

QUESTION 1

A sample outpatient clinic appointment form is:

Clinic#: 4521						
Clinic_Name: Skin Complaints Clinic_Date: 02/05/98						
Consultant Name: A. Boyle Speciality: Dermatology						
Consultant_Phone#: 72451						
Patient#	Pat_Name	Pat_Address	Condition	Time	GPName	GPAddress
51623	J. Smith	Belfast	Acne	10.00	B. Wilson	Belfast
61725	G. Pogue	Larne	Psoriasis	10.15	T. Kelly	Ballyclare
45126	M. O'Kane	Moirs	Acne	10.30	N. Vance	Lisburn
35612	F. Dwyer	Belfast	Alopecia	10.45	K. Lennon	Belfast
35923	S. Hughes	Belfast	Dermatitis	11.00	P. Green	Belfast
Total Number of Patients = 6						

- (a) State the normalisation rules for first, second and third normal forms
- (b) Represent the above form as a relational scheme and normalise to third normal form using dependency diagrams to justify decompositions.

QUESTION 2

- (a) What is normalization?
- (b) Generate a set of fully normalized tables from the following un-normalized table:
Where: OpNo. Means Operation Number

OpDate means Operation date
OpTime means Operation Time

Operating Schedule

Doctor No.	Doctor Name	OpNo.	OpDate	OpTime	Patient No.	Patient Name	Admission Date
18654	Smith	AA1234	04/02/1999	08:30	2468	Davies	20/01/1999
18654	Smith	BA1598	04/02/1999	10:30	3542	Jones	11/01/1999
18654	Smith	FG1965	04/02/1999	16:00	1287	Evans	25/12/1999
18654	Smith	AA1235	13/02/1999	14:00	2468	Davies	20/01/1999
13855	Evans	LP1564	13/02/1999	14:00	4443	Beynon	05/01/1999
18592	Jones	PP9900	15/02/1999	14:00	2222	Scott	04/01/1999
18592	Jones	BA1598	04/02/1999	10:30	3542	Jones	11/01/1999
18592	Jones	FG1965	04/02/1999	16:00	1287	Evans	25/12/1999

You should show the process of normalization starting from the un-normalized relation . The answer should show the 1NF, 2NF and 3NF