

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2024
(Second Semester)

Branch – COMPUTER SCIENCE

BIO-METRICS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 × 1 = 10)

| Module No. | Question No. | Question | K Level | CO |
|------------|--------------|--|---------|-----|
| 1 | 1 | ----- is the automated use of physiological or behavioral characteristics to determine or verify identity. a) Automation b) Password c) Physiology d) Biometrics | K1 | CO1 |
| | 2 | Identification systems answer the question _____. a) Am I who I claim to be? b) Who am I c) What am I? d) How am I? | K2 | CO1 |
| 2 | 3 | A biometric solution's ----- is the probability that a user's template will be incorrectly judged to be a match for a different user's template. a) False Non-Match Rate b) false match rate c) True Non-match rate d) True match Rate | K1 | CO2 |
| | 4 | Iris scan is a/an ----- biometric. a) Active b) Passive c) Direct d) Indirect | K2 | CO2 |
| 3 | 5 | ----- is a face detection and recognition method that determines face variance in image data sets. a) Neural Network b) Local Feature Analysis c) EigenFace d) Automated face processing | K1 | CO3 |
| | 6 | ----- is based on the users being enrolled and verified from a known pool of words. a) Fixed Vocabulary Verification b) Fixed Phrase Verification c) Flexible Vocabulary Verification d) Flexible Phrase Verification | K2 | CO3 |
| 4 | 7 | ----- are visual displays of the amount of infrared energy emitted, transmitted, and reflected by an object. a) Thermograms b) Infragrams c) Thermal Graphs d) Isograms | K1 | CO4 |
| | 8 | Changing the matching and decision subsystems is a -- ---- attack. a) Enrollment b) Front end c) Back end d) Temporal | K2 | CO4 |
| 5 | 9 | Pick out the disadvantage(s) of biometrics. a) Privacy Concerns b) False Positives c) High cost d) All the above | K1 | CO5 |
| | 10 | When selecting a biometric, which of the following factors need consideration? a) Scalability b) Biometric Attributes c) Cost d) All the above | K2 | CO5 |

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

| Module No. | Question No. | Question | K Level | CO |
|------------|--------------|--|---------|-----|
| 1 | 11.a. | Discuss the factors to be considered in Biometric enrollment. | K2 | CO1 |
| | (OR) | | | |
| | 11.b. | Explain the salient aspects of Biometric verification. | | |
| 2 | 12.a. | Compare Passive and Active Biometrics. | K4 | CO2 |
| | (OR) | | | |
| | 12.b. | Inspect the various Biometric technologies. | | |
| 3 | 13.a. | Describe the Iris Algorithm. | K3 | CO3 |
| | (OR) | | | |
| | 13.b. | Identify the various aspects of Signature Verification. | | |
| 4 | 14.a. | Identify the use of Thermograms. | K3 | CO4 |
| | (OR) | | | |
| | 14.b. | Critique the use of Skin Reflectance. | | |
| 5 | 15.a. | Formulate the factors to be considered in selecting a biometric. | K6 | CO5 |
| | (OR) | | | |
| | 15.b. | Develop a list of Evaluating options for Biometrics. | | |

SECTION - C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

| Module No. | Question No. | Question | K Level | CO |
|------------|--------------|---|---------|-----|
| 1 | 16 | Elaborate the benefits of Biometrics versus traditional authentication methods. | K6 | CO1 |
| 2 | 17 | Compare the various Authentication methods. | K5 | CO2 |
| 3 | 18 | Evaluate the algorithms used for facial interpretation. | K5 | CO3 |
| 4 | 19 | Compare Front end attack and back-end attack. | K4 | CO4 |
| 5 | 20 | Compile the Pros and Cons of biometrics. | K6 | CO5 |

Z-Z-Z

END