Annual Online Examination 2020
BCA Part – III
BCA-304
SOFTWARE ENGINEERING

Max.Marks : 100
Time : 3 Hrs.
Min.Marks : 40

Note : Section 'A', containing 10 very short-answer-type questions, is compulsory. Section 'B' consists of short answer type questions and Section 'C' consists of long answer type questions. Section 'A' has to be solved first.

Section - 'A'

Answer the following very short-answer-type questions in one or two sentences :

(2x10=20)

Q.1   Discuss software engineering problem.

Q.2   Define software quality factor.

Q.3   What is measurement? Where do we use the term measurement in software engineering?

Q.4   What are main factors of function oriented metrics?

Q.5   What is SRS? Why do we need SRS?

Q.6   What is context diagram?

Q.7   Explain top down and bottom up strategies in software design.

Q.8   What are concept of modules?

Q.9   Explain difference between error, fault and failure.

Q.10   Explain maintenance in brief.

Section - 'B'

Answer the following short-answer-type questions with word limit 150-200 :   **(6 x 5=30)**

Q.1   Explain waterfall model in detail.

<div align="center">or</div>

Explain quality factors of software product.

Q.2   Explain phase management process.

<div align="center">or</div>

Explain project management techniques and its various phases.

Q.3   What are different characteristics of SRS which should be maintained?

<div align="center">or</div>

Write short notes on :

1) Data Dictionary   2) Data flow diagram

Q.4   What are rules of a good programming style which should be followed in coding?

or

What are the quality guidelines that leads to a good design?

Q.5   What is black box testing? Explain with its various types.

or

Explain test oracles? How test oracles are different from the automatic modern testing techniques.

Section - 'C'

Answer the following long-answer-type questions with word limit 300-350 : (10x5=50)

Q.1   Write short notes on :

a)   Prototype model   b)   Spiral model

or

What are the various problems in software engineering? How to solve these?

Q.2   Explain function oriented metrics in details.

or

What is software metrics? Also explain both types of software metrics in brief.

Q.3   What is DFD? Draw DFD for restaurant management system?

or

What is structure of a good document? Explain in detail.

Q.4   Explain structure chart in detail. Give a structure chart for an email management system.

or

Explain modularity with its types in detail.

Q.5   Explain various levels of testing.

or

Explain white box testing along with its types. Also give difference between black box and white box testing.

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