

Spring 2025
CSE212 – Discrete Mathematics
Quiz-1

Marks: 15

Section: 66_J

Time: 30 Minutes

- Q1. Show if the following statements are tautology or not. [3]
- iii. $p \vee \neg p$
 - iv. $(p \rightarrow q) \vee \neg q$
- Q2. What is the negation of the following propositions and their truth values after negation? [4]
- v. $2 + 2 = 4$
 - vi. 7 is a prime number.
 - vii. π is a rational number.
 - viii. There exists an even prime number greater than 2.
- Q3. Verify the following equivalence using a true table. [5]
- $$(p \wedge q) \rightarrow r \equiv p \rightarrow (q \rightarrow r)$$
- Q4. State the converse, contrapositive, and inverse of the following conditional statement in English. [3]
- If a person is a doctor, then they have completed medical school.

