

## Technical and Business

## Sessional-II Exam

### Writing (SS2012)

Date: 9<sup>th</sup> April 2025

Course Instructor(s)

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[Redacted]

Roll No

[Redacted]

Section

[Redacted]

Student Signature

Total Time (Hrs): 1  
Total Marks: 35  
Total Questions: 3

Do not write below this line

Attempt all the questions. Do not attach the question paper.

Q1: You are the Students Affair Officer at National Institute of Computer Sciences (NICS), Lahore. The Department of Computer Science is currently considering an upgrade of its computer labs to meet modern technological standards. However, before finalizing any decisions, the Head of Department has requested to collect information about the current state of the lab facilities and potential areas for improvement.

*Memo.*

You are required to write an informal problem analysis report addressed to the Head of Department. Your report should identify the problem, analyze the data, and suggest potential solutions.

[20]

Q2: Read the case study and answer the question given below:

[5]

CodeMatrix Solutions, a mid-sized software house in Karachi, specializes in developing custom web and mobile applications for clients in Pakistan and the Middle East. In 2024, the management initiated a research project to improve employee productivity and client satisfaction. The company used a mixed-method approach, combining different types of data to gain deeper insights into internal performance and external perceptions. The company conducted surveys distributed to both employees and clients. The surveys included Likert-scale questions measuring productivity levels, time spent on tasks, communication efficiency, and client satisfaction with deliverables. Over 80 employees and 50 clients responded, providing a broad data set. To complement this, in-depth interviews and focus group discussions were conducted in which Project Managers and senior developers were interviewed about workflow challenges, motivation, and communication gaps. Based in the results, the company introduced new project management practices, clearer communication protocols, and revised its estimation models.

Question: What were the types of data collected during the research through which CodeMatrix Solutions was able to see the full picture, and bring improvements?

**Q3: (a)** Why is an abstract/executive summary considered to be an essential component of a formal report?

**Q3 (b)** Using the sample abstract provided, identify its key parts and arrange them in the correct order. *You may mention the number in the correct order along with the name of each sections of the abstract.*

[5 + 5]

**Title:** Enhancing Strategic Decision-Making through AI-Powered Data Analytics

**Abstract:** Using machine learning algorithms and advanced data visualization tools, the system identifies patterns and trends that would otherwise remain hidden. (1) These results demonstrate the potential of combining AI with data analytics to drive efficiency and innovation across various industries. (2) This project explores the integration of data analytics and artificial intelligence (AI) to enhance business decision-making processes. (3) The project achieved an accuracy rate of 92% in predicting customer behavior and significantly reduced decision-making time by 35%. (4) The objective was to design a predictive analytics model capable of analyzing large datasets and generating real-time insights to support strategic planning. (5)

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