**Balochistan Board of Intermediate and Secondary Education, Quetta**

Model Paper for HSSC Examination 2017 and Onwards

Subject: Botany Total Marks = 43 Class XII

**PART – I** 10 marks

**Q 1: Attempt all the questions**

1. Which one of the following is used in brewing industry to stimulate – amylose production in barley
   1. Cytokines b. ethane c. GA3 d. Abscisic acid
2. The inactive non-conducting wood is called
   1. Sap wood b. Heart wood c. cork d. callus
3. Which of the following pair belongs to long – day plants
   1. Cocklebur, glycine max b. Glycine max, Larkspur c. Larkspur, Spinach d. Spinach, Pansy
4. The optimum temperature for maximum growth is from
   1. 25 – 30 b. 20 – 25 c. 15 – 20 d. 10 – 15
5. The apical dominance is due to
   1. Cytokines b. IAA c. GA3 d. Ethane
6. Which of the following is nonsense codon
   1. UUU b. UAA c. AUA d. UAU
7. The mutation occur in one of the four base pairs is called
   1. Point mutation b. Gene mutation c. Frame shift mutation d. None of these
8. DNA finger prints can be prepared from
   1. Plasma b. Serum c. Lymph d. Blood

(B). Fill in the blanks.

1. layering is the characteristic of \_\_\_\_\_\_\_\_\_\_\_

2. Ozone molecule is made up of three\_\_\_\_\_\_\_\_\_\_\_\_ atoms bounded together.

3. DNA polymerase is commonly known as \_\_\_\_\_\_\_\_\_\_.

**Q 2: Give short answers of any seven of the following, each question carry three marks**  (21)

1. Write a note on Nastic movements.
2. Which concept was given by M.H. Chailakhian for the flowering in plants?
3. Describe the central dogma.
4. What do you know about Bombay phenotype?
5. Write a brief note on the ZZ – ZW type of sex determination
6. Give a brief account of Amniocentesis
7. How nitrogenous wastes of plants and animals are converted into nitrates in the nitrogen cycle?
8. Write a note on mutualism in plants.
9. What is the cause and effects of ozone layer depletion
10. Give a brief description of Eutrophication

**Q 3: Give the answers of any two of the following questions, each question carry six marks** (12)

1. How semiconservative method of DNA replication was discovered by meselson and Stahl?
2. Write a comprehensive note on duplicate recessive epistasis.
3. Describe Polymerase chain reactions
4. What do you know about tropical grassland ecosystem