Assignment # 04

Theory Of Automata

Deadline:...09/06/2015 (Before Lecture)

Total Marks=50

Name	
Class	Section:
ID	
Instructor Name	
Due -Date	

This Assignment Is Hand Written.Take out the Print Out of The Assignment ,Solve The questions in the Given Place Properly.Don't Cheat Or Copy your Assignment. Must Follow the Dead Line ,In any case you are late the dead line will not be extended.In case of Late submission it means that you have lost your 50% Marks.
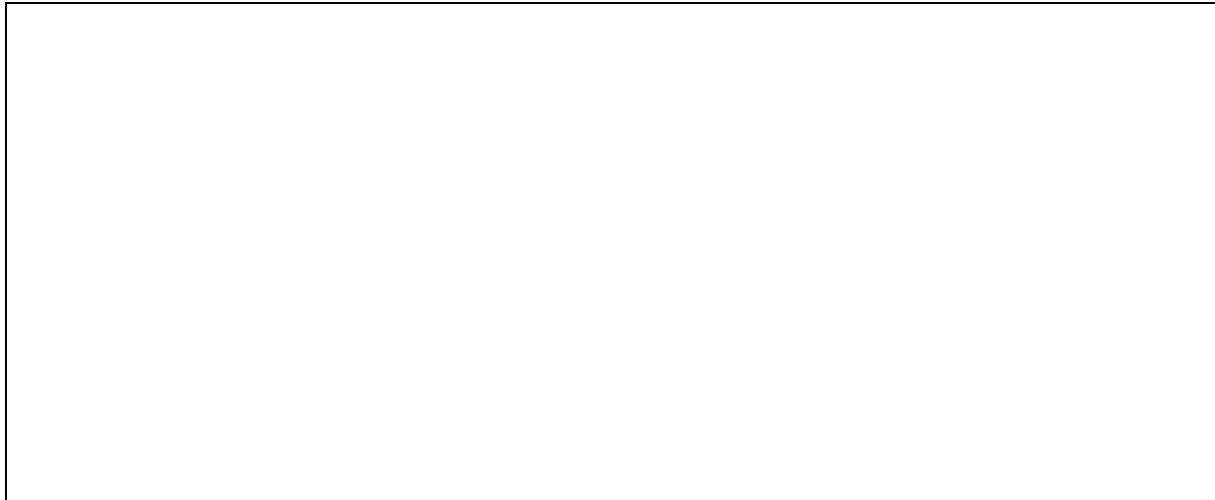
Late Submission will not be accepted in any Reasone.

QUESTION :1   **(4*5)**
Give a context-free grammar (CFG) for each of the following languages over the alphabet . $\sum=\{a,b\}$

a-All the strings in language L: $\{a^n\,b^m\,a^{2n}$ where n,m >= 0\}

b-All nonempty strings that start and end with the same symbols.

c-All strings with more a's than b's.

d-All palindromes (a palindrome is a string that reads the same forwards and backwards

QUESTION NO: 2   **(5*4=20)**

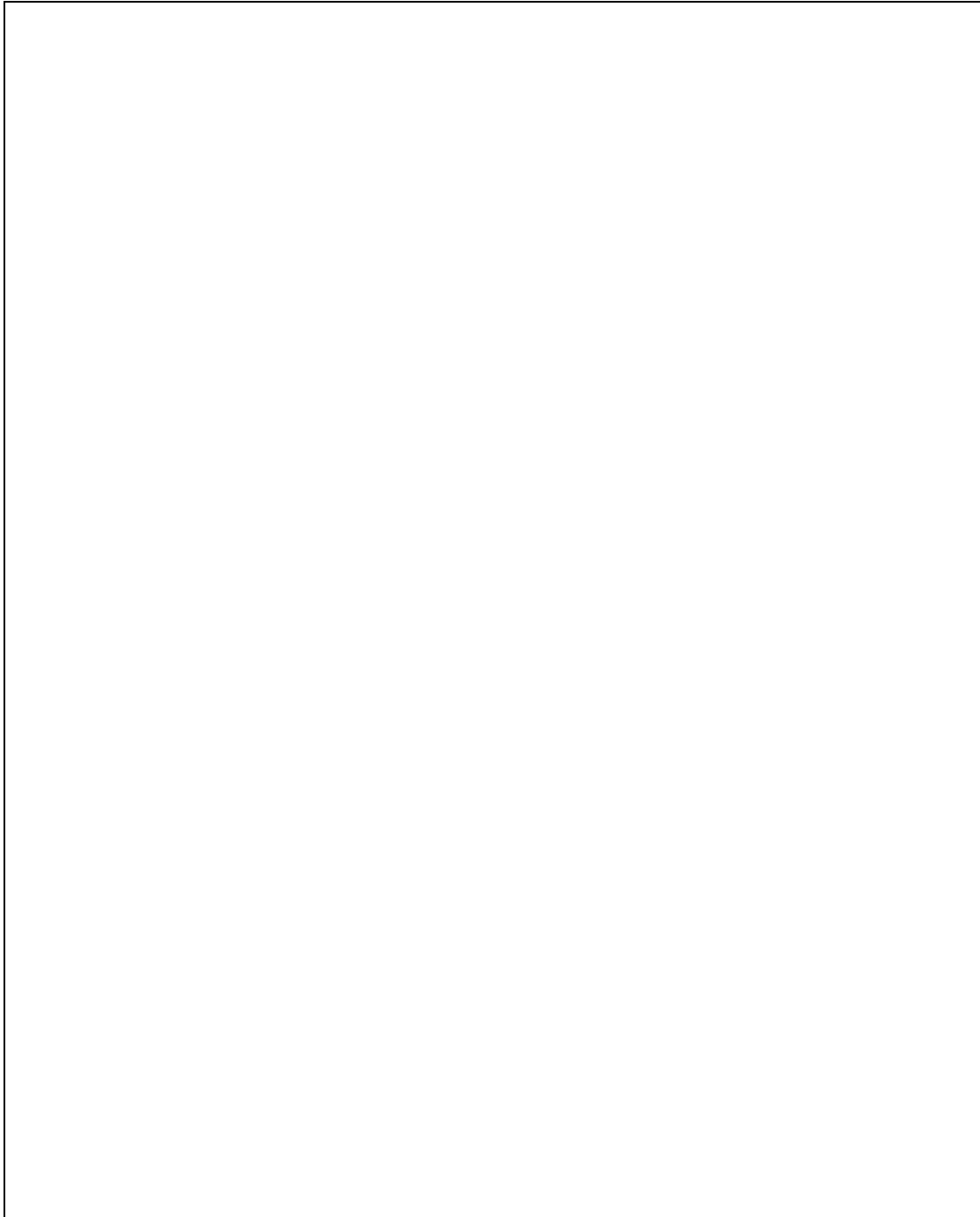   <<<<<<<<<<<<<<<<<<<<<<<Construct PDA's>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

(a)ODD PALINDROME $\sum$={a,b}

(b)a^n b^{n+1} $\sum$={a,b}

(c)a^n b^{3n-1} $\sum$={a,b}

(d)c^n d d^n $\sum$={c,d}

Q:3 From the following CFG: (5)

S --->(S) | S>S | ~S | p | q

construct the following string (~ ~ p > (p > ~ ~ q)) by parsing tree.Show tree also.

QUESTION NO:4 (2+2+1=5)

what is the difference b/w the CFG of EVEN PALINDROME and ODD PLAINDROME.show the difference by writing the CFG's of both PALINDROMEs.

CFG	CFG
EXPLAIN DIFFERENCE	