



DR-003-2016048

Seat No. _____

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

April - 2022

**B - 603 : Instrumentation, Advance techniques in
Biology, Forest & Forestry, Medicinal Plants,
Economic Botany**

Faculty Code : 003

Subject Code : 2016048

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

[Total Marks : 70

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

- 1 (a) Objective type questions : 4
(1) In autoclave, pressure is maintained _____ psi.
(2) Who discovered Laminar flow ?
(3) Give the working principle of incubator.
(4) Give the full form of HEPA filter.
(b) Answer in brief : (any **one**) 2
(1) Write functions of autoclave.
(2) Write significance of oven.
(c) Answer in detail : (any **one**) 3
(1) Draw a labelled diagram of incubator.
(2) Write a short note on function of centrifuge.
(d) Write a note on : (any **one**) 5
(1) Explain structure and function of laminar air flow.
(2) Describe working principle and types of centrifuge.

2	(a) Objective type questions :	4
	(1) Write full form of PCR.	
	(2) Write full form of Rf value.	
	(3) What is stationary phase ?	
	(4) Define electrophoresis.	
	(b) Answer in brief : (any one)	2
	(1) Give any two differences between TLC and GC.	
	(2) Who invented Polymerase Chain reaction ?	
	(c) Answer in detail : (any one)	3
	(1) Give functions of Gas Chromatography.	
	(2) Write in brief about types of HPLC.	
	(d) Write a note on : (any one)	5
	(1) Explain TLC in detail.	
	(2) Describe method and functions of electrophoresis.	
3	(a) Objective type questions :	4
	(1) How many Biosphere reserves are there in India in 2021 ?	
	(2) In Gujarat, which type of forest is found ?	
	(3) Give the number of woody species found in Indian forest.	
	(4) What is Duramen ?	
	(b) Answer in brief : (any one)	2
	(1) What is Biosphere reserves ?	
	(2) Define deforestation.	
	(c) Answer in detail : (any one)	3
	(1) Write about physical properties of wood.	
	(2) Write a note on social forestry.	
	(d) Write a note on : (any one)	5
	(1) Explain types of forests found in India.	
	(2) Describe wild life sanctuaries and National Parks of India.	

- 4 (a) Objective type questions : 4
- (1) What is the family of *Azadirachta indica* ?
 - (2) Give the scientific name of Taj.
 - (3) Give the name of active ingredient of Ashwagandha.
 - (4) 'Nirgundi Tel' is made from which plant ?
- (b) Answer in brief : (any **one**) 2
- (1) Write down the uses of Ashwagandha.
 - (2) Write the distribution of Bili.
- (c) Answer in detail : (any **one**) 3
- (1) Explain the harvesting process of wheat.
 - (2) Write note on uses of Maize.
- (d) Write a note on : (any **one**) 5
- (1) Explain in detail methods of cultivation, botanical name, family and use of coffee.
 - (2) Write in detail about Scientific name, family, distribution, parts used and uses of Neem.
- 5 (a) Objective type questions : 4
- (1) Define Bonsai.
 - (2) What is Emasculation ?
 - (3) Who was the first used hybridization in plant improvement ?
 - (4) What is plant breeding ?
- (b) Answer in brief : (any **one**) 2
- (1) Write the names of steps involved in Lawn making.
 - (2) Write the names of the methods of emasculation.
- (c) Answer in detail : (any **one**) 3
- (1) Write short on Terrace Gardens.
 - (2) Write note on Procedure of Pedigree method.
- (d) Write a note on : (any **one**) 5
- (1) Write note on Hybridization techniques.
 - (2) Explain bonsai in detail.