# Answers - D

Ans: a)- The simple reflex agent doesn't have memory so it makes it's decision based on the environment it currently observes. So it is perfectly rational when it can observe the whole enviornemnt from it's current state. If any part of the environment is not observable from the current state of the agent it can't be rational.

Ans: b)- The greedy robot in question B checks amount of dust in the neighbouring squares. If it finds a unique largest value in some square then it behaves deterministically and moves in that square. But if it gets two or more squares that have equal amount of dust in them, then it behaves non-deterministicly and chooses randomly among those squares.

Ans: c)- When there is only one agent in the environment, it's performance is greatly decreased. The agent may only move repeatedly on some path without doing any work.

Ans: d)-Since the all of the observations are noisy, only the efficiency of the agents will change. They will be perform poor in such case.

Ans: d)- The the gaussian is centered at $20(\mu = 20)$ and the standard deviation is 10 ($\sigma^2 = 10$). Any rational agent will keep moving within range $((10, 30))$ after some amount of time because there is great pissibility of finding dust in this region.

# Answers - E

Ans: a)- In the image the edges are sharp but not straight line. The walls can be determined by determining the edges. The rightmost edges in the image are start of the wall, the vertial edge and the color change can determine the existance of the wall.
The leaf can also be determined by the change of color and the it's boundries. Ans: c)- The dirt range of (0-1) only won't be good enough. We need another parameter that
provides type of the dust. In the image both "dust" and leaves can't be mapped on the same scale. Ans: d)-