

31/05/2022

APPENDIX-III
Question Paper Template (For Online Examination)

K. J. Somaiya Institute of Engineering and Information Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

End Semester Exam

April - May 2021

(B.Tech/M.Tech.) Program: Electronics and Telecommunication

Examination: TY Semester: VI

Course Code: IUEXDLC6054 and Course Name: Database Management System

Duration: 03 Hours

Max. Marks: 60

Instructions:

- (1) All questions are compulsory.
- (2) Draw neat diagrams wherever applicable.
- (3) Assume suitable data, if necessary.

		Max Marks	CO	BT level
Q 1	Solve any six questions out of eight:	12		
i)	List advantages of DBMS	02	CO1	U
ii)	Explain the term attribute	02	CO2	U
iii)	Explain the term normalization	02	co3	U
iv)	Explain selection operator	02	CO4	U
v)	What is constraint	02	CO5	U
vi)	Define atomicity	02	co6	R
vii)	Compare tables and views	02	CO5	R
viii)	List different basic operators	02	CO4	U
Q.2	Solve any four questions out of six.	16		
i)	Explain the difference between logical and physical data independence.	04	CO1	U
ii)	Write short note on primary key	04	CO2	R
iii)	In relation R(ABCD), functional dependencies are given, FD{AB → CD, D → A }, What is the candidate key?	04	co3	A
iv)	Write short note on foreign key	04	CO4	R

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v)	Which of the following plays an important role in representing information about the real world in a database? Explain briefly. 1. The data definition language. 2. The data manipulation language. 3. The buffer manager. 4. The data model.	04	CO5	A																											
vi)	Find Right outer join of the following tables <table border="1" style="display: inline-table; margin-right: 20px;"> <thead> <tr> <th>E_No</th> <th>E_Name</th> <th>Address</th> </tr> </thead> <tbody> <tr> <td>E1</td> <td>Varun</td> <td>D1</td> </tr> <tr> <td>E2</td> <td>Raghav</td> <td>D2</td> </tr> <tr> <td>E3</td> <td>Aditya</td> <td>D1</td> </tr> </tbody> </table> <table border="1" style="display: inline-table;"> <thead> <tr> <th>D_No</th> <th>D_Name</th> <th>Location</th> </tr> </thead> <tbody> <tr> <td>D1</td> <td>IT</td> <td>Delhi</td> </tr> <tr> <td>D2</td> <td>HR</td> <td>Chennai</td> </tr> <tr> <td>D3</td> <td>Finance</td> <td>Pune</td> </tr> <tr> <td>D4</td> <td>IT</td> <td>Mumbai</td> </tr> </tbody> </table> <p style="text-align: center;">Employee Table Department Table</p>	E_No	E_Name	Address	E1	Varun	D1	E2	Raghav	D2	E3	Aditya	D1	D_No	D_Name	Location	D1	IT	Delhi	D2	HR	Chennai	D3	Finance	Pune	D4	IT	Mumbai	04	CO6	U
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Q.3	Solve any two questions out of three.	16																													
i)	Why would you choose a database system instead of simply storing data in operating system files? When would it make sense not to use a database system?	08	CO1	A																											
ii)	Find E Name from employee where address='Delhi' <table border="1" style="display: inline-table; margin-right: 20px;"> <thead> <tr> <th>E_No</th> <th>E_Name</th> <th>Address</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Ram</td> <td>Delhi</td> </tr> <tr> <td>2</td> <td>Yash</td> <td>Chennai</td> </tr> <tr> <td>3</td> <td>Mahesh</td> <td>Chennai</td> </tr> <tr> <td>4</td> <td>Supriya</td> <td>Delhi</td> </tr> </tbody> </table> <table border="1" style="display: inline-table;"> <thead> <tr> <th>D_No</th> <th>D_Name</th> <th>E_No</th> </tr> </thead> <tbody> <tr> <td>D1</td> <td>HR</td> <td>1</td> </tr> <tr> <td>D2</td> <td>IT</td> <td>2</td> </tr> <tr> <td>D3</td> <td>Marketing</td> <td>4</td> </tr> </tbody> </table> <p style="text-align: center;">Employee Table Department Table</p>	E_No	E_Name	Address	1	Ram	Delhi	2	Yash	Chennai	3	Mahesh	Chennai	4	Supriya	Delhi	D_No	D_Name	E_No	D1	HR	1	D2	IT	2	D3	Marketing	4	08	CO4	U
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iii)	Draw and explain transaction states	08	CO6	A																											
Q.4	Solve any two questions out of three.	16																													
i)	List and explain different types of cardinalities	08	CO2	R																											
ii)	In relation R(ABCDEF), functional dependencies are given, $FD\{C \rightarrow F, E \rightarrow A, EC \rightarrow D, A \rightarrow B\}$, What is the candidate key?	08	co3	A																											
iii)	Explain how aggregate function work on null values	08	CO5	A																											