Assignment 2

Q1. What is semantic network? Given following knowledge base, represent it using semantic network

Subash is a student. All students are person. Person has hair. Ram is a player.All player play game. Game is a physical action. Height of all players is larger than the height of all student. Physical action starts fron 7:00 AM and ends at 9:00 AM.

Q2. Define frame. How is knowledge encoded in a frame? Justify with an example.

Q3. What is forward chaining? Explain with appropriate example.

Convert Following Sentences into Predicate

a) All animal who can bark are dog.

b) Someone is firing a gun

c) All tigers are not fierce

Q4. What is Skolem constant? How is Skolemization done during resolution? Represent the following statements into FOPL.

- All movies are not hit.
- Sarangi is a movie.
- All movies which have good script are hit.
- Sarangi has a good script but Sarangi is sentimental.
- There is a movie which is comedy.

Q5. What do you mean by unification and lifting ? Convert following sentences into FOPL

- Sushma likes all kinds of practical courses.
- AI and DBMS are practical courses.
- Any subject anyone practices is practical course.
- Ruby practices PHP.
- Rita practices everything that Ruby practices.
- Using resolution check whether “Sushma likes PHP” is inferred or not.

Q6. Consider the facts;

Anyone whom Pugu loves is a star. Any hero who does not rehearse does not act. Anmol is a hero. Any hero who does not work does not rehearse. Anyone who does not act is not a star.

Convert above into FOPL and use resolution to infer that “If Anmol does not work, then Pugu does not love Anmol”.

Q7.

How uncertain knowledge is represented? Given following full joint probability distribution representing probabilities of having different sizes of CD, find the probability that a CD cover has a length of 130mm given the width is 15mm.

y=Width ↓	x=Length →		
	129	130	131
15	0.12	0.42	0.06
16	0.08	0.28	0.04