

a)

FDs:

studentIdnr -> login

login -> studentIdnr

studentIdnr -> studentName

courseCode -> courseName

courseCode -> credits

courseCode -> capacity

courseCode -> departmentName

courseCode, studentIdnr -> grade

courseCode, studentIdnr -> position

position, courseCode -> studentIdnr

studentIdnr -> branchName

studentIdnr -> programName

b)

BCNF:

Students(studentIdnr , login , studentName , branchName , programName)

unique studentIdnr

unique login

StudentCourses(studentIdnr , courseCode , classification)

Courses(courseCode , courseName , credits , departmentName , capacity)

unique courseCode

WaitingList(courseCode studentIdnr position grade)

unique (courseCode , studentIdnr)

unique (courseCode , position)

c)

R(studentIdnr , courseCode , classification)

MVD:

courseCode ->> classification

R1(courseCode,classification), R2(courseCode,studentIdnr)

R is StudentCourses

R1 is classified

R2 is registered