22 - S2 - Q1

Q (a) agree?
       reason
       solution
       factors

(b) DoS

Solution (a) I agree.

① Industry 4.0

(1) Reasons

Millions of sensors, robotes and controllers are reachable over TCP/IP; most run outdated firmwork and week authentication

② Digital transformation

Reason: Data and identities move to SaaS faster than security team controls.

③ COVID-19

The sudden shift to remote work increased reliane on VPNs, unsecured home networke and ad-hoc collaboration tools.
Phishing campaign exploited.

④ Solutions

(1) Zero-trust network segment
(2) update firmwork.
(3) Secure by Design
(4) Employee Trains

⑤ Factor

(1) expanded attack surface

(2) Automation and scale

(3) human element

(b) (i) packets number $= \dfrac{1000 \times 10^6}{32 \times 1024 \times 8}$

$$= 3814.6972$$

around 3814

(ii) numbers $= \dfrac{1000 \times 10^6}{64 \times 1024 \times 8}$

$$= 1907.3486$$

around 1907

decrease