END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY 2017

Paper Code: BCA-208	Subject: Software Engineering
Time: 3 Hours	Maximum Marks: 75

Note: Attempt any five questions including Q no.1 which is compulsory. Select one question from each unit.

Q1
(a) What is the aim of software engineering?   **(10x2.5=25)**
(b) Provide three examples of software projects that would be amenable to the prototyping model.
(c) Describe 'feasibility study'.
(d) What is estimation?
(e) What is the difference between 'Deliverable' and 'Milestone'?
(f) What is cyclomatic complexity?
(g) What is the difference between flow chart and structure chart?
(h) Define Data structure metrics.
(i) Differentiate between Alpha and Beta testing.
(j) What is the need for Re-engineering?

UNIT-I

Q2
(a) What is software life cycle? Discuss generic waterfall model.   **(6)**
(b) Compare iterative enhancement model and evolutionary enhancement model   **(6.5)**

Q3
(a) Draw two level DFD for library management system.   **(6)**
(b) Draw E-R diagram library management system.   **(6.5)**

UNIT-II

Q4
(a) Describe the role of management in software development with the help of examples.   **(4)**
(b) Difference between product, process and project.   **(4)**
(c) What are various factors of management dependency in software development? Discuss each factor in detail.   **(4.5)**

Q5
(a) Is it possible to estimate software size before coding? If so, how?   **(3)**
(b) What are size metrics? How is function point metric advantageous over LOC metric? Explain.   **(5)**
(c) What is risk? What are the risk management activities? Is it possible to prioritize the risk?   **(4.5)**

UNIT-III

Q6
(a) What are different types of coupling? Give one example of each type.**(4)**
(b) List out the components of 'software Design' document.   **(4)**
(c) Discuss different types of object oriented and function oriented design.   **(4.5)**

Q7
(a) How does software metric can improve the software process? Enumerate the effect of metric on software productivity.   **(4)**
(b) Which one is the most appropriate size estimation technique and why?   **(4)**
(c) Define and explain data structure metrics.   **(4.5)**

UNIT-IV

Q8
(a) Explain all the steps of cause effect graphing test case design technique with the help of diagram.   **(4.5)**
(b) With the help of an example for each, explain following testing-   **(8)**
    (i) Condition testing
    (ii) Loop testing

Q9
(a) What is debugging? Discuss various debugging techniques.   **(4.5)**
(b) Discuss various problems during maintenance. Describe some solutions to these problems.   **(4)**
(c) Explain boehm's maintenance model with the help of a diagram.   **(4)**

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