

**MSc IT DMVI Sem-3 Examination**  
**DMVIBSC-16**

**Software Development Life Cycle**

**December-2024**

**Time : 2-30 Hours]**

**[Max. Marks : 70**

**Q.1. Answer the following: (2 marks each)**

**[14]**

1. \_\_\_\_\_ phase of SDLC involves gathering and understanding the requirements for the software project.
2. In SDLC, which phase is responsible for coding the actual software?
3. List the types of software.
4. What is boundary value analysis?
5. Define white box testing.
6. Write test-case to validate login page having fields username and password.
7. Define software engineering.

**Q.2. Answer the following: (7 marks each)**

**[14]**

1. What is the purpose of SDLC? Explain any three phases of it in detail.
2. What is feasibility study? Explain organizational, technical, economic and schedule feasibility.

**[OR]**

**Q.2. Answer the following: (7 marks each)**

**[14]**

1. Why planning phase is important? Demonstrate it for library management system.
2. What is Testing? Explain different levels of testing.

**Q.3. Answer the following: (7 marks each)**

**[14]**

1. Explain V Model with its features, advantages and disadvantages.
2. Explain Spiral model along with a diagram. Also list its features, advantages and disadvantages.

**[OR]**

**Q.3. Answer the following: (7 marks each)**

**[14]**

1. Explain Waterfall Model with its features, advantages and disadvantages. List the scenarios in which it is used.
2. Explain the Agile Model. List the benefits and drawbacks of using agile models over conventional models.

**Q.4. Answer the following: (7 marks each)** [14]

1. Draw 0<sup>th</sup> and 1<sup>st</sup> level of DFD for online admission system.
2. What is low level design? Draw 2<sup>nd</sup> level of DFD for railway reservation system.

**[OR]**

**Q.4. Answer the following: (7 marks each)** [14]

1. Explain SRS structure in detail along with its sub-points.
2. What is the use of DFD in SDLC? Design the 1<sup>st</sup> level of online ordering system.

**Q.5. Answer the following: (7 marks each)** [14]

1. Explain data flow testing technique in detail with example.
2. What is Black Box Testing? List out all the techniques and explain any one of them.

**[OR]**

**Q.5. Answer the following: (7 marks each)** [14]

1. What is defect clustering? Explain it with example.
2. Explain seven principles of testing in detail.