JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATIONS-2022

M.Tech-I Semester (BI)

COURSE CODE (CREDITS): 13M11BT112 (3)   MAX. MARKS: 15

COURSE NAME: Advanced Bioinformatics

COURSE INSTRUCTORS: Dr. Raj Kumar   MAX. TIME: 1 Hour

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Q1. How do you list the preloaded variables in R?   [1]

Q2. What are the different data types/objects in R?   [1]

Q3. Write down the possible output of the following Rcode: [1]
```
a <- "Hello, "
b <- "World."
paste(a, b)
```

Q4. Find out the invalid variable names in R: [1]

1) var_name2. 2) var_name% 3) 2var_name 4) .var_name 5) var.name 6) _var_name

Q5. How will you delete a variable named 'var4'?   [1]

Q6. A variable in R can store an atomic vector, group of atomic vectors or a combination of many Robjects. Discuss different ways you can assign a variable in R, with examples. [3]

Q7. Write the code in R to construct the following matrix: [2]

	column 1	column 2
row 1	1	2
row 2	3	4
row 3	5	6
row 4	7	8
row 5	9	10

Q8. How will you access the element 'Fri' in the given vector A?   [2]
```
A <- c("Sun","Mon","Tue","Wed","Thurs","Fri","Sat")
```

Q9. Using R programming, create two 3x3 matrices of your choice and demonstrate the arithmetic functions addition and subtractions using them.   [3]