EXERCISE ANSWER BOOK

(For Personal Use Only)

20180610011012 7 Unit-test-2

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(માત્ર અંગત ઉપયોગ માટે)

Subject - Information security

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બેઠક નંબર (આંકડામાં) Seat No. (in Figures)	
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Question / Sub-question No.

Q. ___ ___

Q1a – A.

I State a difference between authentication and authorization.

II Which strategy is best for password selection – which is easier to remember and harder to crack?

III What is the key difference b/t strong collision resistance and weak collision resistance?

IV Write the probability formula that among N people at least one person has the same birthday?

Q1 – B.

(I) Briefly define any two standard application of hash function

(II) How HMAC can be used in place of MAC to achieve integrity

Milestone

Question Sub-question No.

Q. III –

(IV) What is an avalanche effect? Calculate CRC for 1100101010110 & div - 100111.

Q2. (A) Salted password verification makes attacker's job more difficult - justify.

(B) Explain the outer round & inner round of tiger hash

Question Sub-question No. ☐ + ☐ + ☐ + ☐ = ☐

Q. ____

Answer.

Q2-B. * Tiger round outer hash :

→ here the input is x.

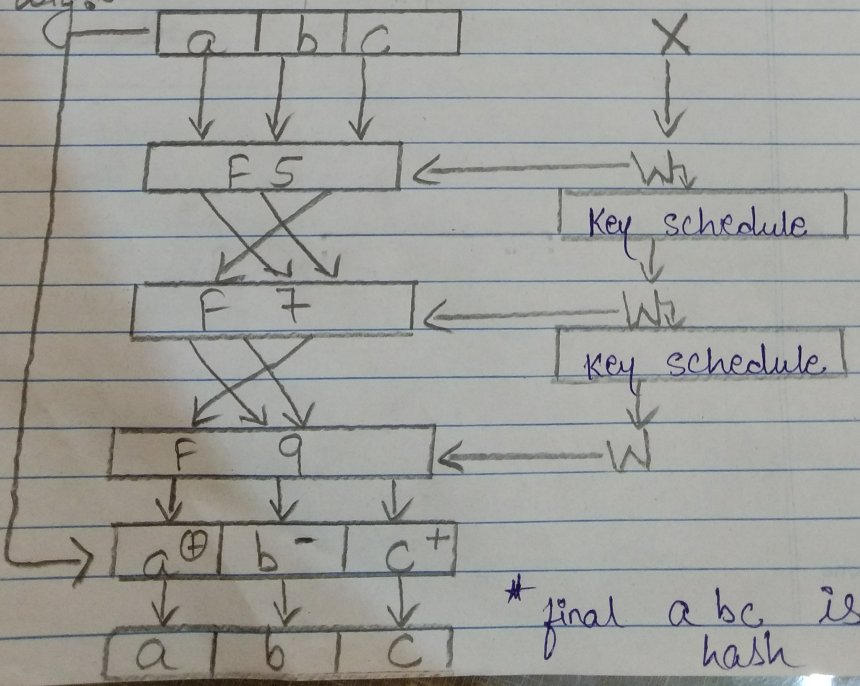
⇒ x = (x_0, x_1 ------ x_{n-1})

→ x is padded.

→ each x_i = 512 bits.

→ it looks like Block cipher.

Dig:-



* final a bc is hash

Milestone

Question
Sub-question No.

Q. ____

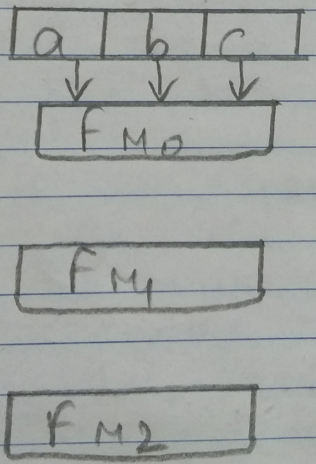
* Tiger inner round.

→ Here each F_M consist of pricesly '8 rounds'.

→ 512 bit- input . W to F_M

Here $W = (W_0, W_1 \ldots\ldots W_7)$
W is the input blocks.

Dig :~



Question Sub-question No.

Q. Q2. (A) Salted password verification makes attackers job more difficult -

Milestone

Question / Sub-question No. [ ] + [ ] + [ ] + [ ] = [ ]

Q. Q1 B I Standard application of hash function.

→ hash functions are used for obtaining integrity.

1. Storing password
2. Digital signature
3. to verify file integrity.

Q1B II HMAC can be used in place of MCA as:-

1. There is No export restrictions for the US.
2. And the cryptographic hash function execute faster in software than other encryption algorithms.

Q1B IV avalanch effect :-

The avalanch effect is the property of the cryptographic algorithm, & typically block ciphers

Milestone

Question / Sub-question No.

Q. ___

and cryptographic hash function.

Q.1a

Ans

T. Difference between authentication and authorization.

Authentication	authorization
① Determine whether access is allowed	① are you allowed to access.
② Authenticate human to machine or either the machine to machine	② Enforces limits on actions.

Milestone

Question / Sub-question No.

Q.

Q1 A. (II) "The password Based on passphrase." this strategy is best for password selection.

Q1 A. (IV) probability formula ⇒

$$1-(365/365)\ \text{----}\ (364/365)$$

$$(365-N+1)/365.$$