

Subject: Mathematics (3rd semester CBCS- Assignment)

Session: 2020.

Course Title: Logic ,Sets and Linear programming

Course Code: LSCSEC

Max Maximum Marks: 60

Q.1: In a group of 65 people, 40 like cricket, 10 like both cricket and tennis. How many like tennis only and not cricket? How many like tennis?

(15 marks)

Q.2 Prove that the following propositions are tautologies.

(i) $q \rightarrow p \vee q$ (ii) $(p \wedge q) \rightarrow (p \vee q)$

(15marks)

Q.3: **State and prove Cauchy-Riemann equations.**

(15marks)

Q.4: **Prove that** the function $f(z) = |z|^2$ is continuous everywhere and but nowhere differentiable except at origin.

(15 marks)