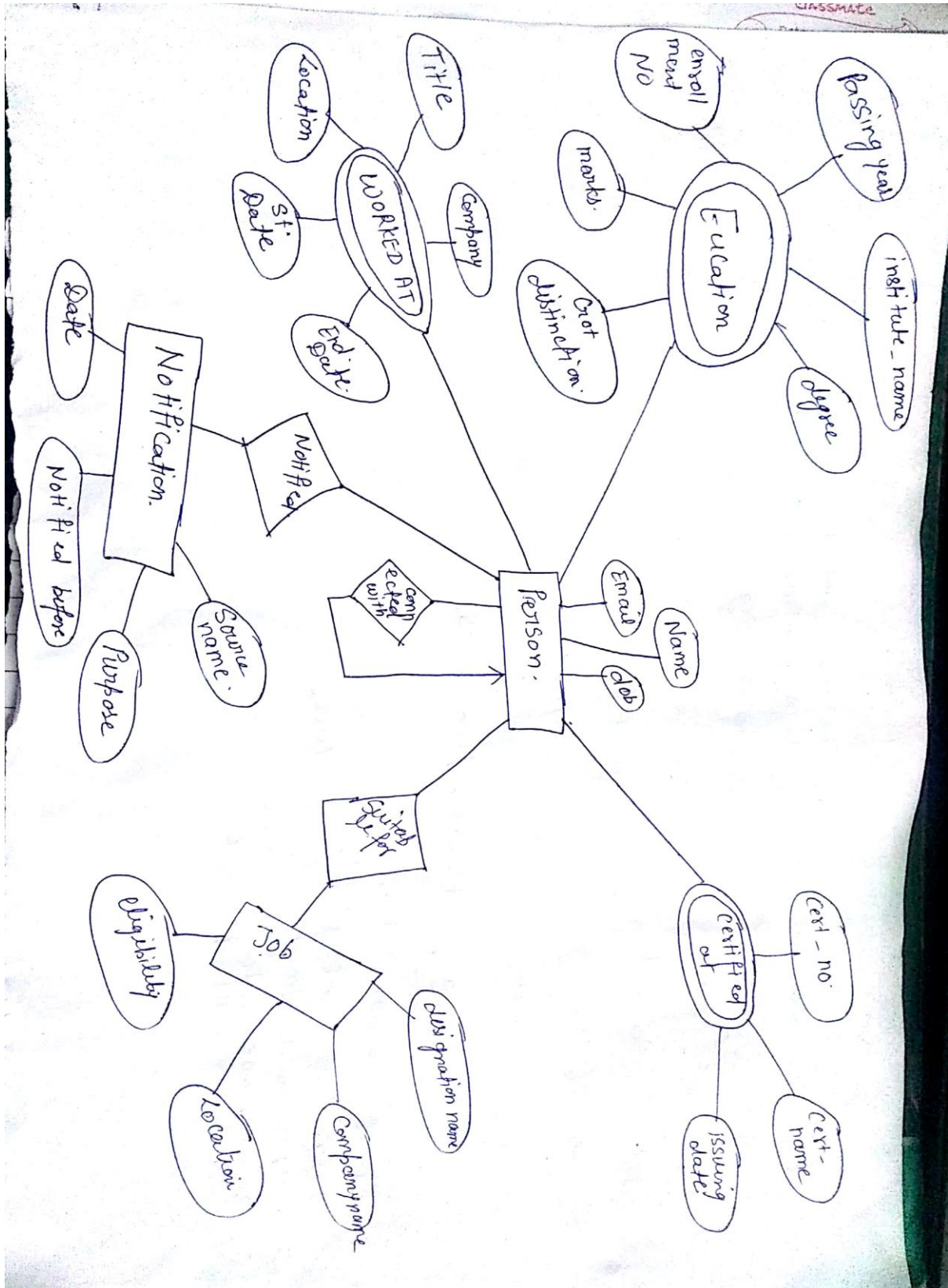


# Solutions:

## Q.1 E/R Diagrams and function dependencies



Functional dependencies and Relations derived from above ER Diagram:-

Relations derived from E-R diagram

Person(Email, name, dob, Education, Experience, certified).  
Notification(source\_name, purpose, date, Notified-before)

Job(designation\_name, company\_name, location, eligibility)

Connected with (Person id 1, person-id 2).

Notified As (Email, source\_name, purpose)

Suitable jobs (Email-id, designation, company\_name)

Set of Functional Dependencies

Email  $\rightarrow$  name, dob, education, Experience, certified.

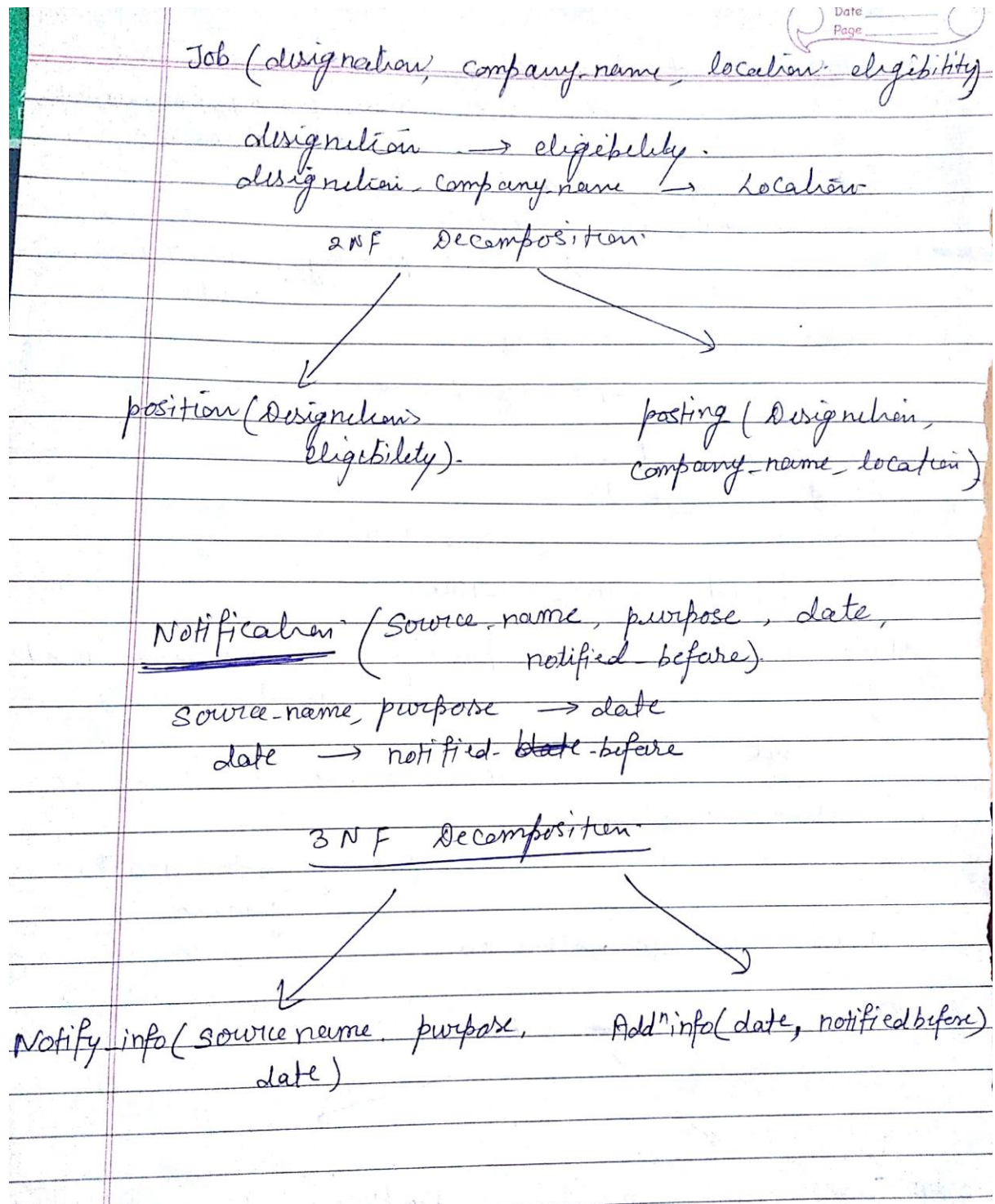
designation  $\rightarrow$  eligibility

designation, company\_name  $\rightarrow$  location

source\_name, purpose  $\rightarrow$  date

date  $\rightarrow$  notified-before

Q(2) Normal Forms:-





classmate  
Date \_\_\_\_\_  
Page \_\_\_\_\_

Person (name, id, dob, cert no, cert name, issue date,  
inst name, degree, passing year, enroll no,  
got distinction, marks)

id  $\rightarrow$  name, dob.

cert no  $\rightarrow$  c name, issue date.

enrollment, inst name  $\rightarrow$  degree, passing year, got distinction,  
marks

marks  $\rightarrow$  got distinction.

### 2NF Decomposition

person (name, id, dob)

certified (id, cert id)

certificate (c no, c name, issue date)

studied (id, enroll no, inst name)

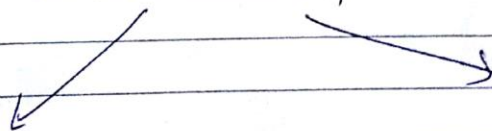
study (enroll no, degree, passing year, inst name, marks,  
got distinction)

This is <sup>not</sup> 3NF as well but not in bcnf bcz  
in study relation

enroll no, inst name  $\rightarrow$  degree, passing year, marks,  
got dist.

marks  $\rightarrow$  got distinction

### 3 ~~BEFF~~ Decomposition



study (Enroll no, inst name, degree, Marks, marks, got distinction,  
passing year,  
marks)