

**Introduction to Data Base**  
**Assignment 4**  
**Submission Date: Saturday, 27/06/2020 Time: 11:50 PM**

**Problem – 1: Consider following table, give valid FDs.**

A	B	C	D	E
a	2	3	4	5
2	a	3	4	5
a	2	3	6	5
a	2	3	6	6

**Problem – 2: Consider following FDs set and find the closures.**

- a. R1(ABCDEFG) FDs = { A → B, BC → DE, AEG → G}. Give closure of BC, AC.
- b. R2(ABCDE) FDs = { A → BC, CD → E, B → D, E → A}. Give closure of A,B,E, CD .

**Problem – 3: Consider following FDs sets,**

- a. R3(ABCDEF) FDs = { AB → C, C → D, B → AE}. Give Super Keys and Candidate Keys
- b. R4(ABCDEFGHIJK) FDs = { A → DK, CG → H, CJ → DG, G → BEI, H →}. Give Super Keys and Candidate Keys
- c. R5(WXYZ) FDs = { Z → W, Y → XZ, XW → Y}. Give Super Keys and Candidate Keys
- d. In above question suppose W attribute is CHAR and X,Y,Z are Integer attributes. Give 5 tuples data which will show the valid dependency given in 3.e.

**Practice Question:**

- a. R1(ABCD) FDs = { ABC → D, AB → CD, A → BCD}. Give Super Keys and Candidate Keys
- b. R2(ABCD) FDs = { AB → CD, D → A}. Give Super Keys and Candidate Keys
- c. R3(ABCDEF) FDs = { A B → C, BC → AD, D → E, CF → B}. Give closure of AB, CF.