Man and His Environment"

Q.No.01:

What is species?

Definition:

A species is a group of organisms which can interbreed freely in nature to produce fertile offspring.

Q.No.02:

What is community and population?

Community:

All the population that live in a habitat and interact in various ways with one another are collectively called community.

Populations:

A group of organisms

of the same species inhabiting a specific geographical area at a particular time is called population.

Q.No.03:

What is biomass?

Define:

The total amount of living or organic matter in an ecosystem at any time is called biomass.

Q.No.04:-

What is food chain and food web?

Food chain:-

A food chain is a series of organisms within an ecosystem in which each organism feeds on the one before it and is fed by the other after it.

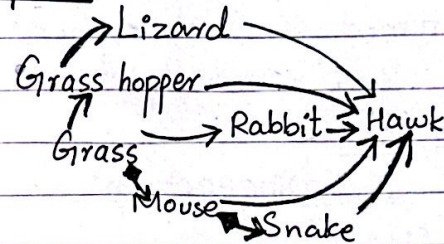
Example:

Grass → Grasshopper → Sparrow → Hawk

Food Web:

Food web can be define as, "a network of food chains which are interconnected at various trophic levels".

Example:



Q.No.05:

What are decomposers?

Define:-

Decomposers break down the complex organic compounds of dead matter (of plants and animals) into simple compounds. They secrete digestive enzymes into dead and decaying plants and animal remains to digest the organic material. After digest they absorb the nutrients.

Example: Many types of bacteria and fungi are decomposers.

Q.No.06:

Why carbon cycle is a perfect cycle?

Answer:-

Carbon cycle is a perfect cycle in the sense that carbon is returned to atmosphere as soon as it is removed.

Q.No.07:-

What is biogeochemical cycle?

Define:-

Biogeochemical cycles are the cyclic pathway through which materials move from environment to organisms and back to environment.

Q.No.08:-

What is denitrification?

It is a biological process in which nitrates and nitrites are reduced to nitrogen gas by denitrifying bacteria. By this process nitrogen is back to environment.

Q.No.09:

Define causcuta plant:

Causcuta (dodder) is a parasitic plants that grow its special roots (haustoria) into host body and suck the required nutrients from the vascular tissues of host.

Q.No.10:-

Define symbiosis:

It is a relationship between member of different species, in which they live together for longer or shorter period of time.

Q.No.11:

Global warming:-

The green house gases remain in the lowest part of Earth's atmosphere and do not allow the solar radiation to reflect back into space. As a result heat remain within the Earth's atmosphere and increase the Earth's temperature. This is called global

warming.

Q.No.12:

Effect of acid rain:-

1- Acid rain destroys the essential nutrients present in the waters of rivers and lakes. It lowers the pH of water which is not suitable for various organisms.

2- Metallic surfaces exposed to acid rain are easily corroded. Fabrics, paper and leather lose their material strength.

Q.No.13:

Effects of deforestation:

* Effects of acid rain include floods, droughts, landslides and soil erosion.

* It also causes change of weather patterns, global warming and loss of habitat of many species.

Q.No.14:

What is pollution and pollutants?

Pollution:-

Pollution is defined as any undesirable change in (air, water and land) that is harmful for organisms.

Pollutants:-

The substances that actually cause pollution are called pollutants.

Q.No.15:

Eutrophication:-

Enrichment of water with inorganic nutrients (nitrates and phosphates) is called eutrophication.

Q.No.16:

Names of heavy metals:

Heavy metals are lead, mercury, arsenic, cadmium etc.

Q.No.17:

Dengue fever:

Dengue fever is a viral infection transmitted through a mosquito called (Aedes mosquito). It has become a major health problem.

Q.No.18:

Symptoms of dengue fever:-

Some symptoms of dengue fever are high fevers, pain behind eyes, headache and rashes on skin, bleeding from gums etc.

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Chapter no. 17

Topic:

Biotechnology

IMPORTANT Short Questions

1. Define biotechnology.

Biotechnology is defined as the use of living organisms in processes for the manufacture of useful products or for services.

2. Who is dolly?

Dolly is name of sheep. In Scotland, 1997, an embryologist Ian Wilmut produced a sheep (Dolly) from the body of cell of an adult sheep.

3- What is glycolysis?

The process begins with glycolysis, in which the glucose molecules is broken in to two molecules of pyruvic acid.

4- How cheese is formed?

Cheese is formed when a milk protein is coagulated. This happens when the acid produced by lactic acid bacteria reacts with a milk protein.

5- How beer is produced?

Beer is produced from cereal grains which have been malted, dried and ground into fine powder.

6- Write uses of formic acid and ethanoic.

• Formic Acid,

Uses as textile, leather

treatment, electroplating, rubber manufacture.

• Ethanol,

Used as solvent, used in production of vinegar and beverages.

7- Define fermenter.

Fermenter is a device that provides, optimum environment to microorganisms to grow into biomass so that they can interact with a substrate, forming the product.

8- Write objectives of genetic engineering.

- Isolation of a particular gene or part of a gene for various purposes such as gene therapy
- Production of particular RNA and protein molecules.
- Treatment of genetic defects in higher organisms.

9. G₁MO stands for what?
G₁MO stands for

"Genetically Modified Organisms"

10. Define Beta endorphin.

Beta-endorphin, a pain killer produced by brain, has also produced by genetic engineering techniques.

11. Define interferon.

Interferon are anti viral protein produced by cells infected with viruses. In 1980, interferon was produced in genetically modified microorganisms for the first time.

12. What is urokinases enzymes?

The enzyme urokinases which is used to dissolve blood clots, has been produced by genetically modified microorganisms.

13. What is single cell protein and mini food?

* Single Cell Protein:

SCP is refers to protein content extracted from pure or mixed cultures of algae, yeasts, fungi or bacteria.

* Mini Food:

The protein content produced by microorganisms is also known as novel protein or mini food.

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CH NO. 18

PHARMACOLOGY

(i)

Pharmacology:

"Pharmacology is the study of drug composition, properties and medical applications"

Pharmacy:

"Pharmacy is the name of profession"

(ii)

Cardiotonic:

"Cardiotonic drugs are used to increase efficiency and improve the contraction heart beat muscle which leads to improve blood flow to all body parts"

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=(iii)=Drug:

"Any substance that, when absorbed into the body of living organism, alters the normal body function is called drug"

=(iv)=Analgesic:

"These are painkillers and they reduce pain"

example:

aspirin, paracetamol e.t.c.

Sedative:

"Sedative include sedation by reducing irritability or excitement"

example:

tetracycline, diazepam e.t.c.

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=(v)=Antiseptic:

"They reduce the possibility of infection on skin"

Antibiotic:

"Antibiotic inhibit or kill bacteria and treat bacterial infections"

example:

cephalosporin e.t.c.

=(vi)=Hashish:

"Hashish is a hallucinogen which is smoked - It is obtained from flowers, stems and leaves of marijuana plant - It is purplish - brown in color."

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=(vii)=

Pencilin is discovered:

.. " A
 Scottish biologist Sir Alexander
 Flemming first discovered the
 pencilin "

=(viii)=

Social Stigma:

" The addicts
 are very weak in their social
 behaviour because of this the
 society dislikes them and they
 face problems. These problems
 are called social stigma "

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=(ix)=

Vaccine:

" The material used to
 produce immunity to a disease
 by stimulating the production of
 antibodies "

=(x)=

Bactericidal Antibodie:

" The
 antibiotics that work by killing
 the bacteria "

Bacteriostatic Antibodie:

" The
 antibodies that work by stopping
 bacteria multiplying "

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-(xi)-

Antigen:

“ Pathogens contain special protein called antigen”

Antibodie:

“ When pathogens enter the body of host, these protein stimulate the immune response in host synthesis the antibodies”

-(xii)-

B-lymphocyte:

“ It recognize the weakend or dead pathogens as enemies and start producing antibodies against them. These antibodies remain in blood and provide protection against pathogens”

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