

# SECOND TERMINAL EXAMINATION, 2017

## BIOLOGY

Time : 3 hrs.

Class XI

M.M. : 70

Date – 03.03.2017 (Friday)

Name of the student \_\_\_\_\_ Section \_\_\_\_\_

### General Instructions:

- All questions are compulsory.
- This Question paper consists of **six Sections** - A, B, C, D, E and F.
- Section A has 5 questions of **1 mark** each.
- Section B has 4 questions of **2 marks** each.
- Section C has 11 questions of **3 marks** each.
- Section D has 1 question of **4 marks**.
- Section E has 2 questions of **5 marks** each.
- Section F has **2** questions with a total of **10 marks** based on **OTBA** study material.
- An internal choice has been provided in one question of 2 marks, one question of 3 marks and all the two questions of 5 marks. You have to attempt only one of the alternatives in such questions.
- Neat and properly labelled diagrams should be drawn wherever necessary,
- *Please check that this question paper contains 02 printed pages.*

### SECTION A

- Q.1** What is the average cell cycle span for a mammalian cell?
- Q.2** Draw the structure of the amino acid-alanine.
- Q.3** Cell is the basic unit of life. Discuss in brief.
- Q.4** How many spermathecae are found in earthworm?
- Q.5** What is periderm?

### SECTION – B

- Q.6** List the hormones secreted by the following –  
a) posterior pituitary      b) kidney
- Q.7** Compare the following –  
a) CNS and PNS.      b) Resting potential and action potential.
- Q.8** What is the significance of juxta glomerular apparatus (JGA) in kidney function?
- Q.9** What is the importance of plasma proteins?

**OR**

Draw a standard ECG and explain the different segments in it.

### SECTION – C

- Q.10** Answer the following –  
a) What is the function of nephridia?  
b) How many types of nephridia are found in earthworm based on their location?
- Q.11** What is stomatal apparatus? Explain the structure of stomata with a labelled diagram.
- Q.12** Differentiate between –  
a) Racemose and cymose inflorescence  
b) Fibrous root and adventitious root  
c) Apocarpous and syncarpous ovary
- Q.13** What are the peculiar features that you find in parasitic platyhelminthes?

**Q.14** Describe the important characteristics of gymnosperms.

**OR**

Write short notes on the functions of the following hormones :

- a) Estrogens                      b) Androgens                      c) Thymosine

**Q.15** How are viroids different from viruses?

**Q.16** Answer the following :

- a) Which part of the ear determines the pitch of a sound?  
b) Which part of the human brain is the most developed?  
c) Which part of our central neural system acts as a master clock?

**Q.17** Describe the role of liver, lungs and skin in excretion.

**Q.18** What is meant by double circulation? What is its significance?

**Q.19** What is the effect of  $p\text{CO}_2$  on oxygen transport?

**Q.20** What are the functions of liver?

### **SECTION – D**

**Q.21** Shikha, a class XI Biology student went for a regular eye checkup at a nearby hospital. While waiting for her turn, she saw a lady with a white patch in the eye. She kept thinking about what must have led to this condition. During her check-up, she asked the doctor about the white patch. The doctor appreciated her for her keen observations and told her that it was due to cataract.

- a) What do you understand by the term cataract?  
b) Name the different parts of a human eye.  
c) What values are shown by Shikha?  
d) Name some other disorders of eye.

### **SECTION – E**

**Q.22** Give the schematic representation of glycolysis?

**OR**

Explain the chemiosmotic hypothesis with diagram.

**Q.23** Describe the important steps in muscle contraction.

**OR**

Name the components of the formed elements in the blood and mention one major function of each of them.

### **SECTION - F**

**Q.24** **Open Text Based Assessment (OTBA).**

- The suggested word limit for the questions is 100-120 words. However, depending on the question, your answer could be shorter/longer. It is important to present your views, arguments and conclusions logically, coherently in your own language; based on the concepts learnt during teaching learning sessions till class XI, their applicability with respect to the open text material and your own awareness of the given theme.

- a) Being rich does not necessarily mean living a healthy life. Justify the statement. (5)  
b) Mention the two types of Diabetes mellitus found in man. (5)

