

BSc4BotC401x
B.Sc. Semester - 4 (CBCS) Examination
March/April-2024 [NEW COURSE]
Botany-B401(Core)

Seat No : _____

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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- Que.1(A) Answer in very short. (04)
- (1) Fill up the blank: Cork cambium: cork; Vascular cambium:.....
 - (2) Give location and function: Bulliform cell
 - (3) Define the term: Interxylary phloem
 - (4) State the type of vascular bundle in *Dracaena*.
- Que.1(B) Answer in brief. (any one) (03)
- (1) Draw only the labelled diagram of v.s. of dorsiventral monocot leaf.
 - (2) Distinguish between: Alburnum and Duramen
- Que.1(C) Answer in detail. (any one) (07)
- (1) What is anomalous secondary growth? Describe it in stem belonging to Liliaceae family.
 - (2) Describe Periderm and formation of tyloses.
- Que.2(A) Answer in very short. (04)
- (1) True or false: Oenothera type of embryo sac does not have any antipodal cells.
 - (2) What is the function of Obturator?
 - (3) Define the term: Crassinucellate ovule
 - (4) In which plant monosporic 4-nucleate type embryo sac is found?
- Que.2(B) Answer in brief. (any one) (03)
- (1) Explain: Significance of double fertilization.
 - (2) Distinguish between: Male gametophyte and Female gametophyte.
- Que.2(C) Answer in detail. (any one) (07)
- (1) Enumerate with the help of labelled illustrations in *Fritillaria* type of embryo sac.
 - (2) Discuss with diagram: Steps of megasporogenesis.
- Que.3(A) Answer in very short. (04)
- (1) Who explained the Donnan equilibrium theory?
 - (2) Why question of translocation does not arise in lower green plants?
 - (3) Define the term: Diffusion pressure
 - (4) In which substance maximum imbibition capacity is found?

- Que.3(B) Answer in brief. (any one) (03)
- (1) Write advantages of Vernalization in plants.
 - (2) Distinguish between: Imbibition and Osmosis
- Que.3(C) Answer in detail. (any one) (07)
- (1) Discuss seed coat induced dormancy in plants
 - (2) Describe mechanism of active salt absorption
- Que.4(A) Answer in very short. (04)
- (1) Which forms of uncombined water is a main source of water for plants?
 - (2) What is called Humus?
 - (3) Define the term: Sheet erosion
 - (4) True or false: Growing crops in broad steps is called strip cropping
- Que.4(B) Answer in brief. (any one) (03)
- (1) Write applications of remote sensing in botany
 - (2) Distinguish between: Water erosion and wind erosion
- Que.4(C) Answer in detail. (any one) (07)
- (1) Discuss with diagram: horizontal layers found in the soil.
 - (2) Describe mechanical methods to control soil erosion.
- Que.5(A) Answer in very short. (04)
- (1) True or False: The aim of somatic embryos encapsulation is to produce an analogue to true seeds
 - (2) Give the term: Individuals with four sets of chromosomes are known as.
 - (3) What is artificial selection in crop improvement methods?
 - (4) Why male gamete has no influence on development of plastid in *Mirabilis*?
- Que.5(B) Answer in brief. (any one) (03)
- (1) Write notes on: Mounting of specimens on herbarium sheets
 - (2) Distinguish between: Natural seed and Synthetic seed
- Que.5(C) Answer in detail. (any one) (07)
- (1) Discuss auto polyploidy and characters of autopolyploid
 - (2) What is mass selection? Discuss its steps, advantages and disadvantages.
