1. **[3 marks]** Choose the best match for the following activities of the phases of SDLC: [Example: 1+A]

1. Analysis	A. Information system is coded, tested, installed, and supported	1+D
2. Project Initiation and Planning	B. System is modified to suit the changing business conditions	2+E
3. Implementation	C. Convert the description into logical and then physical system specification	3+A
4. Maintenance	D. Study of current procedures and information system	4+B
5. Design	E. Determine the scope of the proposed system	5+C

2. **[3 marks]** BRTC wants to launch a fleet of autonomous buses. RoadX company has been awarded the contract to build these buses. The buses will have to comply with Bangladesh traffic laws and regulations. Each bus will operate on specific routes; each bus will have specific stops. Initially, the buses will operate in the Gulshan area and later the operation area will be increased in other parts of Dhaka and you will have to update the navigation software to support new routes. RoadX has selected the Waterfall Development methodology to develop the system. Explain whether the choice of development methodology is appropriate or not.

No, the choice of development methodology is not appropriate.

This is because, in Waterfall Development, each phase of the Software Development Life Cycle is completed one by one and never repeated.

In order to make the system operate in other areas than Gulshan, more work will be need to be done on the software, later, which is not possible in Waterfall Development methodology.

3. **[4 marks]** A foster-care management system is a program that's designed to help to seek an individual to adopt a child. The system can verify a person requesting information and track an existing child's biodata in response to that request. Identify two business requirements of a foster-care management system.

- An user will be able to request for adoption.
- The user will enter his/her details to make a request.
- The user will be verified by asking for their NID and OTP verification.

The system will have a store biodata of each child.
The system will show the biodata to the user requesting for adoption.