

Plant Anatomy

QUE - Read the following statement about the vascular bundles:

- (f) In roots, xylem and phloem in a vascular bundle are arranged in an alternate manner along the different radii.
- (g) Conjoint closed vascular bundles do not possess cambium
- (h) In open vascular bundles, cambium is present in between xylem and phloem
- (i) The vascular bundles of dicotyledonous stem possess endarch protoxylem
- (j) In monocotyledonous root, usually there are more than six xylem bundles present

Choose the **correct answer** from the options given below:

- (5) (b), (c), (d) and (e) only
- (6) (a), (b), (c) and (d) only
- (7) (a), (c), (d) and (e) only
- (8) (a), (b), and (d) only

NTA Answer – 1

Claim Answer – Bonus

Remark – All statements {(a), (b), (c), (d) and (e)} are correct according to PLANT ANATOMY (By - ARTHUR J. EAMES, LAURENCE H. MACDANIELS) TMH EDITION, that's why Question should be Bonus.

Reference 2

PLANT ANATOMY (By - ARTHUR J. EAMES, LAURENCE H. MACDANIELS) TMH EDITION pg no 139, paragraph 1 line 14 to 16,

“Strands of xylem and of phloem lie on different, radii of an axis, separated by nonconducting tissue (Figs 65E, 130A). These strands are commonly said to constitute radial bundles,”

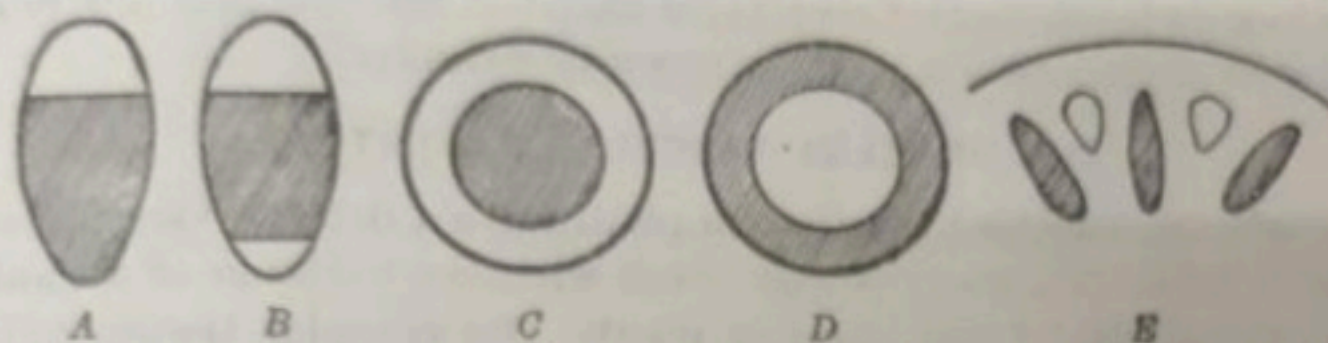


FIG. 65.—Diagrams showing types of arrangement of xylem and phloem with relation to each other. (The xylem is shaded, the phloem unshaded.) A, collateral bundle; B, bicollateral bundle; C, amphicribal bundle; D, amphivasal bundle; E, radial arrangement.

descriptive term covering both amphicribal and amphivasal conditions. The arrangement of the tissues in the third group is such that no definite bundles are formed. Strands of xylem and of phloem lie on different radii of an axis, separated by nonconducting tissue (Figs. 65E, 130A). These strands are commonly said to constitute radial bundles. Since, however, no definite bundles exist—unless each strand be considered a bundle—and the xylem strands are often not independent but are united in a central core, it is better to call such a condition in the primary xylem and phloem radial arrangement. The term “radial bundle” goes back to the period before the proposal of the stelar theory; the stele of a