



Seat No. _____

HB-003-2016048

B. Sc. (Sem. VI) (CBCS) (W.E.F. 2019) Examination

April - 2023

Botany : B-603

*(Instrumentation, Advanced Techniques in Biology,
Forest and Forestry, Medicinal Plants and Economic Botany,
Horticulture and Plant Breeding)*

(New Course)

Faculty Code : 003

Subject Code : 2016048

Time : $2\frac{1}{2}$ / Total Marks : 70

Instructions :

- (1) Attempt all the questions.
- (2) Answer with draw neat and labelled diagram wherever necessary.
- (3) Figures to the right side indicate total marks for the questions.

- 1** (a) Answer the following objective type questions : **4**
- (1) What is the inner surface of autoclaves made of ?
 - (2) In autoclave, pressure is maintained psi.
 - (3) Which part of incubator is used to set the desired temperature of the incubator ?
 - (4) Mention True or False : In Centrifuge particles are separated from a solution according to their size.
- (b) Answer in brief : (any 1 out of 2) **2**
- (1) Draw a labelled diagram of Incubator.
- OR**
- (2) Write significance of centrifuge.
- (c) Answer in detail : (any 1 out of 2) **3**
- (1) Draw a labelled diagram of autoclave.
- OR**
- (2) Write the components of Incubator.
- (d) Write a note on : (any 1 out of 2) **5**
- (1) Write the principle and structure of Autoclave.
- OR**
- (2) Explain structure and function of oven.

- 2 (a) Answer the following objective type questions : 4
- (1) PCR was developed by _____.
 - (2) Thin layer chromatography plate is made up of _____ material.
 - (3) Which techniques separate charged particles using electric field ?
 - (4) Mention True or False : A large number of absorbent can be used as stationary phase.
- (b) Answer in brief : (any 1 out of 2) 2
- (1) In thin layer chromatography what is the stationary phase and mobile phase ?
- OR**
- (2) Write the functions of electrophoresis.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Write the principle of GC.
- OR**
- (2) Give information about the design of Electrophoresis.
- (d) Write a note on : (any 1 out of 2) 5
- (1) Explain – PCR.
- OR**
- (2) Give information about HPLC.
- 3 (a) Answer the following objective type questions : 4
- (1) In temperate region plants, the wood with fewer xylary elements and narrow vessels, is termed as :
 - (2) Timbers with _____ annular rings are generally the strongest.
 - (3) Age of exogenous tree can be judged from _____.
 - (4) The new wood sample gives which type of odour ?
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Give the name of any four wild life sanctuary of India.
- OR**
- (2) Define deforestation.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Give the classification of forests.
- OR**
- (2) Write the importance of agroforestry.
- (d) Write a note on : (any 1 out of 2) 5
- (1) Write the physical properties of wood.
- OR**
- (2) Explain – Biosphere reserves.

- 4 (a) Answer the following objective type questions : 4
- (1) Which beverages possess tannin ?
 - (2) The common name of *Oryza sativa* is _____
 - (3) Which medicinal plant is used chronic bronchitis and asthma ?
 - (4) Write the scientific name of Neem.
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Write the uses of Wheat.
- OR**
- (2) Write two medicinal value of Arduisi.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Write the uses of Maize.
- OR**
- (2) Write three medicinal value of Eucalyptus.
- (d) Write a note on : (any 1 out of 2) 5
- (1) Justify the statement : “Neem is kalpvruksha (കല്പവൃക്ഷ) for human being”.
- OR**
- (2) Describe – Pulses in detail.
- 5 (a) Answer the following objective type questions : 4
- (1) New varieties of plants are produced by _____.
 - (2) What is the size of rectangular tags used in tagging ?
 - (3) Bagging is done to _____
 - (4) What is Bonsai ?
- (b) Answer in brief : (any 1 out of 2) 2
- (1) What is plant breeding ?
- OR**
- (2) Write the names of steps involved in Lawn making.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Describe – Bulk method.
- OR**
- (2) Write the importance of plant breeding.
- (d) Write a note on : (any 1 out of 2) 5
- (1) Describe – Pedigree method.
- OR**
- (2) Describe – Bonsai
- _____