

QUESTION BANK OF BIOLOGY  
CLASS-XI(FINAL TERM)  
SESSION-2014-15

**CHAPTER-ANIMAL KINGDOM**

1-MARK

- 1 Name an example of egg- laying mammals [1]
2. What is polymorphism [1]
3. Which animal is popularly called ploughman of nature & why ? [1]
- 4 What are the organs of excretion in annelids & insects [1]
5. Name a free living & a parasitic Platyhelminths [1]
6. Name two adaptations for an aerial mode of life [1]
- 7 Name the organs of defense in paramecium [1]
8. Name the second largest animal phylum [1]
9. What are acoelomate animals ? [1]
- 10 Name an example of egg- laying mammals [1]
11. What is polymorphism [1]
12. Which animal is popularly called ploughman of nature & why ?
- 13 Name a vertebrate in which jaws are absent [1]
14. Assign the phylum to which following animals belongs – pheretima & sponge  
[1]
15. What is metamerism ?

2-MARKS

1. List any four identifying features of arthropoda & give examples. [2]
2. Distinguish between diploblastic & triploblastic animals [2]
3. What is protochordates? How is it classified. [2]
4. Mention the unique features of nematodes [2]
5. Point out differences between dog fish & cat fish [2]
6. Outline the role of coelom in animals [2]
7. Mention the unique features of phylum mollusca. [2]
8. Distinguish between insect & arachnida. [2]
9. Why are echinoderms considered closer to chordates than any other phylum ?
10. Distinguish between centipede & millipede [2]
11. Give reason why arthropoda constitute the largest group of animal kingdom [2]
12. Differentiate between male & female ascaris. [2]
13. Distinguish between bony fish & cartilaginous fish. [2]
14. Give reason why a snail & an octopus are classified under the same

phylum?[2]

15. List three basic chordate characters [2]

3-MARKS

1. "All vertebrates are chordates but all chordates are not vertebrates" justify the statement.[3]

2. "Mammals are the most successful & dominant animals today" Give evidence [3]

3. Enlist the main characteristics & examples of phylum porifera [3]

4. What are the basis of classification of animalia ?

5. Give important characters of phylum Nematelminthes [3]

6. Members of which phylum are known as "segmented worm" Write about their body symmetry, mode of excretion & respiration.

7. Give three important distinguishing characters of arthropoda, reptiles & mammals[3]

8. Mention the important characteristics of coelentrata & give examples

9. Give any four characteristics of hemichordate. [2]

10. Differentiate between Annelida & Arthropoda. [3]

11. What are basic plans of body design in animals? [3]

12. Differentiate between flightless & flying birds.[3]

5-MARKS

1. How are non chordates different from chordates. Write the major phyla of non- chordate & give examples.

2. Enlist the main features of Aschelminthes & give examples

3. Enlist the main salient features of phylum ctenophora.

4. Mention the important characters of phylum echinodermata & Hemichordata give examples.

5. Mention the important characters of phylum chordata & give examples.

6. Mention the important characters of phylum mollusca & give examples.

## **CHAPTER-BIOLOGICAL CLASSIFICATION:**

### **1-MARK**

1. Who introduced the five kingdom classification of organisms? [1]
2. To which kingdom the multicellular decomposers belong? [1]
3. Expand PPLO. [1]
4. Name the five kingdoms in which the organisms are grouped together? [1]
5. Which organisms are known as “Jokers of plant kingdom” [1]
6. In which class of fungi sexual reproduction does not occur?
7. Who is known as “Father of classification”? [1]
8. Name the fungus from which LSD drug is obtained? [1]
9. It is advised to grow one pulse crop in between two main crops in the same field why?
10. Define experimental taxonomy? [1]
11. Name the fungus causes the rust of wheat? [1]
12. What are distributed organisms which have not been included under any kingdom?

### **2-MARKS**

1. What is the basis of modern classification? [2]
2. Give one example of a fungus as a source of antibiotics? [2]
3. How are viroids different from viruses?
4. Explain phylogenetic system of classification? [2]
5. What is the basis of Whittaker’s system of classification? [2]
6. Find out what do the terms “algal bloom” & “red tides” signify?
7. Why are some fungi grouped under “fungi imperfecti”? [2]
8. Explain “Numerical taxonomy”. [2]
9. What are the demerits of five kingdom classification? [2]
10. Compare salient features of monera & protista. [2]
11. State an economically important use of
  - i) Heterotrophic bacteria.
  - ii) Archaeobacteria.[2]
12. Write the importance of classification of organism. [2]

### **3-MARKS**

1. Explain sexual reproduction in bacteria? [3]
2. Discuss the salient features of viruses with the help of diagram? [3]
3. Distinguish between bacteria & cyanobacteria? [3]

4. Describe the salient features of protists? [3]
5. Give scientific name of species of fungus:-
  - a) Produces a plant disease.
  - b) Is edible
  - c) A source of antibiotic
  - d) Used in manufacture of ethanol.[3]
6. Why is natural system of classification better than artificial system of classification?[3]
7. Give a comparative account of classes of kingdom fungi on the basis of mode of nutrition & mode of reproduction.
8. What are insectivorous plants? Explain with any one example. [3]
9. Discuss different systems of classification briefly. [3]
10. What are the different groups of fungi? [3]

5-MARKS

1. Write the distinct characters of fungi & explain using a diagram. [5]
2. Explain the various methods of asexual & sexual reproduction in fungi? [5]
3. Write the diagnostic characters of kingdom monera. [5]
4. Compare the kingdoms under five kingdom classification in terms of cell type, cell organelles Nucleus, motility, cellularity.[5]
5. Tabulate plant kingdom and explain each and every division with its sub-division with the help of example?

**CHAPTER-PLANT KINGDOM**

1-MARK

1. Name the algae which is used for fodder to poultry birds. [1]
2. Which groups of plants is called vascular cryptogam ? [1]
3. What is a cone ? [1]
4. Name a unicellular algae. [1]
5. Why some bryophytes are called liverworts. [1]
6. What are rhizoids?
7. Name the algae which is used for fodder to poultry birds. [1]
8. Which groups of plants is called vascular cryptogam ?
9. What are cone bearing plants called? [1]
10. Name any red algae which is used as vegetables? [1]
11. What do you mean by thallus?
12. Name the vascular plants which produces only spores but no flowers or seeds?[1]
13. Where are the antheridia & archaegonia located in ferns? [1]
14. What are the two main classes of bryophytes?

## 2-MARKS

1. What features led to dominance of vascular plants? [2]
2. Differentiate between Red algae & brown algae? [2]
3. Give some important features of dicots? [2]
4. List four classes of plants belonging to fern group. [2]
5. How will you differentiate between red algae & green algae. [2]
6. Write two important characteristics of gymnosperms? [2]
7. How do fungi differs from algae ? [2]
8. Both gymnosperms & angiosperm bear seeds but then why are they classified separately?[2]
9. List any three characterstic features of Bryophytes.
10. List any two differences' between gymnosperms & angiosperms? [2]
11. What is the role of capsule in life history of moss? [2]
12. What is the difference between syngamy & triple fusion? [2]
13. Mention some of the uses of ferns?
14. Tabulate differences between Gymnosperm & pteridophytes [2]
15. What is heterospory? What is its significance? [2]
16. What are gymnosperms? What are its four classes? [2]
17. How would you distinguish between monocots & dicots?

## 3-MARKS

1. Explain in brief the structure of prothallus of fern? [3]
2. Point out differences in sexual reproduction of moss & fern?
3. Describe the main features of pteridophytes? [3]
4. "Algae & Bryophytes are different from each other." Point out the main differences between them?
5. What are the identifying features of Angiosperms flowering plants. [3]
6. Describe the similarities in sexual reproduction of moss & fern.
7. Why are Bryophytes regarded as "the amphibians of plant kingdom"? [3]
8. Describe the important characterslics of gymnosperms?
9. List common modes of reproduction in Algae? [3]
10. What are ferns? Describe its salient features.

## 5-MARKS

1. Explain the life cycle in green algae? [5]
2. Explain briefly the alternation of generation in bryophytes? [5]
3. Describe the common mode of reproduction in Angiosperms. [5]
4. Classify plant kingdom? [5]
5. Differentiate between Red, Brown & Green algae.Any 5 difference [5]

## **CHAPTER-THE LIVING WORLD**

### 1-MARK

1. Name the three fields of systematics. [1]
2. Give the two name system of organisms? [1]
3. Write the correct order of sequence of taxonomical categories? [1]
4. Give the unit of classification? [1]
5. Who gave binomial name of classification? [1]
6. What is meant by identification of a species? [1]
7. Name the highest categories of classification? [1]
8. What are the three codes of nomenclatures? [1]
9. What do you mean by "chemotaxonomy"? [1]

### 2-MARKS

1. What are the advantages of giving scientific names of the organisms? [2]
2. Give the role of botanical gardens? [2]
3. Differentiate between species & taxon? [2]
4. Why are classification systems changing every now & then? [2]
5. Differentiate between taxon & category? [2]
6. Describe the role of museum in studying systematic? [2]
7. "Botanical gardens are living herbaria". Comment ? [2]
8. Why are living organisms classified? [2]
9. What is Taxonomic key? How is it helpful in the identification & classification of an organism? [2]
10. Differentiate between taxonomy & systematic. [2]
11. What is a taxon? Illustrate the taxonomical hierarchy with a suitable example? [2]

### 3-MARKS

1. Name the guidelines for naming of organisms? [3]
2. What is Biological classification? What is the need of classification? [3]
3. State any five objectives of classification. [3]
4. Explain the utility of systematic & mention the characteristics of new. [3]
5. What are taxonomic aids? Mention some of the taxonomic aids for identification [3]
6. How would you set up a herbarium? [3]
7. Differentiate between classical taxonomy & Modern taxonomy. [3]

### 5-MARKS

1. What is Binomial system of nomenclature? Who proposed this system? Why is

binomial nomenclature the most acceptable mode of naming organism?  
[5]

2. What are the major divisions of classification, classify man. [3]

### **CHAPTER-DIGESTION AND ABSORPTION:**

#### 1-MARKS

1. Name the secretions of Goblet cell & parietal cells. [1]
2. Name the three parts of small intestine of man. [1]
3. Which is the largest gland in our body? [1]
4. What is the main function of bile salt? [1]
5. Name the watery fluid secreted from Bruner's gland in duodenum. [1]
6. What is atheroma? [1]
7. What is egestion? [1]
8. What are micelles? [1]
9. What are crypts of lieberkuhn? [1]

#### 2-MARKS

1. What is the role of micelles in the fat absorption? [2]
2. Give two functions of trypsin? [2]
3. What are the specific functions of food? [2]
4. How does fat absorption takes place? [2]
5. How is food absorbed? [2]
6. What are enzymes? [2]
7. If a major part of the small intestine of a mammal be removed, will this affect absorption of food?[2]
8. What is the role of micelles in the fat absorption? [2]
9. Differentiate chylomicron & micelles on the basis of their structural components.[2]

#### 3-MARKS

1. How is DNA content in our food digested in the body? [3]
2. How would it affect the digestion of proteins if there is blockade in the pancreatic duct?[3]
3. What is the action of salivary amylase? Differentiate between lipases and peptidases?[3]
4. It is absolutely not necessary to produce amylase in an active form in our body. But it is not in the case of trypsin. Given reasons.[3]
5. Describe coagulation of milk in alimentary canal. [3]
6. Name three enzymes secreted by pancreas specify the substance and the product of each.[3]

## 5-MARKS

1. Draw a labeled diagram of human alimentary canal & Describe its different parts.[5]
2. Name the enzymes for protein digestion in the gastric, pancreatic and intestinal, the substrate they digest and products of their action.[5]
3. Explain the absorption of digested products. [5]
4. Draw digestive tract of Human being and label its part?

## **CHAPTER-BREATHING AND EXCHANGE OF GASES:**

### 1-MARK

1. Define partial pressure of a gas. [1]
2. Name the other pigments which are present in animals besides haemoglobin. [1]
3. What is the difference between alveolar air and inspired air? [1]
4. Define vital capacity. [1]
5. What is the role of carbonic anhydrase in RBC's? [1]
6. What is carbamino haemoglobin? [1]
7. Name the place where actual exchange of gases takes place in insects. [1]
8. What is the percentage of O<sub>2</sub> in inspired & expired air? [1]
9. What is the utility of chloride shift? [1]

### 2-MARKS

1. Give role of intercostals muscles in respiration. [2]
2. Explain Erythrocytes can carry out anaerobic metabolism only. [2]
3. Describe how our brain gets a continuous supply of oxygen form the atmosphere.[2]
4. What is chloride shift? Explain. [2]
5. Explain briefly the first step is respiration? [2]
6. Write a note on bronchitis and its prevention. [2]
7. What is the difference between carbaminohaemoglobin and oxyhaemoglobin. [2]
8. What is functional residual capacity? [2]
9. Describe the transport of O<sub>2</sub> and CO<sub>2</sub>? [2]

### 3-MARKS

1. What is hypoxia, artificial hypoxia & Anaemic hypoxia? [3]
2. How is respiration regulated? [3]
3. Differentiate between vital lung capacity and total lung capacity. [3]
4. Explain the mechanism of breathing in humans. [3]



5. Define oxygen dissociation curve? Why it has sigmoidal pattern? [3]
6. What is the role of carbonic anhydrase? Show by series of reactions how carbonic anhydrase starts the reactions leading to the formation of hemoglobin acid?

5-MARKS

1. Describe transport mechanism of CO<sub>2</sub>. [5]
2. Describe in brief the respiratory organs of man. [5]
3. Explain how our heart muscles get a continuous supply of atmospheric oxygen. [5]

### **CHAPTER-EXCRETORY PRODUCTS AND THEIR ELIMINATION:**

1 MARK

1. In which part of nephron filtration takes place? [1]
2. What difference is observed in the ascending and descending limb of Henle's loop with reference to permeability of water? [1]
3. What is the PH of urine. [1]
4. Name the three kinds of nitrogen excretion. [1]
5. What are podocytes? [1]
6. Besides water, name any two constituents of human sweat. [1]
7. What happens in glomerulonephritis? [1]
8. Name the excretory organ of cockroach. [1]
9. Name the hormone which controls the concentration of sodium in the body. [1]

2 MARKS

1. Differentiate between Rennin and Renin? [2]
2. What are the two intrinsic mechanisms that provide auto regulation of glomerular filtrate? Explain any one of these. [2]
3. How is the permeability of the distal convoluted tubule and the collecting tubule controlled for regulating the water content inside the body? [2]
4. Kidneys do not play a major role in excretion in ammonotelic animals. Justify. [2]
5. Define glomerular filtration rate. What is its value in a healthy human? [2]
6. What is the significance of frog's tadpole being ammonotelic and the adult frog being ureotelic? [2]
7. Describe the blood vessels called vasa rectae found in relation to uriniferous tubules. What is their function? [2]
8. What is chief nitrogenous waste product in birds? Give two advantages of this mode of excretion. [2]
9. Terrestrial animals are generally either ureotelic or uricotelic, not ammonotelic. Why? [2]

3-MARKS

1. Person suffering from very low blood pressure pass no urine why? What suggestion would you offer for the removal of waste products from the

blood in such a situation.[3]

2. Explain briefly how micturation is a reflex process; but is also under some voluntary control.[3]
3. Describe urea cycle. [3]
4. What is a dialysis machine? When is it needed? [3]
5. Suppose the kidneys of a person are damaged, can you predict what is going to happen to him?[3]
6. How does liver both as a digestive as well as an excretory organ? [3]

5-MARKS

1. Describe briefly the structure and function of renal corpuscle. [5]
2. Describe the mechanism of urine formation. [5]
3. Describe the renal excretory system of man. [5]

### **CHAPTER- LOCOMOTION AND MOVEMENT:**

1 MARK

1. Name the functional contractile unit of muscle. [1]
2. What is arthritis? [1]
3. What is the total member of bones present in the left pectoral girdle and the left arm respectively in a normal human?[1]
4. Name the tissue which connects muscles to the bone? [1]
5. What is the function of myoglobin? [1]
6. What causes fatigue of muscle fibers? [1]
7. What is a tendon? [1]
8. Which type of movable joint makes the hip joint? [1]
9. Name the heaviest and longest bone in the human body? [1]

2-MARK

1. List functions of skeleton in higher animals? [2]
2. Define a joint. [2]
3. What is osteoporosis? Name two factors which are responsible for osteoporosis.[2]
4. Which kinds of muscle fibers are richly found in the extensor muscles present on the back of human body? What characteristics enable those fibers to serve their purpose?[2]
5. Give differences between red and white muscle fibers, other than color. [2]
6. What are floating ribs? How many of them are there? [2]
7. Why can a red muscle fiber work for a prolonged period, while a white muscle fibre suffers from fatigue soon?[2]
8. What is the function of girdles? [2]
9. What makes the synovial joints freely movable? List any four types of synovial joints.[2]

### 3-MARK

1. Explain the initiation of muscle contraction. What is the role of sarcoplasmic reticulum, Myosin head and F – actin during contraction in striated muscles?[3]
2. What are the three types of muscle tissue? Write two characteristic points about the structure of each of them?[3]
3. Represent diagrammatically a sarcomere and label its parts. Which of these parts shorten during muscle contraction?[3]
4. Describe any three disorders of the muscular system. [3]
5. Differentiate between Endoskeleton and Exoskeleton. [3]
6. Explain the following –
  - a) Antagonistic muscles
  - b) Tetanus
  - c) Threshed stimulus

### 5-MARK

1. What is the role of  $Ca^{++}$  and ATP in muscle contraction? [5]
2. Describe the various kinds of joint in human body. According to mobility giving one example of each.[5]
3. Explain sliding filament theory of muscle contraction. [5]

### **CHAPTER- NEURAL CONTROL AND COORDINATION:**

#### 1-MARK

1. How does an impulse travel across a synapse? [1]
2. How many pairs of cranial nerves are present in man? [1]
3. What is saltatory conduction? [1]
- 4 Name the band of nerve fibers that joins the two cerebral hemisphere in mammals.[1]
5. What is threshold stimulus for nerve cell? [1]
6. What is a compound eye? [1]
7. What types of neurons are found in dorsal root of spinal nerve? [1]
8. What is the basic unit of neural system? [1]
9. Why is blind spot devoid of the ability for vision? [1]

#### 2-MARKS

1. What is a reflex? [2]
2. What happens when the membrane of a nerve cell carries out a sodium pump? [2]
3. What are the events that take place at the point of stimulation of axon? [2]
4. Give parts of neuron. [2]
5. Describe the role & location of ciliary body in human eye. [2]
6. What is mosaic vision? [2]
7. Where does cerebrospinal fluid occur in our body? Mention two if its function. [2]
8. What is the chemical and difference between rods & cones? [2]

9. Why are gray matter and white matter contained in human nervous system named so?[2]

### 3-MARKS

1. Differentiate between dorsal spinal roots and ventral spinal roots. [3]
2. Describe human neural system. [3]
3. Why do giant squids have very thick nerve fiber? [3]
4. Where are synaptic vesicles found? Name their chemical contents? What is the function of these contents?[3]
5. Give the location and function in the human eye, of the following –  
(i) cornea (ii) Iris (iii) Vitreous humor[3]
6. Why are nerve impulses conducted more rapidly in myelinated nerve fiber than in a non – myelinated one? Explain.[3]

### 5-MARKS

1. Draw a labeled diagram to show the structural view of human ear in the sectional view.[5]
2. What is meant by the resting membrane potential of neuron. How do ion channels & sodium – potassium pumps contribute to the resting potential?[5]
3. Taking one example, describe the functioning of the various components of a spinal reflex arc.[5]

## **CHAPTER- CHEMICAL CO – ORDINATION AND INTEGRATION:**

### 1-MARK

1. What are hormones. [1]
2. Name the gland of emergency. [1]
3. Which gland secrete glucagon? [1]
4. Distinguish between diabetes mellitus and diabetes insipidus. [1]
5. Name the hormones of fight or flight. [1]
6. Name the hormone secreted from outermost cellular layer of adrenal cortex? [1]
7. What is the function of Leydeig's cells? [1]
8. Name the gland which secretes vasopressin. [1]
9. Name one mineralocorticoid. [1]

### 2-MARKS

1. Differentiate hormone & neurohormone? [2]
2. What are gonadotropics? [2]
3. Why oxytocin is called as 'birth hormone'? [2]
4. What usually can cause over secretion of parathormone in human body? List any two effects on the body because of this hormone.[2]
5. What is the function of pineal gland? [2]

6. In general, how steroid hormones do effects changes in their target cells. [2]
7. What is corpus luteum? How does it function as a endocrine gland? [2]
8. Name the gland that functions as a biological clock in our body where it is located? Name its one secretion.[2]

### 3-MARKS

1. Describe the physiological functions & disorders of thyroid gland. [3]
2. Write full form of ADH and describe how it affects the functioning of kidney tubules.[3]
3. Differentiate between exocrine, endocrine & heterocrine glands. [3]
4. Name the T<sub>3</sub> and T<sub>4</sub> components of thyroid hormone. Explain their specific function.[3]
5. Differentiate between vitamin, hormone & enzyme. [3]
6. A patient was complaining of frequent urination, excursive thirst, hunger and tiredness. His fasting glucose level was found higher than 130 mg / dL an two occasions :
  - (i) Name the disease
  - (ii) Give the root cause of this disease
  - (iii) Explain why the blood glucose level is higher than 130 mg / dL.[3]

### 5-MARKS

1. Name the hormone that regulates each of the following and mention the source of it.
  - A) urinary elimination of water.
  - B) storage of glucose as glycogen.
  - C) Na<sup>+</sup> and K<sup>+</sup> metabolism.
  - D) Basal metabolic rate
  - E) Descent of testes into scrotum[5]
2. Explain the Hormones of adrenal gland and their action on target tissue in a tabular form.[5]
3. Explain the mechanism of hormone action. [5]

## **CHAPTER- BODY FLUIDS AND CIRCULATION:**

### 1-MARK

1. Which of the four chambers of the human heart has the thickest muscular wall?[1]
2. Where are RBCs formed from in an adult human? [1]
3. What is ECG technique? [1]
4. In which mammal, the RBC are nucleated? [1]
5. Name any two substances which prevent blood coagulation in uninjured blood vessels.[1]

6. Name the type of granulocytes that play an important role in detoxification? [1]
7. A cardiologist observed an enlarged QR wave in the ECG of a patient. What does it indicate?[1]
8. Name the double layered membranous covering of the heart. [1]
9. Why lymphatic circulation takes place very slowly? [1]

### 2-MARKS

- 1 Distinguish between mitral and tricuspid valve? [2]
2. Why does the fish heart pump only deoxygenated blood? [2]
3. How is heart failure different from heart attack? [2]
4. Why is closed circulatory system considered advantageous? [2]
5. What is the name of the straw coloured fluid left after clotting of blood? How is it different from blood?[2]
6. Why is swelling of feet of leg caused when a person stands immobile for a long time?[2]
7. How are the two heart sounds produced during cardiac cycle? Which one of these is of longer duration?[2]
8. What is average number of thrombocytes in blood? What is their function? [2]

### 3-MARKS

- 1 What is cardiac cycle? [3]
2. Differentiate between right ventricle and left ventricle. [3]
- 3 Write a note on "Regulation of cardiac activity"? [3]
4. Why does lymph contain much less proteins than the blood plasma? Name the two principal lymph vessels in humans.[3]
5. Differentiate between arteries and veins. [3]
6. Explain the chemical events that take place to form a blood clot to seal the wound?[3]

### 5-MARKS

1. Describe the structure of human heart. [5]
2. What is lymphatic system? Discuss its importance. [5]
3. Explain double circulation with the help of diagram. [5]

**BY: MD. IRFAN (BIO FACULTY)**  
**GOVIND VIDYALAYA TAMULIA**