ourdiu.com | Shared by MAHMUDUL HASAN

Daffodil International University

Department of Software Engineering

Faculty of Science & Information Technology

Final Examination, Fall 2025

Course Code: SE 442, Course Title: Management Information System

Level: 3 Term: 3 Section: 40 (A,B,C,D,E,F,G,H,I)

Instructor: IM, RRB, AZ

Duration: 2 Hrs **Marks: 40**

Answer ALL Questions

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



The Metro Rail Bangladesh project is structured around a comprehensive business model that ensures operational sustainability, user value, and long-term economic impact. Its value proposition lies in providing rapid, safe, and reliable urban mobility that significantly reduces travel time and congestion. Key customer segments include daily commuters, students, office professionals, and urban travelers who require predictable and cost-effective transportation. Supported by key activities such as operations management, maintenance, ticketing, and smart-card services, the system is enabled by key resources including modern rolling stock, elevated stations, automation technologies, trained personnel, and robust power infrastructure. The metro rail collaborates closely with key partners such as the Government of Bangladesh, JICA, DMTCL, construction firms, and ICT service providers. Its customer relationships are maintained through safety, punctuality, digital ticketing convenience, and public communication. Channels include physical stations, mobile apps, digital kiosks, and public awareness programs that help commuters engage with the service. The cost structure comprises capital investment, operations, maintenance, energy use, staff training, and technological upgrades, while revenue streams emerge from ticket sales, smart-card usage, long-term ridership growth, and potential advertising or commercial leasing at stations. Please answer the followings:

1.	Express with formula and example for the followings as social media metrics for **Metro Rail.** a) Sentiment analysis b) Follower Growth Rate c) Traffic Referrals d) Influencer Engagement Rate e) Engagement per Follower	**[Mark 10]**	**CLO 1, Level 3**
2.	Illustrate a decision matrix to improve the logo of **Metro Rail** for three directors.	**[Mark 5]**	
3.	Lay out a table with three rows of data and provide the example for **Metro Rail.** a) One hypothesis for one sample t-test b) One hypothesis for independent sample t-test c) Three hypothesis for linear regression	**[Mark 10]**	**CLO 2, Level 4**
4.	Analyze how **Metro Rail** could implement two types of e-learning services—self-paced online learning and group-based asynchronous e-learning.	**[Mark 5]**	
5.	Analyze how Metro Rail could implement two types of e-commerce services—subscription model and white labelling.	**[Mark 10]**	