Roll No.....

BCA–403(N)

B. C. A. (Fourth Semester)
EXAMINATION, May, 2013

(New Course)

Paper Third

SOFTWARE ENGINEERING

Time : Three Hours] [*Maximum Marks : 75*

Note : Section A is compulsory. Attempt *seven* questions from Section B and *one* question from Section C.

Section – A

1. (a) What is Software Engineering ? Give at least *two* definitions of S. E. 2

   (b) What is meant by preventive maintenance ? 1

   (c) Define the term modularity. What is cohesion ? 2

   (d) Discuss Data Flow Diagram (DFD) and draw a D. F. D. that consider the problem of determining the number of words in an input file. 5

2. Choose the correct alternatives. 1 each

   (a) Prototype model is useful for the development of .....

   (i) Small system

   (ii) Large system

   (iii) Small and large system

   (iv) None of these

P. T. O.

(b) View software development as a value added business activity and not merely as .....

(i) Technical activity

(ii) Social activity

(iii) Social and technical activity

(iv) None of these

(c) Data flow diagram were invented by :

(i) Larry constant line

(ii) Barry constant line

(iii) Jarry constant line

(iv) None of these

(d) Decision tables are divided into ..... quadrants.

(i) One

(ii) Two

(iii) Three

(iv) Four

(e) The procedural design is carried out after the completion of .....

(i) Data design

(ii) Architectural design

(iii) Interface design

(iv) All of these

(f) The weakest coupling that is most desirable is :

(i) Data coupling

(ii) Control coupling

(iii) Stamp coupling

(iv) Message coupling

(g) Configuration issued that need to be considered when developing web applications include :

(i) Content

(ii) Cost

(iii) Pepole

(iv) All of these

(h) When software configuration management is a formal activity the software configuration audit is conducted by the :

(i) Development team

(ii) Quality assurance group

(iii) Senior managers

(iv) Testing specialists

(i) The code efficiency is directly related to the efficiency of the :

(i) Algorithm

(ii) Program

(iii) Module

(iv) None of these

(j) Major software quality attributes :

(i) Correctness

(ii) Reliability

(iii) Efficiency

(iv) All of these

Section – B

3. What are different steps in S. D. L. C. ? What are the end products of each step ? 6

4. Describe in detail the different characteristics of a software. 6

5. Discuss in detail the relative advantages of formal and informal requirement specification. 6

6. What is the difference between flowchart and structure chart ? 6

7. What are various elements of analysis and design models ? How is the analysis model translated into design model ? 6

8. Define module coupling and explain different types of coupling in detail. 6

9. List the reasons of software crisis. 6

10. Why is the cost of software maintenance so high ? Illustrate. 6

Section – C

11. (a) Give suitable reasons to justify the following statements : 6

    (i) Software is not manufactured but engineered

    (ii) Software does not wear out

    (b) Describe ISO 9000 certification and the process to get ISO 9000 certification. 7

12. (a) Discuss the spirol model and justify that this model in-co-operates good features of almost every other model i. e. water fall model, prototype model etc. 7

    (b) Discuss the coupling and cohesion concepts ? How are these concepts used to determine strength of software design ? 6