PD-380

(543)M.Sc. BOTANY (THIRD-SEMESTER)

Examination DEC.- 2020

Compulsory/Optional

Group-

Paper-I

Name/Title of Paper- PLANT DEVELOPMENT

Time:-Three House.] **[Maximum Marks:080**

[Minimum Marks 29

नोट : दोनो खण्डोंसेनिर्देशानुसारउत्तरदीजिए।प्रश्नों के अंक उनके दाहिनीओरअंकितहै।

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

Section-A

Q.1. Choose the correct answer- (1x10=10)

(i) Histogen theory was proposed by
(a) Schmidt (b) Nageli
(c) Esan (d) Hanstein

(ii) Lignin is present in the cell walls of -
(a) Parenchyma (b) Collenchyma
(c) Sclerenchyma (d) Chlorenchyma

(iii) Raphides are made up of -
(a) Calcium Carbonate (b) Pectin
(c) Calcium oxalate (d) Calcium Pectave

(iv) Bulliform cells are found in the leaves of -
(a) Euphorbiacease (b) Orchid cease
(c) Lilia cease (d) Poaceac

(v) Lateral roots develop from-
(a) Epidermis (b) Endodermis
(c) Penicillin (d) Cortex

(vi) Quiescent center is present in -
(a) Stem apex (b) Root apex
(c) Leaf tip (d) Flower

(vii) Photogene gives rise to -
(a) Xylem (b) Phloem
(c) Cork (d) pericycle

(viii) Inter xylary phloem is found in -
(a) Aristolochia indicia (b) Bauhinia rubiginosa
(c) Salvandora Persica (d) Thiononia scanners

(ix) P- proteins are found in -
(a) Compassion cells (b) sieve elements
(c) pith (d) vessels

(x) AFter primary growth is mature elements of protoxydem are.
(a) Recognized by circular or spiral secondary wall thickenings.
(b) Transformed into metaxylem
(c) Differentiated into trachiods (d) Crushed beyond recognition.

Q(2) Answer the following in very short - 2x5 = 10

(a) Differentiate between the plant and animal development on the basis of two points.
(b) Write in very short about lactifers.
(c) Write in short about 'MYCORHIZA"
(d) Define with labelled diagrams the "Inverted cortical vascular Bundles.
(c) Comment upon the abnormal secondary growth in monocot stem.

Section-B

15x4 = 60

Q(3) Explain in detail the "metabolisms" of nucleic acid and proteins during seed Germination.

OR

Explain harmonal control of seeling growth.

Q. (4) Explain in detail the organization of 'SAM".

OR

(a) Secretary ducts (b) Wood Development.

Q(5) Describe various theories to explain organization of Root Apical meristem (RAM)

OR

(a) Phyllo taxy (b) Root microbe interaction.

Q(6) Describe the secondary growth in "Tinospora" Stem with suitable diagrams.

OR

Write note on -

(a) Parenchyma and sclerenchyma

(b) Cambium and cork combines

(c) Normal and abnormal secondary growth.