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RVISOR'S  
ATURE  
DATE

DATE : 6/11/14

ROLL NO. A059

TRIMESTER/SEMESTER : VII DIVISION: A

NAME : Chinmay Pooch

ALISATION : IT

LE (SUBJECT) : I - S.

NO. OF SUPPLEMENTARY SHEETS ONLY —

QUESTION NOS.	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL MARKS OBTAINED	MAXIMUM MARKS
KS (NEC) FILLED IN BY (ER)	04	04	04	—————									12	15

*P. Shoh*

SIGNATURE OF THE EXAMINER

## INSTRUCTIONS TO BE STRICTLY FOLLOWED BY CANDIDATES

This answer-book contains eight pages. Check whether the relevant answer-book provided contains eight pages and whether the pages are properly numbered.

Candidates should occupy the correct seats as per the seating plan displayed and write appropriate details in the space provided for the purpose on the answer book.

Candidates must produce their photo identity card provided by the University for verification to the room supervisor during the examination. Candidates will not be permitted to appear for the examination without the identity card.

Candidates who are not in their seats by the time notified, will not be permitted to appear for the examination.

Answer sheets provided to them bear the signature of the



## BIBA

- write down

- read up

① orange > ② green > ③ purple

Subject	Object	Rights
Alice ②	XRay ②	<del>Read</del>
Bob ③	Zebra ②	Read ✓
Carol ①	Yoyo ③	Write ✓
Carol ①	Zebra ②	Write ✓



## Read Rule

Based on COI (Conflict of Interest),  
Subject 'S' can read object 'o' if

- It has previously never read any object

OR

- It has previously read an object from the same CD(Co)  
~~and it doesn't have~~

OR

- It has previously read an object belonging to a different COI class.

This means an user can't read CD(Co) of two different companies in the same COI group.

## Write Rule:

① Satisfy Read Rule

② AND

② It has not read any unsanitized data of other CD(Co).

③ It has previously read from the same CD(Co).

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Question  
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## Concealment Strategy

- ① Encryption Virus
- ② Stealth Virus
- ③ Polymorphic virus
- ④ Metamorphic virus.

① A part of the virus generates a random key and encrypts rest of the virus. This changes the signature hence hard to detect.

② Specially designed viruses to avoid detection by anti-virus s/w

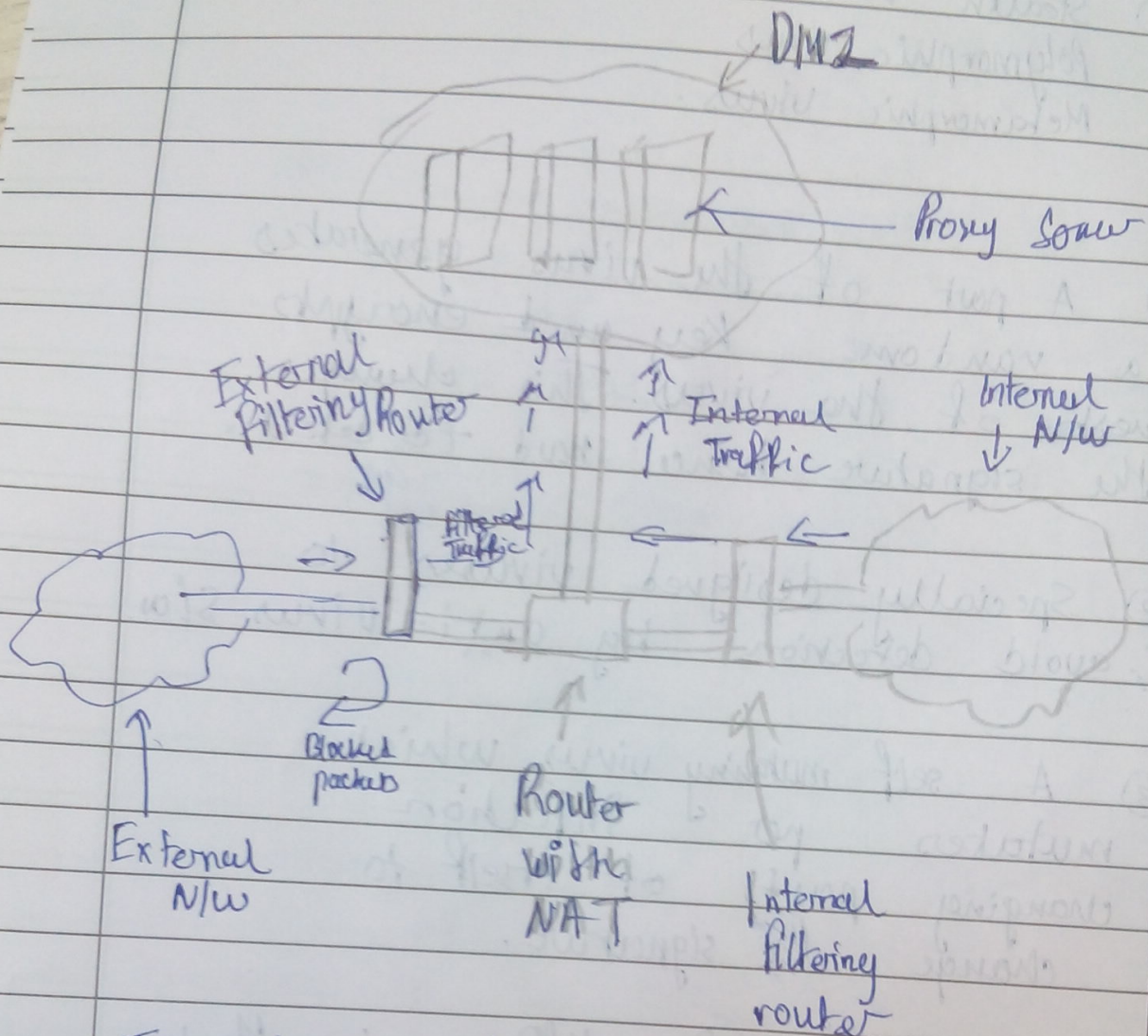
③ A self mutating virus which mutates per infection changing parts of itself to change the signature.

④ Same as ③, difference is that it re-writes its whole code, hence changing both appearance and behaviour.

04



3[a] Screened Subnet Firewall with  
DMZ arch.



The above diagram shows the architecture.

We use the external filtering Router to remove the load off the NAT router and Internal filtering router.

All external traffic after being filtered heads to the DMZ, it cannot access the Internal n/w.



Question  
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NAT provides an extra barrier to hackers.

The Internet traffic is allowed to flow freely to DMZ, the opposite is heavily filtered by internal filtering router.

e.g. A website is hosted on the servers in DMZ. Customers place orders from there, a worker fetches the digitized customer order into the internal network where its serviced and processed, the output is then stored back onto a server in DMZ where the customer can check the result.

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