

SARDAR PATEL UNIVERSITY
B.Sc.(Sem-5)Examination
Subject: BOTANY
Paper: US05CBOT06 (PLANT PHYSIOLOGY)

Date: 22/11/2019(Friday)
Time: 10-00A.M. to 01-00 P.M.

Max. Marks: 70

I. Choose the correct answer:

(10x1=10)

- (i) Plant hormones are also known as:
 (a) Growth factors (b) Growth regulators (c) Phytohormones (d) All of these
- (ii) _____ is used on seedless grape variety to increase the size and quality of fruit.
 (a) GA (b) Auxin (c) Cytokinins (d) None of these
- (iii) Who suggested the term 'photoperiodism'.
 (a) Garner & Allard (b) Hammer (c) Bonner (d) All of these
- (iv) The pigment that control flowering is known as:
 (a) Phytochrome (b) Cytochrome (c) Chlorophyll (d) None of these
- (v) Who proposed the protein model of cross linking?
 (a) Garner (b) Allard (c) Levitt (d) None of these
- (vi) Stress caused by pathogen called:
 (a) Biotic (b) Abiotic (c) Osmotic (d) None of these
- (vii) Phyto gerontology concerned with the study of-
 (a) Senescence (b) Vernalization (c) Dormancy (d) None of these
- (viii) Which one of the following is known to accelerate fruit ripening?
 (a) GA (b) Auxin (c) Ethylene (d) Cytokinin
- (ix) Name a hormone responsible for delaying senescence:
 (a) GA (b) Auxin (c) Cytokinins (d) ABA
- (x) Which one of the following causes oxidative stress in plants?
 (a) Air pollution (b) Heavy metals (c) UV light (d) All of these

①

(P.T.O.)

2. Answer any TEN of the following questions in brief: (10x2=20)

- (i) List out the physiological effects of kinetin on plants.
- (ii) Define: 'Apical dominance'.
- (iii) Enumerate the applications of plant growth hormones in agriculture.
- (iv) Write a brief note on short day plants.
- (v) Give examples of DNP.
- (vi) Differentiate between stress and strain.
- (vii) Write in brief about effect of stress on cell membrane.
- (viii) What is abscission and state its importance in plant life.
- (ix) What are SAGs?
- (x) Briefly explain how ethylene is synthesized.
- (xi) Write a brief note on photoperiodism.
- (xii) Briefly discuss the vernalization.

3. Write a note on synthesis and physiological significance of ethylene. (10)

OR

3. Discuss: (a) Role of kinetin in senescence (05)

(b) Role of auxin in parthenocarpy (05)

4. Write in detail about Phytochrome. (10)

OR

4. (a) Distinguish between SDP, LDP and DNP. (06)

(b) Write the difference between Pr and Pfr forms of phytochrome. (04)

5. Write a note on types of biotic environmental stress. (10)

OR

5. Discuss: Write about abiotic stress in detail. (10)

6. (a) Explain the types and physiology of senescence. (05)

(b) Draw a flow chart of major events taking place during leaf senescence. (05)

OR

6. Write in detail about flower senescence. (10)

→ X →
②