B.Sc./5th Sem (H)/BOTH/22(CBCS)

2022

5th Semester Examination

BOTANY (Honours)

Paper : DSE 1-T

[CBCS]

Full Marks : 40 Time : Two Hours

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

[Natural Resource Management]

Group - A

1. Answer any *five* of the following : 2×5=10

(i) Which are the reasons behind energy crisis?

(ii) Mention two major causes of soil degradation.

(iii) What is resource accounting?

(iv) Give full form of CBD and EIA.

(v) What is silviculture? Where is it applied?

(vi) Give the difference between biodiversity hotspot and warm spot.

(vii) Name two industries based on forest produce.

(viii) What is the difference between aquifer and ground water?

P.T.O.

Group - B

2. Answer any ***four*** of the following : 5×4=20

(i) Describe various sources of energy for human utilization. 5

(ii) What are the NTFPs? How these NTFPs are gradually degraded today in the forest? Write any one name of participatory management of forest to conserve these NTFPs. 1+3+1

(iii) Discuss different management strategies to protect biodiversity. 5

(iv) Mention different sources of fresh water. Discuss various anthropogenic causes for the depletion of fresh water. 2+3

(v) What are solid wastes? Write different scientific procedures of solid wastes managements which are applied in urban areas. 1+4

(vi) What are wetlands? What is their importance? 5

Group - C

3. Answer any ***one*** of the following : 10×1=10

(i) What are renewable and non-renewable sources of energy? Write different examples. Write a brief note on non-renewable sources of energy mentioning their uses. (3+1)+6

(ii) What is deforestation? Discuss various causes for deforestation. Describe different measures taken to protect forest. 2+4+4

OR

[Biostatistics]

Group - A

1. Answer any ***five*** of the following : 2×5=10

(a) What is regression equation?

(b) Differentiate between random and non-random sampling.

(c) What is standard deviation and standard error?

(d) What is co-efficient of range?

(e) What is meant by degree of freedom?

(f) Define mean and mode.

(g) Give any two properties of normal distribution.

(h) Give any two applications of chi-square distribution.

Group - B

2. Answer any ***four*** of the following : 5×4=20

(a) Differentiate between null and alternative hypothesis. 5

(b) Explain briefly various steps followed for hypothesis testing. 5

(c) What are the advantages of 'Arithmetic mean' and 'mode value'? 5

P.T.O.

(d) How does the standard deviation help for analysing the data in case of normal distribution? What is bimodal distribution? 4+1

(e) Calculate the Chi-square value from the following data :

No. of classes	Sample character	Observed value (O)	Expected value (E)
1	Tall plant	72	75
2	Dwarf plant	28	25

5

(f) Fit a binomial distribution to the following data :

x	0	1	2	3	4
f	28	62	46	10	4

5

Group - C

3. Answer any ***one*** of the following : 10×1=10

(a) Calculate the value of mean and standard deviation from the following frequency distribution :

Variable	10-25	25-40	40-55	55-70	70-85	85-100
Frequency	6	50	44	26	3	1

5+5

(b) What are the different procedures of data collection in Statistics? Mention the merits and demerits of each procedure. Write a short note on basic principles of Statistics. 10
