B19114 3CS

(1) maximum no. of superkeys with branch_name as key is 4

(2) Borrower (customer name, loan number)

loan number → customer name.

It is in BCNF, because loan number is a superkey for all functional dependencies (for each non-trivial) functional dependencies $x \to Y$ (x must be super key)

(3) b - Is lossless decomposition and both are in BCNF

(4) For the following functional dependcies, we expect

loan_number - amount → (1)

loan - number - branch - name → (2)

but would not expect the following to hold

loan - number - customer - name

Candidate key = loan - number. → which is a superkey for (1) & (2) loan - number is a superkey which is BCNF Condition satisified for each non-trivial Functional Dependencies

Prime Attributes = {loan - number}

Non - prime attributes = {amount, branch - name, customer - name}

III : .....

..... Class/ Sec. :..... No. of pages used : .....

.....Date : ..... Sign. of the Invigilator :

(5) ▷

custorname+= {customername, customer street, Customer City}

Similarly Branchname determines all the attributes which is Superkey for each non-trivial solution.

Candidate key ={customername} which is single key

it means satisfying 1NF, 2NF, 3NF, BCNF

2NF- no partial dependency

3NF- (i) left is superkey

~~BCNF~~- (ii) Right is prime attribute

BCNF- left is superkey