

KENDRIYA VIDYALAYA SANGATHAN LUCKNOW REGION

CLASS XI BIOLOGY SESSION ENDING EXAMINATION

Maximum Marks: 70

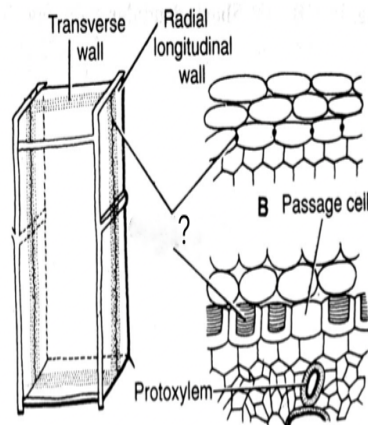
Time: 3 Hours

General Instructions:

- (i) All questions are compulsory.
- (ii) The question paper has five sections and 33 questions.
- (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 each question.
- (v) Wherever necessary, neat and properly labeled diagram should be drawn.

SECTION A

1.	This phylum is consisting two important forms polyp and medusa a. Platyhelminthes b. Porifera c. Aschelminthes d. Colenterata (Cnidaria)	1
2.	The root is covered at the apex by a thimble like structure called a. root cap b. root cup c. hard cap d. hard dome	1
3.	The improved model of cell membrane (fluid mosaic model) was proposed by- a. Singer and Nicholson (1970) b. Rudolf Virchow (1855) b. Schleiden and Schwann (1838 and 1839) Singer and Nicholson (1972)	1
4.	During the process of photosynthesis, the O ₂ is released from a. CO ₂ b. H ₂ O c. C ₆ H ₁₂ O ₆ d. H ₂ S	1
5.	In Amphibia, like frogs can respire through their moist skin, this respiration is termed as a. Tracheal respiration b. Cutaneous Respiration c. Body respiration d. Vascularised bags	1
6.	Select the chemical which could not act as respiratory substrate a. Proteins b. Carbohydrates c. Fats d. Enzymes	1
7.	The heart present in reptiles consisting three chambers. The ventricles are partially divided. Name the reptile which consisting four chambered heart. a. Tortoise b. Naja c. Crocodile d. Bangarus	1
8.	The correct name of Mango according to binomial nomenclature a. Mangifera indica b. mangifera indica c. <u>Mangifera indica</u> d. <i>mangifera indica</i>	1
9.	The tangential as well as radial walls of the endodermal c water-impermeable, waxy material, called a. Thickening b. Suberin c. Tough Cells d. No any correct	1



10.	In a polysaccharide the individual monosaccharides are linked by a a. Phosphodiester bond b. Glycosidic bond c. Peptide bond d. Hydrogen bond	1
11.	The following phytohormone is mostly used as herbicides a. IAA b. IBA c. NAA d. 2,4-D	1
12.	In pancreas the Islets of Langerhans are present. It is important to secrete an important hormone called glucagon. Name the cell which secrete glucagon a. α -cell b. β -cell c. D-cell d. θ -cell	1

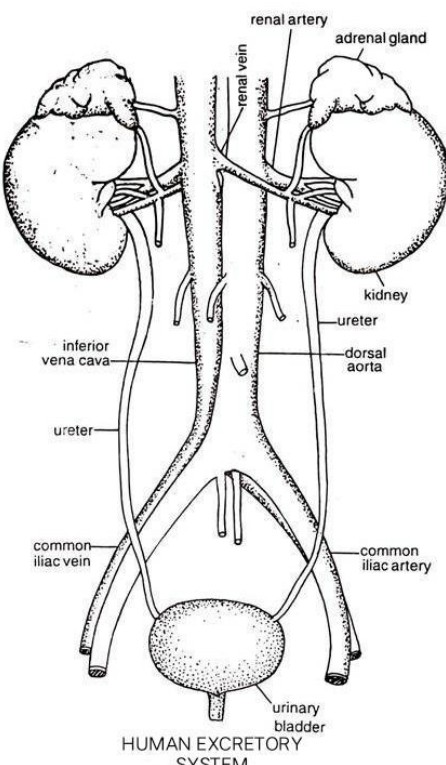
Question No. 13 to 16 consist of two statements- Assertion (A) and Reason (R). Answer these questions by selecting the appropriate option given below:

- A. Both A and R are true and R is the correct explanation of A.
B. Both A and R are true and R is not the correct explanation of A.
C. A is true but R is false.
D. A is false but R is true.

13.	Assertion (A): The five-kingdom classification system is proposed by R.H. Whittaker Reason (R): This system consisting main criteria for classification used by him include cell structure, body organization, mode of nutrition, reproduction and phylogenetic relationship.	1
14.	Assertion (A): In plant cells, wall formation starts in the centre of the cell and grows outward to meet the existing lateral walls. Reason (R): The formation of the new cell wall begins with the formation of a simple precursor, called cell plate, that represents the middle lamellae between the walls of two adjacent cells.	1
15.	Assertion (A): Aerobic respiration takes place inside the mitochondria. It produces large amount of energy. Reason (R) : Anaerobic respiration takes place in cytoplasm of the cell and It produces less amount of energy in comparison to aerobic respiration.	1
16.	Assertion (A): The ovary secretes steroid hormone after fertilization called progesterone. Reason (R): Progesterone supports pregnancy.	1

SECTION B

17.	Complete the table given below- <table border="1"> <thead> <tr> <th>PHYLUM / CLASS</th><th>MAIN FEATURE</th><th>EXAMPLE</th></tr> </thead> <tbody> <tr> <td>Porifera</td><td>Pores are present on body</td><td>a</td></tr> <tr> <td>b</td><td>Malpighian tubules</td><td>Scorpion</td></tr> <tr> <td>c</td><td>Bioluminescence</td><td><i>Pleurobranchia</i></td></tr> <tr> <td>Cyclostomata</td><td>d</td><td><i>Petromyzon</i></td></tr> </tbody> </table>	PHYLUM / CLASS	MAIN FEATURE	EXAMPLE	Porifera	Pores are present on body	a	b	Malpighian tubules	Scorpion	c	Bioluminescence	<i>Pleurobranchia</i>	Cyclostomata	d	<i>Petromyzon</i>	$\frac{1}{2} \times 4 = 2$
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18.	Describe the external features(morphology) of frog.	2															
19.	What is respiratory quotient? Calculate the R.Q. of given reaction $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + \text{Energy}$	$1+1 = 2$															
20.	Match the following a. Aquatic animals i. Green gland b. Prawns ii. Nephridia c. Earthworm iii. Ureotelic	$\frac{1}{2} \times 4 = 2$															

	d. Planeria iv. Ammonotelic v. Flame cells	
21.	The mammals are considered as advanced animals. They consisting specific features in all their forms. Prepare a list of important features present in Class Mammalia with suitable example.	2
SECTION C		
22.	Draw the structure of stomata with all labellings. Or Draw the position of floral parts on thalamus in all three cases.	3
23.	The process of photosynthesis consisting two important steps, light reaction and dark reaction. Describe the all steps of Calvin cycle.	3
24.	How the Archaeobacteria are different from Eubacteria? Or Mention the universal rules of nomenclature of a living organism. Mention any suitable example which is not given anywhere in this question paper.	1½+ 1½ =3 3
25.	How the tap root system is different from fibrous root system? Write with suitable example in each.	1+2 =3
26.	Draw a neat and clean diagram of mitochondria and discuss its contribution in cell.	1½+ 1½
27.	Mention the important functions of following a. Cytokinin b. Ethylene c. Gibberellins	1+1 +1= 3
28.	Draw the simple structure of a neuron and label its important portions.	3
SECTION D		
Q. Nos. 29 and 30 are case based questions. Each question has subparts with internal choice in one subpart.		
29.	In humans, the excretory system Each kidney has nearly one million complex tubular structural functional units. Each nephron has two parts – the glomerulus. Glomerulus is a tuft of capillaries formed by the afferent renal artery. Blood from the glomerulus is carried away by an efferent renal vein. The renal tubule begins with a double walled cup-like structure called Bowman's capsule, which encloses the glomerulus. Glomerulus along with Bowman's capsule, is called the Malpighian body or renal corpuscle. The tubule continues further to form a highly coiled network – proximal convoluted tubule (PCT). A hairpin shaped Henle's loop is the next part of the tubule which has a descending and an ascending limb. The ascending limb continues as another highly coiled tubular region called distal convoluted tubule (DCT). The DCTs of many nephrons open into a straight tube called collecting duct, many of which converge and open into the renal pelvis through medullary pyramids in the calyces.	 The diagram illustrates the human excretory system. It shows two kidneys, each with an adrenal gland on top. Renal arteries and veins connect the kidneys to the dorsal aorta and inferior vena cava. Ureters lead from the kidneys to the urinary bladder. The common iliac artery and vein are also shown. The caption below the diagram is 'HUMAN EXCRETORY SYSTEM'. 1+ 1+ 2 = 4

