

1059

B.Sc. (Hons.) Bio-Informatics  
Second Semester

BIN-2004: Statistics and Computer Fundamentals

Time allowed: 3 Hours

Max. Marks: 60

**NOTE:** Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

**Question(1)**

- (a) What do you understand by Kurtosis?
- (b) What is Skewness? Describe the graphical method of detecting Skewness.
- (c) Given mean = 40 and variance = 16, find the coefficient of variation.
- (d) What is data processing?
- (e) What is IC? Whats its purpose.
- (f) What is secondary storage. How it differs from primary storage. ( $6 \times 2 = 12$ )

**UNIT I**

**Question (2):**

(a) Explain the advantages of graphical representation of frequency distribution. Develop a frequency distribution with the help of a data set of your choice and draw:

- (i) A histogram (ii) a frequency polygon (iii) a cumulative frequency diagrams.
- (b) Convert the following distribution into more than frequency distribution.

Weekly Wages less than (00 Rs):	20	40	60	80	100
No. of workers:	41	92	156	194	201

For the data given above, draw less than and more than ogives and hence find the value of median. (6,6)

**Question (3):**

- (a): What are various measures of central tendency. Explain along with real life example based on life sciences. Also discuss its merits and demerits.
- (b) The average daily wage of all workers in a factory is Rs. 444. If the average daily wages paid to male and female workers are Rs.480 and Rs.360 respectively, find the percentage of male and female workers employed by the factory. (6,6)

**Question (4):**

- (a) State Bayes Theorem.
- (b) Define Normal distribution. What are the main characteristics of a normal distribution. Also discuss different properties of Normal distribution? (6,6)

(2)

## UNIT II

**Question (5):**

- (a) What is computer? why it is also known as a data processor. Explain in detail various characteristics of computers.
- (b) Draw a block diagram to illustrate the basic organization of a computer system and explain the functions of the various units. (6,6)

**Question (6):**

- (a) Define software and explain in detail system software and application software along with its uses.
- (b) Define main memory and explain the storage evaluation criteria. (6,6)

**Question (7):**

- (a) Define magnetic tape and discuss its basic principles of operation. Also give the advantages and limitations of magnetic tapes.
- (b) Define magnetic disk and discuss its basic principles of operation. What are the advantages, limitations and use of magnetic disks. (6,6)

x-x-x