Seat No.

Total No. of Pages : 2

MAR_APR 2026 SUMMER EXAMINATION

1154 B.Tech. CBCS

Sub. Name: Computer Vision

Sub. Code: 56517

Day and Date: Thursday ,14-05-2026 **Total Marks: 70**

Time: 10:30 AM To 01:00 PM

Instructions: **1. Assume suitable data wherever necessary and mention it boldly**
2. Figures to the right indicate full marks

Special Inst.: **1. Question no. 6 is compulsory**
2. Solve any four questions from Q. No. 1 to Q. No. 5

Q1) [15]

a. What is the basic architecture of a CNN? Describe the role of each layer in CNN. **[8]**

b. What is bag of words model in the context of object-recognition? **[7]**

Q2) [15]

a. What are the applications of computer vision? Explain any two. **[8]**

b. What are the geometric primitives and transformation? **[7]**

Q3) [15]

a. Explain how AdaBoost algorithm works in face detection. **[8]**

b. Define homography and its significance in computer vision. **[7]**

Q4) [15]

a. How the Viola-Jones algorithm is used for face detection? what are the components of this algorithm? **[8]**

b. Explain in detail contour tracing algorithm with examples. **[7]**

Q5) [15]

a. Discuss at least three real world applications of CNN. How CNN architecture is adapted for each application? **[8]**

b. Describe the framework for computer vision. **[7]**

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Q6) Write short notes on any two. **[10]**

a. SFM (Structure From Motion) **[5]**

b. Pedestrian Detection **[5]**

c. Eigenfaces Algorithm **[5]**

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -
This Question Paper may be distributed for following Subjects as common code.
सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (1154) B.Tech. CBCS (56517) Computer Vision Part 4 SEM 7

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