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MCAH 301

**Third Semester M.C.A. Degree Examination, December 2018
ADVANCED DATABASE MANAGEMENT SYSTEMS**

Time : 3 Hours

Max. Marks : 70

Note : Answer **any five full** questions. **Each** question carries **equal** marks.

1. a) Discuss in detail about database management system architecture with a neat diagram. 7
b) What are the different data models present ? Explain in detail. 7
2. a) Construct an ER diagram for an employee payroll system. 7
b) With relevant examples discuss the various operations in relational algebra. 7
3. a) Explain the Boyce-Codd normal form with an example. Also state how it differs from that of 3NF. 7
b) State comparison of RDBMS, OODBMS and ORDBMS. 7
4. a) Mention design and implementation issues for active databases. 7
b) What is Event-condition-action model ? Write a trigger to enforce a policy that "limits all salary increases to 50%" for the following table schema ?
EMPLOYEE (EmployeeId, Name, Salary, Department) 7
5. a) What is temporal database ? Explain how time is represented in temporal databases. 7
b) Define DDBMS. Explain the various DDBMS design techniques. 7

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- 6. a) What are the differences between the uses of tags in XML versus HTML ?
Give suitable example for each. **7**
 - b) Give the structure of DTD document with suitable example. Also write a note on XML schema. **7**
 - 7. a) Explain the characteristics of a data warehouse and write about data modelling for data warehousing. **7**
 - b) Differentiate between OLAP and OLTP. Briefly explain OLAP operations by using data cube. **7**
 - 8. Write a short note on :
 - a) Multimedia Database. **5**
 - b) Spatial Database. **5**
 - c) Deductive Database. **4**
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