

B.Sc. Semester - 6 (CBCS) Examination**March/April -2019****PLANT PHY,BIOCHEM,BIOSTAT,MICROBIO AND BIODIVERSITY(CORE)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

Q – 1 Give the answer of following questions. (14)

- (A) Answer any one question in detail (any one) (07)
- (1) Describe pentose phosphate pathway.
 - (2) Discuss injury and resistance mechanism in plants.
- (B) Shortly answer any one question (any one) (04)
- (1) Discuss physiological role of Gibberellins as a plant growth regulator.
 - (2) Discuss biosynthesis of Cytokinins.
- (C) Answer the following question very shortly (any three) (03)
- (1) State the name of the factors which affects seed germination.
 - (2) Give the name of any two synthetic Auxin.
 - (3) Define physiological stress in plants
 - (4) Give the full form of HMP shunt.
 - (5) State any two functions of Absciscic acid in plants.

Q – 2 Give the answer of following questions. (14)

- (A) Answer any one question in detail (any one) (07)
- (1) Describe the process of enzyme inhibition.
 - (2) Describe the structure of proteins.
- (B) Shortly answer any one question (any one) (04)
- (1) Give the classification of carbohydrates with examples.
 - (2) Point out the functions of lipids.
- (C) Answer the following question very shortly (any three) (03)
- (1) Give names of cofactors of enzymes.
 - (2) By which type of bonds lipid is formed?
 - (3) Define enzyme.
 - (4) Name the carbohydrates present in exoskeleton of animal.
 - (5) Give the name of lipid which covers all aerial surfaces of plants.

Q – 3 Give the answer of following questions. (14)

- (A) Answer any one question in detail (any one) (07)
- (1) Calculate the mean, SD and Coefficient of variation

Class intervals	101 - 105	106 - 110	111 - 115	116 - 120	121 - 125
Frequency	6	22	40	25	7
 - (2) Calculate the mean, SD and Coefficient of variation

Height (inches)	95 - 105	105 - 115	115 - 125	125 - 135	135 - 145
No. of children	19	23	36	70	52
- (B) Shortly answer any one question (any one) (04)
- (1) Find out mode and median : 4,3,2,5,3,4,5,1,7,3,2,1
 - (2) Find out standard deviation: 11,12,13,14,15,16,17,18,19,20,21

- (C) Answer the following question very shortly (any three) (03)
- (1) State difference between mode and median
 - (2) Define - Standard deviation.
 - (3) Define sample with respect to biostatistics.
 - (4) State the uses of mean.
 - (5) State merits of Standard deviation.

Q – 4 Give the answer of following questions. (14)

- (A) Answer any one question in detail (any one) (07)
- (1) Give the detail ultra structure of *E. Coli*.
 - (2) Describe any methods for microbial growth determination.
- (B) Shortly answer any one question (any one) (04)
- (1) Discuss pure culture methods.
 - (2) Describe moist heat sterilization technique.
- (C) Answer the following question very shortly (any three) (03)
- (1) Who coined word bacteriophage and what does it mean?
 - (2) Gram staining method named after _____ Scientist
 - (3) Give the names of chemical disinfectants.
 - (4) State the methods for dry heat sterilization.
 - (5) Give the names of filters used for removal of microbes from heat labial medium.

Q – 5 Give the answer of following questions. (14)

- (A) Answer any one question in detail (any one) (07)
- (1) Discuss conservation strategies for biodiversity.
 - (2) Explain with suitable examples that biodiversity is for human welfare.
- (B) Shortly answer any one question (any one) (04)
- (1) Discuss the possible causes for biodiversity loss.
 - (2) Discuss different levels of biodiversity organization.
- (C) Answer the following question very shortly (any three) (03)
- (1) Define Biodiversity.
 - (2) What is alpha biodiversity?
 - (3) Define beta biodiversity
 - (4) What is gamma biodiversity?
 - (5) What is biodiversity hotspot?
