West Bengal Madhyamik Board Class 10 Life Science 2018 Question Paper with Solutions

Group-A
(Answer all the question of this section)

1. Mention the respective serial number of the correct answer for each question and give the answer in complete sentence. [1x15=15]

1.1 The tentacles on leaves of an insectivorous plant, called sundew bend will trap the insect as soon as they come in contact with the insect's body. This is_____

a. Seismonasty
b. Thermonasty
c. Photonasty
d. Chemonasty

Answer: The tentacles on leaves of an insectivorous plant, called sundew bend will trap the insect as soon as they come in contact with the insect body. This is_(a) seismonasty_.

1.2 In the case of women, the Follicle Stimulating Hormone that stimulates the Graafian Follicle of the Ovary to secrete the hormone is_____

a.TSH
b. ADH
c. Oestrogen
d. ACTH

Answer: In the case of women, the Follicle Stimulating Hormone that stimulates the Graafian Follicle of the Ovary to secrete the hormone is (c) Oestrogen.

1.2 **Which one of the following is the correct reflex arc?**

a. Receptor → Effector → Efferent nerve→Nerve centre → Afferent nerve
b. Nerve centre→ Receptor →Afferent nerve- Effector→ Efferent nerve
c. Efferent nerve → Receptor →Afferent nerve- nerve centre-Effector
d. Receptor→ Afferent nerve →Nerve centre→ Efferent nerve →Effector

Answer: (d) Receptor→ Afferent nerve →Nerve centre→ Efferent nerve →Effector is the correct reflex arc

1.4 In which stages of mitosis cell division, the nuclear membrane and nucleolus are seen to disappear?

a. Anaphase
b. Prophase
c. Metaphase
d. Telophase

Answer: In (b) Prophase stage of mitosis cell division, the nuclear membrane and nucleolus are disappearing.

1.5 Which of the following is not a structural component of the DNA?

a. Deoxyribose sugar
b. Uracil base
c. Thymine base
d. Phosphoric acid

Answer: (b) Uracil base is not a structural component of the DNA

1.6 Which one of the following statements is correct regarding sexual reproduction?

a. Haploid gamete formation is essential for sexual reproduction
b. Sexual reproduction depends only on mitosis
c. In sexual reproduction, offspring could be produced from a single parental organism
d. The offspring produced in sexual reproduction are genetically identical with the parental organism

Answer: (a) Haploid gamete formation is essential for sexual reproduction is the correct statement regarding sexual reproduction.

1.7 Which one of the following is the genotypic ratio at F_2 generation of Mendel's monohybrid cross?

a. 1:2:1
b. 3:5:1
c. 9:3:3:1
d. 2:1:2

Answer: (a) 1:2:1 is the genotypic ratio at F_2 generation of Mendel's monohybrid cross.

1.8 Which one of the following is not controlled by the autosomal gene of humans?

a. Roller tongue
b. Haemophilia
c. Thalassaemia
d. Attached ear lobe

Answer: (b) Haemophilia is not controlled by the autosomal gene of humans.

1.9 What would be the phenotypic ratio in the F_2 generation of a monohybrid cross in case of incomplete dominance?

a. 3:1
b. 2:1:1
c. 9:3:3:1
d. 1:2:1

Answer: (d) 1:2:1 is the phenotypic ratio in the F_2 generation of a monohybrid cross in case of incomplete dominance.

1.10 Which one of the following is the intraspecific struggle for the same food?

a. Struggle between Vulture and Hyaena
b. Struggle between Eagle and Kite
c. Struggle between members of Rohu fish in a pond
d. Struggle between Egret and Kingfisher

Answer: (c) Struggle between members of Rohu fish in a pond is the example of the intraspecific struggle for the same food.

1.11 Which of the following changes did not occur during the evolution of a horse?

a. Lengthening of limb
b. Increase in the length and thickness of all digits in limbs
c. Increase in the length and thickness of only the third digit in limbs
d. Increase in size of the whole body

Answer: (d) Increase in size of the whole body is a change that did not occur during the evolution of a horse.

1.12 According to the opinion of the scientists the prebiotic Environment of the earth that led to the origin of life was like_____

a. Hot dilute soup in the seawater
b. Cold dilute soup in the seawater
c. Cold dilute soup in the river water
d. Hot dilute soup in the groundwater

Answer: (a) Hot dilute soup in seawater is the prebiotic environment of the earth that leads to the origin of life.

1.13 Which one of the following microbes take part in nitrification?

a. Nitrosomonas
b. Azotobacter
c. Pseudomonas
d. Thiobacillus

Answer: (a) Nitrosomonas bacterium species are the microbes that take part in nitrification.

1.14 An example of Ex-situ conservation is ____

a. Suderban Tiger Reserve
b. Corbet National Park
c. Nilgiri Biosphere Reserve
d. Cryopreservation

Answer: (d) Cryopreservation is an example of Ex-situ conservation.

1.15 Which of the following effects is the result of water pollution?

a. Global warming
b. Eutrophication
c. Deafness
d. Bronchitis

Answer: (b) Eutrophication effect is the result of water pollution.

Group-B

2. Give answers to any 21 questions out of the 26 as instructed. **[1 x 21=21]**

Fill in the blanks with proper words in the following sentences [any 5]

2.1 Due to deficiency of Iodine, the synthesis of _____ hormone is hampered.

Answer: thyroid

2.2 During embryonic development and growth in vertebrates _____ cell division takes place.
Answer: mitosis

2.3 The different _____ of pea plant may show the same phenotype.

Answer: genotype

2.4 Homologous organs evolve due to _____ evolution.

Answer: divergent

2.5 The name of one exotic species, that affects the local biodiversity, is ___

Answer: Amazon sailfin catfish

2.6 The line droplets of smokes, ashes, dust, pollen grains etc., suspended in air are collectively called _____, which cause various lung diseases.

Answer: air pollutants

Decide whether the given statements are true or false (any five). [1x5=5]

2.7 Hypothalamus helps to maintain body balance in humans.

Answer: True.

It is responsible for maintaining your body's internal balance, which is known as homeostasis.

2.8 In DNA, Adenine is linked with Guanine by hydrogen bonds.

Answer: False.

In DNA, the Adenine always base pair with Thymine, and Cytosine and Guanine always base pair together, via hydrogen bonds.

2.9 In his monohybrid cross experiment, Mendel obtained 75% pure tall Pea Plants in the first filial generation.

Answer: False.

All plants of the first filial generation were tall. That is, in his monohybrid cross experiment, Mendel obtained 100% pure tall Pea Plants in the first filial generation.

2.10 In Lamarck's opinion, organisms can acquire any particular inheritable physical trait according to their need.

Answer: True

It is possible for an organism to pass on to its offspring, physical characteristics that the parent organism has acquired via use or disuse during its lifetime. This is also known as the inheritance of acquired characteristics.

2.11 Acid rain is caused by SO_2 and NO_2 gases formed due to air pollution.

Answer: True

The causes of acid rain are Sulphur and Nitrogen particles which get mixed with the wet components of rain. Sulphur and Nitrogen particles which get mixed with water are found in two ways either man-made i.e as the emissions are given out from industries or by natural causes like how a lightning strike in the atmosphere releases nitrogen ions and sulphur is released from volcanic eruptions.

2.12 Auxin helps the seed to germinate by breaking off dormancy

Answer: False

Auxin does not help in breaking seed and bud dormancy.

Match the words in Column-A with the words that are most appropriate in Column-B and rewrite the correct pair by mentioning the serial number of both the columns (any five) [1x5=5]

Column A	Column B
2.13 CSF	(a) Large colloidal aggregates
2.14 Crossing over	(b) Active participation of local people for restoration of forest
2.15 Haemophilia	(c) Meiosis
2.16 Coacervate	(d) Movement of daughter chromosomes towards poles
2.17 JFM	(e) Disorder caused by recessive gene located at human X-chromosomes
218 Grafting	(f) Supplies nutrients to brain cells
	(g) Stock and Scion

Answer: 2.13-(f) , 2.14- (g) , 2.15- (e), 2.16 - (a) , 2.17-(b), 2.18-(c)

Answer in a single word or a single sentence (any six) [1x6=6]

2.19 Choose the odd one and write it :
Dwarfism, Goiter, Thalassaemia, Diabetes Mellitus

Answer: Thalassaemia is the odd one out. Rest are all caused by hormonal imbalance.

2.20 Mention one function of lens of eyeball.

Answer: The lens of the eyeball helps to focus light onto the retina and also helps the eye to focus on objects at various distances.

2.21 A pair of related terms is given below. On the basis of relationship in the first pair write the suitable word in the gap of the second pair.

Mitosis: Radicle :: _____ :: Spore Mother: Cell

Answer: Mitosis: Radicle ::Meiosis :: Spore Mother: Cell

2.22 In the case of guinea pig, see whether the phenotype of the two genotypes bbRR and bbRr is the same.

Answer: No, in the case of the guinea pig, the phenotype of the two genotypes bbRR and bbRr is not the same.

2.23 Write the phenotypic ratio obtained in the F_2 generation of Mendel's Dihybrid cross experiment.

Answer: The phenotypic ratio obtained in the F_2 generation of Mendel's Dihybrid cross experiment is 9:3:3:1.

2.24 What is one adaptation of the Sundari plant for salt tolerance?

Answer: Mangroves or the Sundari plants have certain mechanisms to adapt to salt tolerance. One such mechanism is that they excrete salt that is in much higher concentration than seawater, through glands on their leaves.

2.25 Among the following four terms one includes the other three. What is the term? Write it.
Overall knowledge regarding local biological resource, PBR,
Traditional belief regarding local biological resource, Sustainable use of Biological resource.

Answer: PBR or the "People's Biodiversity Registers" is the term that includes the other three.

2.26 Name one endangered animal conserved at Singalila National Park.

Answer: Red Pandas are one endangered animal conserved at Singalila National Park.

Group-C

Answer any 12 questions out of the 17 questions given below in 2-3 sentences: [2x12=24]

3.1 Reflex actions occur when the following incidents happen in the everyday life of a human. Give the importance of these two reflex actions:
(i) When food particles enter into the trachea
(ii) When foreign particles enter inside the naval cavity

Answer: (i) Trachea is a long tube passing through the mid-thoracic cavity. The epiglottis, a flap in the throat, separates both the oesophagus and trachea, thus preventing the food from entering the windpipe. If the food goes down the wrong pipe or the trachea instead of the oesophagus, the healthy person would feel extremely uncomfortable and could stimulate a gag as well as a coughing fit. If these reflexes do not clear the trachea, then it could also finally result in choking.

(ii) There are hairs inside the nose, which prevent large particles from entering the lungs. Meanwhile, the nasal mucosa and cilia prevent the pathogens and dust from reaching the lungs. Sneezing is the best way to remove foreign particles that irritate the nasal mucosa.

3.2. To rectify which defects in the eye's vision, spectacles of convex and concave are used?

Answer: Hyperopia or Hypermetropia is an eye defect that can be cured by using powered convex lenses. Likewise, there are other eye defects like presbyopia and myopia. Find here details about eye defects and their correction.

3.3. Name the hormones related to the following functions

(i) Regulation of sugar level in the blood
(ii) Stimulation for the secretion of hormones from the Thyroid gland
(iii) Causing the growth of Corpus Luteum and stimulating the secretion of progesterone hormone in the female body
(iv) Increasing blood pressure due to anxiety

Answer: (i) Insulin and glucagon are hormones that help regulate the body's glucose levels.

(ii) The thyroid-stimulating hormone regulates the production of thyroid hormones, thyroxine and triiodothyronine, by the thyroid gland.

(iii) Luteinising hormones are called gonadotropin hormones, produced and released by the group of cells of the anterior pituitary gland. In females, the luteinising hormone causes ovulation of the Graafian follicles. Also, it maintains the corpus luteum, which is developed from the traces of the Graafian follicles after the ovulation process that produces progesterone.

(iv) Adrenaline hormone increases the blood pressure due to anxiety.

3.4 A resting animal attempts to move. Give four probable reasons behind it.

Answer: A resting animal attempts to move for these four probable reasons as given below:

- To find food and water
- In search of a suitable habitat
- To escape from predators
- In search of a mate

3.5 What are the differences between the autosome and the sex chromosome of human-based on the following features?
(i) Nature
(ii) Number

Answer: (i) Find here the difference between the autosome and the sex chromosome of human.

(ii) A human cell contains 23 pairs of chromosomes (2 x 23=46), of which 22 pairs are autosomes, and 1 pair is a sex chromosome.

3.6 Write short notes on the processes of asexual reproduction in Spirogyra and Planaria.

Answer: Fragmentation is the type of asexual reproduction exhibited by Planaria. In this, the parent body breaks into several pieces where each piece grows into a new individual. The detachment of the body parts is intentional. Meanwhile, Spirogyra undergoes vegetative, asexual and sexual reproduction. The life cycle of Spirogyra is haplontic, i.e. the dominant stage is free-living haploid (n) gametophyte, and the sporophyte is represented only by the diploid zygote (2n). Asexual reproduction is found in few of the species of Spirogyra.

Asexual reproduction is caused by the formation of zygospores, akinetes or aplanospores.

- Formation of aplanospores occurs under unfavourable conditions. The protoplast shrinks and forms a wall around it. This results in the formation of aplanospores.
- Akinetes are also formed similarly, but they have a thicker cell wall of cellulose and pectin.
- Akinetes and aplanospores are non-motile spores, which develop into a new filament under favourable conditions after the parent filament decay.
- Zygospores are also known as parthenospores**.** These gametes failed to fuse during sexual reproduction and develop into a new filament asexually.

3.7 Which are the two changes related to vision and bones of late adulthood or senescence phase of human development?

Answer: Senescence is a process in which cells reach permanent growth arrest without cells' death as the whole cell division process comes to a halt. It can either occur at the cellular level, or senescence of the entire organism can take place. It is characterised by a gradual functional decline eventuating heterogeneously across organ systems, leading to a progressive deterioration ultimately leading to dysfunctioning of tissues.

During the senescence phase of human development or late adulthood, about 10% of the people may see without the lenses. Some common eye defects for these people include cataract, glaucoma or presbyopia.
Meanwhile, as we age, we may have to undergo the effects of osteoporosis and osteoarthritis. Bone loses the minerals and tends to become more fragile. Also, the ligaments and the connective tissue between the bones become more flexible and less elastic.

3.8 With the help of a cross, determine how the sex of offspring of a human is identified.
Answer: For the example of sex determination of offspring using a cross, check here.
3.9 One day students read an article in a newspaper about Thalassemia and were very scared to know the fate of a thalassemia patient. Give a list of the kind of measures they have to use to eradicate this disease from the population.

Answer: Thalassemia is an inherited blood disorder wherein the body produces an inadequate amount of haemoglobin. Haemoglobin is a protein molecule that carries oxygen to the red blood cells. Also, find more details about the treatment and prevention of Thalassemia.

3.10 Find the probable gametes to be produced from the hybrid plant YyRr produced at F_1 generation in a dihybrid cross experiment.

Answer: Find here details about the probable gametes produced from the hybrid plant YyRr produced at F_1 generation in a dihybrid cross experiment.

3.11 Write the two adaptive significance of air sacs for pigeons.

Answer: Given here is the adaptive significance of air sacs for pigeons. Air sacs, the air filled extension of the breathing apparatus of the mammals are found attached to the lungs of the pigeons. It is seen that the lungs of the pigeon obtain fresh air during the process of both exhalation and inhalation, as the air sacs perform all the "pumping" and the lungs only absorb oxygen. These air sacs work to boost the respiratory efficiency by providing a large surface area for gas exchange.

3.12 Which are the vestigial organs present in the vertebral column and alimentary canal in the human body? Name one of each.

Answer: Organs that have “lost” their function throughout our evolution are called vestigial organs. The Coccyx at the end of the vertebral column represents the vestigial tail of a human. Meanwhile, an appendix can be considered as one of the vestigial organs present in the alimentary canal of a human.

3.13 Write in chronological sequence the names of four main fossil ancestors during the course of evolution of the horse.

Answer: Eohippus found some 55 million years ago, said to be the first ancestor of the horse. Then the fossil of Mesohippus was found, followed by that of Hipparion and the recent horse, known as Przewalski’s horse to Equus horse.

3.14 “Nitrogen Cycle is affected due to human activities”-State two phenomena to justify it.

Answer: Nitrogen Cycle is a biogeochemical process which transforms the inert nitrogen present in the atmosphere to a more usable form for living organisms. Like every other biogeochemical cycle, this is also impacted by human activities. See here, two phenomena that can disrupt the nitrogen cycle. Human activities that convert the nitrogen in the atmosphere to more reactive forms have exponentially increased nitrogen fixation, thus altering the natural nitrogen cycle. Combustion of fossil fuels such as coal, oil, and natural gas will disrupt the nitrogen cycle, by releasing nitric oxide into the atmosphere, resulting in adverse environmental impacts such as the smog or rain, global warming, adverse effect on biodiversity, human health and more. Addition of Nitrogen into fertilizers is another phenomenon that will affect the nitrogen cycle. Excess nitrogen in the atmosphere will alter the natural nitrogen cycle.

3.15 What would be the environmental consequences resulting from recurrent destruction of wetlands and depletion of the number of agricultural lands?

Answer: Wetland destruction and depletion of agricultural lands over the years could cause significant disasters. One of the significant advantages of the wetlands to the ecosystem were flood control, water purification, groundwater

replenishment, climate change mitigation and adaptation. So, the depletion of these wetlands could result in environmental and economic effects such as loss of biodiversity, flooding caused by climatic change, disruption of the water cycle, etc. The cause of depletion of agricultural land is often the result of land degradation, resulting in loss of nutrients also adding to agriculture and food crisis, biodiversity decline and destruction of livestock.

3.16 What are the harmful impacts that sound pollution can exert on the human body's ears and heart?

Answer: Prolonged exposure to loud sound or noise pollution can harm human health. Other than an annoyance, loud noise can cause irritation and mental tension and emotional disturbance at work. Apart from these, the auditory effect includes fatigue and deafness due to continued exposure to noise pollution. It also increases the risk of heart diseases, as the noises of decibels higher than 60 can cause high blood pressure, irregular heart rate, rise in cholesterol, heart attacks, quicker pulse rates and so.

3.17 Mention the role of biodiversity in the following two aspects of the progress of human civilization:
(i) Production of foods
(ii) Manufacturing of medicines

Answer: (i) Biodiversity can be considered the basis or foundation for agriculture and food production, thus making way for the farming systems to evolve. Agricultural biodiversity pertains to plants' genetic resources such as crops, wild plants that are harvested and managed, wild animals hunted for food and so on. Agricultural biodiversity provides food and raw materials for food. It also contributes to food security and nutrition.

(ii) Biomedical research mainly relies on the natural supply of plant and animal materials and microbes to understand humans' physiology and treat diseases. Numerous medicines, such as antibiotics and painkillers, are often resourced from plants and animal sources. It is seen that recent discoveries also allow for the development of medicine and the treatment of diseases.

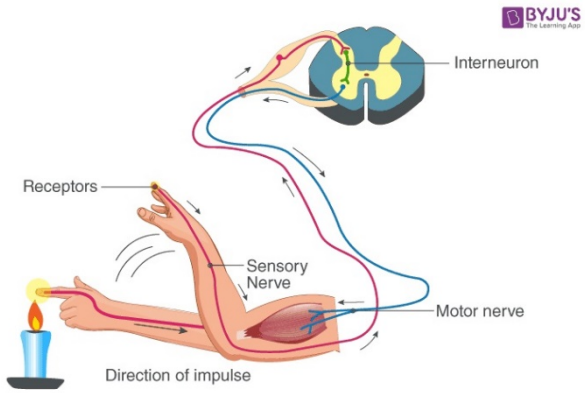
Group- D

[Long Answer Type Questions]

4. Answer 6 questions or their alternatives from those given below [5x6=30]

4.1 Draw a diagram of the reflex arc and label the following parts:
(a)Receptor
(b)Sensory Nerve
(c)Nerve centre
(d) Motor Nerve

Answer:

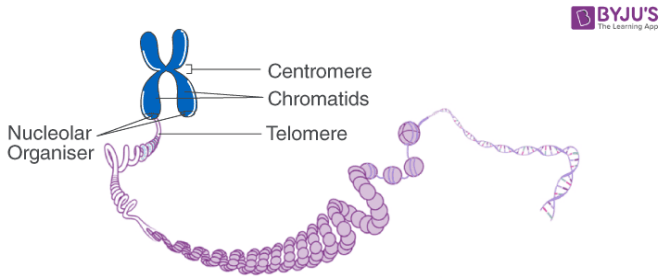


Or

Draw the morphology of an ideal eukaryotic chromosome and label the following parts: [3+2=5]

a. **Chromatid**
b. **Centromere**
c. **Nucleolar Organiser**
d. **Telomere**

Answer:



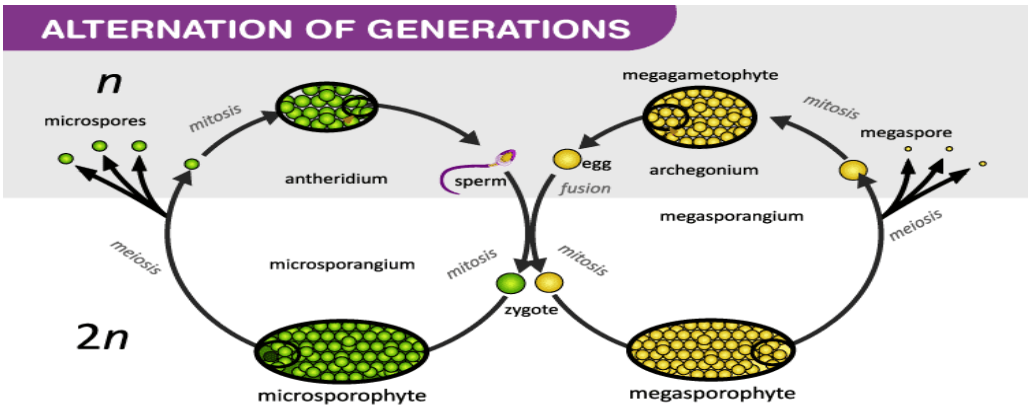
4.2 What type of chemical components are synthesised in different stages of interphase in a cell cycle? What might happen if normal control at different points of a cell cycle is lost? [3+2=5]

Answer: Cell cycle or cell division refers to the ordered series of events that take place in a cell leading to its maturity and subsequent division. These events include duplication of its genome and synthesis of the cell organelles followed by division of the cytoplasm. A typical eukaryotic cell cycle is divided into two main phases, the Interphase and M-phase. However, in case of unchecked cell division or if normal control at different points of a cell cycle is lost, it could result in Cancer.

Or

Depict the alternation of generation in a fern with the help of a flowchart. "In case of Prophase or Telophase changes of opposite nature happens". Write two such changes. [3+2=5]

Answer: Zygotene and Diplotene are the contrasting stages of prophase-1 where changes of opposite nature happens. Check out details here. During telophase, the chromosomes that cluster at the two poles start coalescing into an undifferentiated mass, as the nuclear envelope starts forming around it. The nucleolus, Golgi bodies and ER complex, which had disappeared after prophase start to reappear. Telophase is followed by cytokinesis, which denotes the division of the cytoplasm to form two daughter cells. Thus, it marks the completion of cell division.



4.3 Colour of seed or shape of seed of a pea plant-taking these two characters Mendel performed Dihybrid cross. Write the genotypes of pea plant having yellow and round seeds produced in the F_2 generation of the experiment. State the law of independent assortment of Mendel. [2+3=5]

Answer: Check out details of Mendel's dihybrid cross here. The law of independent assortment states that the alleles of different genes are inherited independently within the organisms that reproduce sexually.

Or

State the opposite traits for each of the characters of flowers of the pea plant chosen by Mendel for his experiment. "For developing the scientific ideas on heredity the experiments performed by Mendel on pea plants are epoch making"-Mention three reasons behind his success in performing the experiment. [2+3=5]

Answer: For monohybrid cross experiment, Mendel took two pea plants of opposite traits (one short and one tall) and crossed them, while for Dihybrid cross, he crossed wrinkled-green seed and round-yellow seeds. Check out details of Mendel's experiments here.
Also, given here are reasons for success of Mendel's experiment:

- Took pea plants that are self pollinating and has contrasting characters
- Studied only one character of a hybrid at a time
- Kept accurate quantitative and qualitative accounts

4.4 How are the special features of RBC in camels related to their ability to withstand extreme loss of water? Give examples of the ways Chimpanzees solve their problems intelligently for procuring food and preventing disease. [2+3=5]

Answer: The RBCs of camels are oval shaped with a nucleus in them unlike in other mammals, which are circular and enucleated. This helps them to withstand great variation in osmotic pressure. These cells can swell and increase to twice the size of the original volume after rehydration. This oval shape is so that it can easily facilitate their flow in a dehydrated state. These cells are also more stable in order to withstand high osmotic variation without rupturing when drinking large amounts of water. Also, the viscosity of the blood in the camel remains the same, while the haemoglobin also remains normal.
Meanwhile, chimpanzees are also prone to ill -health like any human being. They are also known to self-medicate themselves to prevent diseases. One such medication they take is the Aspillia leaves, known for its pharmacological effects. Unlike other food items they take, Chimpanzees will chew these leaves whole, so that it can help them to purge the parasites in their stomach. Intelligent Chimps also eat tortoises by smashing their shells on trees and by storing the food like humans. They have long and sharp canine teeth that help them in tearing into their prey like other small primates, rodents, and some birds.

Or

Explain the process of Natural Selection as proposed by Darwin with the help of a suitable example. What are the roles of swim bladder in the aquatic adaptation of Rohu fish? [3+2=5]

Answer: The concept of natural selection is 'survival of the fittest', and individuals who are unfit were weeded out. In evolution, all that matters is how an organism ensures its existence in its environment. It is not about perfection. For example, take a look at thermophilic bacteria and archaebacteria. Evolution of archaebacteria resulted in the thermophiles. But we can't say it is the better version of archaebacteria. This is because the archaebacteria still exist and both of these species are best suited to thrive in their own environment. Meanwhile, see how the swim bladder also known as air bladder or buoyancy organ located in the body cavity of the Rohu fish helps it in its aquatic adaptation. The swim bladder

contains gas, usually oxygen. This bladder works as a hydrostatic or ballast organ, thus enabling the Rohu fish to maintain its depth in the water without floating upward or sinking.

4.5 "A lot of indiscriminate activities of humans pollute the environment"- Support the statement by giving three examples in favour of it. Give examples of a national park and a biosphere reserve in West Bengal. [3+2=5]

Answer: West Bengal is the place for illicit wildlife trade, which poses a great challenge to the forests of West Bengal. Also, poaching and cutting of woods have affected the mangrove forests, the Sunderban of West Bengal. Biosphere reserves, in the meanwhile, also maintain healthy ecosystems by preventing soil erosion, protecting water springs, and maintaining the decomposers to maintain the soil quality. Also, initially, many of the National Parks were wildlife sanctuaries.

After the adoption of conservative measures by the Indian Government, there was a 30% rise in the number of tigers in the year 2015. Additionally, sanctuaries are naturally occurring areas that are meant to protect the endangered species from hunting, poaching and predation. Years of abuse from man and nature such as Illicit logging, mostly for building materials to house the region's booming population, has also cut down on the periphery of the forest.

Or

Show the steps of a Nitrogen cycle with the help of a flow chart [3+2=5]

Answer: Find details about Nitrogen Cycle and the flowchart related to it.

4.6 What environmental factors may cause cancer in humans? If the water level in the sea increases enormously due to global warming,what problems will the humans and bio-diversity of Sunderbans face?

Answer: The impact of radiation on health depends on a number of factors such as the energy, types and amount of radiation, the age of the individual and the body part exposed. Ionizing radiation may cause the following biological effects in human beings. Carcinogenic effects – Ionizing radiation increases the probability of most forms of cancer.

Meanwhile, chemical contaminants that occur in drinking water throughout the water supply systems ranging from barely detectable amounts to levels could also possibly threaten human health. Chemicals react in the body to damage cells and cause illness such as Cancer.
With the encroaching sea rising and resulting in increase of water salinity, many tree species of higher value were destroyed. The upstream dams on rivers in India reduced the flow of freshwater into the Sunderbans, even as the sea-level rise resulted in climate change, which flushed in more salt water into the mangroves. This proves disastrous for the mangroves.

Or

Mention the in-situ measures adopted for conservation of lion in Gir National park of India. What environmental problems may arise in a locality due to the ever-increasing human population? [3+2=5]

Answer: Gir forest is a natural habitat of Gujarat, India where Asiatic lions are found. Hence, it comes under the status of Protected Area. Despite this threat to the habitat and the lion population, it still persists. Poaching and degradation of the habitat are causes for destruction of the Gir forest and the lions, there. They have to be protected well. Find here some measures to conserve the lion in Gir National Park of India.

In-situ is the method of conserving all the living species, especially the wild and endangered species in their natural habitats and environment. In-situ conservation of Biodiversity includes biosphere reserves, national parks, wildlife sanctuaries, etc. Gir forests have skilled and dedicated forest rangers who have put a stop to poaching to a large extent. They have a patrol based monitoring system. Veterinary support as well as zoo-keeping facilities are provided.

Environmental problems may also arise in a locality due to the ever-increasing human population. It gives rise to issues such as loss of plants and other wildlife species, result in increase of greenhouse gas emissions, lead to scarcity of water, malnourishment and inadequate shelter are other issues.