

Total No. of Questions : 5]

SEAT No. :

PC-3246

[Total No. of Pages :2

[6383]-1003

M.C.A. (Part - I)

IT - 13 : ADVANCED DBMS

(2024 Pattern) (Semester - I)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions are compulsory.
- 2) Figure to the right side indicates full marks.

Q1) Case Study :

‘Marriage place’ is an online portal which provides matrimonial services for groom and bride. Interested person need to register online as a member. The members then need to create their profile along with a photograph. Members can specify their expectations about their partners in terms of academic qualilfications, salary, service, age, height, religion and caste along with brief information about family members. The member can subscribe for this service for a period of 3,6 or 12 months by paying respective fees. Member get a list of matches based on their expectations. This portal also provides facilities related to marriage hall, catering services etc.

- a) construct the E-R diagram for following case study. [7]

OR

Design the normalised database upto 3 NF using above case study

(Describe it structured and constraints) [7]

- b) Attempt any one : [3]

- i) Describe and explain codd’s rule any three.
- ii) Explain specialisation with example.

Q2) a) Explain the term transaction with ACID properties. [5]

- b) Explain concurrency control with time stamp based ordering control.[5]

OR

- c) What is dead lock? Explain method of Deadlock Handling. [5]

- d) What is Schedule? Explain its types. [5]

P.T.O.

Q3) a) Write Mandatory access control and role-based access control with proper example. [5]

b) Explain Shadow paging in details. [5]

OR

c) Explain Recovery and Atomicity. [5]

d) Explain Database Backup and its types. [5]

Q4) a) Explain Inter operational & Intra operational parallelizm in details. [5]

b) Explain the term fragmentation & replication in DDBMS. [5]

OR

c) Explain need of parallel database with its architecture. [5]

d) Explain 2-pc commit protocol in DDBMS. [5]

Q5) Attempt any two :

a) Explain the term no SQL & Mongo DB. [5]

b) What is Fire Base & its uses? [5]

c) Author. (AID, name, city, No-of Books print) where AID - primary key.
Book (BID, name, publication - name, year) where BID - primary key
Relation between Book & Author is Many To Many. [5]

i) Display Book details published in 2021.

ii) Display Author name along with their book name.

iii) Display all author who stay in Amar's City.

