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3 (Sem-4/CBCS) CSC HC 2

2022

COMPUTER SCIENCE

(Honours)

Paper : CSC-HC-4026

(Software Engineering)

Full Marks : 60

Time : Three hours

**The figures in the margin indicate
full marks for the questions.**

1. Choose the correct answer for the following :
(any seven) 1×7=7

(i) Which of the following is the first step
of software development life cycle ?

- (a) Design
- (b) Coding
- (c) Preliminary investigation and
analysis
- (d) Testing

Contd.

(ii) Total phases of RAD software model is

- (a) 6
- (b) 5
- (c) 3
- (d) 2

(iii) When can white-box testing be started ?

- (a) After SRS creation
- (b) After installation
- (c) After programming
- (d) After designing

(iv) Identify the incorrect type of prototyping model

- (a) vertical prototype
- (b) horizontal prototype
- (c) diagonal prototype
- (d) domain prototype

(v) Quality management in software engineering is also known as

- (a) SQA
- (b) SQM
- (c) SQI
- (d) SQA and SQM

(vi) Which one of the following is not a stage of software development life cycle ?

- (a) System analysis
- (b) Problem identification
- (c) System design
- (d) Feasibility study

(vii) Risk management is one of the most important jobs for a/an

- (a) client
- (b) investor
- (c) production team
- (d) project manager

(viii) By whom is unit testing done ?

- (a) Users
- (b) Customers
- (c) Developers
- (d) None of the above

✓(ix) Which of the following words correctly summarized the importance of software design ?

- ✓(a) Quality
- (b) Complexity
- (c) Efficiency
- (d) Accuracy

✓(x) Risk analysis of a project is done in

- (a) system analysis phase
- ✓(b) feasibility study
- (c) implementation phase
- (d) maintenance phase

2. Define the following terms : **(any four)**

2×4=8

- ✓(a) Software characteristics
- (b) Cohesion
- (c) Coupling
- (d) Baseline
- ✓(e) Software risks

(f) ISO 9000

✓(g) COCOMO model

✓(h) Data flow diagram

3. Answer the following questions : **(any three)**

5×3=15

✓(a) Briefly describe various phases of software development life cycle model.

✓(b) What are the responsibilities of a software project manager ?

(c) What are the major software quality assurance activities ?

(d) Briefly explain the elements of a data flow diagram (DFD).

(e) Briefly explain the characteristics of a good and bad SRS.

✓(f) Briefly explain various kinds of risks in software development.

✓(g) What are the advantages and disadvantages of prototyping model ?

(h) Briefly explain the term 'control flow graph' in software testing.

4. Answer the following questions : **(any three)**
10×3=30

(a) Explain the waterfall model in detail.

(b) Write short notes on the following :

(i) Delphi cost estimation

(ii) Project scheduling

(c) Define risk assessment. Explain in detail about risk monitoring and management plan.

(d) Define software validation. How can you validate a software designed by you ? Explain the method used to validate the software.

(e) What is ISO 9000 certificate ? Explain the required steps to get ISO 9000 certificate.

(f) Explain V-model of software development life cycle in detail.

(g) Explain the concept of risk mitigation, monitoring and management (RMMM) plan.

(h) Draw a context level and upto 2nd level DFD for online banking system.
