

PAPER-2 ANIMAL PHYSIOLOGY

SEMESTER-II, INTERNAL- I

- 1) Open type of circulation found in [a]
a) Arthropods b) Helminthes c) Annelida d) None
- 2) Annelids exhibit which type of circulation [a]
a) Close type b) Open type c) a & b d) None
- 3) Amphibians have how many chambered heart [d]
a) 4 b) 6 c) 5 d) 3
- 4) Duration of cardiac cycle [c]
a) 9 sec b) 1 min c) 0.8 sec d) 5 sec
- 5) Hemoglobin is [a]
a) Respiratory pigment b) Excretory c) Digestive d) None
- 6) Normal blood pressure [b]
a) 60/20 b) 120/80 c) 10/80 d) 130/60
- 7) Anticoagulants are [d]
a) Warfarin b) Citrates c) Heparin d) a & c
- 8) Blood clotting factors are [b]
a) 8 b) 12 c) 4 d) 6
- 9) Myogenic heart is made up of [b]
a) Nerves b) Muscles c) Tissues d) None
- 10) Hypoxia means [a]
a) Low amount O₂ b) Low amount of CO₂
c) High amount CO₂ d) High amount of CO₂
- 11) Which of the following is not a type of muscle tissue found in animals? [d]
a) Skeletal muscle b) Cardiac muscle c) Smooth muscle d) Adipose tissue
- 12) What is the main function of the kidneys in animals? [c]
a) Regulation of blood pressure b) Regulation of blood sugar level
c) Regulation of electrolyte balance d) Regulation of body temperature
- 13) Reabsorption of water via the DCT is by which of the following? [c]
a) Renin b) Aldosterone c) Vasopressin d) Glucocorticoid
- 14) Osmoregulators carry out excretion through [a]
a) Gills b) Fins c) Scales d) Bladder
- 15) Which of the following is not a ruminant animal? [c]
a) Cow b) Buffalo c) Dog d) Goat
- 16) What is false at high altitude? [d]
a) Partial pressure of oxygen is lower b) total pressure is lower
c) Partial pressure of CO₂ is lower d) pressure of gas molecules that are oxygen is lower.

- 17) Which of the following is not a process of urine formation? [d]
a) Glomerular filtration b) Reabsorption c) Secretion d) Excretion
- 18) Aestivation is typically observed in animals during which condition? [c]
a) Extreme cold temperatures b) High altitudes c) Hot and dry conditions d) None
- 19) In ruminants which compartment is responsible for fermentation of plant material? [c]
a) Stomach b) Cecum c) Rumen d) Small intestine
- 20) The closure of AV valves occurs during? [b]
a) Atrial systole b) ventricular systole c) ventricular diastole d) Atrial diastole

II. Fill in the Blanks.

- 1) Mammals have **four** Chambered heart.
- 2) Size of the heart **size as your fist**
- 3) Arteries carry **oxygenated blood.**
- 4) Normal heart beats **60-100** /minutes.
- 5) Neurogenic heart is made up of **nerves.**
- 6) ECG stands for **electrocardiogram.**
- 7) Closed type of circulation found in **vertebrates.**
- 8) Intra cerebral hematoma means **bleeding within the brain.**
- 9) Hemoglobin has **four** Polypeptide chains.
- 10) Hypercapnea is presence of excess **CO₂.**
- 11) Oxygen toxicity is otherwise called as **oxygen poisoning.**
- 12) GFR means **glomerular filtration rate.**
- 13) Adenine and guanine are **purines.**
- 14) The **kidney** is the organ responsible for filtering waste products from the blood.
- 15) **Nephron** is the structural and functional unit of kidney.
- 16) Process by which food is broken down into simpler substances is **digestion.**
- 17) primary site for gas exchange is **alveoli.**
- 18) **Smooth muscle** is responsible for movement of food in digestive tract.
- 19) **Actin and myosin** are the proteins found in muscle fibers.
- 20) **Hemoglobin** is responsible for transport of oxygen.

III. Answer the following questions.

1) Cardiac cycle?

A - It refers to the series of events that occur from the beginning of one heartbeat to the beginning of the next.

2) Name the blood clotting factors?

A - Factor I (fibrinogen), Factor II (prothrombin), Factor III (tissue thromboplastin or tissue factor), Factor IV (ionized calcium), Factor V (labile factor or proaccelerin), Factor VII (stable factor or proconvertin), and Factor VIII (antihemophilic factor). Additionally, the coagulation factors also include Factor IX (plasma thromboplastin component or the Christmas factor), Factor X (Stuart-Power factor), Factor XI (plasma thromboplastin antecedent), Factor XII (Hageman factor), and Factor XIII (fibrin-stabilizing factor).

3) Closed type of circulation?

A - In a closed circulatory system, blood is always enclosed within a network of vessels (arteries, veins, and capillaries) and never directly contacts body tissues.

4) Bradycardia?

A - Heart rate that's slower than normal, usually less than 60 beats per minute .

5) Hemodynamics?

A - The study of the principles governing blood flow and its behavior within blood vessels, encompassing factors like cardiac output, blood pressure.

6) Osmoconformers?

A - Organisms that have body fluids with the same osmolarity as their environment.

7) Osmoregulators?

A - Organisms that maintain body fluids with a different osmolarity than their environment.

8) Oxygen toxicity?

A - Prolonged exposure to high concentrations of oxygen can lead to oxygen toxicity.

9) Hematoma?

A - It is a collection of blood outside of blood vessels, which can occur due to injury or trauma.

10) Torpor?

A - A state of reduced physiological activity in animals- slow metabolism, heart rate and breathing enabling survival periods of harsh conditions.

