



DN-003-001406

Seat No. \_\_\_\_\_

**B. Sc. (Sem. IV) (CBCS) Examination**

April / May – 2015

**Botany : B - 401**

(*Applied Botany*)

**Faculty Code : 003**

**Subject Code : 001406**

Time :  $2\frac{1}{2}$  Hours

[Total Marks : 70

**Instructions :**

- (1) This question paper contains three questions. All questions are compulsory
- (2) Write answers of all the questions in main answer sheet.
- (3) Draw neat and labelled diagram wherever necessary
- (4) Figures to the right side indicated full marks for the questions

**1. Choose the correct answer from the given options :**

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- (1) Which of the following physiological process is responsible for the dissemination of fruits?  
(a) Wound healing (b) Tyloses  
(c) Abscission (d) None of above
- (2) ..... Possess glandular hairs.  
(a) Euphorbia (b) Avicennia  
(c) Ocimum (d) Tragia
- (3) In  $C_4$  plants  $CO_2$  is fixed in malic acid, in which .....enzyme fixes  $CO_2$   
(a) Phosphoenol pyruvic acid carboxylase (b) Fructose phosphatase  
(c) Ribulose biphosphate carboxylase (d) Ribulose phosphate kinase
- (4) The term mycorrhiza was coined by .....  
(a) Dobreiner (b) Frank  
(c) Joubert (d) Waksman
- (5) Strawberries can be propagated by :  
(a) Bulbs (b) Runner  
(c) Tuber (d) Rhizome
- (6) ..... produces Polymixin – B  
(a) *Bacillus thuringiensis* (b) *Bacillus brevis*  
(c) *Bacillus subtilis* (d) *Bacillus polymixa*

- (7) ..... grafting is used to 'bridge' a diseased or damaged area of a plant.  
 (a) Inarch graft (b) Bridge graft  
 (c) a & b Both (d) None of above
- (8) Blue green algae can be used as bio-fertiliser because  
 (a) They are photosynthetic (b) They have mucilage  
 (c) They provide more moisture to plants (d) They fix nitrogen
- (9) Tip layering generally found in .....  
 (a) Raspberries (b) Ficus  
 (c) Apple (d) Banana
- (10) The wall of commercial cork shows ..... deposition.  
 (a) Cuticle (b) Cellulose  
 (c) Lignin (d) Suberin
- (11) Pick up C<sub>4</sub> plants  
 (a) Papaya (b) Potato  
 (c) Maize (d) Pea
- (12) Warmth of the surface of the earth is due to:  
 (a) Solar radiation (b) Greenhouse effect  
 (c) Geothermal energy (d) All of above
- (13) Which of the following soil water is generally important for plants?  
 (a) Water vapour (b) Combined water  
 (c) Hygroscopic water (d) Capillary water
- (14) Which of the following plant shows Kranz anatomy?  
 (a) Sugarcane (b) a and c both  
 (c) Maize (d) Pea
- (15) Which of the following plant possess Resin duct?  
 (a) Pinus (b) Eucalyptus  
 (c) Citrus (d) Pistia
- (16) The standard size of the herbarium sheet is .....  
 (a) 16.5 × 11.5 inches (b) 16 × 11 inches  
 (c) 17 × 12 inches (d) 13.5 × 11.5 inches
- (17) What is the function of nectary gland?  
 (a) It secrete excess salt solution  
 (b) It secrete latex substance  
 (c) It reduced rate of transpiration  
 (d) It useful for pollination to attract insects

- (18) Name the disease which is not caused by water pollution.  
 (a) Cholera (b) Typhoid  
 (c) Tuberculosis (d) Dysentery
- (19) Endosperm in angiosperm is a:  
 (a) Haploid structure (b) Diploid structure  
 (c) Triploid structure (d) All of above
- (20) Which gases are commonly known as greenhouse gases?  
 (a) CO<sub>2</sub> and CH<sub>4</sub> (b) CO<sub>2</sub> and NH<sub>4</sub>  
 (c) CO and N<sub>2</sub> (d) SO<sub>2</sub>, CO and NH<sub>4</sub>

**2. (A) Answer in brief : (any three)**

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- (1) State the importance of Potassium on plants.
- (2) Which kinds of equipment are used during herbarium preparation?
- (3) Write a note on stinging hairs.
- (4) What is T – budding?
- (5) Define humus.
- (6) What is cutting and give information about the types of cutting.

**2. (B) Answer any three:**

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- (1) Give information about global warming.
- (2) Explain history of green evolution in India.
- (3) Give an illustrative account on action mechanism of ethylene.
- (4) What is floriculture? Describe the cultivation process of rose varieties.
- (5) Write a note on Abscission.
- (6) Describe Crassulacean Acid metabolism (CAM) in plants.

**2. (C) Answer in detail : (any two)**

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- (1) Describe Calvin cycle.
- (2) What is embryo sac? Explain tetrasporic embryo sac.
- (3) What is soil? Explain the process of soil formation.
- (4) Describe the asexual method of plant propagation.
- (5) Describe the conventional methods of crop improvement.

3. (A) Answer in brief : (any three) 6
- (1) Write note on : tyloses
  - (2) Write the function of Cytokinins on plants.
  - (3) Draw only labelled diagram of soil profile.
  - (4) Define: Bonsai.
  - (5) Write a note on: Anther culture.
  - (6) Write the causes of air pollutants.
3. (B) Answer any three: 9
- (1) Explain bisporic embryo sac.
  - (2) Write a note on: Layering.
  - (3) What is the need of plant breeding?
  - (4) Describe different mode of soil erosion.
  - (5) Write the properties of antibiotics.
  - (6) Give information about the mechanism of translocation in phloem.
3. (C) Answer in detail : (any two) 10
- (1) What are bio fertilizers? Explain the types bio fertilizers used in agriculture.
  - (2) Discuss the effects of water pollutants.
  - (3) Describe any three methods of grafting.
  - (4) Write an essay on Auxin.
  - (5) Explain the process of double fertilization in angiosperms.
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