23/11/2017

Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore – 641 043
Bachelor's Degree Examination – November 2017
III Semester

Class : II UG **Time : 3 hrs**
Major : Information Technology **Max. Marks : 100**

15BITC12 Software Engineering

Part – A 10 x 1 = 10
Choose the Correct Answer

1. ---------- programs have the highest productivity as measured in lines of code per programmer –day
   a. System programs b. Utility programs
   c. Application programs d. None of the above

2. ---------- defines the essential requirements and external interfaces
   a. Software verification plan b. Project plan
   c. Software Requirement specification d. User manual

3. ---------- Cost estimation technique relies on the experience, background and business sense of key people in organization.
   a. Expert judgment b. Delphi c. Work breakdown structure d. COCOMO

4. ---------- activities include enhancing the product adapting to new environment and connecting problems
   a. Testing b. Maintenance c. Verification d. Validating

5. ---------- provides a mechanism for recording complete decision logic
   a. Transition table b. Decision table c. Implicit equations d. Algebraic axioms

6. ---------- coupling involves the use of parameter lists to pass data items between routines
   a. Content b. Control c. Stamp d. Data

7. ---------- are used by individual programmers to organize their work activities and maintain documentation
   a. Program unit notebooks b. SRS
   c. Internal Documentation d. Project plan

8. ---------- data structure is used by Recursive subprograms
   a. Array b. Heap c. Stack d. Queue

9. ---------- is a rigorous mathematical demonstration that source code conforms to its specifications
   a. Formal verification b. Quality Assurance c. Validation d. Static Analysis

10. ---------- is concerned with tracking and controlling of the work products that constitute a software product
    a. Software management b. Con-figuration management
    c. Change management d. Quality management

Part – B 5 x 6 = 30

Answer the following
Answer should not exceed 400 words or two pages

11.a. Describe the working principle of spiral model

(Or)

11.b. Explain about planning an organizational structure

12.a. Explain COCOMO model for cost estimation.

(Or)

12.b. List the five categories of reliability with effort multipliers as described by Boehm.

13.a. How can Regular Expression be used to specify syntactic structure of symbol strings.

(Or)

13.b. Explain the use of DFD as design notation with example.

14.a. Write short notes on Data Encapsulation.

(Or)

14.b. Explain about documentation guidelines.

15.a. Describe the main contents of quality assurance plan.

(Or)

15.b. Discuss the commonly used debugging methods.

Part – C 5 x 12 = 60

Answer the following
Answer should not exceed 800 words or four pages

16.a. Describe about the size factors for software projects.

(Or)

16.b. Explain about 'planning the development process' for a software project.

17.a. Elaborate the factors affecting the software cost.

(Or)

17.b. Write short notes on Estimating software maintenance costs.

18.a. Describe the preparation of SRS and formal specification techniques.

(Or)

18.b. Explain the fundamental design concepts.

19.a. Discuss the major issues related to structures coding techniques.

(Or)

19.b. Explain guidelines for good coding style.

20.a. Explain the types of system testing in detail.

(Or)

20.b. Explain the fundamental concepts related to software maintenance.

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