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BCA(III) — Soft.

Test. (304) SEC

2019

Time : 3 hours

Full Marks : 70

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from all the Sections as directed.

Section – A

(Compulsory)

1. Choose the appropriate answer from each of the following multiple choice questions : $2 \times 10 = 20$

(a) _____ integration testing begins construction and testing with atomic modules.

(i) Top Down

(ii) Bottom Up

(iii) Up-down

(iv) Top-up

(b) _____ focuses on functional requirement of the software.

(i) Red-Box Testing

- ☒ (ii) Black-Box Testing
- ☐ (iii) Glass-Box Testing
- ☐ (iv) Blue-Box Testing
- (c) The objective of testing is :
 - ☒ (i) Debugging
 - ☒ (ii) To Uncover error
 - ☐ (iii) To gain modularity
 - ☐ (iv) To analyze system
- (d) Which of the following is not a software life cycle model ?
 - ☐ (i) Spiral Model
 - ☐ (ii) Waterfall Model
 - ☐ (iii) Prototyping Model
 - ☒ (iv) Capability Maturity Model
- (e) Testing of individual components by the developers are comes under which types of testing ?
 - ☐ (i) Integration Testing
 - ☐ (ii) Validation Testing
 - ☒ (iii) Unit Testing
 - ☐ (iv) None of these
- (f) Which of the following is the Process Improvement Model ?
 - ☒ (i) CMMI
 - ☐ (ii) Agile
 - ☐ (iii) Prototyping
 - ☐ (iv) V Model
- (g) Beta testing is done at :
 - ☒ (i) User's End
 - ☐ (ii) Developer's End

- (iii) User's and Developer's end
- (iv) None of these
- (h) Which of the following is not used in measuring the size of the software ?
 - (i) KLOC
 - (ii) Function Point
 - (iii) Size of module
 - (iv) None of these
- (i) Which of the following is not a type of incremental testing approach ?
 - (i) Big-bang
 - (ii) Top-down
 - (iii) Bottom up
 - (iv) Functional incrimination
- (j) Which of the following is a form of functional testing ?
 - (i) Security level testing
 - (ii) Boundary value analysis
 - (iii) Performance testing
 - (iv) Usability testing

Section – B

Answer any four questions of the following :

5×4 = 20

2. Explain Software Process Model.
3. Describe the term Software Varification and Validation.
4. Describe the V process model.

5. What is test plan and contents available in a Test Plan ?
6. Explain the Environment of Testing.
7. What is the role of quality assurance in software development ?
8. Explain the boundary value analysis technique with a suitable example.
9. What is a graph matrix ? How is it related to a connection matrix ?

Section – C

Answer any **two** questions of the following :

$15 \times 2 = 30$

10. What is cyclomatic complexity ? Discuss different ways to compute it with example.
11. Describe the various types of testing during software development.
12. What are the different types of structural testing techniques ? Discuss any two techniques with the help of examples.
13. What are the various types of functional testing technique ? Also explain the boundary value analysis technique with suitable example.