B6

Autumn Holiday Homework

Biology

Section - A

Q1) The number of modes by which animals reproduce are three.

Q2) Asexual reproduction is observed is sponge.

Q3) The main function of gaurdcells is to help with transpiration

Q4) Transpiration is regulated by the movement of gaurdcell

Q5) Ecosystem has two components biotic and abiotic

Section - B

Q6) Which chromosomes does the unfertilized egg contain?

Ans) The unfertilized egg contain x-chromosomes

Q7) Which hormones balances the proportion of salts in the blood.

Ans) Corctical hormones balances the proportion of salts in the blood.

Q8) What do you mean by reproductive health?

Ans) Reproductive health is a state of complete, mental and social well-being and not merely the absence of disease or infiremity in all matters relating to the reproductive system and to its fuction and processess

Q9) Which hormone is released by pancreas? What is its function?

Ans→ Insulin hormone is released by pancreas. Its functions are :-

(i) It lowers glucose from the blood stream.

(ii) It regulates the amount of sugar in the blood.

Q10) What is artificial ecosystem?

Ans→ Ecosystems that are made by man called for commercial or other benefits is known as an artificial ecosystem. These ecosystem are modified by humans for their own profit and can either be terrestrial or aquatic.

Q11) Differentiate between food chain and food web

Ans→

Food chain	Food web
Food chain is the linear sequence of organisms in which each organism eats the lower member and is itself eaten by the higher member.	Food web is a network of interconnecting food chains in a natural community of different organisms.

member

Q12) What are ecological pyramids ?

Ans→ The pyramid structure which is obtained when we illustrate the number of biomass or energy of different organisms at different trophic levels in an ecosystem is called ecological pyramids.

Q13) Name two plants which reproduce through spores ?

Ans→ Ferns and mosses reproduce through spores.

Q14) Why is regeneration considered as mode of reproduction?

Ans→ Regeneration is considered as a method of reproduction because it is the ability of an organism it is the ability of an organism to give rise to new individual organism from their body parts.

Q15) Which vegetative part is used in the propagation of bryophillum and mint ?

Ans→ For the propagation of bryophillym, leaf is used, while for mint, root is used.

Section-C

16) A mother is ~~afraid~~ angry at her child misbehaving. The child is also afraid of scolding. Which hormones would be released in both their bodies ? What will be the effect of the hormone ?

Ans→ When the mother is angry and the child is afraid more adrenalin would be released from adrenal gland. Due to this there will be heavy sweating and lowering of body temperature.

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17) a) Which organ is responsible for implantation of zygote.

Ans) Uterus is responsible for implantation of zygote.

b) State the function of fallopian tubes.

Ans) Functions of fallopian tubes are

* Fertilization occurs in fallopian tube
* It also conveys fertilized egg to the uterus.
* It collects ~~ovum~~ the mature ovum from ovaries and provide passage to the fertilized ovum to reach the uterus for implantation

18) What would be the ratio of chromosome number between an egg and its zygote? How is the sperm genetically different from the egg

Ans) The ratio of chromosomes number between egg and its zygote is 1:2. Sperms and eggs are genetically different in terms of nature of sex chromosomes. The sperm contain either X or Y-chromosomes whereas an egg always have an X-chromosomes.

19) How does the embryo developing inside the mother's womb obtain its nutrition?

Ans) The embryo grows inside the mother's womb and gets nutrition from the mothers blood through the tissue called placenta. The placenta is a temporary organ that connects the developing fetus to the uterine cavity of the mother via umbilical.

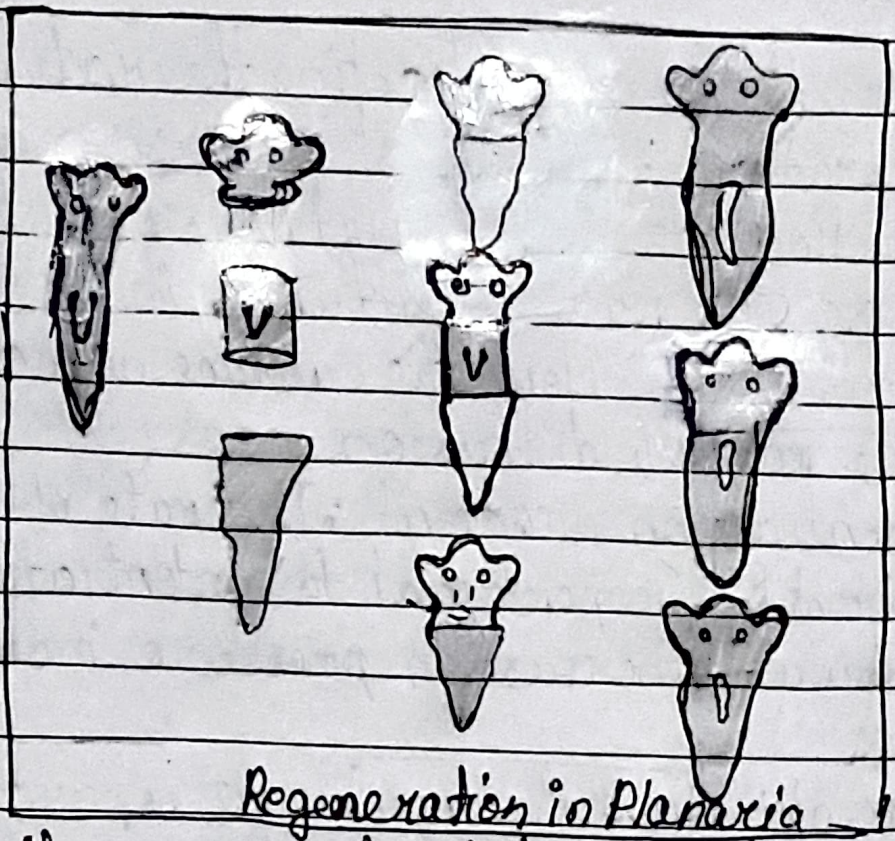
20) What changes are observed in the uterus subsequent to implantation of young embryo?

Ans) The uterine lining is thickened every month support the growing embryo. Followed by fertilization, placenta is developed which serve to provide nutrition and oxygen to developing embryo from the mother's blood. It is a disc embedded in the uterine wall and contains villi on the embryo's side of the tissues while blood spaces surrounding the villi are present on mother's side. Waste products of developing embryo are removed by transferring them into the mother's blood through the placenta.

21) Why are budding, and fragmentation and regeneration all considered as actual types of reproduction? With neat diagrams explain the process of regeneration in planaria.

Ans→ Budding, fragmentation and regeneration are considered as asexual types of reproduction because none of them includes gametes formation and fertilization. All of these give rise to offspring but single parent only.
Planaria exhibits regeneration as it has ability to grow the broken body part again. If the body of planaria cut into any number of pieces, each piece grows into a complete organism i.e reproduction through regeneration.

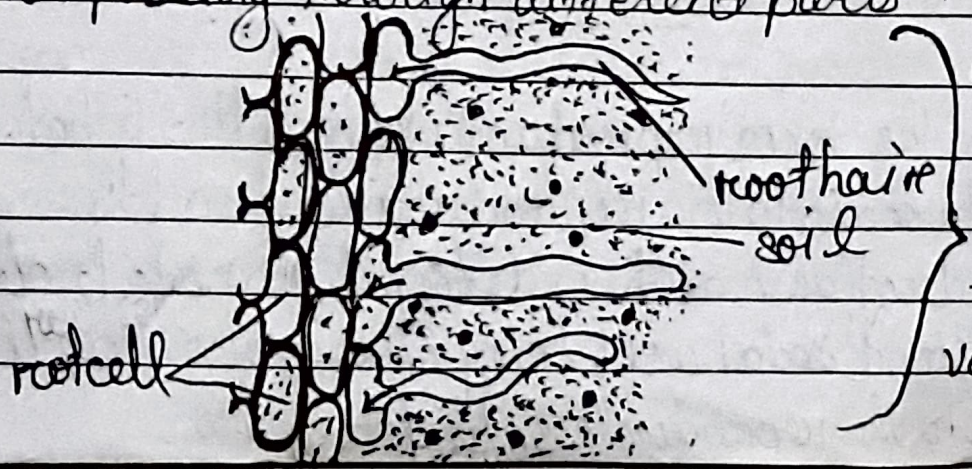
Regeneration is carried out by specialized cell which poliferate and produce large number of daughter cells. Different cells from the groupof daughter cells then differentiate into various cell types and tissues.



Regeneration in Planaria

22) Given there is an enlarged diagram of a part of the root. Draw arrows on the diagram to show the movement of water passing through different parts.

Ans)



23) Why plasma membrane is called semipermeable membrane?

Ans → Plasma membrane is known as semi-permeable membrane because it regulates the movement of substances from within to outside of the cell. This means the plasma membrane allows the entry of some substances while preventing the movement of some other substances.

24) What are the factors affecting the rate of diffusion?

Ans → 1) Temperature: The rate of diffusion is directly proportional to the temperature. As the temperature increases the rate of diffusion increases.

2) Surface area: More the surface area more will be the rate of diffusion

3) Concentration gradient: The rate of diffusion is directly proportional to contentration gradient.

4) Pressure: Increase in pressure increase diffusion rate

5) Permeability of the membrane separating the solutions. More permeable the more will be the diffusion.

Section D

25) Explain the term reproductive health. What should we do to maintain reproductive health.

Ans → Reproductive health is defined as a state of physical mental and social well-being of a person in all matters relating to the reproductive ~~health~~ system

at all stages of life.
The important conditions to maintain good reproductive health during adolscene are.
1) It is necessary to eat balanced during adolscence.
2) It is necessary to maintain personal hygiene during health adolscene.
3) It is neccessary to take adequate physical excercise during adolscence
4) It is necessary to avoid taking any drugs during adolescence

26) What is vegetative reproduction. Write two examples where it is used. State two reasons of practising vegetative propagation for giving same types of plants
Ans) Vegetative propagation is a method where new plants are produced by the vegetative parts of the plant i.e leaf, stem and root. Potato, mint, ginger, banana etc are reproduced by this method. Vegetative propagation can occure by natural methods as well as by artificial methods. Vegetative propagation is used in tuber of potato and the rhizome of ginger
Vegetative propagation can be used for the production of same types of plants because of the following reasons:

(i) The plants produced by vegetative propagation are genetically identical to their parents.

(ii) Plants produced by vegetative propagation required less effort as these plants are grown without seeds.

27) Reproduction is essentially a phenomenon that is not for survival of an individual but for the stability of a species. Justify.

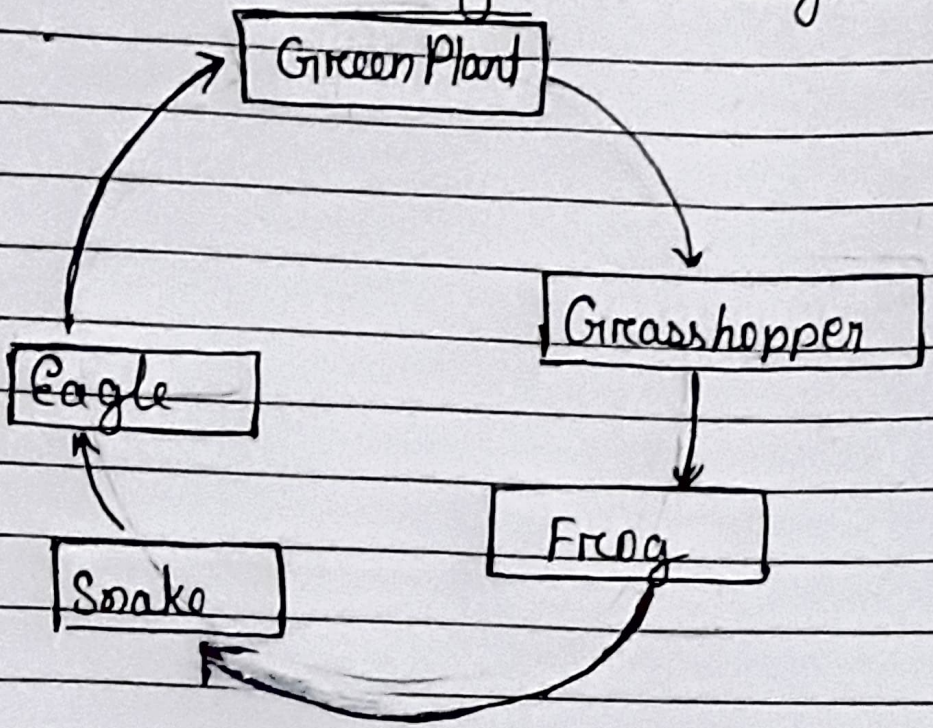
Ans→ During reproduction, the DNA is passed from one generation to another. This replication takes place takes place with little or no errors. DNA copying is done during reproduction with high consistency, which leads to stability of reproduction. Also, reproduction helps in replacing the aging population with new population and thus ensures the survival of the species. In the absence of reproduction. One particular species will disappear with time.

28) What is a clone? Why do offsprings formed by asexual reproduction exhibit remarkable similarity

Ans→ Clone is an organism which is genetically identically with its parent organism. Cloning is an artificial method of asexual reproduction. Offspring produced by asexual reproduction exhibit remarkable similarities as no new combination of genes takes place. The parental set of genes is distributed in the off spring.

Q30) What is a food chain? Write a five-step food chain found in grassland with frog as one of the members. What will happen to organisms at different trophic levels if all the frogs are removed?

Ans) Food chain is the linear sequence of organisms in which each organism eats the lower member and is itself eaten by the next higher member.



If all frogs are removed, grasshopper increases in number as there is no predator for them. They will eat more grass so producers becomes less. Snakes will die because their prey i.e frog are not there to eat. Number of eagle is also affected as snakes are reduced. So, Eagle will also decrease in number.