

## **Marking Criteria: Part 1**

1. Global rules:
  - 1.1. Compilation error: 0
  - 1.2. Failure of submitting both sender and receiver source files: 0
  - 1.3. Any single case that programs never terminate given a part (e.g., part 1b): 20% mark deduction from the implementation mark
2. Part 1a (total mark: 10)
  - 2.1. Compliance to the packet header format (data packet): 4
  - 2.2. Correct file transfer: 6
3. Part 1b (total mark: 20 - implementation: 14, worksheet: 6)
  - 3.1. Correctness of sender behavior (e.g., timer, retransmission, etc.): 8
  - 3.2. Correctness of receiver behavior (e.g., duplicate packet handling, etc.): 4
  - 3.3. Compliance to the packet header format (data packet and ACK packet): 2
  - 3.4. Runtime error: 10% reduction for each runtime error out of 10 attempts from the implementation mark
  - 3.5. Any incorrect file transfer out of 10 attempts: 20% reduction from the implementation mark
  - 3.6. Worksheet: 6

Regarding rule (1.3) in the global rules, consider a following situation. You got 10 out of 14 marks for implementation of Part 1b. But, in one case, your program kept running and didn't finish within a reasonable amount of time (e.g., 10 min for one run); then we will consider your program fails to terminate properly. You will get 20% deduction from the total implementation mark. Thus, the final implementation mark will be 8.

Regarding rules (3.4) and (3.5) in Part 1b, we will apply rule (3.4) first and rule (3.5) next.

## **Marking Criteria: Part 2**

1. Global rules:
  - 1.1. Compilation error: 0
  - 1.2. Failure of submitting both sender and receiver source files: 0
  - 1.3. Runtime error: 10% reduction for each runtime error out of 10 attempts from the implementation mark
  - 1.4. Any incorrect file transfer out of 10 attempts: 20% reduction from the implementation mark
  - 1.5. Any single case that programs never terminate: 20% mark deduction from the implementation mark

\* Regarding rules (1.3), (1.4) and (1.5), we will apply rule (1.3) first, rule (1.4) next and rule (1.5) finally.

2. Part 2a:

- a. Implementation (20):
  - i. Optimal retransmission time-out for 25 and 100 msecs (2)
  - ii. Duplicate packet handling (2)
  - iii. Correct sender packet transmission process
    - 1. According to window size and (4)
    - 2. Go-back-N Retransmission/time-out (4)
  - iv. Correct receiver message handling:
    - 1. Following Go-Back-N Ack Process (4)
    - 2. And out of order discard mechanism (4)
- b. Worksheet (10)
  - i. Q1 (6)
    - 1. Table (3)
    - 2. Graph (3)
  - ii. Q2 (4)

3. Part 2b.

- a. Implementation (20)
  - i. Duplicate packet handling (2)
  - ii. Correct packet transmission process
    - 1. Sender Window Size implementation (4)
    - 2. Selective Repeat- Retransmission/time-out (4)
  - iii. Correct packet reception process
    - 1. Receiver Window Size implementation (4)
    - 2. Selective Repeat ACK process (6)
- b. Worksheet (20)
  - i. Q3 (5)
  - ii. Q4 (4)
  - iii. Q5 (8)
  - iv. Q6 (3)