



AAI-003-001613

Seat No. _____

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

April / May – 2016

Botany : Paper - B - 603

*(Inst., Adv. Tech. in Bio., Forest-Forestry,
Med. Plant and Eco. Botany) (New Course)*

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 questions.

1 Choose the correct answer : 20

- (1) Spectrophotometer is used for
 - (A) Protection
 - (B) Determine the optical density of a solution
 - (C) Sterilization
 - (D) Heating
- (2) Which is the application of PCR ?
 - (A) Separation of gases from a mixture
 - (B) Determine molecular weight of proteins
 - (C) Propagate DNA for gene manipulation
 - (D) Determine the concentration of substances in liquids.
- (3) The technology of combining agriculture with forestry is the concept of
 - (A) Agro forestry
 - (B) Urban forestry
 - (C) Rural forestry
 - (D) None of these
- (4) In India the earliest reference to the medicinal value of plants appears in _____.
 - (A) Ayurveda
 - (B) Aryabhisak
 - (C) Rigveda
 - (D) Susruta Samhita
- (5) Marketing involves :
 - (A) Engineering approaches
 - (B) Curing and storing
 - (C) Physiological approaches
 - (D) None of the above

- (6) In the clinical diagnosis in Ayurvedic doctor examines which of the following sign used ?
 (A) Pitham, Kadam, Vadham
 (B) Akrti, Shabda, Sparsha
 (C) Black colouration of tongue, High pitched voice, pale stools
 (D) Miasms, Kashayam, Thailam
- (7) Isolation of radioisotopes like H^3 , P^{32} , S^{33} , I^{131} is done by:
 (A) Gas chromatography
 (B) PCR
 (C) Paper chromatography
 (D) Thin layer chromatography
- (8) In which technique solution is rotated in circles around a central axis ?
 (A) Electrophoresis (B) Chromatography
 (C) Centrifugation (D) PCR
- (9) These occur in regions where annual rainfall is more than 200 cm.
 (A) Mangroove or tidal Vegetation
 (B) Tropical Evergreen Forests
 (C) Dry monsoon forests
 (D) Himalayan Vegetation
- (10) Biodiesel is
 (A) Bio degradable
 (B) Non-toxic
 (C) Free from sulphur and aromatics
 (D) All the above
- (11) Which of the following is used to a sterilization ?
 (A) Autoclave (B) Electrophoresis
 (C) Centrifuge (D) PCR
- (12) Which Biomolecules is not separated by electrophoresis ?
 (A) Amino acids (B) Proteins
 (C) DNA (D) Sugars
- (13) Major forest types in India are
 (A) Tropical evergreen and tropical moist deciduous
 (B) Tropical evergreen and tropical thorn
 (C) Temperate mixed and tropical deciduous
 (D) Tropical dry deciduous and tropical moist deciduous
- (14) Reserpine a drug is extracted from....
 (A) Artopa belladona (B) Digitalis Purpurea
 (C) Rauwolfia Serpentina (D) Ferula asafoetida

- (15) Identify the mismatch pair
- (A) The cultivation of plants which give economic flowers → Gardening
 - (B) Growing of tree species alone in specific location is called → Arboriculture
 - (C) The cultivation of fruit crop → Pomology
 - (D) The cultivation vegetable crops → Olericulture
- (16) Incubator is used for.....
- (A) Separation (B) Sterilization
 - (C) Heating for culturing (D) Cooling for culturing
- (17) Full name of HPLC.
- (A) High Pressure Liquid Chromatography
 - (B) Heavy Performance Liquid Chromatography
 - (C) High Partition Liquid Chromatography
 - (D) High Procedure Liquid Chromatography
- (18) Percentage of forest cover recommended by National Forest Policy (1988) is
- (A) 37% in plains 63% in hills
 - (B) 30% in plains 60% in hills
 - (C) 20% in plains 70% in hills
 - (D) 33% in plains 67% in hills
- (19) Which of the following is an activity for conservation of medicinal plant ?
- (A) Saltation (B) Deforestation
 - (C) Restoration (D) None of these
- (20) Which of the following is not a characteristic of dry land ?
- (A) High humidity
 - (B) High dry-temperature
 - (C) High water deficiency
 - (D) High run of water and soil erosion

- 2** (a) Answer in short : (any three) : **6**
- (1) Write about design of oven.
 - (2) Explain the principle of TLC.
 - (3) Define the term : Silviculture.
 - (4) Write the useful part and medicinal uses of *Adhatoda Vasica*.
 - (5) Give importance of seed producing organization.
 - (6) Explain disadvantages of Bio-diesel.

- (b) Answer in brief : (any three) **9**
- (1) Write notes on Design of Centrifuge.
 - (2) Explain applications of PCR.
 - (3) Explain any one major forest product of Gujarat.
 - (4) Write notes on medicinal plant - Ocimum.
 - (5) Explain future of traditional medicine in India.
 - (6) Discuss recent researches in dry land farming for increased productivity.
- (c) Answer in detail (any two) : **10**
- (1) Write notes on principle of Autoclave
 - (2) Write methods of performing GC.
 - (3) Write an essay on : Agroforestry.
 - (4) Give biodiesel production process in Jatropha.
 - (5) Give brief outline of classification of Indian Forests.
- 3** (a) Answer in short : (any three) **6**
- (1) Explain the principle of HPLC.
 - (2) Explain : Components of Spectrophotometer.
 - (3) What are your views regarding protection of forest ?
 - (4) Give characteristics of dry land farming.
 - (5) Write the useful part and medicinal uses of turmeric.
 - (6) Explain any one major fruit of India.
- (b) Answer in brief : (any three) **9**
- (1) Explain functions of Incubator.
 - (2) Write about design of electrophoresis unit.
 - (3) Give sources of bio-diesel plants in Gujarat.
 - (4) Discuss scope of ethnomedicinal plants in India.
 - (5) Explain : Teak as major forest product.
 - (6) Explain conservation strategies of medicinal plants.
- (c) Answer in detail : (any two) : **10**
- (1) Write note on : Design and application of Autoclave.
 - (2) Discuss approach of afforestation.
 - (3) Explain basic objectives of National Forest Policy.
 - (4) Explain history of traditional medicine in India.
 - (5) Discuss : Problems of Dry land farming.