UG/5th Sem/Aqua(H)/T/19

2019

B.Sc. (Honours)

5th Semester Examination

AQUACULTURE MANAGEMENT

Paper - DSE-1T

[Fisheries Biotechnology, Bioinformatics and Statistics]

Full Marks : 40 Time : 2 Hours

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

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

   (a) Write short note on DNA fingerprinting.

   (b) State the principle of PCR.

   (c) What are the criteria for primer selection ?

   (d) Define 'coefficient of variance'.

[Turn Over]

(e) Mention the type of bond that connects two complementary nucleotides.

(f) Write a short note on NCBI.

(g) Point out the difference between prokaryotic and eukaryotic cell on the following criteria (1) Nucleus (2) Cell wall (3) Cell division (4) Ribosome (5) Cell organelle

(h) What do you mean by primary and secondary data ?

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

(a) Give an account of structure of B-DNA helix.

(b) Write a note on development of fish vaccine.

(c) Briefly explain the *Lac* operon in detail with suitable example.

(d) Write a note on western blotting technique and its utility.

(e) Discuss different measures of central tendency of an analysing data.

(f) Briefly discuss on restriction enzymes.

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

(a) (i) What are biosensors ? Briefly write on their types and application

(ii) Write a note on the characteristics of genetic code. (2+2+2)+4

(b) (i) Describe post-transcriptional processing of mRNA.

(ii) Calculate the standard deviation from the following data :

Class interval	20–29	30–39	40–49	50–59	60–69	70–79	80–89	90–99
Frequency	5	12	15	20	18	10	6	4

6+4