CS/B.TECH(ECE) (SUPPLE)/SEM-8/EC-803A/09
SOFTWARE ENGINEERING (SEMESTER - 8)
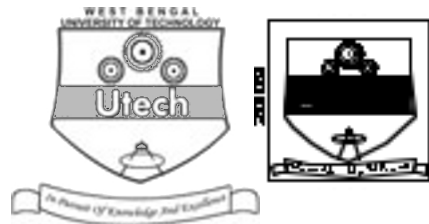
1. ....
   Signature of Invigilator

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

Reg. No.

Roll No. of the Candidate

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CS/B.TECH(ECE) (SUPPLE)/SEM-8/EC-803A/09
ENGINEERING & MANAGEMENT EXAMINATIONS, JULY – 2009
SOFTWARE ENGINEERING (SEMESTER - 8)

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

FOR OFFICE USE / EVALUATION ONLY
Marks Obtained

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

....
Head-Examiner/Co-Ordinator/Scrutineer

S-53003 (27/07)

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SOFTWARE ENGINEERING
SEMESTER - 8

Time : 3 Hours]

[Full Marks : 70

GROUP – A
### (Multiple Choice Type Questions)

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

   i)   Which of the following levels of testing checks whether the requirements identified in the SRS document have been met ?

      a)   Unit Testing

      b)   Integration Testing

      c)   System Testing

      d)   Acceptance Testing.

   ii) Functional Testing is known as

      a)   Structural Testing

      b)   Behaviour Testing

      c)   Regression Testing

      d)   none of these.

   iii) Which of the following is not a tool for application prototyping ?

      a)   Third Generation Languages

      b)   Report Generators

      c)   Screen Testing

      d)   Application Testing.

   iv) Structured Programming involves

      a)   Functional Modularization

      b)   Localization of Errors

      c)   Decentralized Programming

      d)   all of these.

v)   Failure usually occurs only when

    a)   it was not properly developed

    b)   it was developed but not tested

    c)   defect is not properly fixed

    d)   all of these.

vi)   Halstead's matrix is a measure of

    a)   Reliability   b)   Availability

    c)   Complexity   d)   none of these.

vii)   Reliability quantities have been defined over

    a)   Execution time   b)   Calender time

    c)   Clock time   d)   all of these.

viii)   Which of the following is not a milestone ?

    a)   Arrival of equipment

    b)   Completion of user training

    c)   Cut over to new system

    d)   Inspection by steering committee.

ix)   COCOMO-II estimation model is based on

    a)   Complex approach

    b)   Algorithmic approach

    c)   Bottom-up approach

    d)   Top-down approach.

x)   Software complexity is a measure to access the

    a)   quality of an internal product

    b)   time to execute the program

    c)   time to execute with respect the data volume

d)   none of these.
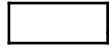
GROUP – B
(Short Answer Type Questions)

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

2.   Why is cost estimation done in respect of KLOC ?

3.   How is COCOMO model useful in a software development process ?

4.   What are the three phases of Project management in case of a software development ? Explain them briefly.

5.   Explain when to use PERT chart and when to use Gantt charts, if you were to perform the duties of a Project manager.

6.   A 100 KLOC embedded system is to be developed. You have a choice of hiring from two pools of developers : Highly capable (0.7) with very little experience in programming language being used (1.14) or developers of low quality (1.42) but a lot of experience with the programming language (0.95). What is the impact of hiring all developers from one or the other group ?

GROUP – C
(Long Answer Type Questions)

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

7.   a)   "Software does not wear out but hardware does." Explain.

b)   What are the relative advantages and disadvantages the Spiral model has over Waterfall Model ?

c)   Distinguish between Software Verification and Validation.   5 + 6 + 4

8.   a)   Define and explain reliability in relation to Software development.

b)   What are the metrics used for estimating reliability ?

c)   Specify the roles that are to be performed by a project manager.   5 + 4 + 6

9. A software is being developed in an organic mode with a data size of 32000 DSI. Find the effort, schedule, productivity cost required to develop that software with proper mathematical analysis.

10. What is the difference between Physical and Logical DFD with diagram ? Draw the context level and zero level DFD for a savings bank account system and also explain transaction taking place in the two diagram briefly.

11. Explain mathematical representation of risk analysis.

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END