

International Islamic University Chittagong
Department of Computer Science & Engineering
B. Sc. in CSE Semester Final Examination, Autumn 2018
Course Code: CSE 3505 Course Title: Software Engineering
Total marks: 50 Time: 2.5 hours

[Answer any *two* questions from **Group-A** and any *three* questions from **Group-B**;
Separate answer script must be used for Group-A and Group-B.]

Group-A

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|-------|---|---|
| 1.a) | Why validation of requirements is needed? Which check should be done during requirements validation? | 5 |
| b) | What do you know about viewpoints in requirement engineering? Describe different types of viewpoint. | 5 |
| 2. a) | What does a software design specify? Draw a general model of software design process. | 5 |
| b) | What is use-case? Explain with a diagram. | 3 |
| c) | What is ethnography? How ethnography helps to do requirement analysis? | 2 |
| 3.a) | What is data dictionary? How is used in Database? | 4 |
| b) | Consider a scenario of library management system where a library consist of library admin , users (teachers and students), stakeholders such as suppliers. Draw a use case based on this concept. | 6 |

Group-B

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|-------|---|---|
| 4. a) | What is V&V model? Differentiate between alpha and beta testing with example. | 6 |
| b) | Suppose you have written a C program but the input of the program does not show the actual output due to some logical errors. Now your project supervisor asked you to perform debugging. Explain the concept of black box and glass box testing based on the above scenario. | 4 |
| 5. a) | What is software maintenance? Briefly describe corrective, adaptive and preventive maintenance with example. | 5 |
| b) | Briefly describe the factors affecting software maintenance. | 4 |
| c) | What is software documentation? | 1 |
| 6.a) | What is test log? What do you mean by top down and bottom up approach of software testing? | 5 |
| b) | What is legacy system? What is regression testing? Why is it performed? What do you mean by boundary analysis testing? | 5 |
| 7.a) | Briefly describe McCabe's Cyclomatic complexity. | 5 |
| b) | Describe different types of software cost estimation techniques. | 3 |
| c) | What is COCOMO model? Why we use this model? | 2 |