JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year II Semester Examinations, May - 2017
DATABASE SECURITY
(Computer Science and Engineering)

Time: 3 hours   Max. Marks: 75

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

(25 Marks)

1.a) Give the list of various kinds of databases used in real time applications. [2]
  b) Are databases necessary for storing data? Justify with an example. [3]
  c) List different types of database security models. [2]
  d) Write different services provided by operating system for database security. [3]
  e) What do you mean by secure DBMS? [2]
  f) Write about IDES with an example. [3]
  g) Is frame based system model used for database security? Justify. [2]
  h) Differentiate between Frame Based Systems and the Object-Oriented Systems. [3]
  i) What is Orion model? Give an example. [2]
  j) How the next generation models help for database security? [3]

PART - B

(50 Marks)

2.a) State and explain Acten Model.
  b) Illustrate Bussolati and Martella's Model for Distributed databases with a neat diagram.
                                                                          [5+5]

OR

3.a) Explain the security issues in database management systems.
  b) Write about Hartson model for database security. [5+5]

4. Briefly explain about User Authentication and Memory Protection with examples. [10]

OR

5.a) Give a brief note on Resource Protection.
  b) Explain the use of Trusted Computer System in database security. [5+5]

6. Explain the steps involved in designing Secure Operating System and Secure DBMS.
                                                                          [10]

OR

7. Distinguish between IDES System, RETISS System and ASES System. [10]

8. List and explain any two models for the protection of new generation database systems.

OR

9. Explain the SORION Model for the Protection of Object-Oriented Databases. [10]

10.a) What is an active database? Explain it with an example.
  b) How security is provided against attacks in active databases? Discuss [5+5]

OR

11. Explain the protection of active database with an example scenario. [10]

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