12/12/18

1-30-4-30

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Roll No. .....

TBC/TBI–502

B. C. A./B. SC. (IT)
(FIFTH SEMESTER)
END SEMESTER EXAMINATION, 2018

SOFTWARE ENGINEERING

Time : Three Hours

Maximum Marks : 100

Note : (i) The question paper contains five questions.

(ii) All questions are compulsory.

(iii) Instructions on how to attempt a question are mentioned against it.

(iv) Total marks assigned to each question are **twenty**.

1. Attempt any *two* questions of choice from (a), (b) and (c). (2×10=20 Marks)

(a) "Software is developed and engineered; it is not manufactured in classical sense." Explain. Illustrate with a diagram that software does not wear out while hardware does with time.

(b) Explain the waterfall model of software engineering. How is classical waterfall model different from iterative waterfall model ?

(c) Define Software Engineering. Explain it as a layered technology. What is the most desirable software quality attributes ?

2. Attempt any *two* questions of choice from (a), (b) and (c). (2×10=20 Marks)

(a) Explain the difference between verification and validation. Discuss V-Process model and its significance in software development.

(b) Describe the various strategies of design. Differentiate between flowchart and DFD.

(c) Define error, fault and failure. Differentiate between unit testing and module testing.

3. Attempt any *two* questions of choice from (a), (b) and (c). (2×10=20 Marks)

(a) Enumerate the different types of cohesion that a module might exhibit.

(b) What is the importance of testing ? Explain different types of testing carried out during complete SDLC.

(c) What is software project estimation ? Write in brief about COCOMO estimation models.

4. Attempt any *two* questions of choice from (a), (b) and (c). (2×10=20 Marks)

(a) "Partitioning a problem in software development helps a lot." Justify your answer.

(b) Explain the importance of maintenance. Briefly discuss the few reasons which are responsible for software modifications. Discuss the different types of maintenance.

(c) What is re-engineering and reverse engineering ? How are they carried out ? Explain.

5. Attempt any *two* questions of choice from (a), (b) and (c). (2×10=20 Marks)

(a) What is software reliability ? State its significance in software engineering. Differentiate between hardware and software reliability.

(b) What is ISO 9000 certification ? Write a comparative note on ISO and CMM.

(c) What are the CASE tools ? How do they aid in software development life cycle ?