1. What do REGION PROPOSALS entail?

**Ans : Region proposal is about finding regions with a high probability of containing interesting information. By interesting information I mean information relevant to the task.**

2. What do you mean by NON-MAXIMUM SUPPRESSION? (NMS)

**Ans : Non Maximum Suppression (NMS) is a technique used in numerous computer vision tasks. It is a class of algorithms to select one entity (e.g., bounding boxes) out of many overlapping entities. We can choose the selection criteria to arrive at the desired results.**

3. What exactly is mAP?

**Ans : mAP is Mean Average Precision. Its use is different in the field of Information Retrieval and Multi-Class classification (Object Detection) settings. To calculate it for Object Detection, you calculate the average precision for each class in your data based on your model predictions.**

4. What is a frames per second (FPS)?

**Ans : FPS (Frame Per Second) defines how fast your object detection model process your video and generates the desired output. The first step for any custom object detection is to grab images for labeling.**

5. What is an IOU (INTERSECTION OVER UNION)?

**Ans : ntersection over Union (IoU) is used when calculating mAP. It is a number from 0 to 1 that specifies the amount of overlap between the predicted and ground truth bounding box.**

6. Describe the PRECISION-RECALL CURVE (PR CURVE)

**Ans : A PR curve is simply a graph with Precision values on the y-axis and Recall values on the x-axis. In other words, the PR curve contains TP/(TP+FN) on the y-axis and TP/(TP+FP) on the x-axis. It is important to note that Precision is also called the Positive Predictive Value (PPV).**

7. What is the term "selective search"?

**Ans : It is based on computing hierarchical grouping of similar regions based on color, texture, size and shape compatibility. Selective Search starts by over-segmenting the image based on intensity of the pixels using a graph-based segmentation method by Felzenszwalb and Huttenlocher.**

8. Describe the R-CNN model's four components.

**Ans : input image; extract region proposals; compute CNN features; classify regions**

9. What exactly is the Localization Module?

**Ans : Localization and Object detection are two of the core tasks in Computer Vision , as they are applied in many real-world applications such as Autonomous vehicles and Robotics. Localization : Find where the object is and draw a bounding box around it. Object detection: Classify and detect all objects in the image.**

10. What are the R-CNN DISADVANTAGES?

**Ans : It still uses the Selective Search Algorithm which is slow and a time-consuming process. It takes around 2 seconds per image to detect objects, which sometimes does not work properly with large real-life datasets.**