



JB-003-1016022

Seat No. _____

Third Year B. Sc. (Sem. VI) (CBCS) Examination

August – 2019

Zoology : Paper - 602

(Cardiovascular System Res. & Mus. System & Reprodu., Immunology)

(New Course)

Faculty Code : 003

Subject Code : 1016022

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) Draw neat and labeled diagram wherever necessary.
(2) Numbers to the right side indicate full marks of the questions.

- 1 (A) Objective type questions : 4
(1) Which anticoagulant prevent conversion of Prothrombin to Thrombin?
(2) Which hormone affect the heart rate?
(3) Write name of valves present in heart.
(4) _____ is the volume of blood being pumped by the heart in a minute.
- (B) Answer in brief : (Any **One** out of Two) 2
(1) Draw neat and clean diagram of Human Heart.
(2) Origin of Heart Beat.
- (C) Answer in detail : (Any **One** out of Two) 3
(1) Cardiac Cycle
(2) Systolic Blood Pressure and Diastolic Blood Pressure.

- (D) Write note on : (Any **One** out of Two) 5
- (1) Explain Intrinsic pathway of Blood Clotting by neat and clean chart (diagram) and write the names of all clotting factors.
 - (2) Electrocardiogram (ECG)
- 2** (A) Objective type questions : 4
- (1) Write the function of "Titin" in muscle contraction.
 - (2) Give statement of Henry's Law.
 - (3) Which Metal Ion is present in Haemoglobin?
 - (4) Write the names of four important classes of respiratory pigments.
- (B) Answer in brief : (Any **One** out of Two) 2
- (1) Describe Dalton's Law.
 - (2) Describe "Partial Pressure difference of gases" in exchange of gases.
- (C) Answer in detail : (Any **One** out of Two) 3
- (1) Describe Actin and Myosin.
 - (2) Explain sarcomere with labeled diagram of the "arrangement of filaments within a sarcomere".
- (D) Write note on : (Any **One** out of Two) 5
- (1) "Transport of gases" during respiration.
 - (2) Contraction and Relaxation of Skeletal Muscle Fibers.
- 3** (A) Objective type questions : 4
- (1) Write the names of 4 endocrine glands.
 - (2) Why pituitary gland called the "masters" of endocrine gland?
 - (3) Which gland secrete "Calcitonin".
 - (4) Where the Pineal gland is situated?

- (B) Answer in brief : (Any **One** out of Two) **2**
- (1) Lipid soluble Hormones and Water Soluble Hormones
 - (2) Oestrous Cycle
- (C) Answer in detail : (Any **One** out of Two) **3**
- (1) Menstrual Cycle
 - (2) Parathyroid glands
- (D) Write note on : (Any **One** out of Two) **5**
- (1) Histological structure and function of adrenal glands
 - (2) Write a note on "Anterior Pituitary Gland".
- 4 (A) Objective type questions : **4**
- (1) Write the importance of epidermis.
 - (2) Write the function of Ig G and Ig A
 - (3) Write the importance of vaccinations.
 - (4) Which immunity includes internal defenses like phagocytes and inflammation ?
- (B) Answer in brief : (Any **One** out of Two) **2**
- (1) Gustato Receptor
 - (2) Phono Receptor
- (C) Answer in detail : (Any **One** out of Two) **3**
- (1) Photo Receptor
 - (2) First Line of Defence in Innate Immunity
- (D) Write note on : (Any **One** out of Two) **5**
- (1) Antibody Structure
 - (2) Adaptive Immunity

- 5 (A) Objective type questions : 4
- (1) In which liquid temporary mounts can be made?
 - (2) Write the names of dealcoholizing agents.
 - (3) Write the preparation method of Eosin.
 - (4) Write the names of chemicals used in preparation of Bouins fluids.
- (B) Answer in brief : (Any **One** out of Two) 2
- (1) Preparation method and use of "Acetocarmine" stain.
 - (2) Carnoy's fluid
- (C) Answer in detail : (Any **One** out of Two) 3
- (1) Histological structure of testis.
 - (2) Chart of Single staining and Double Staining.
- (D) Write a note on : (Any **One** out of Two) 5
- (1) Histological structure and functions of ovary.
 - (2) Describe "Fixation" and "Sectioning" in microtomy.
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