

B.Sc. Semester - 6 (CBCS) Examination**March/April -2020****INSTRU.,AD.TECH.,FORESTRY, MEDI PLANT AND ECO. BOT (CORE)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Q – 1 Give the answer of following questions.

- (A) Answer any one question in detail (any one) (07)
- (1) Describe principle and structural design of Autoclave.
 - (2) State the principle, structural design and application of Spectrophotometer
- (B) Shortly answer any one question (any one) (04)
- (1) State the functions of Hot Air Oven.
 - (2) Discuss the design of Incubator.
- (C) Answer the following question very shortly (any three) (03)
- (1) Differential centrifugation is based on the differences in the _____ of biological particles of different _____.
 - (2) The more massive a biological particle is, the slower it moves in a centrifugal field. Statement is true or false?
 - (3) After centrifugation of milk, the supernatant is _____
 - (4) Give the principle of Hot Air Oven
 - (5) State the principle of Incubator.

Q – 2 Give the answer of following questions.

- (A) Answer any one question in detail (any one) (07)
- (1) Discuss the HPLC technique in detail.
 - (2) What is Electrophoresis? Discuss its methodology and applications.
- (B) Shortly answer any one question (any one) (04)
- (1) Describe the process of TLC preparation.
 - (2) State the application of Gas Chromatography.
- (C) Answer the following question very shortly (any three) (03)
- (1) Denaturation is the first step of PCR reaction and involves the breaking of hydrogen bonds by heating at 95⁰ C. True or False?
 - (2) Give the full form of RAPD.
 - (3) The technique of electrophoresis was developed by _____
 - (4) Which buffer is used in electrophoresis technique?
 - (5) In Gas Chromatography which two gases can used as Carrier, Make-up gas and Detector Fuel Gas?

Q – 3 Give the answer of following questions.

- (A) Answer any one question in detail (any one) (07)
- (1) Describe the types of Indian forest.
 - (2) Write down a note on wild life and biosphere reserves.
- (B) Shortly answer any one question (any one) (04)
- (1) Social forestry.
 - (2) Agro-forestry.
- (C) Answer the following question very shortly (any three) (03)
- (1) Forest cover in India as per India State of Forest Report 2017 is about _____
 - (2) Coniferous forest belt is characterized by Short summer and long winter. True or False?
 - (3) Girnar forest comes under _____ type of forest.
 - (4) Density wise which plant is dominant in Girnar wild life sanctuary.
 - (5) Among all areas studied by individuals and institutions in Gujarat State, floral Diversity of Barda wild life sanctuary is the highest. True or False?

Q – 4 Give the answer of following questions.

- (A) Describe the following plants with medicinal properties in detail (any one) (07)
- (1) Bili
 - (2) Nagod
- (B) Shortly Describe the application following medicinal plants (any one) (04)
- (1) Ashwagandha
 - (2) Ardusi
- (C) Answer the following question very shortly (any three) (03)
- (1) Tulsi (state the Botanical name and family)
 - (2) Neem (state the Botanical name and family)
 - (3) Eucalyptus (state the Botanical name and family)
 - (4) Give the name of the chemical compound present in Eucalyptus.
 - (5) Give the name of the chemical compound present in Neem.

Q – 5 Give the answer of following questions.

- (A) Describe the following plants with respect to cultivation and uses. (any one) (07)
- (1) Wheat
 - (2) Gram
- (B) Shortly describe the following plants with scientific name, origin and cultivation methods (any one) (04)
- (1) Ground nut
 - (2) Rice
- (C) Give the scientific name and origin of following plants (any three) (03)
- (1) Maize
 - (2) Tea
 - (3) Taj
 - (4) Cardamom
 - (5) Pea
