Marks

Full Name (in Block Letter): _____

ID: _____ Section: ___ Signature: _____

Date:_____ Total Marks: 20   Time: 20 minutes

Consider the following relation:

MOOC_Offered_Course (providerID, courseCode, cohortNo, offeringNo, providerName, type, establishmentYear, headquarter, enrollmentFee, domain, duration, courseTitle, instructorInitial, instructorName, instructorEmail, rating, totalStudent)

The primary key is underlined. Relation has the following additional functional dependencies (FDs):

FD1: providerID → providerName, type, establishmentYear, headquarter, enrollmentFee

FD2: courseCode → domain, duration, courseTitle

FD3: instructorInitial → instructorName, instructorEmail

FD4: courseCode, cohortNo, offeringNo → instructorInitial, instructorName, instructorEmail

FD5: type, establishmentYear → enrollmentFee

a. **Explain** if the above relation is in the first normal form (1NF) or not? If not, **apply** 1NF normalization. [2 Mark : 1 for identification + 1 for explanation]

b. **Explain** if the relation(s) of no (a) is/are in the second normal form (2NF) or not? If not, **apply** 2NF normalization. [8 Marks : 2 for identification and explanation + 6 for decomposed relations]

c. **Explain** if the relation(s) of no (b) is/are in the third normal form (3NF) or not? If not, **apply** 3NF normalization. [10 Marks : 2 for identification and explanation + 8 for decomposed relations]

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Solution:
https://drive.google.com/file/d/1RrfWcVZ59Tv1G9x2nCiyhwpATQ0tKr-8/view?usp=sharing

Ignore the arrows