

BE | IT | VIII (old) 2415112

AGJ 1st half (j)-Con-Cod 13

Con. 3955-12.

Information Security
(OLD COURSE)

GN-6035

-(3 Hours)

[Total Marks : 100

- N.B. :** (1) Question No. 1 is compulsory.
(2) Attempt any four questions from remaining six questions.

Q.1

- a) Distinguish among vulnerability, threat and control using suitable example (10)
b) Compare the different separation methods used as a basis for protection in Operating systems, citing their uses and disadvantages (10)

Q.2

- a) Explain technique (or fundamental concepts) for following attacks? (20)

1. Cross Site scripting
2. ARP Poisoning
3. Packet sniffing
4. Spoofing
5. Session hijacking
6. Ping to Death
7. Root Traverse attack on web server

Q.3

- a) why is it a good idea to hash passwords that are stored in a file? What is a "salt" and why should a salt be used whenever passwords are hashed (5)
b) Explain Visual CAPTCHA (5)
c) What is inference problem in Database? Discuss with example (10)

Q.4

- a) Explain DMZ in enterprise wide network? Explain various attacks possible on DMZ and its countermeasure (10)

- b) Write down firewall rule for the following scenario (In plain English sentence - Assume suitable diagram and Private/Live IP addresses)

- 1) College has its own DNS server in DMZ, College students and faculties should use only its own DNS server for getting IP address of any web sites, they should not able to access Public DNS Server.
- 2) College is hosting web site in its own Web Server in DMZ, Outside people can able to access college web site securely. (10)

- Q.5

- a) Identify security issues due to protocol weakness in following protocols (10)
1) CSMA/CD 2) ARP 3) Ethernet with MTU 1500
b) What is the difference between Digital signature and Digital Certificate (05)
c) Explain Man -in -the-middle (MiM) attack and how SSL prevent MiM attack (05)

[TURN OVER

Q.6

a) Explain following class of software flows:

Buffer overflow, Race condition, Incomplete mediation

(15)

b) What are the possible attacks on the password, Explain each in detail ?

(05)

Q.7

Write short notes;

(20)

a) PKI

b) RBAC (role based Access control)

c) DoS and DDoS

d) IPSEC

Con .4475-12

[Old Course]

(3 Hours)

GN-8363

[Total Marks - 100]

- N.B. 1) Question No. 1 is compulsory
2) Attempt any four out of remaining questions.

Q1.

- a) Give information package diagram for recording information requirement for "college Admission" considering dimensions like time, seats, branch etc. design star Schema from information package. Also draw snowflake schema. (10)
b) A database has four transactions. Let minimum support and minimum confidence is 50%

Tid	Items Bought
1	A,B,D,E,F
2	A,D,C,B
3	A,C,D,E,F
4	B,D,E,F,C

- i) Find all frequent itemsets using Apriori Algorithm (05)
ii) List strong Association Rules (05)

Q2

- a) Define classification. Explain decision tree for classification with an example (10)
b) What is clustering? Explain K-means clustering and solve the following with K= 2, for the given data {2,25,10,15,5,20,4,40} (10)

Q3

- a) Define datawarehouse with features. Explain DW architecture with suitable block diagram. (10)
b) What are the types of OLAP server? Explain the different operations of OLAP (10)

Q4

- a) Define Factless fact table with an example (10)
b) Write a short note on outliers in data mining (10)

Q5

- a) Explain data mining steps in KDD? Give the architecture of typical data mining system (10)
b) What is web mining? Explain content mining with respect to crawlers and personalization (10)

Q6

- a) Define data mining. Differentiate between classification and prediction (10)
b) Explain general trend in Datawarehousing (10)

Q7

Write short notes on (Any Four) (20)

- a) Spatial Mining
b) DMQL
c) Visualisation
d) Hypercubes
e) Temporal Mining
f) Regression