1 point

⊕ English ➤ Due Mar 28, 11:59 PM CET

1. Image and video processing has applications in (you can select more than one correct answer.) Consumer images Outer-space images Medical images 2. Images exist only in the visual spectrum. True False 3. When you enter dark room in a bright day, it takes some time before you can see reasonable well in the room. Which visual process explains this phenomena? Color vision O Binocular vision (2 eyes) Brightness adaptation O Dilated pupils 4. Consider an image with 100 lines and 1000 pixels per line. Each pixel can take 256 different values. The total amount of bits needed to store that image is 0 10,000 000,000 25,600,000 Carger than the hard drive in my computer. 5. Sampling refers to Testing the possible positions of an object in an image Discretization of the spatial image domain. O Discretization of the values an image pixel can take Inversion of the pixel values 6. Quantization refers to O Inversion of the pixel values. O Testing the possible positions of an object in an image. O Discretization of the values an image pixel can take. Oiscretization of the spatial image domain. 7. Going from a pixel with coordinate (1,1) to a pixel with coordinate (0,0) takes O Two steps both for 4 and 8 adjacency neighborhoods. One single step both for 4 and 8 adjacency. One step for 8 adjacency and 2 steps for 4 adjacency Two steps for 8 adjacency and 2 steps for 4 adjacency. 8. The determinant of a scaling matrix is equal to 1. True False 9. The determinant of a rotation matrix is 10. When we quantize an image, the amount of memory needed to store it Decreases Increases **11.** A video has 30 frames (images) per second. Considering that each image has 1000 imes 1000 pixels, an hour of

864000000 bits
We can't know
12. If we quantize an image with double resolution (meaning we use twice the number of bits per pixel) and sample it with half the resolution in each direction, then

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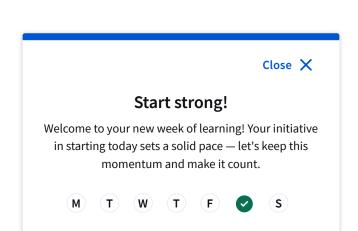
video will occupy

All the memory in my mobile phone

The total storage needed is reduced by half

The total storage needed is reduced 4 times

The image quality remains the same



https://www.coursera.org/learn/image-processing/exam/OqWjx/quiz-1/attempt

Graded Quiz • 30 min • 12 total points