

JK LAKSHMIPAT UNIVERSITY JAIPUR
INSTITUTE OF ENGINEERING AND TECHNOLOGY
End-Term Examination

Programme: BTech
 Course Name: Introduction To RUST Programming
 Maximum Marks: 30

Semester: 7th OE
 Course Code: EE1227
 Time Allowed: 3 Hours

- Do not write anything other than your roll number on question paper.
- Mention all the assumptions for your answers clearly.
- The student, before starting to write the solutions, should please check the question paper for any discrepancy and ensure that they have been delivered the question paper of right course code.
- Total 6 Questions are there.

Sr. No.		Question	Marks	CO
1.		What is the difference between a Rust enum and struct. Give examples of the each	3+2	1
2	a	How is multithreading/Concurrency handled in Rust? Explain with help of an example.	3	4
	b	Discuss the concept of borrowing with respect to rust programming language.	2	3
3	a	Describe the functioning of the following code and also write the output generated. <pre>fn main() { let my_option: Option<i32> = Some(222); // use of match expression to match Option type match my_option { Some(value) => println!("The option has a value of {}", value), None => println!("The option has no value"), } }</pre>	3	1
	b	What are the ownership model rules in Rust?	2.5	3
4.	a	Write a Rust function that takes a tuple (i32, i32) and returns "Equal" if both elements are equal, "Increasing" if the first element is less than the second, and "Decreasing" if the first element is greater than the second.	4	2
		OR		
	b	Write a Rust program that iterates over a vector of tuples (i32, i32) and calculates the product of the first and second elements of each tuple.	4	2
5		What is "Cargo" in the context of RUST language. List some of the main feature or work of "Cargo" in using RUST language	1.5+3.5	1
6	a	What is the difference between the Copy and Clone traits in Rust?	3	2
	b	How are slices used in Rust? Provide an example to support your answer?	2.5	2