

Total No. of Questions : 5]

SEAT No. :

PB835

[Total No. of Pages : 2

[6204]-24

M.C.A. - I (Management)

IT - 24 : ADVANCED DATA BASE FOR MANAGEMENT SYSTEM

(Revised 2020 Pattern) (Semester - II)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.

Q1) Case Study :

[8]

A publishing company publishes books on various subjects. The books are written by authors who specialize on one particular subject. The company employee editors not necessarily being specialize on particular area. Each take sole responsibility of one or more book publications. Every book required some items you publications. Then items supplied by supplier. One supplier can supplied many items. Shop owner buys books by publisher. Shop owner can buy many books but one book can be bought by one shop owner only. Books are uniquely identified by booked

a) Draw the E-R diagram for the above system

OR

b) For the above case, normalize the database up to 3 NF

Q2) a) Describe transaction server, data server of cloud based server. [5]

b) Why is spatial indexing important? What are the two types of spatial data? [5]

OR

a) Describe the client-server architecture [5]

b) Explain the mobile database with its architecture. [5]

P.T.O.

Q3) a) Why is recovery needed in database? Explain any one log based recovery technique with proper example. [5]

b) Explain mandatory access control and role-based access control with proper example. [5]

OR

a) Describe the database backup system with its types. [5]

b) What type of encryption is used by public key infrastructure and by digital certificates? [5]

Q4) a) Check whether the given schedules is conflict seriziable or not $S : R_1(A), R_2(A), R_1(B), R_2(B), R_3(B), W_1(A)$. [6]

b) Explain the features of NOSQL. [2]

OR

a) What is dead lock? Explain dead lock prevention, detection techniques with proper example. [6]

b) State the types of NoSQL. [2]

Q5) a) Explain data partitioning techniques in parallel database with examples. [7]

b) Differentiate between homogeneous and heterogeneous database. [7]

OR

a) What is difference between interoperational parallism of intraoperational parallism? [7]

b) Explain 2 phase & 3 phase comment protocol in DDBMS with proper example. [7]

