

Reg. No.:



Name:

University of Kerala

U9015

Second Semester FYUGP Degree Examination, April 2025

Discipline Specific Core Course

COMPUTER SCIENCE

UK2DSCCSC103 - Introduction to Biometric Systems

Academic Level: 100-199

Time: 2 Hours(120 Mins)

Max. Marks: 56

Part A.6 Marks:Time 5 Minutes.(Cognitive Level :Remember(RE)/Understand(UN)) Objective Type.1 mark each, Answer all questions

Qn No.	Question	CL	CO
1	Name the minutia point where ridge stops	RE	2
2	Name the point where FMR and FNMR are equal	RE	1
3	Cite the minutia point where ridge splits into two	UN	2
4	List any two common types of biometric identifiers.	UN	1
5	Cite one challenge of gait recognition.	UN	4
6	Give an example of face detector	UN	3

Part B.10 Marks.Time:20 Minutes (Cognitive Level:Understand(UN)/Apply(AP))Two-three sentences.2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Define permanence in biometric systems	UN	1
8	Explain Soft Biometrics.	UN	4
9	Compare FMR and FNMR	AP	1
10	Identify the advantages of face recognition	AP	3
11	Show how the minutiae extraction helps in fingerprint recognition?	AP	2

Part C.16 Marks.Time:35 Minutes.(Cognitive Level :Apply(AP)/Analyse(AN))Short Answer.4 marks each, Answer all 4 questions,choosing among options * within each question

Qn No.	Question	CL	CO
12	A) Describe the role of feature extraction in Hand geometry recognition. OR B) Discuss the use of the Viola-Jones face detector in biometrics.	AP	4, 3

Qn No.	Question	CL	CO
13	A) Explain the use of biometric system in Healthcare OR B) Discuss the types of errors that a biometric system can make	AP	1, 1
14	A) Explain the different layers of Iris OR B) Discuss about hand geometry recognition	AN	3, 4
15	A) Explain the factors that affect the quality of fingerprint image in biometric system OR B) Explain about the different elements that effects the selection of bio metric trait	AN	2, 1

Part D.24 Marks.Time: 60 Minutes.(Cognitive Level :Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer 6 Marks each.Answer all 4 questions choosing among options * within each question

Qn No.	Question	CL	CO
16	A) Compare Palmprint and Fingerprint in Biometric system OR B) Illustrate various modules of Biometrics system	AN	2, 1
17	A) Discuss the importance of Tattoo in Biometrics OR B) Summarize the design of Iris recognition system	EV	4, 3
18	A) Summarize the application of Biometric Syestem OR B) Illustrate the features of Ear biometric trait	EV	1, 4
19	A) Explain the key features of Palmprint OR B) Analyse the different techniques in fingerprint acquisition	CR	2, 2