B SSI Assignment 3: Probability

Part1 :- Written Problems :

1. Probability that no two adjacent parakeets are the same color :-

Sol :- Given 8 parakeets, four green and four blue.

$$\Rightarrow \frac{2 \times 4! \times 4!}{8!} \Rightarrow \frac{2 \times 4 \times 3 \times 2 \times 1}{8 \times 7 \times 6 \times 5} \Rightarrow \frac{1}{35}$$

2. a) Probability that a given C.P.U. will have 8 functioning compute cores :-

C.P.U will have no defect which is

$$1 - 0.3 = 0.7$$

One Picking one which is not defective :- 0.7.

We want all 8 are not defective $= (0.7)^8$

$$= 0.05764$$