***COMSATS UNIVERSITY ISLAMABAD***



**ASSIGNMENT NO: 3**

**ARTIFICIAL INTELLIGENCE**

**Class:** BCS-V-B

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Submitted to Ms. Shehla Saif

**Rule no 1:**

If person is suffering from Fever and Chills and sweats than he is suffering from some infectious disease.

Rule: ∀x Person(x) ^ suffers(x, fever) ^ suffers(x, chills) ^ suffers(x, sweats) = suffers(x, infectious disease)

**Rule no 2:**

If there is Change in cough or a new cough than person may have infectious disease.

Rule: ∃x Person(x) ^ infection(x) = suffer(x, cough) v suffers (x, new cough)

**Rule no 3:**

There exists a person who suffers from Sore throat or new mouth sore and Shortness of breath and has infection

Rule: ∃x Person(x) ^ infection(x) = suffer(x, sore throat) v suffers (x, new mouth) v suffers(x, breath shortness)

**Rule no 3:**

If person has high temperature and headache and sweat and vomiting and coldness and throb and sometimes color of urine is black water fever and muscle pain and diarrhoea than he suffers from malaria

Rule: ∀x Person(x) ^ malaria(x) = high temperature(x) ^ headache(x) ^ sweat(x) ^ vomiting (x) ^ coldness(x) ^ throb(x) v urineColor(x, black) ^ muscelPain(x) ^ diarrohea(x)

**Rule no 4:**

If patient has vomiting and water diarrhea and leg cramps than he suffers from cholera

Rule: ∀x Patient(x) ^ cholera(x) = vomiting(x) ^ waterDiarrhea(x) ^ legCramp(x)

**Rule no 5:**

If patient has poor appetite and headache and generalized aches and pains and high temperature and lethargy and diarrhoea than he suffers from Typhoid fever

Rule: ∀x Patient(x) ^ Typhoid fever (x) = poor appetite(x) ^ headache (x) ^ generalized aches (x) ^ pains (x) ^ high temperature (x) ^ lethargy (x) ^ diarrhoea (x)

**Rule no 6:**

If patient has Fever and Chills and Abdominal pain and Flu-like symptoms and Change in skin color and Dark-colored urine and/or clay-colored stool than he suffers from Jaundice.

Rule: ∀x Patient(x) ^ Jaundice (x) = Fever (x) ^ Chills (x) ^ Abdominal pain (x) ^ Flu-like symptoms(x) ^ Change in skin color (x) ^ Dark-colored urine (x) v clay-colored stool (x)

**Rule no 7:**

If patient has Nausea and vomiting and Rash and Aches and pains than he suffers from Dengue.

Rule: ∀x Patient(x) ^ Dengue(x) = Nausea (x) ^ vomiting (x) ^ Rash (x) ^ Aches (x) ^ Pains (x)

**Rule no 8:**

If patient has Belly pain and tenderness and Vomiting and Nose Bleeding and Vomiting blood and blood in the stool and Feeling tired and restless or irritable than he suffers from Dengue.

Rule: ∀x Patient(x) ^ Dengue(x) = Belly pain (x) ^ tenderness (x) ^ Vomiting (x) ^ Nose Bleeding (x) ^ Vomiting blood (x) ^ StoolBlood (x) ^ tired (x) ^ restless (x) v irritable(x)