B. Tech. Sem – VIII (Biomedical Engg.) (2014 COURSE) (CBCS) : SUMMER - 2019

SUBJECT : ELECTIVE – IV : DATABASE MANAGEMENT SYSTEMS

Day : Thursday | Time : 02.30 PM TO 05.30 PM

Date : 30/05/2019 | **S-2019-2940** | Max. Marks : 60

N. B. :

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labeled diagram **WHEREVER** necessary.
4) Assume suitable data, if necessary.

Q. 1 Draw and describe overall structure of Database Management System. **(10)**

OR

Q. 1 Differentiate between file system and database system. **(10)**

Q. 2 Describe the concept of primary key, candidate key, super key and foreign key with suitable examples. **(10)**

OR

Q. 2 What is E-R model? Describe its concepts. **(10)**

Q. 3 With suitable examples, describe in detail mapping of E-R model to Relational model. **(10)**

OR

Q. 3 Describe following relational Algebra Operators with some examples: **(10)**

i) Select **iii)** Join
ii) Project **iv)** Division

Q. 4 Write short notes on: **(10)**

i) Dynamic SQL **ii)** Embedded SQL

OR

Q. 4 Write short notes on: **(10)**

i) Views in SQL **ii)** Data definition

Q. 5 Write short notes on: **(10)**

i) Multivalued dependency **ii)** Boyce – Codd normal form

OR

Q. 5 What is mean by functional dependency? How functional dependency helps in database design? **(10)**

Q. 6 **a)** Distinguish between view and conflict serializability. Give suitable example. **(06)**

b) Explain log based recovery in detail. **(04)**

OR

Q. 6 Write a short note on: Deadlock Handling. **(10)**

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