Problem #1

1. The table is in 0 normal form (0NF) because it is not in relation form.
2. PART\_SUP (PartID, PartName, SupName, City, Unitcost)

This is 1NF because it is written in a relation.

1. Modification anomaly exist with both Logic Chip and Memory Chip because multiple records would need to be changed in order to change either chip. Insertions anomaly exists for both chips you need SupName to tell what city the chips are from.
2. 3NF

PART (PartID, PartName)

SUP (SupName, City)

PART\_SUP (PartID, SupName, UnitCost)

Problem #2

1. CLASS (CourseID, InstID, CourseName, ClassTime, InstName)

FD: CourseID --> CourseName

FD: InstID --> InstName

1. 1NF
2. It is in 1NF because it is written in a relation: CLASS (CourseID, InstID, CourseName, ClassTime, InstName)
3. 3NF

COURSE (CourseID, CourseName)

INST (InstID, InstName)

CLASS (CourseID, InstID, ClassTime)

1. JOBS (EmployeeID, DeptNum, JobID, JobTitle, EmpName)

FD: JobID --> JobTitle

1. 2NF
2. It is 2NF because it is FD there is no PDF, there is transitive dependency.
3. 3NF

EMPLOY (EmployeeID, EmpName)

JOB (JobID, JobTitle)

JOBS (EmployeeID, DeptNum, JobID)

Problem #3

PATIENT\_TREATMENT (PATIENT\_TREATMENT, PatientID, TreatID)

Foreign Key PatientID, References PATIENT

Not Null

On delete restrict

Foreign Key TreatID, References TREATMENT

Not Null

On delete restrict

PATIENT (PatientID, PatFname, PatLname, PatPhone)

TREATMENT (TreatID, TreatName, Price, PatientID)

Foreign Key PatientID, References PATIENT

Not Null

On delete restrict

PHYSICIAN ( PhysID, PhysFname, PhysLname, Department)

PATIENT (PatientID, PatFname, PatLname, PatPhone, PhysID)

Foreign Key PhysID, References PHYSICIAN

Not Null

On delete restrict

HOSPITAL ( HospID, HospName, HospStreet, HospState, HospCity, HospZip)

PHYSICIAN ( PhysID, PhysFname, PhysLname, Department, HospID)

Foreign Key HospID, References HOSPITAL

Null Allowed

On Delete Set Null

