



## BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Sc.(BT)-Hons-2023

Course Name – Computer Application for Biotechnology

Course Code - BBT10001

( Semester I )

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Identify the Excel function that could be used to calculate the mean growth rate of a bacterial culture.
  - a) AVERAGE
  - b) MEAN
  - c) GROWTH
  - d) RATE
- (ii) Identify the device that accepts input, processes data, stores data, and produces output among the following:
  - a) Television
  - b) Radio
  - c) Computer
  - d) Smartphone
- (iii) Identify the component responsible for processing data in a computer:
  - a) Hard Disk Drive (HDD)
  - b) Central Processing Unit (CPU)
  - c) Random Access Memory (RAM)
  - d) Power Supply Unit (PSU)
- (iv) Google Chrome is an example of \_\_\_\_\_ software.
  - a) System Software
  - b) Utility Software
  - c) Database
  - d) Application Software
- (v) Convert 256 kilobytes into megabytes.
  - a) 256 Megabytes
  - b) 2.56 Megabytes
  - c) 25.6 Megabytes
  - d) 0.25 Megabytes
- (vi) What is the output of the following code snippet? `x = 5 y = 2 print(x % y)`
  - a) 2
  - b) 3
  - c) 0
  - d) 1
- (vii) Determine the invalid variable name from the following in Python.
  - a) `my_variable`
  - b) `_variable`
  - c) `123variable`
  - d) `variable123`
- (viii) Determine the value of x after executing the following code? `x = 10 if x > 5: x += 5 else: x -= 5 print(x)`
  - a) 5
  - b) 10

- c) 15 d) 20
- (ix) Determine the output of the following code snippet? `x = [1, 2, 3] y = x x.append(4)`  
`print(y)`  
 a) [1,2,3] b) [1,2,3,4]  
 c) 4 d) Error
- (x) Which of the following statements is used to exit from a loop in Python?  
 a) break b) continue  
 c) pass d) exit
- (xi) How can we define a worksheet in Excel?  
 a) A collection of cells where data is entered and manipulated b) A tool for creating graphs and charts  
 c) A type of data format used in Excel d) A function that performs calculations on data
- (xii) Identify the statement that best describes a feature of Excel.  
 a) Excel is a word processing software b) Excel is a software for creating animations  
 c) Excel is a spreadsheet software that allows for data manipulation and analysis d) Excel is a software for creating music
- (xiii) Distinguish between absolute and relative cell references in Excel.  
 a) Absolute reference is when the row and column references change when copied, while relative reference is when they remain constant b) Absolute reference is when the row and column references remain constant when copied, while relative reference is when they change  
 c) Absolute reference is a type of formula, while relative reference is a type of function d) Absolute reference is a type of chart, while relative reference is a type of graph
- (xiv) What is a computer?  
 a) A device that can be instructed to carry out sequences of arithmetic or logical operations automatically via computer programming b) A device that can only perform calculations
- c) A device that can only access the internet d) A device that can only play games
- (xv) Which feature in Windows 10 allows you to manage and arrange open windows?  
 a) Task View b) Cortana  
 c) Edge Browser d) Action Center

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Demonstrate how would you identify and handle missing data in an Excel dataset? (3)
3. Using the data given below, construct a bar graph and write down the steps of creating such a bar graph using Excel. (3)
4. What is the primary function of the Central Processing Unit (CPU) in a computer? (3)
5. Explain the difference between RAM (Random Access Memory) and ROM (Read-Only Memory). (3)
6. Illustrate the difference between a shallow copy and a deep copy of a list in Python, with suitable example code. (3)

OR

Develop a python program to calculate and display the first n fibonacci terms. (3)

### Group-C

(Long Answer Type Questions)

5 x 6=30

7. How do you create a for loop in Python to iterate over a list? (5)
8. Explain the difference between a list and a tuple in Python. (5)

9. Explain the concept of variable scope in Python, including global and local scope. (5)
10. Describe the concept of variable packing and unpacking in Python with examples. (5)
11. Create a Python program that calculates the factorial of a given number. Ask the user for an integer input and compute its factorial. (5)
12. Provide an overview of the key features of the Windows 10 operating system. (5)

**OR**

Explain the role of cache memory in a computer system, its hierarchy, and its impact on overall system performance. (5)

\*\*\*\*\*