(6 pages)   Reg. No. : ....

Code No. : 6930   Sub. Code : HCAM 25

M.C.A. (CBCS) DEGREE EXAMINATION,
APRIL 2016.

Second Semester

Computer Applications

SOFTWARE ENGINEERING

(For those who joined in July 2012 onwards)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following is not the characteristic of software?

   (a) Software does not wear out

   (b) Software is flexible

   (c) Software is not manufactured

   (d) Software is always correct

2. Requirements can be refined using

   (a) The waterfall model

   (b) Prototyping model

   (c) The evolutionary model

   (d) The spiral mode

3. Which is not a step of requirement engineering?

   (a) Requirements elicitation

   (b) Requirements analysis

   (c) Requirements design

   (d) Requirements documentation

4. Expansion of ERA is

   (a) Enterprise Resource Analysis

   (b) Entity Relation Attribute

   (c) Entity Relationship Analysis

   (d) Entity Relationship Activity

5. ———————— is the single attribute for software that allows a program to be intellectually manageable

   (a) Information hiding

   (b) Abstraction

   (c) Modularity

   (d) Architecture

6. The worst type of coupling is

    (a) Data coupling   (b) Control coupling

    (c) Stamp coupling   (d) Content coupling

7. Path testing is a ——————— testing strategy whose objectives is to exercise every independent execution path through a component or program

    (a) White box   (b) Block box

    (c) Structural   (d) Object oriented

8. ——————— coverage is the testing to test every statement in the code has been executed at least once

    (a) Program   (b) Path

    (c) Branch   (d) Statement

9. ——————— provides a quantitative indication of the extent, amount, dimension, capacity or size of some attribute of a product or process

    (a) Measurement   (b) Measure

    (c) Both (a) and (b) (d) Metric

10. Which is not a size metric?

    (a) LOC

    (b) Function count

    (c) Program length

    (d) Cyclomatic complexity

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Define software engineering. What are the characteristics of a software?

Or

    (b) What is a software? Explain the software engineering layers.

12. (a) Explain briefly functional modeling.

Or

    (b) Explain steps involved in the structured analysis.

13. (a) Illustrate architectural context diagram.

Or

    (b) Explain the importance of abstraction in software design process.

14. (a) Explain the regression testing process.

Or

    (b) Describe the debugging process.

15. (a) Explain the size oriented software metrics.

Or

(b) Explain the software measure principles.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe the activities involved in system development life cycle.

Or

(b) Describe various phases in the development of a software product.

17. (a) What are the behavioural models? Explain.

Or

(b) List and explain briefly the different types of documentation.

18. (a) Explain various stages in the system design process.

Or

(b) How the architecture design can be represented? Explain.

19. (a) How boundary conditions are achieved in Testing? Explain.

Or

(b) Discuss the test coverage criteria based on data flow mechanisms.

20. (a) What is software maintenance? Explain various methods.

Or

(b) How software cost estimation is achieved using function point model? Explain.

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