

KOTHARI INTERNATIONAL SCHOOL, NOIDA
PREBOARD EXAMINATION-1, SESSION: 2025-26
GRADE: 11 SUBJECT: BIOLOGY (044)
SET A
ANS KEY

DAY & DATE: WEDNESDAY/11th FEBRUARY, 2026

MAXIMUM MARKS: 70

TIME ALLOTTED: 3 HOURS

NAME: _____

ROLL NO: _____

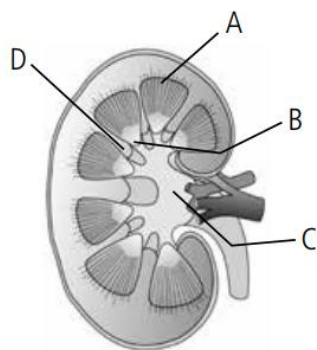
GENERAL INSTRUCTIONS:

- (i) All questions are compulsory.
- (ii) The question paper has five sections and 33 questions. All questions are compulsory.
- (iii) Section–A has 16 questions of 1 mark each; Section–B has 5 questions of 2 marks each; Section–C has 7 questions of 3 marks each; Section–D has 2 case-based questions of 4 marks each; and Section–E has 3 questions of 5 marks each.
- (iv) There is no overall choice. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.
- (v) Wherever necessary, neat and properly labeled diagrams should be drawn.

SECTION – A

Q1.	Which one of the following represents a scientific name correctly? (a) <i>Mangifera Indica</i> (b) <i>Mangifera indica</i> (c) <i>mangifera indica</i> (d) <i>mangifera Indica</i> (b) <i>Mangifera indica</i>	(1)
Q2.	Choose the correct statement. (a) Lichen is a composite organism formed by the symbiotic association of an algae and a protozoan. (b) <i>Paramecium</i> and <i>Plasmodium</i> belong to the same kingdom as that of <i>Penicillium</i> . (c) <i>Nostoc</i> and <i>Anabaena</i> are decomposers belonging to Kingdom Protista. (d) <i>Euglena</i> belonging to Kingdom Protista acts like a predator of small organisms in the absence of light.	(1)

	d) Euglena belonging to Kingdom Protista acts like a predator of small organisms in the absence of light.	
Q3.	<p>At which stage of meiosis does the genetic constitution of gametes is finally decided?</p> <p>(a) Metaphase-I (b) Anaphase-II (c) Metaphase – II (d) Anaphase -I</p> <p>soln.(d): The paternal and maternal chromosomes of each homologous pair segregate during anaphase I independently of the other chromosomes. Anaphase I is the cytological event that corresponds to Mendel’s law o’f independent assortment. Although the paternal and maternal chromosomes of a homologous pair have the genes for the same traits, either chromosome of a pair may carry different alleles of the same genes. Therefore, independent assortment of homologous chromosomes in anaphase I introduces genetic variability.</p>	(1)
Q4.	<p>Which of the following hormones is not secreted by anterior pituitary?</p> <p>(a) Growth hormone (b) Follicle stimulating hormone (c) Oxytocin (d) Adrenocorticotrophic hormone</p> <p>Ans: (c) The pars distalis region of pituitary, commonly called anterior pituitary, produces 6 Growth Hormone (GH), Prolactin (PRL), Thyroid Stimulating Hormone (TSH), Adrenocorticotrophic Hormone (ACTH), Luteinizing Hormone (LH) and Follicle Stimulating Hormone (FSH). Neurohypophysis (pars nervosa) also known as posterior pituitary, stores and releases two hormones called oxytocin and vasopressin, which are actually synthesised by the hypothalamus and are transported axonally to neurohypophysis.</p>	(1)
Q5.	<p>One of the common symptoms observed in people infected with Dengue fever is</p> <p>(a) significant decrease in RBC count (b) significant decrease in WBC count (c) significant decrease in platelets count (d) significant increase in platelets count</p> <p>Ans: (c) One of the common symptoms observed in people infected with Dengue fever is significant decrease in platelets count.</p>	(1)
Q6.	<p>Which part of the skull is movable?</p> <p>(a) Nasal Turbinates (b) Lower jawbone (c) Septal bone (d) Upper jawbone</p> <p>(b) Lower jawbone</p>	(1)



- (a) A is medullary pyramid; B is minor calyx ;C is renal pelvis;D is renal column
 (b) A is minor calyx ;B is medullary pyramid; C is renal pelvis;D is renal column
 (c) A is renal pelvis; B is medullary pyramid; C is minor calyx ;D is renal column
 (d) A is renal column; B is medullary pyramid; C is minor calyx ;D is renal pelvis

(a)A is medullary pyramid; B is minor calyx ;C is renal pelvis;D is renal column

Q12. Which one of the following is oviparous?

- (A) Platypus
 (B) Flying fox (Bat)
 (C) Elephant
 (D) Whale

Answer:

Option (A) is correct.

Explanation: Platypus is an example of egg laying mammal or showed oviparity.

(1)

Directions: In the following questions, A statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

- (A) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
 (B) Both Assertion (A) and Reason (R) are true but Reason (R) is NOT the correct explanation of Assertion (A).
 (C) Assertion (A) is true but Reason (R) is false.
 (D) Assertion (A) is false but Reason (R) is true.

Q13. Assertion (A): Glucagon is known as a hyperglycemic hormone.

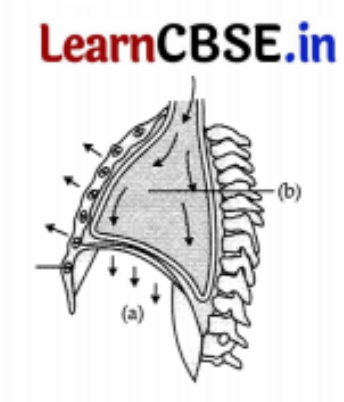
Reason (R): Glucagon stimulates the liver to convert stored glycogen into glucose and increases the level of blood glucose.

Answer:

Option (A) is correct.

Explanation: Glucagon is known as a hyperglycemic hormone because glucagon stimulates the liver to convert stored glucagon into glucose and increases the level of blood glucose.

(1)

Q14.	<p>Assertion (A) : Human skull is described as dicondylic. Reason (R) : It articulates with the first vertebrae of the vertebral column by means of two occipital condyles.</p> <p>Answer: Option (A) is correct. Explanation: Human skull is described as dicondylic because it articulates with the first vertebrae of the vertebral column by means of two occipital condyles.</p>	(1)
Q15.	<p>Assertion (A): Palmitic acid is an unsaturated fatty acid. Reason (R) : These are fatty acids without double bond.</p> <p>Answer: Option (D) is correct. Explanation: Palmitic acid is a saturated fatty acid. These are fatty acids without double bond.</p>	(1)
Q16.	<p>Assertion (A): Hypothalamus is called “thermostat” of the body. Reason (R): It keeps body temperature at roughly 37°C by means of a complex thermostat system.</p> <p>Answer: Option (A) is correct. Explanation: Hypothalamus is a thermoregulatory centre. Hence, it is called the “thermostat” of the body. It keeps body temperature at roughly 37°C using a complex thermostat system.</p>	(1)
SECTION B		
Q17.	<p>Why have unicellular algae not been kept in kingdom Protista by Whittaker?</p> <p>Answer: A distinction between unicellular and multicellular organisms is not possible in case of algae. It is because of this unicellular green algae have not been included in kingdom Protista by Whittaker.</p>	(2)
Q18.	<p>Study the given diagram:</p> <div style="text-align: center;">  </div> <p>(A) Name the process shown in the above diagram. (B) Identify the labelling (a) and (b)</p> <p>Answer:</p>	(2)

- (i) Inspiration
- (ii) (a) Diaphragm
- (b) Volume of thorax increased.

Q19.

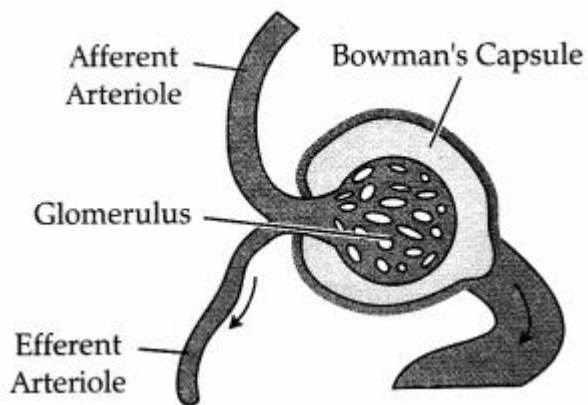
Study the given diagram:

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- (a) Afferent arteriole
- (b) Bowman's capsule

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(2)

Q20.

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(2)

(a) Identify the given animal, and write down the name of the phylum to which it belongs.

(b) Give some more examples of this phylum

Answer:

(a) Aurelia, Phylum- Coelenterata (Cnidaria)

(b) Hydra, Adamsia, etc.

Q21.

A student got injured someday. He took the medicine from the doctor and got cured. He wonders that how medicine got to know where to act. He asks the doctor about the reason. What could be the possible reason according to you?

(2)

OR

(a) Label the given diagram .

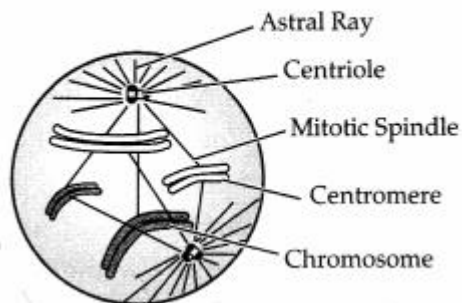
(b) Determine the stage at which this structure is visible.

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Answer: Every cell membrane has some receptor over it, which perceives the drugs and this stimulate cascade effects in the cell and hence, the disease can be cured.

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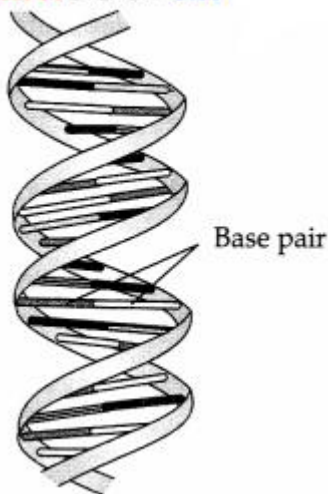
SECTION – C

Q22.

a) What are the various types of nitrogenous bases found in DNA?

(3)

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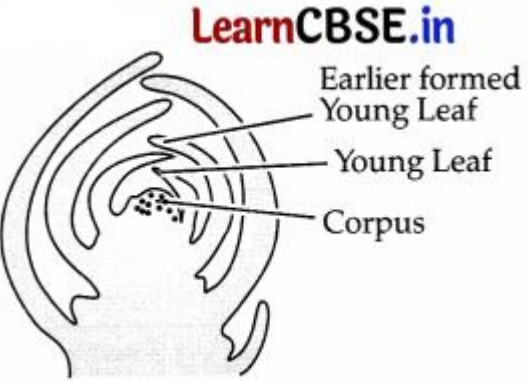
b) Name the type of bond seen between –
(i) two nitrogen bases of DNA and
(ii) phosphate and hydroxyl group of sugar of DNA.

Answer:

(a) Types of nitrogenous bases found in DNA are:

- **Adenine:** Abbreviated as 'A', has a 2-ring structure, so that it is a purine.
- **Thymine:** Abbreviated as 'T', is a pyrimidine, which means it has a 1-ring structure. It is only present in DNA, where it pairs with adenine.
- **Guanine:** Abbreviated as 'G', is part of both DNA, where it bonds with cytosine.

	<ul style="list-style-type: none"> • Cytosine: Abbreviated as ‘C’, is part of DNA and bonds with guanine. It has one ring, so it’s a pyrimidine. <p>(b) (i) Hydrogen bond (ii) Phosphodiester bond</p>	
Q23.	<p>Describe the habit, habitat and morphology of mosses.</p> <p>Answer: Habit, habitat and morphology of moss:</p> <ol style="list-style-type: none"> 1. These are the good example of leafy bryophyte. It grows in moist shady places. 2. The plant (2.3 cm in height) has a tiny stem with a number of small leaves. 3. The true roots are absent but rhizoids fix the plant to the ground and perform the functions of roots. 4. The leaves and stem portion bear chlorophyll with the help of which it manufactures food. 5. The adult plant represents the gametophyte. 6. It bears antheridia and archegonia which produce antherozoids (male gametes) and egg. 7. Fertilisation takes place inside the archegonium. 8. The zygote formed by the fusion of the two gametes develops into a sporophyte. 9. It grows and consists of three parts: foot, seta and capsule. 	(3)
Q24.	<p>Analyse the events during every stage of cell cycle and notice how the following two parameters change.</p> <p>(a) Number of chromosomes (n) per cell (b) Amount of DNA content (c) per cell</p> <p>Answer: (a)</p> <ol style="list-style-type: none"> 1. In G₁ phase, the number of chromosome (N) per cell remains the same. 2. In S or synthetic phase of cell cycle, DNA synthesis or the replication occurs. The amount of DNA per cell doubles. If it is 2C then it becomes 4C. There is no increase in chromosome number. 3. Same above condition continues in G₂– phase. 	(3)

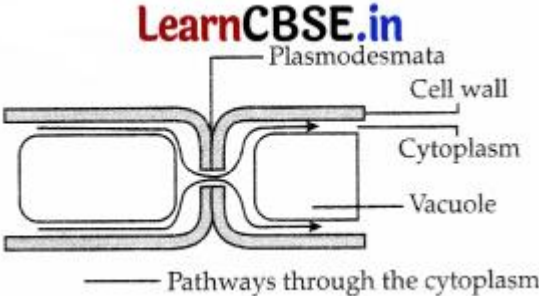
	<p>4. In M-phase the sister chromatids separate and move to different cells but the number of chromosomes remain the same in mitosis.</p> <p>(b)</p> <ol style="list-style-type: none"> 1. In G₁-Phase, the amount of DNA content (c) per cell remains same. 2. In S-phase it is doubled due to DNA replication. 3. It remains double in G₂-phase. 4. It is halved in M-phase of the cell cycle. Shoot apex 	
<p>Q25.</p>	<p>Label the diagram.</p> <div style="text-align: center;">  <p>LearnCBSE.in</p> </div> <p>(a) Given diagram represent which part of a dicotyledonous plant? (b) What will happen if we remove part 1 from the plant?</p> <p>Answer: (i) Shoot apex</p> <div style="text-align: center;">  <p>LearnCBSE.in</p> </div> <p>(ii) Removal of shoot apex will help to overcome apical dominance. As a result, the lateral buds grow faster, giving rise to branches and give the plant a bushy appearance.</p>	<p>(3)</p>
<p>Q26.</p>	<p>Does it make any difference to have the haemoglobin in the corpuscles rather than in plasma? Explain.</p> <p>Answer:</p>	<p>(3)</p>

	<p>There is great difference in respects of efficiency of carrying the oxygen from respiratory organs to the body tissue as follows:</p> <table border="1" data-bbox="256 331 1252 594"> <tr> <td data-bbox="256 331 751 443">Haemoglobin in corpuscles</td> <td data-bbox="751 331 1252 443">Haemoglobin in plasma</td> </tr> <tr> <td data-bbox="256 443 751 594">As RBC are small, rounded and in more quantity, so haemoglobin is exposed with a large combined surface area to absorb O₂</td> <td data-bbox="751 443 1252 594">In plasma, the exposed surface area for haemoglobin is very limited in comparison to the RBC, the result is the absorption of O₂ in less amount.</td> </tr> </table>	Haemoglobin in corpuscles	Haemoglobin in plasma	As RBC are small, rounded and in more quantity, so haemoglobin is exposed with a large combined surface area to absorb O₂	In plasma, the exposed surface area for haemoglobin is very limited in comparison to the RBC, the result is the absorption of O₂ in less amount.	
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Q27.	<p>Certain plants growing in tropical region suffer from photorespiratory loss.</p> <p>(a) How do they overcome it? (b) Mention the anatomical adaptation. (c) Mention the first stable CO₂ fixation product and the enzyme responsible for it.</p> <p>OR</p> <p>Enzymes are biological catalysts which accelerate chemical reactions. They are essential for different physiological processes. They are proteins that helps to speed up the process of metabolism.</p> <p>(a) (i) Name the enzyme that catalyses carboxylation as well as oxygenation reaction. (ii) In which cell organelle is this enzyme found? (b) In what way is that organelle different in the mesophyll and bundle sheath cells ?</p> <p>Answer:</p> <p>(a) Plants like sugarcane, and maize shows a C₄ pathway for CO₂ fixation during photosynthesis to overcome the problem of photorespiration which is energy consuming process.</p> <p>(b) These plants have kranz anatomy. In kranz's anatomy, the mesophyll is undifferentiated and its cells occurs in concentric layers around vascular bundles. Vascular bundles are surrounded by large-sized bundle sheath cells. The chloroplast of mesophyll cells are smaller and perform light reactions of photosynthesis and also possess PEPcase for CO₂ fixation.</p> <p>(c) The first stable product of the C₄ pathway is oxaloacetic acid. The enzyme responsible for the fixation of atmospheric CO₂ is PEP carboxylase (Phosphoenol pyruvate carboxylase).</p> <p>OR</p> <p>(a) (i) RubisCO enzyme catalyses carboxylation and oxygenation reactions. (ii) It is found in the chloroplast (cell organelle).</p> <p>(b) Chloroplasts in mesophyll cells are granal but chloroplast of bundle sheath cells are agranal. Granal chloroplasts have thylakoids stacked to form grana (as</p>	(3)				

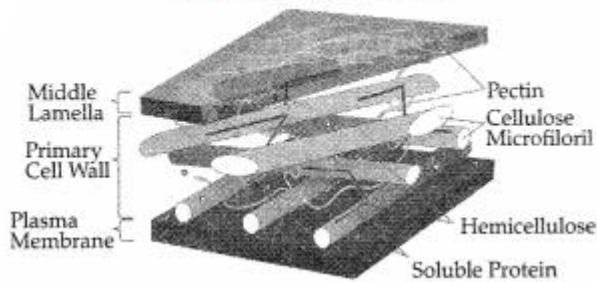
	in C₃ plants). Agranal chloroplasts are without grana but thylakoids are found as stroma lamellae.													
Q28.	Distinguish between endocrine and exocrine glands. (3) Answer:	(2)												
	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Endocrine glands</th> <th>Exocrine glands</th> </tr> </thead> <tbody> <tr> <td>(i)</td> <td>They do not have ducts.</td> <td>They possess ducts.</td> </tr> <tr> <td>(ii)</td> <td>They secrete hormones directly into the blood.</td> <td>They secrete their secretions into ducts.</td> </tr> <tr> <td>(iii)</td> <td>Thyroid, hypothalamus, pituitary, etc.</td> <td>Sweat and oil glands (of skin), liver and salivary glands.</td> </tr> </tbody> </table>	S. No.	Endocrine glands	Exocrine glands	(i)	They do not have ducts.	They possess ducts.	(ii)	They secrete hormones directly into the blood.	They secrete their secretions into ducts.	(iii)	Thyroid, hypothalamus, pituitary, etc.	Sweat and oil glands (of skin), liver and salivary glands.	
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SECTION – D														
Q.No 29 and 30 are case based questions. Each question has subparts with internal choice in one subpart.														
Q29.	<p>In spite of differences in structure and form of different animals, there are fundamental features common to various individuals in relation to the arrangement of cells, body symmetry, nature of coelom, patterns of digestive, circulatory or reproductive systems. These features are used as the basis of animal classification</p> <p>Answer the following questions:</p> <p>1) Birds and mammals share one common feature. What is that common feature from the following characteristics given below?</p> <p>(a) Pigmented Skin (b) Pneumatic bones (c) Viviparity (d) Warm-blooded nature</p> <p>2) The body cavity is the cavity between the body and gut walls. In some animals, the body cavity is absent, while in some, it is present. To define the terms.</p> <p>(a) Acoelomate and (b) Pseudocoelomate. (c) Coelomate</p> <p>Answer Option (d) is the right answer.</p> <p>i) Acoelomate: Acoelomates are animals in which the body cavity is absent. E.g., Porifers, Coelenterates, Ctenophores and Platyhelminthes.</p> <p>(ii) Pseudocoelomate: The mesoderm is not lined in some animals. Instead, the mesoderm is present as scattered pouches between the ectoderm and endoderm. Here the body cavity is directly connected to the archenteron. Such a body cavity is known as pseudocoelom, and pseudocoelomates are the animals possessing the body cavity examples are Aschelminthes, also known as Ascaris.</p>	(4)												

	<p>(iii) Coelomate: In coelomate animals, the coelom is the body cavity lined by mesoderm on both sides. Animals possessing coelom are called coelomates, the cavity between the alimentary canal and body wall enclosed by mesoderm on both sides. E.g., Annelids, Arthropods, Molluscs, Echinoderms, Hemichordates and Chordates.</p>	
<p>Q30.</p>	<p>Mitosis takes place both in somatic and reproductive cells of plants and animals. In multicellular organisms, mitosis produces more cells for growth and repair. Mitosis division is responsible for the growth and development of a single-celled zygote into a multicellular organism. Mitosis division helps in maintaining the proper size. Mitosis also helps in restoring wear and tear in body tissues, replacing damaged or lost part, healing wounds and regeneration of detached parts. Mitosis is a method of multiplication of unicellular organisms. It produces diploid daughter cells with identical genetic complements (both quantitatively and qualitatively) as in the parent cell. Mitosis is a continuous process and it is divided into four phases viz: prophase metaphase, anaphase and telophase.</p> <p>(a) What is the significance of mitosis? (b) What happens during the mitotic cell division? (c) What is the characteristic feature of mitosis?</p> <p style="text-align: center;">OR</p> <p>Proteins are polypeptide chains made up of amino acids. There are 22 types of amino acids joined together by peptide bonds when carboxylic groups two amino acids: Essential and non-essential amino acids. The Primary structure of a protein is the linear sequence of amino acids in a polypeptide chain. The first amino acid of the enzyme is called a terminal acids and the last amino acid of the peptide is called C-terminal amino acid. The secondary structure proteins forms a helix. There are three types of secondary structure: a helix, β pleated and collagen helix. In tertiary structure long protein chain is folded upon itself like a hollow woollen ball to give three dimensional view of the protein. In quaternary structure, each polypeptide develops its own tertiary structure and function as a subunit of protein.</p> <p>(a) Amino acids, as the name suggests, have both an amino group and a carboxyl group in their structure. In addition, all naturally occurring amino acids (those which are found in proteins) are called L-amino acids. From this, can you guess from which compound the simplest amino acid can be made? (b) Many organic substances are negatively charged e.g., acetic acid, while others are positively charged e.g., ammonium ion. An amino acid under certain conditions would have both positive and negative charges simultaneously in the same molecule. Name such form of amino acid. (c) A primary protein normally have how many ends? (d) Name the bond present in the tertiary structure of a protein contain.</p> <p>Answer:</p>	<p>(4)</p>

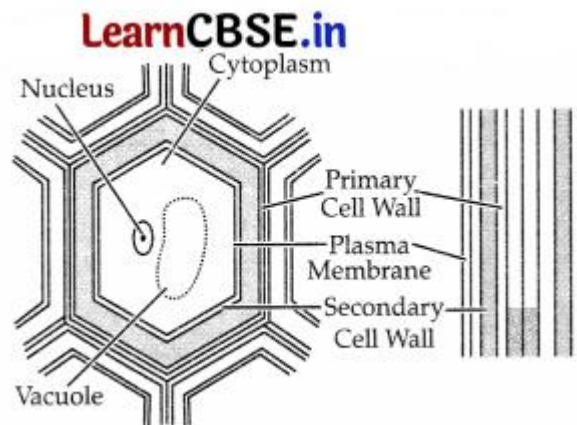
	<p>(a) Mitosis is an equational division and is a means of multiplication in unicellular organisms.</p> <p>(b) Daughter cells formed have the same genetic constitution as the qualitatively and quantitatively and as the parent cell.</p> <p>(c) Mitosis is an equational division. Daughter cells formed are genetically identical and similar to the mother cell. Number of chromosomes remain the same in parental and progeny cell. OR (a) Glycine is the simplest amino acid which has both an amino group of a carboxyl group in its structure and a single hydrogen atom as its side chain.</p> <p>(b) Explanation: Under certain conditions, an amino acid may have both positive and negative charges simultaneously in the same molecule. Such a form of amino acid is known as zwitter ionic form.</p> <p>(c) Primary protein is simply an amino acid sequence that has two ends, the carboxyl amino terminals.</p> <p>(d) Tertiary structure of protein is maintained by several types of bonds such as hydrogen bonds, ionic bonds, sulphide bonds, and hydrophilic and hydrophobic bonds formed between the part of a polypeptide and another</p>																
Q31.	<p>Calvin cycle occurs in all photosynthetic plants whether they have C₃ or C₄ pathways. With the help of photosynthesis, plants turn light, carbon dioxide, and water into sugars that fuel plant growth using the primary photosynthetic enzyme RuBisCO. Various plant species on Earth use C₃ photosynthesis, and some show C₄. (5)</p> <p>With context to the given paragraph complete the following table :</p> <table border="1" data-bbox="253 1459 1323 1837"> <thead> <tr> <th>Characteristics</th> <th>C₃ Plants</th> <th>C₄ Plants</th> </tr> </thead> <tbody> <tr> <td>Place of photosynthesis:</td> <td></td> <td></td> </tr> <tr> <td>CO₂ acceptor:</td> <td></td> <td></td> </tr> <tr> <td>Kranz anatomy:</td> <td></td> <td></td> </tr> <tr> <td>1st stable product:</td> <td></td> <td></td> </tr> </tbody> </table>	Characteristics	C ₃ Plants	C ₄ Plants	Place of photosynthesis:			CO ₂ acceptor:			Kranz anatomy:			1 st stable product:			(5)
Characteristics	C ₃ Plants	C ₄ Plants															
Place of photosynthesis:																	
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	Optimum temperature:			
	Photorespiratory loss:			
Q32.	<p>Each of the following terms has some anatomical significance. What do these terms mean? Explain with the help of line diagrams.</p> <p>(a) Plasmadesmoses/Plasmodesmata (b) Middle lamella (c) Secondary wall</p> <p style="text-align: center;">OR</p> <p>The arrangement of ovules within the ovary is known as placentation. What does the term placenta refer to? Draw various types of placentations in the flower</p> <p>Answer:</p> <p>(a) Plasmodesmata: These are cytoplasmic bridges between the two cells through the cell wall. They form a protoplasmic continuum called symplast. It allows communication and transport between two neighboring cells.</p> <div style="text-align: center;">  <p style="text-align: center;">— Pathways through the cytoplasm</p> </div> <p>(b) Middle lamella: It is a thin layer in the cell wall mainly made up of calcium pectate. It performs the function of cementing between the two neighboring cells.</p>			(5)

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(c) Secondary' wall: It is the non-extensible layer made up of hemicellulose fibres, in the cell wall of plant cells. It provides rigidity to the cell wall in plant



Placentation: The arrangement of ovules within the ovary is known as placentation. The placentation are of different types namely, marginal, axile, parietal, basal, central and free central. In marginal placentation, the placenta forms a ridge along the ventral suture of the ovary and the ovules are borne on this ridge forming two rows, as in pea. When the placenta is axial and the ovules are attached to it in a multilocular ovary, the placentation is said to be axile, as in china rose, tomato and lemon. In parietal placentation, the ovules develop on the inner wall of the ovary or on peripheral part. Ovary is one-chambered but it becomes two-chambered due to the formation of the false septum, e.g., mustard and Argemone. When the ovules are borne on central axis and septa are absent, as in Dianthus and Primrose the placentation is

called free central. In basal placentation, the placenta develops at the base of ovary and a single ovule is attached to it, as in sunflower, marigold.



Q33.

Epidermal cells are often modified to perform specialized functions in plants. Name some of them and function they perform.

(5)

OR

(b) (i) What is venation

(ii) Explain its types.

Epidermal cells are often modified to perform specialized functions in plants. Name some of them and function they perform.

Ans:

• **Root hairs:** The root hairs are unicellular elongations of the epidermal cells and help absorb water and minerals from the soil.

• **Stem hairs or trichomes:** On the stem the epidermal hairs are called trichomes. The trichomes in the shoot system are usually multicellular.

They may be branched or unbranched and soft or stiff. They may even be secretory. The trichomes help in preventing water loss due to transpiration.

• **Bulliform cells:** In grasses, certain adaxial epidermal cells along the veins modify themselves into large, empty, colourless cells. These are called bulliform cells. When the bulliform cells in the leaves have absorbed water and are turgid, the leaf surface is exposed. When they are flaccid due to water stress, they make the leaves curl inwards to minimise water loss.

OR

(b) (i) **Venation:** The arrangement of veins and veinlets in the lamina of a leaf is called venation. The veins are not only the conducting channels for water,

minerals, and organic food, but they also provide firmness to the lamina and keep it expanded. They give rise to lateral veins, which traverse the entire lamina.

(ii) Venation is of two types: Reticulate and parallel.

Reticulate venation: When the veinlets form a network, the venation is termed reticulate venation, e.g., leaves of dicot plants.

Parallel venation: When the veins arising from midrib or main veins, run parallel to each other towards the margin or the apex of the lamina, venation is termed as parallel venation. Present in the leaves of monocot plants. Parallel venation is of two sub-types:

Pinnate or uncostate parallel venation:

The lamina has a single prominent vein or midrib running from the base to the apex of the lamina, e.g., Banana, Canna, etc.

Palmate or multicostate parallel venation: The lamina has several principal veins arising from the base and running towards the apex or margin of the lamina.