HALF YEARLY EXAMINATION, 2017-18

BIOLOGY

Time : 3 hrs. **Class - XI** **MM: 70**

Name of the student _____ Section ____ Date-23.09.2017 (Saturday)

General Instructions:

- *All questions are compulsory.*
- *This question paper consists of sections **A, B, C, D and E**.*
- ***Section A** contains **5** questions of **1 mark** each. **Section B** contains **5** questions of **2 marks** each. **Section C** contains **12** questions of **3 marks** each. **Section D** contains **1** question of **4 marks**. **Section E** contains **3** questions of **5 marks** each.*
- *An internal choice has been provided in one question of 2 marks, in one question of 3 marks and 3 questions of 5 marks weightage.*
- *Wherever necessary the diagram drawn should be neat and properly labelled.*

SECTION – A

Q.1 Name the person who proposed the system of binomial nomenclature.

Q.2 What technical term is given to the symbiotic association of fungi with –

a) Algae b) Roots of higher plants

Q.3 Expand PPLO.

Q.4 Write the formula of palmitic acid.

Q.5 Why is mitosis called equational division?

SECTION – B

Q.6 What is hydroponics? Give one application of this technique.

OR

What is the function of nucleolus?

Q.7 What are the functions of liver?

Q.8 Differentiate between IRV and ERV.

Q.9 Define a cardiac cycle and the cardiac output.

Q.10 How do the following reproduce asexually?

a) Hydra b) Planaria

SECTION – C

Q.11 Discuss how classification system have undergone several changes over a period of time?

Q.12 Name the persons who proposed the cell theory. State the two salient features of this theory.

OR

Draw a neat diagram of a plant cell and label any six parts of it.

Q.13 Bring out the differences between primary and secondary metabolites. Give an example for each of them.

Q.14 Represent schematically the cell cycle, indicating the different phases and the formation of two cells from one parent cell.

Q.15 How are the minerals absorbed by the plants?

Q.16 Name the different types of teeth and their respective number in an adult human.

Q.17 Explain the process of inspiration under normal conditions.

Q.18 What is the importance of plasma proteins?

Q.19 Differentiate between the gametophyte and sporophyte of plants. What is meant by alternation of generations?

Q.20 What are the characteristics of prokaryotic cells?

Q.21 Draw a standard ECG and explain the different segments in it.

Q.22 Write any three differences between mitosis and meiosis.

SECTION – D

Q.23 Shruti's grandfather has to undergo a bypass surgery for his coronary artery disease. Shruti explains to her mother and grandmother all about coronary artery disease and also tells in general how it can be prevented.

a) What is coronary artery disease commonly called?

b) What happens in this disease?

c) How can it be avoided by proper life style?

d) What values are shown by Shruti, when she explained what she knows about the disease?

SECTION – E

Q.24 Who proposed the fluid mosaic model of plasma membrane? Describe the same along with the help of a labelled diagram.

OR

What is centromere ? How does the position of centromere form the basis of classification of chromosomes? Support your answer with diagrams showing the position of centromere on different types of chromosomes.

Q.25 a) Describe the secondary structure of DNA using the double helical model. Who proposed this model?

b) Describe the primary structure of proteins.

OR

a) Enlist the four steps involved in the catalytic action of an enzyme.

b) Write the differences between coenzyme and prosthetic group.

Q.26 a) Draw a diagram of an animal cell and label any ten parts of it.

b) Differentiate between primary cell wall and secondary cell wall.

OR

a) How are polysaccharides and disaccharides digested?

b) Describe the process of digestion of butter in your body and its absorption.