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C023

Term Work - 5b

Q1)

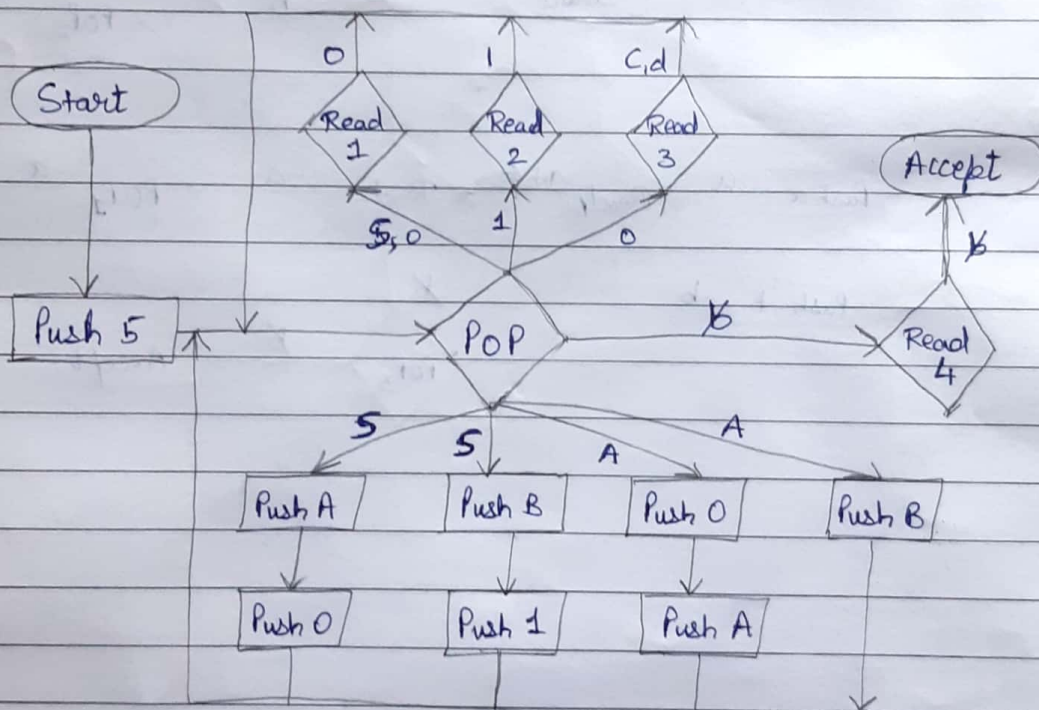
Ans = PDA accepting the language generated by the grammar given below is :-

$S \rightarrow oA|1B|o$

$A \rightarrow Ao|B$

$B \rightarrow c|d$

Here, $N = \{S, A, B\}$, $T = \{o, 1, c, d\}$ and S is the start symbol.



Q2) Ans = The language L represents all the even length palindromes over $\{a, b\}$.
 So for even length palindrome we get grammar as :-

$$\Rightarrow S \rightarrow aSa \mid bSb \mid \epsilon \Rightarrow G_1$$

From the grammar we will only get palindromes of even length only.
 The ' ϵ ' will be used to make the final transition of S .

eg:-

$S \rightarrow aSa$	$S \rightarrow aSa$
$S \rightarrow absba$	$S \rightarrow bSb$
$S \rightarrow abba$	$S \rightarrow \epsilon$

→ we get an even length.

Now, PDA for the given grammar G_1 is :-

