

23 - S2 - Q3

Q(a) (i) attack

(ii) code

(b) (i) DDOS

(ii) Dos

(iii) Dos

Solution (a) (i) ① concept: trial and error method
in which the attacker uses every password
that is possible until the correct is found

② measures: choosing strong, mixed-character password.
changing them regularly, never re-using the
same password on multiple system.
and avoiding visible password hints.

(ii)
$$\frac{128^8}{8 \times 10^6} = 9007199255 \text{ second}$$

$$\frac{9007199255}{60 \times 60 \times 24 \times 365} = 285.6164 \text{ year}$$

around 286 years

(b) (i) ① Definition

Distributed Denial of Service attack is
attackers use multiple compromised systems
to launch this attack

② prevent.

(1) Run a traffic analysis to identify malicious
traffic

(2) Understand the warning signs

- (3) formulate incident response plan
- (4) Outsource DDos prevention to cloud based service providers.

(ii) Dos

$$\textcircled{2} \text{ packets numbers} = \frac{500 \times 10^6}{256 \times 1024 \times 8}$$
$$= 238.4186$$

around 239 packets/second

$$\text{(iii) packets numbers} = \frac{5 \times 10^9}{512 \times 1024 \times 8}$$
$$= 1192.0929$$

around 1193 packets/second.