ourdiu.com | Shared by Eshtiaq Ahmad

Daffodil International University

Faculty of Science & Information Technology

Department of Software Engineering

Final Examination, Summer 2026

Course Code: SE 212; Course Title: Software Requirement Specifications & Analysis

Sections & Teachers: A,B,C(JK), D(NML), E,F(KBB),G(MSS)

Time: 2:00 Hrs **Marks: 40**

Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

		Due to the increasing number of natural disasters such as floods, wildfires, and extreme weather events around the world, governments and organizations are adopting AI-powered emergency management systems. **RescueNet** is a smart emergency response mobile application designed to assist citizens during emergency situations.After launching the application, users can register using their phone number and current location. The home dashboard provides real-time disaster alerts, emergency contacts, nearby shelters, and safety guidelines. The system collects real-time weather information and uses AI-based prediction models to generate early warnings for possible disasters such as floods, storms, or other environmental hazards. During an emergency, users can activate the **"SOS Emergency Request"** feature to send their live location, emergency category, and personal information to nearby rescue teams. The system automatically identifies the nearest available rescue center and forwards the emergency request. If network connectivity is unavailable, the application temporarily stores the request and automatically synchronizes it once the connection is restored.The system allows users to upload images or videos of affected areas. An AI-based damage assessment module analyzes the uploaded media to estimate the severity of the situation and helps authorities prioritize rescue operations. Users can also access real-time information about affected locations, available shelters, and relief distribution centers.To ensure data privacy and security, users can control location-sharing permissions and decide whether their emergency history should be		

ourdiu.com | Shared by Eshtiaq Ahmad

		stored. After completing a rescue operation, users can provide feedback regarding the quality of emergency services.		
1.	*a)*	**Explain** the system requirements of **RescueNet** described in the scenario by preparing a **Software Requirement Specification (SRS) table.**	**[Marks-10]**	**CLO-2** *Level-2*
2.	*a)*	**Prepare** a detailed **Use Case Description** for the **"Send Emergency SOS Request"** functionality of RescueNet.	**[Marks-8]**	**CLO-3** *Level-3*
	b)	**Apply** a suitable **Requirement Prioritization Technique** to classify and prioritize the requirements of RescueNet. Explain the justification behind the prioritization using examples from the scenario.	**[Marks-7]**	
	c)	**Construct** a **Requirement Traceability Matrix (RTM)** for RescueNet The RTM should trace each requirement and corresponding test cases.	**[Marks-8]**	**CLO-3** *Level-3*
		A software company is developing a new online food delivery website. The customer has not finalized the complete requirements, so the development team decides to develop the system gradually.The team creates all the static web pages using HTML to demonstrate the overall look and navigation of the website. The customer reviews these pages and provides feedback.Then,the developers make the screens functional using simulated data through a temporary service layer. Customers can interact with features such as searching restaurants, viewing menus, and placing a simulated order, although the actual backend services are not yet connected. Last of all,the developers implement the actual backend services and connect them with the previously developed prototype so that the complete website becomes functional.		
3.	*a)*	**Analyze** the given scenario, identify the Prototyping Model being used, and justify your answer. Also, explain the general steps involved in the Prototyping Model.	**[Marks-7]**	**CLO-4** *Level-4*