PIONEER INTERNATIONAL UNIVERSITY

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UNIVERSITY EXAMINATIONS

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

ACADEMIC YEAR: 2021/2022   **UNIT NAME: BIOMETRIC IDENTIFICATION AND AUTHENTICATION**

SEMESTER: JAN - APRIL 2022   **UNIT CODE: BSSC 4110**

DATE: April 2022   Main exam   **TIME: 2 HOURS**

INSTRUCTIONS: Answer question one (30 marks) and any other two

QUESTION ONE

a) Discuss five constraints of Signature Recognition System (10 Marks)

b) Biometrics are being applied in various ways. Discuss five application areas of Biometrics (10 marks)

c) A multimodal biometric system conducts fusion strategies to combine decisions from each subsystem and then comes up with a conclusion. Discuss five factors that should be considered when designing a multimodal biometric system (5 marks)

d) Discuss evolution of biometric noting the factors that led to the use of technology (5 marks)

QUESTION TWO

a) Explain the disadvantages of traditional method of identification (10 marks)

b) State and explain five demerits of Finger Recognition System (10 marks)

QUESTION THREE

a) State and explain the steps a biometric system takes to perform identification and verification (5 marks)

b) Discuss the types of biometric modalities (10 marks)

c) Explain the criteria for Generating Biometric Templates (5 marks)

QUESTION FOUR

a) Explain five differences between Voice and Speech Recognition (10 marks)

b) Discuss five Criteria for measuring effectiveness of Biometric System (5 marks)

c) Explain the steps followed in pattern recognition (5 marks)