M.Sc. 2nd Semester Examination, 2016

ADVANCED DBMS

PAPER — COS-201

Full Marks : 40

Time : 2 hours

Answer any four questions

The figures in the right-hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

1. Given a block diagram of physical DBMS architecture and explain its various components. 10

2. (*a*) Write an algorithm of compute the closure of α under functional dependency F. Give example.

(b) What is a multivalved dependency ? Why is it required ? 6 + 4

3. (a) What are the advantages of distributed database system ?

(b) State the difference between horizontal fragmentation and vertical fragmentation. 5 + 5

4. Briefly explain two-phase commit protocol in distributed database environment. 10

5. (a) What are the different types of update done ? Explain.

(b) Differentiate between master slave replication and multimaster replication. 6 + 4

6. Write short notes on (any *two*) : 5 × 2

(*i*) Quorum consensus protocol

(*ii*) Bully Algorithm

(*iii*)Deadlock Detection Algorithm.

[*Internal Assessment* : 10 Marks]

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