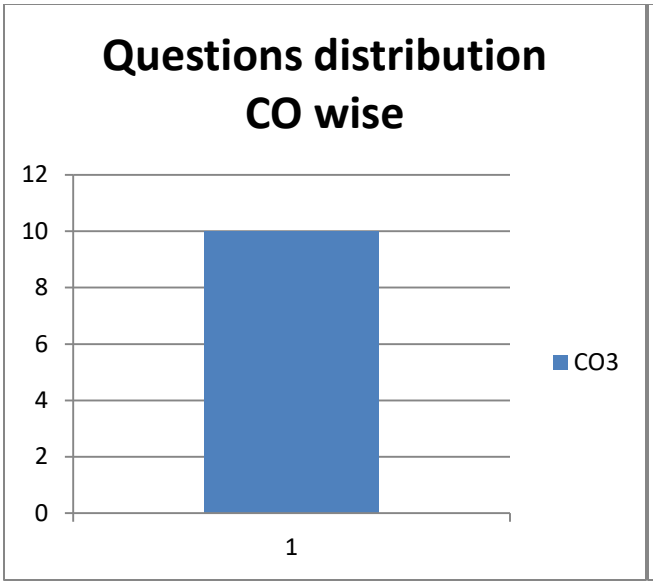
United College of Engineering and Research, Prayagraj

Database Management System (KCS-501)

Assignment-3

Q. No.	Question	CO	Bloom's level
1.	Why do we normalize database?	CO3	L1
2.	What are the different types of anomalies associated with database?	CO3	L2
3.	Define partial functional dependency. Consider the following two sets of functional dependencies F= {A ->C, AC ->D, E ->AD, E ->H} and G = {A ->CD, E ->AH}. Check whether or not they are equivalent.	CO3	L3
4.	Define Minimal Cover. Suppose a relation R (A,B,C) has FD set F ={A→B, B→C, A→C, AB→B, AB→C, AC→B} convert this FD set into minimal cover.	CO3	L3
5.	Write the difference between 3NF and BCNF. Find normal form of relation R(A,B,C,D,E) having FD set F={ A->B,BC->E,ED->A}.	CO3	L3
6.	Write difference between BCNF and 3 NF.	CO3	L2
7.	Short Notes of the Following (i) MVD or JD (ii) Normalization with advantages	CO3	L1
8.	Consider the universal relational schema R (A, B, C, D, E, F, G, H, I, J) and a set of following functional dependencies. *F* ={ *AB→C*, *A→DE*, *B→F*,*F →GH*,*D→IJ* } Determine the keys for R? Decompose R into 2nd Normal Form.	CO3	L4
9.	Consider R = (A, B, C, D, E, F, G, H) and F= { AB → C, BC → D, E → F, G → F, H → A, FG → H } Is the decomposition of R into R1(A, B, C, D), R2(A, B, C, E, F), R3(A, D, F, G, H) lossless? Is it dependency preserving?	CO3	L4
10.	Consider R = (A, B, C, D, E) and F= { A → B, BC → E, ED → A } (a) List all the candidate keys for R. (b) Is R in third normal form? (c) Is R in BCNF?	CO3	L4


Questions distribution CO wise
12
10
8
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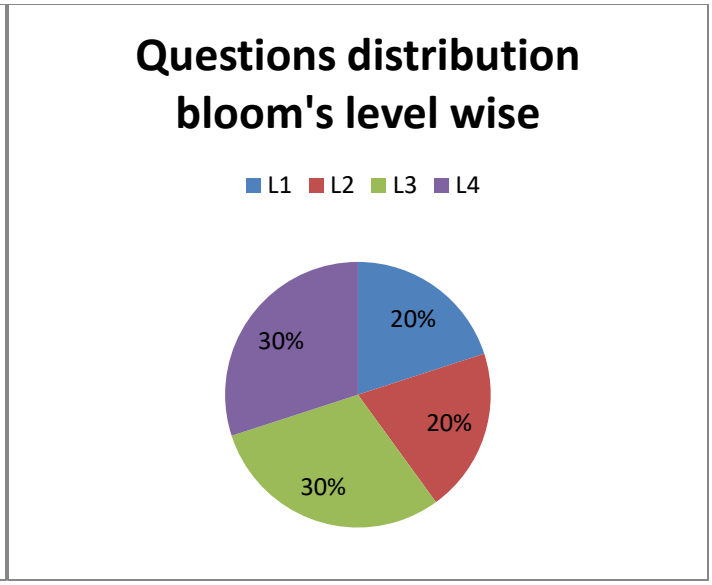
CO3


Questions distribution bloom's level wise
L1
L2
L3
L4
20%
20%
30%
30%