ACAD - 27(a)	SHRI RAMDEOBABA COLLEGE OF ENGINEERING AND MANAGEMENT, NAGPUR - 440013			Issue No.: 01 Rev. No. : 03
Ref. Clause(s): 9.1	**Semester**	**: VI**	**Shift**: II	**Date of Rev.:** 01-01-2018
Department: Computer Science & Engineering	**Course Code**	**: CST357**		
	Course Name	**: Software Engineering**		**Page:** 01/01
Programme: B. E.	**Test: 2**			**Date of Exam:** 20-04-2021
Max. Marks: 15	**Session:** 2020-2021			**Time:** 01 Hour [12:00 PM]

Instructions to Candidates:

1. All questions carry marks as indicated against them.
2. Illustrate your answers with neat sketches/diagrams wherever necessary.
3. Use of non-programmable calculator is permitted.
4. Upload the Answerbook containing **all attempted questions** as single PDF on CST357 Classroom.

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01 Consider the insertBeg() function and use Halstead's Approach to compute the software measures – (1) Estimated Program Length, (2) Difficulty, Volume & Effort, and (3) Time-to-Code & Bugs-Delivered in Source Code. **(04) CO2 CO4 L4**

```
list insertBeg(list first, int key){
    list neww;
    neww = (list) calloc(1, sizeof(struct nodeLL));
    if(!neww)
        return first;
    neww->data = key; neww->link = NULL;
    if(first == NULL)
        return neww;
    neww->link = first;
    return neww;
}
```

02 (a) Differentiate between "known risks" and "predictable risks". Explain the categorization for these risks. **(03) CO2 CO4 L3**

02 (b) For the macro implementing Euclid's algorithm for GCD, construct the flow graph and find independent paths (use all 3 formulations). Also list the paths. **(04) CO3 L4**

(***Note**: The macro boundaries are ignored in graph. Clearly indicate nodes in the code.*)

```
%macro Euclid(m, n);
    data _null_;
        retain m &m n &n;
        if (n>m) then do;
            r=m; m=n; n=r;
        end;
        r=mod(m, n);
        do while (r ne 0);
            m=n; n=r; r=mod(m, n);
        end;
        put n=;
    run;
%mend;
```

03 Differentiate between an SCM audit and a formal technical review. **(04) CO4 L2**

What do you understand by cost of quality? Elaborate.
