

KENDRIYA VIDYALAYA SANGATHAN LUCKNOW REGION**SESSION ENDING EXAM****CLASS XI****BIOLOGY****MARKING SCHEME****Max marks- 70**

Q.No	Expected answer	Marks
1	A	1
2	C	1
3	B	1
4	D	1
5	B	1
6	A	1
7	B	1
8	D	1
9	C	1
10	D	1
11	A	1
12	C	1
13	A	1
14	B	1
15	A	1
16	A	1
17	a) cat – felidae, felis b) dog- canidae, canis	1+1
18	Any two difference	2
19	Any two function	1+1
20	Any two difference	2
21	It is graphical representation of the electrical activity of the heart during a single cardiac cycle. The electro cardiogram is obtained by a machine known as electrocardiograph.	2
22	Arthropoda, Insecta. They have an open circulatory system with dorsal heart and arteries. They have compound eyes and mosaic vision	½+½ +2
23	a. Bolt a rosette plant- gibberellins b. Quickly ripen a fruit – ethylene c. Induce rooting in a twig- auxins	1+1+1

24	Solanaceae Features- Alternate, simple, rarely pinnately compound By carpellary, syncarpous	1+2
25	Any three importance OR Correct Explanation	1+1+1
26	$ \begin{array}{ccc} \begin{array}{c} \text{COOH} \\ \\ \text{H}-\text{C}-\text{NH}_2 \\ \\ \boxed{\text{H}} \end{array} & \begin{array}{c} \text{COOH} \\ \\ \text{H}-\text{C}-\text{NH}_2 \\ \\ \boxed{\text{CH}_3} \end{array} & \begin{array}{c} \text{COOH} \\ \\ \text{H}-\text{C}-\text{NH}_2 \\ \\ \boxed{\text{CH}_2-\text{OH}} \end{array} \\ \text{Glycine} & \text{Alanine} & \text{Serine} \end{array} $	1+1+1
27	<p>The relationship between the partial pressure of oxygen (pO_2) and percentage saturation of the haemoglobin with oxygen (O_2) is graphically illustrated by a curve called oxygen haemoglobin dissociation curve (also called oxygen dissociation curve).</p> <p>The sigmoidal pattern of oxygen haemoglobin dissociation curve is the result of two properties which play significant role in the transport of oxygen. These two properties are:</p> <p>(i) Minimal loss of oxygen from haemoglobin occurs above pO_2 of 70-80 mm Hg despite significant changes in tension of oxygen beyond this. This is depicted by relatively flat portion of the curve.</p> <p>(ii) Any further decline in pO_2 from 40 mm Hg causes a disproportionately greater release of oxygen from the haemoglobin. It results in the steeper portion of the curve and causes the curve to be sigmoid.</p>	1+2
28	Correct explanation	3
29	<p>A) During aerobic respiration the final product of glycolysis i.e pyruvic acid is transported from the cytoplasm into mitochondria and undergoes oxidative decarboxylation reaction to form <i>acetyl CoA</i>, mitochondrial matrix.</p> <p>B) electron transport chain proteins and the ATP synthase are located in inner mitochondrial membrane. They are not present in cytoplasm of eukaryotes.</p> <p>C) Pyruvate dehydrogenase</p> <p>D) oxydative decarboxylation</p> <p style="text-align: center;">OR</p> <p>36 ATP</p>	1+1+1+1
30	<p>1) c) nictitating membrane</p> <p>2) b) Presence of copulatory pad</p> <p>3) An animal that regulates its internal body temperature throughout a wide range of temperatures, frequently in response to changes in the ambient temperature is known as poikilotherms.</p>	1+1+1+1

	<p>4)The frogs are not seen during peak summer and winter because during this period they take shelter in deep burrows to protect them from extreme heat and cold. This is called as summer sleep (Aestivation) and winter sleep (Hibernation) respectively.</p> <p style="text-align: center;">OR</p> <p>5) Camouflage is a natural phenomenon used by plants and animals to blend into their environment. Predators and prey alike use camouflage to avoid detection (Any four to be attempted)</p>	
31	<p>a) Correct any two differences b) Correct explanation c) Correct explanation</p> <p>Or</p> <p>a) Cell Wall Nature of Flagella</p> <p>ChlorophyceaeCellulose 2-8 equal. Apical</p> <p>PhaeophyceaeCellulose and algin 2 unequal , lateral</p> <p>Rhodophyceae. Cellulose, pectin and poly sulphate estersAbsent</p> <p>b) <u>Thallophytes</u><u>Bryophytes</u></p> <p>1. Aquatic, freshwater or marine</p> <p>1. Land plants , living in damp and shady places</p> <p>2. Sex organs are unicellular and do not have a protective covering. 2. Sex organs are multicellular and have a protective covering.</p> <p>3. Sporophyte is absent and zygote is the only diploid phase</p> <p>3. Zygote develops into an embryo and then into a diploid sporophyte.</p> <p>4. Have a thalloid body.</p> <p>4. Root like , stem like parts present.</p>	<p>2+2+1</p> <p>Or</p> <p>3+2</p>
32	<p>Correct explanation with suitable diagrams</p> <p>Or</p>	<p>5</p> <p>Or</p>

	<p>A) Lysosomes are membrane-bound vesicular structures holding a variety of enzymes such as lipases, proteases, and carbohydrases. The purpose of lysosomes is to digest worn out cells. They are involved in the intracellular digestion of foreign food particles and microbes. Sometimes, they also act as suicidal bags. They are involved in the self-digestion of cells. They are a kind of waste disposal systems of a cell. On the other hand, vacuoles are storage sacs found in cells. They might store the waste products of cells. In unicellular organisms, the food vacuole contains the consumed food particles. It also plays a role in expelling excess water and some wastes from the cell.</p> <p>B) Correct diagram.</p> <p>C) George palade 1953 it help in proteinsynthesis.</p>	<p>2+2+1</p>
<p>33</p>	<p>a) arthritis, Decreased level of oestrogen causes osteoporosis.(Proper Explanation)</p> <p>(b) The sliding filament theory explains the process of muscle contraction during Which the thin filaments slide over the thick filaments, which shortens the Myofibril. Each muscle fibre has an alternate light and dark band, which contains a Special contractile protein, called actin and myosin respectively. Actin is a Thin contractile protein present in the light band and is known as the I-band, Whereas myosin is a thick contractile protein present in the dark band and is Known as the A-band. There is an elastic fibre called z line that bisects each I-band. The thin filament is firmly anchored to the z line. The central part of The thick filament that is not overlapped by the thin filament is known as the H-zone. During muscle contraction, the myosin heads or cross bridges come in close Contact with the thin filaments. As a result, the thin filaments are pulled Towards the middle of the sarcomere. The Z line attached to the actinFilaments is also pulled leading to the shortening of the sarcomere. Hence, the length of the band remains constant as its original length and the I-band shortens and the H-zone disappears.</p> <p>Or</p> <p>Correct difference (any two) in each case</p>	<p>2+3</p> <p>Or</p> <p>1+1+1+1+1</p>