

B.Tech. (Semt. - 7th /8th)
DATABASE MANAGEMENT SYSTEMS
SUBJECT CODE : CS - 305
Paper ID : [A0440]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

Section - A

Q1)

(10 x 2 = 20)

- a) What is role of storage structures in database management system?
- b) Explain the difference between a weak entity and a strong entity.
- c) What are non-procedural languages?
- d) What do understand by a heterogeneous distributed database?
- e) What are the foreign keys?
- f) What are ER diagrams?
- g) Define shadow paging.
- h) What are log records?
- i) What is data fragmentation?
- j) What is the role of security in normal forms?

Section - B

(4 x 5 = 20)

Q2) What are Triggers? Explain all types with SQL examples.

Q3) Write the SQL commands for Commit and Rollback. And also explain the role of stored procedures in database management system.

Q4) Demonstrate the use of four character functions; LOWER, UPPER, INITCAP and LENGTH.

Q5) Write the SQL Commands for the following:

Identify the syntax and uses of the %ISOPEN cursor attribute.

Identify the syntax and uses of the %FOUND cursor attribute.

Identify the syntax and uses of the %NOTFOUND cursor attribute.

Identify the syntax and uses of the %ROWCOUNT cursor attribute.

Q6) What are Indexes, Package, Cursor and Views? Explain briefly with SQL examples.

Section - C

(2 x 10 = 20)

Q7) Construct an ER diagram for a hospital with a set of patients and a set of medical doctors. Associate with each patient a log of the various tests and examinations conducted.

Q8) The students passing in the various subjects are as follows:

Name	Math	Science	Languages	Total	Average	Result
P Jones	68	90	72	230	76.66	Pass
M Henry	95	92	80	267	89.00	Pass
J Man	29	67	41	137	45.66	Fail
A Bryan	45	60	71	176	58.66	Pass
W Fringe	77	82	64	223	74.33	Pass
A Lawson	55	76	67	198	66.00	Pass
B Marsh	59	52	41	152	50.66	Pass

Write the commands in SQL for the following:

- What is average Math Score?
- List of students in the order of merit list.
- List the students who have passed either in Math or Science.
- What is maximum score in language?
- How many students have passed?

Q9) What is normalization? Explain various types of normalizations with the help of suitable examples.