

2018

M. Phil.

1st Semester Examination

LIFE SCIENCE

PAPER—LSC-112

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Group-A

1. Answer any four questions : 4×2

(a) What is distributed database ?

(b) What is computational evolutionary biology ?

(Turn Over)

- (c) What is the format of URL ?
- (d) What is homoscedasticity ?
- (e) What do you mean by chi-square test for goodness of fit ?
- (f) How does operating system act as an user interface ?

Group-B

2. Answer any *four* questions : 4×4
- (a) Explain the role of randomization in the experimental design.
 - (b) (i) State the importance of experimental design.
(ii) What do you mean by retrospective and prospective methods ? 1+3
 - (c) State two laws of probability.
 - (d) What do you mean by data retrieval ? State the role of Entrez as data retrieval tool. 1+3

- (e) Differentiate between percentage and percentile.
- (f) State the guidelines for good format of a slide. What precautions should be undertaken for using colour in a slide ? 2+2

Group-C

3. Answer any *two* questions : 2×8

- (a) (i) Explain Model II anova with an example.
- (ii) In case of anova, how do you compute sum of square between-groups and within-groups ?
- (iii) How is *F*-ratio computed ? What is the *df* of *F*? 2+4+2
- (b) (i) What are the goals of bioinformatics ?
- (ii) Write about three popular languages which are used in bioinformatics.
- (iii) Write about bioinformatics application in drug development. 2+4+2

- (c) (i) What are the advantages of Unix ?
- (ii) What are the major components of Unix ?
- (iii) What are the characteristics of Linux ?

3+3+2
