



বিদ্যাসাগর বিশ্ববিদ্যালয়
VIDYASAGAR UNIVERSITY

Question Paper

B.Sc. Honours Examinations 2021

(Under CBCS Pattern)

Semester - V

Subject: BOTANY

Paper : DSE 1-T & P

Full Marks : 60 (Theory-40 + Practical-20)

Time : 3 Hours

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Natural Resource Management

[Theory]

Group - A

- A. Answer any **three** questions from the followings : 12×3=36
1. What are the solid wastes? Discuss different procedure of solid wastes managements of an ideal municipality. What is your view regarding the solid wastes managements? 2+8+2
 2. Write about the different types of ground water. Briefly discuss the soil erosion and its conservation. 4+(4+4)

3. What is a dam? Write two advantages and two disadvantages of constructing a big dam. What are non-renewable resources of energy? Give two examples. Write four disadvantages of fossil fuel. 3+3+2+2+2
4. Give an account of the different types of natural resource management strategies implemented by the Indian government. What is silviculture? 10+2
5. What is deforestation? Discuss various causes for deforestation. Describe different measures taken to protect forest. 2+5+5
6. Write short notes on :
- National Biodiversity action plan
- Hotspots of Biodiversity
- Urban problems related to energy
- Intellectual property right. 3+3+3+3

Group - B

- B. Answer any **two** questions from the followings : 2×2=4
1. What is ecological foot print?
 2. What is GIS?
 3. Give full form of CBD & EIA
 4. What are aquifers?

[Practical]

Group - A

- A. Answer any **one** question from the following : 15×1=15
1. Describe the solid waste generated by a domestic system (biodegradable and non-biodegradable) and mention its impact on land degradation. 10+5
 2. Describe the techniques used for calculation and analysis of ecological footprint. Mention its utility. 10+5

Group - B

B. Answer any **one** question from the following :

5×1=5

1. Mention the process for calculating forest cover of an area.
2. What is ecological modelling? State its significance.
3. Mention the impact of domestic wastes on land degradation.

Or;

(a) Practical note book

2

(b) Viva-voce

3

Vidyasagar University

Or
Biostatistics

[Theory]

Group - A

- A. Answer any **three** questions from the followings : 12×3=36
1. How do you define mean, median and mode? Give examples of each. Briefly enumerate the merits and demerits of mean, median and mode. (2+2+2)+(2+2+2)
 2. Give an account of different methods of sampling. What are the limitations of sampling? Give explanatory notes on skewness and kurtosis. 3+3+6
 3. Define correlation coefficient. Illustrate different types of correlations with suitable examples. Explain regression and state its significance. 3+3+6
 4. What do you mean by measures of dispersion? What are the different types of absolute measures and relative measures? Compare quartile deviation, mean deviation and standard deviation based on definition, formula, merits and demerits. 2+4+6
 5. Write short notes on
 - (a) Variance,
 - (b) Coefficient of variation,
 - (c) Standard error.

How will you measure the dispersion of series of observations? 3+3+3+3
 6. Define chi square and write its formula illustrating all components of it. Explain degree of freedom and probability level used in determining goodness of fit stating their significance. 3+3+6

Group - B

- B. Answer any **two** questions from the followings : 2×2=4
1. Why measurement of standard deviation is more applicable than mean deviation?
 2. What is class interval?
 3. Write on the characteristic features of normal distribution.
 4. What are the two rules of probability? Give examples.

[Practical]

Group - A

A. Answer any **one** question from the following : 15×1=15

1. In a F_2 population of Ragi, the breeder observed 603 plants of grey coloured seeds and 217 plants of red coloured seeds. Test whether this proportion of plants is in agreement with Mendel's monohybrid ratio of 3 : 1 15
2. Score in examination of the students with frequency are given below. Calculate mean median and mode of the given dataset.

Scores	Frequency
1-20	6
21 - 40	20
41 - 60	45
61 - 80	15
81 - 100	2

3. Data of different persons with age and height are given below. Calculate and interpret the correlation coefficient of the two variables below.

Person	Age	Height
A	16	150
B	15	156
C	19	169
D	17	172
E	20	174

Group - B

B. Answer any **one** question from the following : 5×1=5

1. What do you mean by test of significance? What is the procedure for laying down of hypothesis for carrying out of significance test. 1+4

2. Which of the following sequences have the highest S.D ? Give its mean value with S.D. 1+4

(a) 2, 4, 6, 8

(b) 3, 6, 9, 12

(c) 4, 8, 12, 16

(d) 1, 2, 3, 4

3. Find the mean of the following data. $11/4, 21/2, 51/2, 31/4, 21/2$. 5

Or,

(a) Laboratory note book 2

(b) Viva-voce 3
