FORMAL LANGUAGES and AUTOMATA THEORY

(CS4402)

ASSIGNMENT – 2

Instructions:

1. Try to answer in A4 papers.
2. **On top left side of every page write your roll number, name and page number and Assignment-1 (If anybody missed the writing the roll number and name in any page that answer script will not be evaluated)**
3. Scan the pages in the same order, convert them into pdf and merge them.
4. Save the document with your full roll number followed by CS4402 (For example 1906001_CS4402).

Answer All questions

1. Define the post correspondence problem? Mention the difference between post correspondence problem and modified post correspondence problem? Obtain the solution for the following PCP?
   A = {b, babbb, ba} B = {bbb, ba, a} 3M
2. Prove that the MPC problem is undecidable. With an example recursive language grammar show how to construct set A and set B? 3M
3. Consider the following grammar for a Context Free Language L:
   G = ({S, A, B}, {0, 1}, {S→A1B, A → 0A, A→ Ɛ, B → 1B, B→ 0B, B→ Ɛ}, S)
   Check the string w = 0110110 is a member of the L(G) or not using the CYK algorithm. 4M