Sem-III–Bot-CC-5
(Reg)

2020-21

Time - 3 hours
Full Marks – 60

*Answer **all groups** as per instructions.*
Figures in the right hand margin indicate marks.
Candidates are required to answer
in their own words as far as practicable.

Group-A

1. Answer all questions or fill in the blanks as required. [1x8]
   a) The dead cells present in the composition of phloem are _____.
   b) The meristematic tissue that causes increase in circumference of stem is _____.
   c) Radial vascular bundles are typically found in _____.
   d) _____is called as living mechanical tissue.

   Express in one technical term:

   e) The nitrogen compounds secreted by protoplasm and act as catalyst in biochemical reactions –
   f) Loaves possessing stomata on both the epidermises-
   g) The radial thickening in the cells of endodermis layer of the root-
   h) The chemical cutin layer present external to epidemis-

GROUP-B

2. Answer any eight of the following questions within two or three sentences each. [$1\frac{1}{2}$x8]
   a) Companion cell
   b) Plasmodesmata
   c) Bicollateral vascular bundle
   d) Tyloses
   e) Medullary ray

f) Root cap

g) Lenticel

h) Hydrophytes

i) Bulliform cells

j) Lysigenous cavity

GROUP-C

3. Write notes on any eight of the followings within 75 words: [2x8]

a) Sieve elements

b) Excretory products

c) Kranz anatomy

d) Korper-Kappe theory

e) Mesophyll cells

f) Glandular hairs

g) Epicuticular waxen

h) Periderm

i) Concentric vascular bundles

j) Lateral roots

GROUP- D

4. Answer any four questions within 500 words each. [6x4]

a) What are permanent tissues? Describe different types of simple permanent tissue.

b) Define complex tissue. Give an account of structure and functions of components of xylem.

c) Give an account of various theories to explain organisation of shoot apex.

d) Describe normal secondary growth only in the stelar zone of a dicot stem.

e) Describe the internal structure of a monocot root. How does it differ from dicot root?

f) Give an account of anatomical adaptations of Xerophytes.

g) Write a brief note on mechanical tissue system and their distribution in dicot plants.

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KACK - 2021