AU–341

M.Sc. Part–I Semester–II (CBCS Scheme) Examination

ENVIRONMENTAL SCIENCE

(Bioinformatics in Environmental Analysis)

Paper–V

Time : Three Hours] [Maximum Marks : 80

N.B. :– All questions are compulsory and carry equal marks.

1. Define primary and secondary data. Describe the methods for collection of data with suitable examples. 16

OR

Haemoglobin percent g/100 ml of liver fed *Wallago attu* was recorded as 23, 22, 20, 24, 16, 17, 18, 19 and 21.

Calculate the standard deviation. 16

2. Explain the following :
   (a) Probability density function 5
   (b) Binomial distribution 5
   (c) Concept of simple linear regression with example. 6

OR

   (d) Statement and properties of Poisson distribution. 5
   (e) Properties of Pearson's Coefficient of correlation. 5
   (f) Probability mass function. 6

3. Describe the following :
   (g) Concept of testing hypothesis. 5
   (h) Applications of Chi-Square test with significance. 5
   (i) Student t-test for single mean. 6

OR

   (j) Concept of simple random sampling. 5
   (k) Concept of ANOVA with one way example. 5
   (l) Types of error. 6

4. What is environmental system ? Describe the principles, approaches for the development of simple and multiple regression models. 16

OR

Discuss about the principles, applications and significance of Lotka Voltra and Leslie's matrix model. 16

5. Describe the following :

(m) Computer organization and classification. 5

(n) Key features of DOS for data input and output. 5

(o) Internet access to generate the environmental data. 6

OR

(p) Capabilities and limitations of computers. 5

(q) Key feature of MS PowerPoint for data input and output. 5

(r) Structure and functions of computers. 6