



DB-003-001613

B. Sc. (Sem. VI) (CBCS) Examination

April / May – 2015

Botany : Paper - B - 603

*(Inst., Adv. Tech. in Biology, Forest,
Forestry, Med. Plant & Eco. Botany)*

Faculty Code : 003

Subject Code : 001613

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

[Total Marks : 70

- Instructions :**
- (1) Write answers of all questions in main answer book.
 - (2) Draw neat and labelled diagrams wherever necessary.
 - (3) Figures to the right side indicate full marks for the question.

1 Choose the correct answer : 20

- (1) The important application of spectroscopy is :
 - (A) diagnosis of diseases
 - (B) estimation of light absorbance
 - (C) estimation of unknown concentration of solutions
 - (D) estimation of electrolyte concentration
- (2) Which type of sterilization occurs in Autoclave ?
 - (A) steam
 - (B) dry
 - (C) Both of these
 - (D) None of these

- (3) Which of the following is part of oven ?
- (A) Motor
 - (B) Rotor
 - (C) Sample holders
 - (D) Electronic power converter
- (4) Cell organelles can be physically separated from each other by :
- (A) microscopy
 - (B) centrifugation
 - (C) chromatography
 - (D) radioactive traces
- (5) The basic principle of all chromatographic techniques is :
- (A) stationary coefficient
 - (B) mobile coefficient
 - (C) partition coefficient
 - (D) solvent coefficient
- (6) In TLC the solid stationary phase is :
- (A) silica gel
 - (B) alumina powder
 - (C) aniline diphenylamine
 - (D) Both (A) or (B)
- (7) The movement of molecules in electrophoresis is dependent on :
- (A) current passed
 - (B) temperature
 - (C) pH of buffer
 - (D) charge/mass ratio

- (8) PCR is technique of :
- (A) determine the concentrational substances in liquids
 - (B) gene amplification
 - (C) separation of gases from mixture
 - (D) determine molecular weight of proteins
- (9) Percentage of forest cover recommended by National Forest Policy (1988) is :
- (A) 30% in plains 60% in hills
 - (B) 20% in plains 70% in hills
 - (C) 33% in plains 67% in hills
 - (D) 37% in plains 63% in hills
- (10) Major forest types in India are :
- (A) Tropical evergreen and tropical thorn
 - (B) Temperate mixed and tropical deciduous
 - (C) Tropical dry deciduous and tropical moist deciduous
 - (D) Tropical evergreen and tropical moist deciduous
- (11) Afforestation should be with :
- (A) Exotic species (B) Indigenous species
 - (C) Bamboos (D) Eucalyptus
- (12) Leaves used as wrappers for 'bidis' are got from :
- (A) Diospyros ebenum
 - (B) Dipterocarpus indicus
 - (C) Dipterocarpus tuberculatus
 - (D) Diospyros melenoxylon

- (13) Which of the following is an activity for conservation of medicinal plants ?
- (A) Deforestation
 - (B) Restoration
 - (C) Saltation
 - (D) None of these
- (14) An important medicine for bronchitis is obtained from :
- (A) *Adhatoda vasica*
 - (B) *Curcuma longa*
 - (C) *Hemidesmus indicus*
 - (D) *Rauwolfia serpentina*
- (15) A drug is a medicinal substance or active principal used in the treatment of a disease it may be :
- (A) a protein
 - (B) a carbohydrate
 - (C) fatty acid or volatile oil
 - (D) All the above
- (16) Forest connected with cultivation and breeding of forest plant is :
- (A) Silviculture
 - (B) Natural culture
 - (C) Agriculture
 - (D) Tissue culture

- (17) Identify the mis-match pair :
- (A) Growing of tree species alone in specific location is called → arboriculture
 - (B) The cultivation of fruit crop → pomology
 - (C) The cultivation of plants which give economic flowers → Gardening
 - (D) The cultivation vegetable crops → olericulture
- (18) Agro forestry helps :
- (A) to boost the rural economy
 - (B) to increase forest areas
 - (C) to save the land from degradation
 - (D) All the above
- (19) The cheapest high energy fruit crop of India is :
- (A) Banana
 - (B) Guava
 - (C) Apple
 - (D) Mango
- (20) Bio-diesel is derived from :
- (A) Acalypha sp.
 - (B) Jatropha sp.
 - (C) Euphorbia sp.
 - (D) Zingiber sp.

2 (a) Answer in short : (any **three**)

6

- (1) Write about design of centrifuge.
- (2) Explain the principle of TLC.
- (3) What do you mean by Silviculture ?
- (4) Why conservation of medicinal plant is essential ? Explain.
- (5) Explain the role of NSC in the setting up of seed standard.
- (6) Describe the afforestation.

- (b) Answer in brief : (any **three**) **9**
- (1) Explain : Principle of spectrophotometer.
 - (2) Explain : Single sided PCR.
 - (3) Discuss any one minor forest products of Gujarat.
 - (4) Explain : ethnomedicine a bright prospects.
 - (5) Discuss marketing in Horticultural practices.
 - (6) Give importance of seed producing organization.
- (c) Describe in detail : (any **two**) **10**
- (1) Write about principle and design of Autoclave.
 - (2) Explain : Applications of PCR.
 - (3) Give brief outline of classification of Indian forests.
 - (4) Give scientific name, family and uses of any five important medicinal plants of Gujarat.
 - (5) What is Bio-diesel ? Describe extraction of Bio-diesel.
- 3** (a) Answer in short : (any **three**) **6**
- (1) Explain : Components of spectrophotometer.
 - (2) Explain : Applications of paper electrophoresis.
 - (3) Define : Forest mensuration.
 - (4) Write uses of : Ocimum.
 - (5) Explain 'Mango' as a major fruit of India.
 - (6) Define : Horticulture.
- (b) Answer in brief : (any **three**) **9**
- (1) Write applications of centrifuge.
 - (2) Explain methods of separation of pigments by TLC.
 - (3) Explain any one major forest products of Gujarat.

- (4) Give brief account of history of traditional medicines.
- (5) Write note on : SSC.
- (6) Discuss : National Forest Policy.

(c) Describe in detail : (any **two**) **10**

- (1) Write note on : Design and application of oven.
- (2) Give brief account of HPLC.
- (3) Write an essay on : Agroforestry.
- (4) Write note on history of traditional medicine in India
- (5) Write an essay on : Dryland farming.