



**Cairo University**  
**Faculty of Computers and Artificial Intelligence**  
**Quiz-1 Model-2**



<b>Department: Information Technology</b>	
<b>Course Name: Pattern Recognition</b>	<b>Date: March 2023</b>
<b>Course Code: IT 352</b>	<b>Duration: 25 Mints</b>
<b>Instructor(s): Dr. Mona Soliman</b>	<b>Total Marks: 5 Marks</b>
<b>Name :</b> <span style="float: right;"><b>SID:</b> <span style="float: right;"><b>Group:</b></span></span>	

**Having Four images, We extract three main features for each image, representing Color, shape, and weight**

$$\mathbf{Fv1} = (2, 0, 2)^T$$

$$\mathbf{Fv2} = (2, 3, 0)^T$$

$$\mathbf{Fv3} = (2, 2, 2)^T$$

$$\mathbf{Fv4} = (2, 3, 0)^T$$

**(a) Get the corresponding Covariance matrix**

**(b) Determine the correlated and uncorrelated features.**