



Name:

Grade: X Sec: Date:

PRESIDENCY SCHOOL

Subject: Artificial Intelligence

Topic: Worksheet

Unit 5: Computer Vision

Section A:

1. Which of the following is an open-source tool for Computer Vision?

- a) Python b) OpenCV c) TensorFlow d) Google Lens

Answer: b

2. Computer Vision (CV) refers to:

- a) The ability of machines to process text
b) The ability of machines to understand and interpret visual data
c) The ability of machines to recognize voices
d) The ability of machines to store large data

Answer: b

3. Computer Vision is a subfield of:

- a) Robotics b) Data Mining c) Artificial Intelligence d) Image Processing

Answer: c

4. The main difference between Computer Vision and Image Processing is:

- a) Image Processing focuses on enhancing images, while Computer Vision focuses on understanding images
b) Both are exactly the same
c) Image Processing uses AI while CV does not
d) Image Processing deals only with text

Answer: a

5. Which of the following is NOT an application of Computer Vision?

- a) Face Filters b) Google Search by Image c) Spell Checker d) Medical Imaging

Answer: c

6. Face unlock in smartphones uses which CV application?

- a) Image Segmentation b) Facial Recognition
c) Image Processing only d) Classification + Localization

Answer: b

7. Google Translate App's camera feature works on:

- a) NLP only b) Text recognition using CV
c) Audio recognition d) Chatbots

Answer: b

8. Which of the following is an example of CV in retail?

- a) Self-checkout using image recognition b) Face filters c) Google Maps navigation d) Spell checking

Answer: a



Name: _____ Grade: X Sec: _____ Date: _____

Subject: Artificial Intelligence Topic: Worksheet

9. In self-driving cars, Computer Vision helps in:

- a) Reading text only b) Identifying road lanes, pedestrians, and objects
c) Listening to road sounds d) Predicting weather conditions

Answer: b

10. The smallest unit of a digital image is:

- a) Feature b) Pixel c) Resolution d) Byte

Answer: b

11. Image resolution refers to:

- a) Number of pixels in an image b) The brightness of an image
c) The size of the image file only d) Number of colors in the image

Answer: a

12. In grayscale images, each pixel is represented by:

- a) One value (0–255) b) Three values (R, G, B)
c) Binary only (0 and 1) d) No values

Answer: a

13. RGB images use how many channels per pixel?

- a) One b) Two c) Three d) Four

Answer: c

Section B: HOTS (Case-based MCQs)

Case 1: Airport Security

An airport uses an AI-based Computer Vision system to scan passengers' faces and match them with passport photos.

14. Which CV application is this?

- a) Image Segmentation b) Facial Recognition c) Object Detection d) Classification only

Answer: b

15. If the system wrongly denies entry to genuine passengers, this indicates a problem with:

- a) Precision b) Recall c) Both Precision and Recall d) F1 Score

Answer: b

Case 2: Social Media Filters

A social media app applies animated ears and glasses on users' faces in real time.

16. This CV application is called:

- a) Image Segmentation b) Face Filters c) Classification only d) Medical Imaging

Answer: b



Name: _____ Grade: X Sec: _____ Date: _____

Subject: Artificial Intelligence Topic: Worksheet

17. To correctly place the filters, the model must identify both the face and its location. This is an example of:

- a) Classification b) Classification + Localisation c) Object Detection d) Segmentation

Answer: b

Case 3: Road Safety with CV

A self-driving car identifies pedestrians, traffic lights, and lane markings.

18. Identifying pedestrians with bounding boxes is an example of:

- a) Image Segmentation b) Object Detection c) Classification only d) Association

Answer: b

19. Marking different parts of an image (road, lane, vehicles) with different colors is:

- a) Classification b) Object Detection c) Image Segmentation d) Regression

Answer: c

Section C: Assertion & Reasoning

Choose the correct option:

- A) Both Assertion (A) and Reason (R) are true, and (R) is the correct explanation of (A).
B) Both (A) and (R) are true, but (R) is not the correct explanation of (A).
C) (A) is true, but (R) is false.
D) (A) is false, but (R) is true

Q20.

Assertion (A): Computer Vision enables machines to interpret and understand images.

Reason (R): Pixels are the smallest unit of an image that machines process.

Answer: A

Q21.

Assertion (A): Image Processing and Computer Vision are the same.

Reason (R): Both deal with visual data.

Answer: C

Q22.

Assertion (A): Resolution of an image depends on the number of pixels.

Reason (R): Higher resolution means more pixels and clearer details.

Answer: A

Q23.

Assertion (A): RGB images are grayscale images with 3 layers.

Reason (R): RGB images consist of Red, Green, and Blue channels.

Answer: D



Name: _____ Grade: X Sec: _____ Date: _____

Subject: Artificial Intelligence Topic: Worksheet

Q24.

Assertion (A): Facial recognition in mobile phones is an application of Computer Vision.

Reason (R): CV is used to identify and verify human faces.

Answer: A
