

Question 1 4 marks

True or false, correct the false

1. if frequency = 2000 and max frequency = 4000, according to requist sample rate will be 4000 Hz.
- 2 - sample rate = 16000 times, Quantization level = 1024 \Rightarrow bitrate = ~~160~~ 16 Mbps.
- 3- transmission rate is 1.5 Gbps if I have image ^{HD} with 2000 x 1000 pixel, 25 frame, 24 bit per pixel
- 4- 8-bit color image \Rightarrow definition of LUT

Question 2: 4 marks

draw Chromo Sampling 4:2:0, 4:1:1

Question 3: 6 marks

$$\{c_x, y\} = \begin{matrix} 90 & 0 & 50 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 50 & 0 & 50 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \end{matrix}$$

Calculate

$$F(0,0), F(1,1)$$

معطى القارئ

Question 4: 6 marks

- 1- Draw I frame and list the algorithms used in each stage.
- 2- Why I frame inserted is sent frequently?