# UNIVERSITY OF DAR ES SALAAM

# COLLEGE OF INFORMATION AND COMMUNICATION TECHNOLOGY (CoICT)

#### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CS 348: NETWORK SWITCHING AND ROUTING (3 Unit)

## MAIN ASSIGNMENT

**DEADLINE**: 31st July 2020

## **INSTRUCTIONS**

- This assignment consists of ONE question.
- It contributes 10 points to your continuous assessment
- Attempt the question and submit through LMS.
- ONLY PDF document format is allowed for submission.
- Your answer should NOT exceed 2 pages

#### **Question 1**

The figure below indicates one of the malfunctions of Selective Repeat ARQ flow control mechanism. It compares a window size of 2 with a window size of 3. When window size is 3 and all ACKs are lost, sender sends duplicate of frame 0, window of the receiver expect to receive frame 0 (part of the window), so accepts frame 0, as the 1st frame of the next cycle though in reality it is the 1st frame of the first cycle.

Design an improved flow control mechanism that can be used to solve the above problem. Provide description/algorithm and a similar time diagram for your design.

