

**PC- 380 CV-19**

**M.Sc. Botany (III SEM.)**

**Examination Dec-2020**

**Compulsory**

**Paper-I**

**PLANT DEVELOPMENT**

**Time: Three Hours]**

**[Maximum Marks: 80**

**[Minimum Pass Marks: 29**

**Note: Answer from Both Section as Directed. The figures in the right hand margin indicate marks.**

**Section -A**

1. Answer the following in very short. 1X10
- (a) Enumerate two unique features of plant development.
  - (b) Write only names of the theories which are given to explain organization of 5 AM.
  - (c) What is phellogen?
  - (d) Give one example of lateral tissue.
  - (e) What are "Trichomes".
  - (f) Define Secondary Growth with one example.
  - (g) Define medullary bundles.
  - (h) Name any one monocot plant showing secondary growth.
  - (i) What is the type of vascular bundle found in dracen.
  - (j) What is the type of vascular bundle in family Cucurbitaceous.
2. Answer the following questions in short and to the point. 2X5
- a. Differentiate between plant and animal development.
  - b. Comment upon tunica-carpus theory.
  - c. Diagram showing abnormal Secondary growth in mirabilis stem. (Draw any well labelled diagram)
  - d. Comment upon inverted cortical vascular bundle.
  - e. Give the details of any two types of Stomata with diagram.

**Section -B**

3. Answer the following question in detail- 15x4  
Explain hormonal control of seeding growth.
- OR
- Comment upon the "mobilization of food reserves during seed germination"
4. Discuss in detail the organization of "Shoot apical meristem".
- OR
- Comment upon- (Any Two)
- a. Differentiation of Xylem.
  - b. Lactifers.
  - c. Wood development.
5. Describe the "Leaf Differentiations" in detail differentiate between
- a. Root Modules and Mycorshiza
  - b. Alternate and opposite phyllotaxy.
6. Describe the abnormal Secondary growth in Tinospara storm.
- OR
- Differentiate between----- (Any-3)
- (a) Medullary and cortical Vascular Bundles
  - (b) Intra and Interylary phloem.
  - (c) Collateral and Bicolateral Vascular bundles.
  - (d) Amphicribal and Amphivessal Vascular bundles.
  - (e) Cambium and Cork Cambium.