Name : ……………………………………………………………

Roll No. : …………………………………………………………

Invigilator's Signature : ………………………………………

CS/B.Tech/(EE-NEW)/SEM-6/EE-604A/2013
2013
SOFTWARE ENGINEERING

Time Allotted : 3 Hours   *Full Marks* : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words
as far as practicable

GROUP – A
(Multiple Choice Type Questions)

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

i)   The chain of activities determines the duration of the
     p oject is

a)   duration path

b)   linearly independent path

c)   critical path

d)   none of these.

6414   [Turn over

CS/B.Tech/(EE-NEW)/SEM-6/EE-604A/2013

    ii)   To achieve good design which quality a module should have ?

        a)   High cohesion low coupling

        b)   High cohesion high coupling

        c)   Low cohesion low coupling

        d)   Low cohesion high coupling.

    iii) Compilers and linkers are

        a)   organic software

        b)   semi-detached software

        c)   embedded software

        d)   none of these.

    iv) Activity network is used to

        a)   decompose a given task set

        b)   to show different activities, duration, interdependencies

        c)   project monitoring and control

        d)   allocate resources to activities.

v)   If the project size is same then development time is maximum for

    a)   organic

    b)   semi-detached

    c)   embedded

    d)   impossible to determine.

vi)   Data processing programs are cons dered as

    a)   utility programs

    b)   application programs

    c)   system programs

    d)   none of these.

vii)   Which of the following estimation is carried out first by a project manager during project planning ?

    a)   Estimation of cost

    b)   Estimation of the duration of the project

    c)   Project size estimation

    d)   Estimation of development effort.

CS/B.Tech/(EE-NEW)/SEM-6/EE-604A/2013

    viii) Project planning does not include

        a)   risk identification   b)   design

        c)   cost estimation   d)   configuration.

    ix) Software failure rate is highest during

        a)   design phase

        b)   testing phase

        c)   implementation phase

        d)   installation phase

    x)   Which type of risk factor is most likely to cause problems for a software project developing commercial software ?

        a)   Inadequate user documentation

        b)   Litigation expense

        c)   Low productivity

        d)   Cancellation of project.

GROUP – B
(Short Answer Type Questions)
Answer any *three* of the following. 3 × 5 = 15

2. Write out the reasons for the failure of Water Fall Model. Why is Spiral Model called meta model ? 3 + 2

3. What is the difference between the "Known Risks" and "Predictable Risks" ?

4. What are CASE tools ? How do they aid in Software Development Life Cycle ? 3 + 2

5. Explain critical path method with suitable example.

6. What are the differences between black box and white box testing ? "System testing can be considered as a pure black box test. Justify or contradict. 3 + 2

GROUP – C
(Long Answer Type Questions)
Answer any *three* of the following. 3 × 15 = 45

7. a) What are the basic steps and main assumptions of COCOMO ?

6414 5 [Turn over

CS/B.Tech/(EE-NEW)/SEM-6/EE-604A/2013

b) How can you improve upon the estimates given by basic COCOMO ?

c) Explain the Delphi cost estimation technique.   5 + 5 + 5

8. a) What is data dictionary ? Explain with an example. Why is it used ?

b) Differentiate between verification and validation ?

c) How do you capture system requrements using use case modelling ? Explain with example.   5 + 5 + 5

9. What is cohesion and coupling ? Discuss different kinds of cohesion and coupling Define decision table and decision tree. Why are they us d ?   3 + 6 + 4 + 2

10. a) What are the main features of structured programming ?

b) What is the significance of documentation in software design ?

c) Differentiate between logical DFD and physical DFD ?

d) Draw and explain the DFD for a typical ATM transaction system.   3 + 3 + 3 + 6

11. Write short notes on the following :   5 × 3

    a)   Spiral model vis-à-vis Iterative Model

    b)   Feasibility study

    c)   Beta testing

    d)   Software quality assurance

    e)   Cyclomatic complexity.

————————