BSEH MARKING SCHEME

CLASS- XI Biology (Model Paper 2025-26) Code: A

- **The answer points given in the marking scheme are not final. These are suggestive and indicative. If the examinee has given different, but appropriate answers, then he should be given appropriate marks.**

Q. No.	Part no.	Answers	Marks	Total Marks
1.	---	c) citrus canker	1	1
2.	---	a) %	1	1
3.	---	b) Duodenum	1	1
4.	---	c) Plasmodesmata	1	1
5.	---	c) ricin	1	1
6.	---	a) 2	1	1
7.	---	b) 12	1	1
8.	---	d) TV	1	1
9.	---	d) Neutrophils	1	1
10.	---	pteridophytes	1	1
11.	---	46	1	1
12.	---	When xylem and phloem within a vascular bundle are arranged in an alternate manner	1	1

		along the different radii, the arrangement is called radial.		
13.	---	Four	1	1
14.	---	Embryonic	1	1
15.	---	ABA or Abscisic acid	1	1
16.	---	d) A is false but R is true.	1	1
17.	---	a) Both A and R are true, and R is the correct explanation of A.	1	1
18.	---	b) Both A and R are true, and R is not the correct explanation of A.	1	1
19.		Similar Taxon: Kingdom-Plantae / Division-Angiospermae	1	2
		Different Taxon: Species- indica and aestivum/ Genus- Mangifera and Triticum / Family- Anacardiaceae and Poaceae / Order – Sapindales and Poales/ Class – Dicotyledonae and Monocotyledonae	½ + ½	
		Or *Felis* and *Panthera*	Or 2	

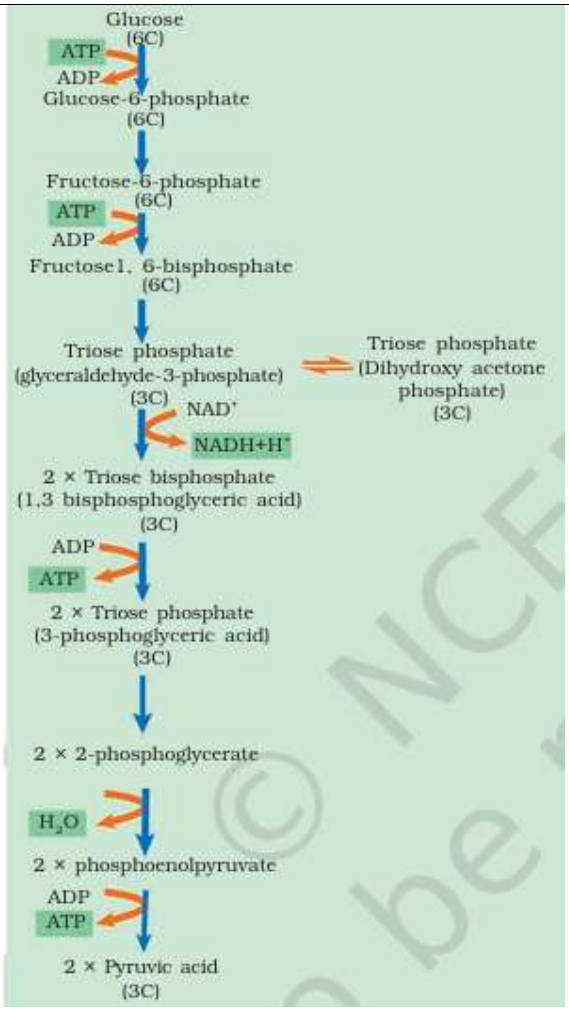
20.		Virus: DNA/RNA and Protein	1	2
		Viroid: Only RNA	½	
		Prions: Only protein	½	
21.		Number of bones: 22	1	2
		Fibrous Joints	1	
22.		Cutaneous Respiration – Skin	½ + ½	2
		Pulmonary Respiration – Lungs	½ + ½	
23.		When stamens are attached to the petals, they are epipetalous.	1	2
		When stamens are attached to perianth, they are epiphyllous.	1	
		Or	Or	
		1. Veins provide rigidity to the leaf blade	1	
		2. Veins act as channels of transport for water, minerals, and food materials.	1	
24.		1. When the bulliform cells in the leaves have absorbed water and are turgid, the leaf surface is exposed.	1	2
		2. When they are flaccid due to water stress, they make the leaves curl inwards to minimise water loss.	1	

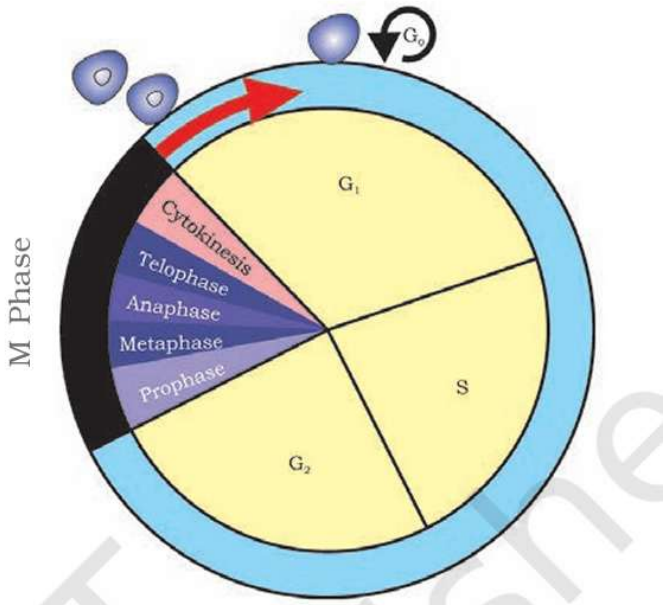
25.		Oils: Elaioplasts	1	2
		Proteins: Aleuroplasts	1	
		Or		
		erythrocytes of many mammals	1	
		sieve tube cells of vascular plants	1	
26.		Notochord: Absent	½	3
		Segmentation: Absent	½	
		Coelom: True coelom/present	½	
		Level of organisation: Organ-system level	½	
		Symmetry: Bilateral	½	
		Type of development: Indirect	½	
27.	i)	Chondrichthyes / Cartilaginous fish	1	3
	ii)	Aves/ Birds	1	
	iii)	Arthropoda	1	
28.		i. **Renal calculi**: Stone or insoluble mass of crystallised salts formed within the kidney	½ + ½	3
		ii. **Glomerulonephritis**: Inflammation of glomeruli of kidney.	½ + ½	
		iii. **Uremia**: Malfunctioning of kidneys can lead to accumulation of urea in blood	½ + ½	
		Or		
		i. **Ammonotelic**: bony fishes/	½ + ½	

		aquatic amphibians/ aquatic insects				
		ii. **Ureotelic:** Mammals/ terrestrial amphibians/ marine fishes			½ + ½	
		iii. **Uricotelic:** Reptiles/ birds/ land snails			½ + ½	
29.		**Feature**	**C_3 Plants**	**C_4 Plants**		3
		photorespiration	Yes	No	1	
		optimum temperature	20-25 ^{0}C	30-40 ^{0}C	1	
		primary CO_2 fixation product	Phospho glyceric acid (PGA)	Oxalo acetic acid (OAA)	1	
30.		i. Green algae: Photosynthesis/ food supplements			1	3
		ii. Brown algae: Hydrocolloids like algin			1	
		iii. Red algae: Carrageen/ Agar as hydrocolloids			1	
		Or The first stage of gametophyte is the **protonema stage**. It develops directly from a spore.			½ + ½	

		The second stage is the **leafy stage**, which develops from the secondary protonema. Sex organs antheridia and archegonia are produced at the apex of the leafy shoots.	½ + ½	
		After fertilisation, the zygote develops into a sporophyte, consisting of a foot, seta and capsule. The capsule contains spores which give rise to gametophyte.	½ + ½	
31.	i)	20	1	4
	ii)	Insulin Or Enables glucose transport into cells	1	
	iii)	Ribulose bisphosphate Carboxylase-Oxygenase (RuBisCO)	1	
	iv)	Because proteins has 20 different type of monomers repeating 'n' number of times.	1	
32.	i)	inner parts of cerebral hemispheres amygdala hippocampus	1 ½ ½	4
	ii)	dura mater	1	

	iii)	Cerebrum Or Mid brain	1	
33.		gastrin secretin cholecystokinin (CCK) gastric inhibitory peptide (GIP)	½ ½ ½ ½	5
		i) Gastrin acts on the gastric glands and stimulates the secretion of hydrochloric acid and pepsinogen. ii) Secretin acts on the exocrine pancreas and stimulates secretion of water and bicarbonate ions. iii) CCK acts on both pancreas and gall bladder and stimulates the secretion of pancreatic enzymes and bile juice, respectively. iv) GIP inhibits gastric secretion and motility.	Any three (1 mark each)	
		Or		
	i)	Thyroxine, Thyroid gland	½ + ½	
	ii)	Insulin, Pancreas	½ + ½	
	iii)	Anti-diuretic hormone (ADH), Pituitary Gland	½ + ½	

	iv)	Growth hormone, Pituitary Gland	½ + ½	
	v)	Adrenaline, Adrenal gland	½ + ½	
34.			½ mark for each correct step	5
		Or		
		i. Pyruvate + CoA + NAD^+ → Acetyl Co A + NADH + H^+ + CO_2	1	
		ii. Citric Acid + NAD^+ → α-ketoglutaric acid + NADH + H^+ + CO_2	1	
		iii. α-ketoglutaric acid + GDP + NAD^+ → Succinic acid + GTP + NADH + H^+ + CO_2	1	

		iv. Succinic Acid + FAD^+ → Malic acid+ $FADH_2$	1	
		v. Malic Acid + NAD^+ → Oxaloacetic acid+ NADH + H^+	1	
35.			2 ½	5
		G_1 Phase: the cell is metabolically active and continuously grows but does not replicate its DNA	½	
		S Phase: S or synthesis phase marks the period during which DNA synthesis or replication takes place.	½	
		G_2 Phase: During the G2 phase, proteins are synthesised in preparation for mitosis while cell growth continues.	½	

		M Phase: The M Phase represents the phase when the actual cell division or mitosis occurs.	½	
		G_0 Phase: cells that do not divide further exit G_1 phase to enter an inactive stage called quiescent stage of the cell cycle. Cells in this stage remain metabolically active but no longer proliferate	½	
		Or		
		i. Leptotene: the chromosomes become gradually visible under the light microscope and compaction of chromosomes continues throughout it.	½ + ½	
		ii. Zygotene: During this stage chromosomes start pairing together and this process of association is called synapsis.	½ + ½	
		iii. Pachytene: During this stage, the four chromatids of each bivalent chromosomes becomes distinct and clearly appears as tetrads and this stage is characterised by the appearance of recombination nodules, the sites at which	½ + ½	

		crossing over occurs between non-sister chromatids of the homologous chromosomes.		
		iv. Diplotene: It is recognised by the dissolution of the synaptonemal complex and the tendency of the recombined homologous chromosomes of the bivalents to separate from each other except at the sites of crossovers.	½ + ½	
		v. Diakinesis: During this phase the chromosomes are fully condensed and the meiotic spindle is assembled to prepare the homologous chromosomes for separation.	½ + ½	