SECOND TERMINAL EVALUATION 2022-23
ANSWER KEY
BIOLOGY(ENG MED) STD: IX

QNO	VALUE POINTS	SCORE	TOT
1	Atherosclerosis	**1**	1
2	Pelvis:-Region where urine from the filters flows into.	**1**	1
3	Lactic acid Fermentation, Glycolysis	½ + ½	1
4	X= Intercostal muscles	**1**	**1**
5	Diastolic pressure	**1**	**1**
6	Absorption of water takes place. Urine is collected and is carried to the pelvis	½ + ½	**1**
7	a) Alveoli increase the respiratory surface area in lungs b) The surface that separates the blood in the blood capillaries and the air in the alveoli, has the thickness of two rows of cells only	**1** **1**	**2**
8	a) X=Tissue fluid b) It does not contain RBCs, large protein molecules and platelets	**1** **1**	**2**
9	a) Hypertension b) Unhealthy habits, such as excess use of salt and fat, smoking, lack of excercise etc.	**1** **1**	**2**
10	a) (i) Emphysema b) This reduces the respiratory surface and reduces vital capacity	**1** **1**	**2**
11	Redraw A= Cortex, B= Pelvis	**1** ½ + ½	**2**
12	(i) Lymph Duct (ii) Spleen	**1+1**	**2**
13	Avoiding urination for a long time prevents the expulsion of bacteria that may be present in the urinary tract and urinary bladder. This causes infection in the inner membrane of the urinary bladder.	**2**	**2**
14	a) (i) Xylem Vessels (ii) Phloem b) Transportation of food materials	**2** **1**	**3**
15	a) Liver b) As a result of the metabolic activities of amino acids c) Ammonia + Carbon dioxide + Water $\xrightarrow{\text{Enzymes}}$ Urea	**1** **1** **1**	**3**
16	a) Krebs cycle b) Pyruvic acid is converted to carbon dioxide and water. 28 ATP molecules are produced. It requires oxygen.	**1** **2**	**3**
17	a) Anaerobic respiration/Fermentation b) Alcohol + CO_2 c) During strenuous exercise, energy utilization in muscles increase and the oxygen availability decreases. In such	**1** **1** **1**	**3**

	situations, lactic acid is formed in the muscle cells		
18	a) A= Lenticels B) Leaves and tender stems b) plants need less energy when compared to animals **Similarities:**- utilize glucose for the production of energy oxygen is also absorbed from atmospheric air. Energy is stored in ATP	½ + ½ **2**	**3**
19	(i) Hepatic portal vein (ii) Capillaries in the liver (iii) Liver (iv) Hepatic vein (v)Venacava (vi) Heart	½ **X6**	**3**
20	a) Sweat gland b) The sweat glands are surrounded by blood capillaries at their base. When blood flows through these capillaries, salt and water from the blood enter the sweat glands c) The main objective of sweating is regulation of body temperature.	**1** **1** **1**	**3**
21	a) Transpiration, Root Pressure, Adhesion and cohesion b) Water is lost from the intercellular spaces of leaves through stomata by transpiration. It reduces the pressure in the cells of leaves. In order to compensate this pressure difference, water enters these cells from adjacent cells through osmosis. The transpiration pull developed due to transpiration helps to carry water to the top. Besides this, water molecules have the capacity to stick to themselves and with the walls of the vessels through which they move. These processes are known as cohesion and adhesion respectively. Along with these, the root pressure developed in the cells of root due to absorption of water also helps in raising water.	**2** **2**	**4**
22	a) (i) Dissolved in plasma water (ii) As carbamino haemoglobin b) (ii) Inside the lungs carbamino haemoglobin and bicarbonate breakdown and carbon dioxide is released. (iii) As bicarbonates, formed by getting dissolved in water in the RBC c) Carbon dioxide combines with water present in and out of the cell to form carbonic acid. The increase in the level of carbonic acid increases the acidity in the body. This changes the internal environment.	½ + ½ **2** **1**	**4**
23	a) Glomerular filtrate. When blood flows through the glomerulus, ultrafiltration takes place through its small pores. b) Glucose, Amino acids c) When glomerular filtrate flows through renal tubules to the collecting duct, glucose and amino acids reabsorbed to the peritubular capillaries.	**2** **1** **1**	**4**

Prepared by
VINODKRISHNAN TV
PCNGHSS Mookkuthala
(Malappuram district)