### Short Answers:

**1. How does a Conditional GAN differ from a vanilla GAN?**  
→ In cGANs, both the generator and discriminator receive extra label information (class condition). This guides the generator to produce samples specific to that class.

**Real-world application:**  
→ Face generation conditioned on emotions, like “happy,” “sad,” etc., or generating clothes for specific genders/styles in fashion design.

**2. What does the discriminator learn in image-to-image GANs?**  
→ The discriminator learns to distinguish between real (input, target) image pairs and fake (input, generated) pairs.

**Why pairing is important?**  
→ Pairing ensures the model learns correct mappings. Without pairs, the generator might create random outputs unrelated to the input.