

Code No. K1223

**R07****Set No.1**

IV B.Tech II Semester Supplementary Examinations, July/August, 2012

**BIOMETRICS  
(Information Technology)**

Time: 3 hours

Max. Marks: 80

**Answer any FIVE Questions  
All Questions carry equal marks**

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1. a) When are Verification and Identification Appropriate? Explain in detail.  
b) Describe in detail about the benefits of Biometrics over Traditional Authentication Methods. [8+8]
2. a) Explain different approaches to the problem of acquiring fingerprint images of sufficient quality to create finger-scan templates in detail.  
b) Describe about the components of finger scan systems in detail. [8+8]
3. a) Explain about a handful of facial-scan technologies that compete within the biometric market, with substantial differences in their operations.  
b) Describe about the components of facial scan systems. [8+8]
4. a) What is iris scan technology ? Describe about the components of iris scan devices.  
b) Delineate Iris-scan's strengths in detail. [8+8]
5. a) Describe in detail about the process of integration of voice scan and voice recognition .  
b) Discuss about weaknesses relating to performance and perception that delimit the areas in which voice-scan can be effectively deployed. [8+8]
6. a) How AFIS and finger scan differs? Explain in detail.  
b) What is layered biometrics and what are their types? Explain. [8+8]
7. a) Discuss about classification of biometrics applications in detail.  
b) Are Biometrics Unique Identifiers? Explain in detail. [8+8]
8. a) How can we trust and secure a biometric transaction? Explain.  
b) Define the following terms:
  - i) FAR
  - ii) FRR
  - iii) FTE
  - iv) EER[8+8]

**Code No. K1223****R07****Set No.2****IV B.Tech II Semester Supplementary Examinations, July/August, 2012****BIOMETRICS  
(Information Technology)****Time: 3 hours****Max. Marks: 80****Answer any FIVE Questions  
All Questions carry equal marks****\*\*\*\*\***

1. a) Explain in detail about processes involved in enrollment and template creation.  
b) Describe in detail about Equal Error Rate (EER) and Ability-to-Verify (ATV) Rate. [8+8]
2. a) What are stages involved in finger-scan verification and identification.? Explain in detail about image acquisition and image processing in finger scan systems.  
b) Explain about different types of algorithms used for interpretation in finger scan technologies. [8+8]
3. a) Describe about key strengths that distinguishes Facial-scan from most other biometrics.  
b) Explain about the core processes of distinctive characteristic location for facial scan in detail. [8+8]
4. a) Describe about Iris-scan weaknesses pertaining mainly to operational issues in detail.  
b) Describe about deployments in Iris scan technologies in detail. [8+8]
5. a) Explain about the features of voice scan systems in detail.  
b) How Voice-scan technology measures a variety of vocal qualities? Discuss about distinctive features to be identified in voice scan? [8+8]
6. a) How Automated Fingerprint Identification Systems works? Explain in detail.  
b) Explain about the strengths, weaknesses and components of signature scan systems. [8+8]
7. a) How to address the system's scope and capabilities for privacy-sympathetic system design .  
b) Why standards are required for Biometrics? Explain how Application programming interface (API) standards ensure that developers can address a wide range of biometric technologies and devices in a standardized fashion? [8+8]
8. a) Explain the different characteristics of fingerprint biometrics for network security.  
b) Discuss in detail about biometric transactions. [8+8]

Code No. K1223

**R07****Set No.3**

IV B.Tech II Semester Supplementary Examinations, July/August, 2012

**BIOMETRICS  
(Information Technology)**

Time: 3 hours

Max. Marks: 80

**Answer any FIVE Questions  
All Questions carry equal marks**

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1. a) What is false match rate? Give importance of false match rate. When are false matches acceptable?  
b) Explain in detail about basic process flow of biometric verification and identification and briefly explain about how biometric matching works. [8+8]
2. a) What are the weaknesses that affect nearly all finger-scan solutions.  
b) Discuss in detail about template creation and template matching for finger scan systems. [8+8]
3. a) Explain in detail about Eigen face technology and feature analysis of facial technology.  
b) What is facial scan technology? Explain about the features of facial scan technology in detail. [8+8]
4. a) How does iris scan technology work? Explain in detail.  
b) What is iris scan? What are the features of iris scan? Explain. [8+8]
5. a) Explain in detail about the components of voice scan system.  
b) Summarize about the strengths and weaknesses of voice scan systems. [8+8]
6. a) Describe in detail about the components of Automatic Finger print identification system.  
b) How keystroke-scan product works? Explain its operation. [8+8]
7. a) What is IBG's Biometric Solution Matrix? How Urgent is the Authentication Problem that Biometrics are Solving?  
b) Describe about comparison of privacy factor in different biometric technologies. [8+8]
8. a) Explain about various statistical measures that are used in biometrics.  
b) Explain how biometrics is useful for network security. [8+8]

**Code No. K1223****R07****Set No.4****IV B.Tech II Semester Supplementary Examinations, July/August, 2012****BIOMETRICS  
(Information Technology)****Time: 3 hours****Max. Marks: 80****Answer any FIVE Questions  
All Questions carry equal marks****\*\*\*\*\***

1. a) Why Biometrics are needed? Discuss about the benefits of biometrics in identification Systems  
b) Describe about factors that affecting False Non-match Rates. [8+8]
2. a) Enumerate and elucidate about advantages of Finger-scan technology over competing technologies.  
b) How finger scan technology works? Explain in detail. [8+8]
3. a) Facial-scan technology is based on what process? Explain how it works in detail.  
b) What are the limiting factors that reduce facial-scan's effectiveness in a range of environments? [8+8]
4. a) Elucidate about the operation of iris scan biometric technology.  
b) Explain about the strengths of Iris scan biometric systems. [8+8]
5. a) Describe about the operational steps involved in voice scan systems.  
b) What are Voice-scan's strengths that are found in the core technology and in its relation to existing processes? [8+8]
6. a) Explain about the operation steps of retina scan in detail.  
b) Describe in detail about behavioral biometrics. [8+8]
7. a) Describe in detail about Designing Privacy Sympathetic Biometric Systems.  
b) Delineate in detail about BAPI. [8+8]
8. a) How is biometrics used for network security? Explain.  
b) Discuss about the choice of a biometric for network access in detail. [8+8]