398 (DMS)

[20-HKPGDEO–M2S(O)21J]

PGDCA 2nd Semester (Old) Exam., 2020

FUNDAMENTALS OF DATABASE MANAGEMENT SYSTEM

[PGDCA(S2) 08]

Full Marks : 50

Time : 2 hours

The figures in the margin indicate full marks for the questions

1. Answer any *five* from the following questions : 2×5=10

(a) Define sequential organization of file. Give an example of sequential access storage device.

(b) Define DBA.

(c) Define entity and attribute.

(d) What is domain constraint?

(e) What are the properties of primary key?

(f) Define functional dependency.

2. Answer any *two* from the following questions : 4×2=8

(a) Write the objectives of the normalization process.

(b) Explain database failure in brief.

(c) Write about direct access organization.

3. Answer any *two* from the following questions : 6×2=12

(a) Explain three-tier database architecture in brief.

(b) Design an E-R diagram for library management system.

(c) Explain any six Codd's rules for RDBMS.

4. Answer any *two* from the following questions : 10×2=20

(a) *(i)* What are the constraints of relationship type? Give examples of the constraints of different cardinality ratio. 6

(ii) Define BCNF. Differentiate between BCNF and 3NF. 4

(b) Define SQL. What are the various categories of SQL statements? Write the purposes of each. 2+8=10

(c) Write short notes on any *two* of the following : 5×2=10

(i) Multivalued and join dependency

(ii) SuperKey and candidate key

(iii) Data independence

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