SOFTWARE ENGINEERING (SEMESTER - 6)

CS/BCA/SEM-6/BCAE-602A/09

1. ..... *Signature of Invigilator*

2. ..... *Signature of the Officer-in-Charge*

Reg. No. | | | | | | | | | | | | | | |

Roll No. of the Candidate | | | | | | | | | | | | | | |

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ENGINEERING & MANAGEMENT EXAMINATIONS, JUNE – 2009

SOFTWARE ENGINEERING (SEMESTER - 6)

Time : 3 Hours] [Full Marks : 70

INSTRUCTIONS TO THE CANDIDATES :

1. This Booklet is a Question-cum-Answer Booklet. The Booklet consists of **32 pages**. The questions of this concerned subject commence from Page No. 3.
2. a) In **Group – A**, Questions are of Multiple Choice type. You have to write the correct choice in the box provided **against each question**.
   b) For **Groups – B** & **C** you have to answer the questions in the space provided marked 'Answer Sheet'. Questions of **Group – B** are Short answer type. Questions of **Group – C** are Long answer type. Write on both sides of the paper.
3. **Fill in your Roll No. in the box** provided as in your Admit Card before answering the questions.
4. Read the instructions given inside carefully before answering.
5. You should not forget to write the corresponding question numbers while answering.
6. Do not write your name or put any special mark in the booklet that may disclose your identity, which will render you liable to disqualification. Any candidate found copying will be subject to Disciplinary Action under the relevant rules.
7. **Use of Mobile Phone and Programmable Calculator is totally prohibited in the examination hall.**
8. You should return the booklet to the invigilator at the end of the examination and should not take any page of this booklet with you outside the examination hall, **which will lead to disqualification**.
9. Rough work, if necessary is to be done in this booklet only and cross it through.

No additional sheets are to be used and no loose paper will be provided

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Marks Obtained

	Group – A										Group – B			Group – C			***Total Marks***	***Examiner's Signature***
Question Number																		
Marks Obtained																		

.....

Head-Examiner/Co-Ordinator/Scrutineer

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GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following : 10 × 1 = 10

i) Which of the following are essential program constructs (i.e. it would not be possible to develop programs for any given problem without using the construct) ?

a) Sequence b) Selection

c) Iteration d) All of these.

ii) Which of the following problems can be considered to be contributing to the present software crisis ?

a) Large problem size

b) Shortage of skilled manpower

c) Lack of rapid progress of software engineering

d) All of these.

iii) Among development phases of software life cycle, which phase typically consumes the maximum effort ?

a) Requirements analysis and specification

b) Design

c) Coding

d) Testing.

iv) In the classical waterfall model during which phase is the Software Requirement Specification (SRS) document produced ?

a) Design

b) Maintenance

c) Requirements analysis and specification

d) Coding.

v) An SRS document normally contains

a) functional requirements of the system

b) non-functional requirements of the system

c) constraints on the system

d) all of these.

vi) A module is said to have logical cohesion, if

a) it performs a set of tasks that relate to each other very loosely

b) all the functions of the module are executed within the same time span

c) all elements of the module perform similar operations, e.g. error handling, data input, data output etc.

d) none of these.

vii) The context diagram of a DFD is also known as

a) level 0 DFD b) level 1 DFD

c) level 2 DFD d) none of these.

viii) Data Flow Diagram (DFD) is also known as a

a) structure chart b) bubble chart

c) Gantt chart d) PERT chart.

ix) Compilers, Linkers, etc. can be considered as

a) application programs b) utility programs

c) system programs d) none of these.

x) The primary objective(s) in using any CASE tool is(are)

a) to increase productivity of software development

b) to decrease software development as well as software maintenance cost

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c) to help produce better quality software

d) all of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. 3 × 5 = 15

2. What is formal technical review ? Write the features of FTR.

3. What is the role of a software engineer for developing software ?

4. Explain Prototype Model.

5. What is Gantt chart ? Explain in brief.

6. What are CASE tools ? Explain briefly with example.

GROUP – C

(Long Answer Type Questions)

Answer any *three* questions. 3 × 15 = 45

7. a) What is software engineering ? Discuss why one must make use of software engineering to develop reliable and efficient software.

   b) What do you mean by software crisis ? What are some of its indicators ?

   c) What is software re-engineering ? Why is it required ? 5 + 5 + 5

8. a) What is risk analysis ? What is its significance in Software Engineering ?

   b) Identify at least 10 important components of a project plan.

   c) What is Work Breakdown Structure ? Discuss briefly with an example. 5 + 5 + 5

9. What are the disadvantages of Waterfall model ? Why we preferred Iterative Waterfall model ? Describe the various stages of spiral model. 6 + 9

10. a) What are risk analysis and RMMM planning ?

    b) Define cohesion and coupling with their classification. For a good design "high cohesion and low coupling is required" — explain it with reason. 6 + 9

11. a) Distinguish between black box and while box testing methods.

    b) What is system testing ? Why is it known as black box testing ?

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c) What do you mean by McCabe cyclomatic complexity ? Give example with control flow graph. 4 + 5 + 6

END

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