Digital Image Processing Multiple Choice Questions | MCQs | Quiz

Practice Digital Image Processing questions and answers for interviews, campus placements, online tests, aptitude tests, quizzes and competitive exams.

Get Started

- Gaussain Lowpass Filters (https://www.sanfoundry.com/digital-image-processing-questions-answers-gaussain-lowpass-frequency-domain-filters-sharpening/)
- Visual Perception Elements (https://www.sanfoundry.com/digital-image-processing-mcqs-elements-visual-perception/)
- Pixels Relationships (https://www.sanfoundry.com/digital-image-processing-mcqs-relationships-between-pixels/)
- Color Fundamentals (https://www.sanfoundry.com/digital-image-processing-questions-answers-test/)
- Color Models (https://www.sanfoundry.com/digital-image-processing-questions-answers-color-models-2/)
- Regional Descriptors (https://www.sanfoundry.com/digital-image-processing-questions-answers-mcqs/)
- Boundary Descriptors (https://www.sanfoundry.com/digital-image-processing-questions-answers-boundary-descriptors-2/)
- Grey Level Resolutions (https://www.sanfoundry.com/digital-image-processing-questions-answers-online-test/)
- Zooming & Shrinking (https://www.sanfoundry.com/digital-image-processing-questions-answers-zooming-shrinking/)
- Image Enhancement Basics (https://www.sanfoundry.com/digital-image-processing-questions-answers-related-pixels/)
- Grey Level Transformation (https://www.sanfoundry.com/digital-image-processing-questions-answers-greylevel-transformation/)
- Histogram Equalization (https://www.sanfoundry.com/digital-image-processing-questions-answers-histogram-equalization/)
- Histogram Specification (https://www.sanfoundry.com/digital-image-processing-questions-answers-online-quiz/)
- Logic Operations (https://www.sanfoundry.com/digital-image-processing-questions-answers-enhacement-logic-operation/)
- Arithmetic Operations (https://www.sanfoundry.com/digital-image-processing-questions-answers-enhacement-arithmetic-operation/)
- Second Order Derivatives (https://www.sanfoundry.com/digital-image-processing-questions-answers-second-order-derivative-enhancement/)
- First Order Enhancement (https://www.sanfoundry.com/digital-image-processing-questions-bank/)
- Laplacian Frequency (https://www.sanfoundry.com/digital-image-processing-questions-answers-entrance-exams/)

Best Reference Books

Digital Image Processing Books (https://www.sanfoundry.com/best-reference-books-digital-image-processing/)

« Prev Page (https://www.sanfoundry.com/digital-image-processing-questions-answers-second-order-derivative-enhancement/)
Next Page (https://www.sanfoundry.com/digital-image-processing-questions-answers-entrance-exams/) »

Digital Image Processing Questions and Answers – Use of First Order Derivative for Enhancement

This set of Digital Image Processing Question Bank focuses on “Use of First Order Derivative for Enhancement”.

1. “For very large value of A, a high boost filtered image is approximately equal to the original image”. State whether the statement is true or false?
a) True
b) False
View Answer

2. Subtracting Laplacian from an image is proportional to which of the following?

a) Unsharp masking

b) Box filter

c) Median filter

d) None of the mentioned

View Answer

3. A First derivative in image processing is implemented using which of the following given operator(s)?

a) Magnitude of Gradient vector

b) The Laplacian

c) All of the mentioned

d) None of the mentioned

View Answer

4. If for an image function f(x, y), the magnitude of gradient vector

$$\nabla f = \begin{pmatrix} G_x \\ G_y \end{pmatrix} = \begin{pmatrix} \frac{\partial f}{\partial x} \\ \frac{\partial f}{\partial y} \end{pmatrix}$$

(https://www.sanfoundry.com/wp-content/uploads/2017/06/digital-image-processing-questions-bank-q4.png)is given by: mag(∇f)=$[G^2_x+G^2_y]^{(1/2)}$, then which of the following fact is correct?

a) The component of Gradient vector are linear operator and also the magnitude of the vector

b) The component of Gradient vector are linear operator, but the magnitude are not

c) The component of Gradient vector are nonlinear operator and also the magnitude of the vector

d) The component of Gradient vector are nonlinear operator, but the magnitude are not

View Answer

5. What is the sum of the coefficient of the mask defined using gradient?
a) 1
b) -1
c) 0
d) None of the mentioned
View Answer

Answer: c
Explanation: Since, first order derivative of a digital function must be zero in the areas of constant grey values. So, the mask using gradient has a sum 0, so to produce a zero result if applied on constant gray level areas.

6. Gradient is used in which of the following area(s)?
a) To aid humans in detection of defects
b) As a preprocessing step for automated inspections
c) All of the mentioned
d) None of the mentioned
View Answer

Answer: c
Explanation: Gradient has a usage in both human analysis as well as a preprocessing step for automated inspections.

7. Gradient have some important features. Which of the following is/are some of them?
a) Enhancing small discontinuities in an otherwise flat gray field
b) Enhancing prominent edges
c) All of the mentioned
d) None of the mentioned
View Answer

Answer: c
Explanation: Since gradient are used in fist order derivative image enhancement that enhances the discontinuities except for in flat areas and produces thick edge for constant slope ramp. So, Gradient has all the mentioned features.

8. An image has significant edge details. Which of the following fact(s) is/are true for the gradient image and the Laplacian image of the same?

a) The gradient image is brighter than the Laplacian image

b) The gradient image is brighter than the Laplacian image

c) Both the gradient image and the Laplacian image has equal values

d) None of the mentioned

View Answer

Answer: a

Explanation: Because the gradient enhances prominent edges better than Laplacian, so, the Gradient image with significant edge detail has higher value than in Laplacian image.

Sanfoundry Global Education & Learning Series – Digital Image Processing.

To practice Digital Image Processing Question Bank, here is complete set of 1000+ Multiple Choice Questions and Answers (https://www.sanfoundry.com/1000-digital-image-processing-questions-answers/).

« Prev Page - Digital Image Processing Questions and Answers – Use of Second Order Derivative for Enhancement (https://www.sanfoundry.com/digital-image-processing-questions-answers-second-order-derivative-enhancement/)

» Next Page - Digital Image Processing Questions and Answers – Laplacian in Frequency Domain (https://www.sanfoundry.com/digital-image-processing-questions-answers-entrance-exams/)

7. **Digital Image Processing Questions And Answers – Sharpening Spatial Filters (https://www.sanfoundry.com/digital-image-processing-questions-answers-sharpening-spatial-filters/)**
8. **Digital Image Processing Questions and Answers – Enhancement using Arithmetic Operations (https://www.sanfoundry.com/digital-image-processing-questions-answers-enhacement-arithmetic-operation/)**
9. **Digital Image Processing Questions and Answers – Histogram Specification and Use of Histogram Statistics for Image Enhancement (https://www.sanfoundry.com/digital-image-processing-questions-answers-online-quiz/)**
10. **Digital Image Processing Questions and Answers – Laplacian in Frequency Domain (https://www.sanfoundry.com/digital-image-processing-questions-answers-entrance-exams/)**

Manish Bhojasia (https://www.sanfoundry.com/about/), a technology veteran with 20+ years @ Cisco & Wipro, is Founder and CTO at Sanfoundry. He is Linux Kernel Developer and SAN Architect and is passionate about competency developments in these areas. He lives in Bangalore and delivers focused training sessions to IT professionals in Linux Kernel, Linux Debugging, Linux Device Drivers, Linux Networking, Linux Storage & Cluster Administration, Advanced C Programming, SAN Storage Technologies, SCSI Internals and Storage Protocols such as iSCSI & Fiber Channel. Stay connected with him below:

LinkedIn (https://www.linkedin.com/in/manishbhojasia) | Facebook (https://www.facebook.com/sanfoundry) | Twitter (https://www.twitter.com/sanfoundry) | Google+ (https://plus.google.com/104408026570656234343/posts)

Name*

Email*

Subscribe

Best Careers

Developer Tracks (https://www.sanfoundry.com/salary-50l/)
SAN Developer (https://www.sanfoundry.com/san-storage-developer-training-courses/)
Linux Kernel Developer (https://www.sanfoundry.com/linux-kernel-developer-training-courses-jobs/)
Linux Driver Developer (https://www.sanfoundry.com/linux-device-driver-developer-training/)
Linux Network Developer (https://www.sanfoundry.com/linux-network-developer-training/)

Live Training Photos (https://www.sanfoundry.com/sanfoundry-classes/)
Mentoring (https://www.sanfoundry.com/professional-mentoring-coaching-career-guidance-cto/)
Software Productivity (https://www.sanfoundry.com/programming-discipline-and-software/)
GDB Assignment (https://www.sanfoundry.com/gdb-example-tutorial/)

*Sanfoundry is **No. 1** choice for Deep Hands-ON Trainings in **SAN, Linux & C, Kernel Programming**. Our Founder has trained employees of almost all Top Companies in India such as VMware, Citrix, Oracle, Motorola, Ericsson, Aricent, HP, Intuit, Microsoft, Cisco, SAP Labs, Siemens, Symantec, Redhat, Chelsio, Cavium, ST-Micro, Samsung, LG-Soft, Wipro, TCS, HCL, IBM, Accenture, HSBC, Mphasis, Tata-Elxsi, Tata VSNL, Mindtree, Cognizant and Startups.*

Best Trainings

SAN I - Technology (https://www.sanfoundry.com/san-storage-area-networks-training/)
SAN II - Admin (https://www.sanfoundry.com/san-administration-training-course/)
Linux Fundamentals (https://www.sanfoundry.com/linux-administration-training/)
Advanced C Training (https://www.sanfoundry.com/advanced-c-programming-training/)
Linux-C Debugging (https://www.sanfoundry.com/training-on-linux-debugging-techniques/)
System Programming (https://www.sanfoundry.com/training-on-linux-internals-systems/)
Network Programming (https://www.sanfoundry.com/training-socket-network-programming/)
Linux Threads (https://www.sanfoundry.com/training-multithreaded-parallel/)
Kernel Programming (https://www.sanfoundry.com/linux-kernel-internals-training/)
Kernel Debugging (https://www.sanfoundry.com/linux-kernel-debugging-training/)
Linux Device Drivers (https://www.sanfoundry.com/training-on-linux-device-drivers/)

Best Reference Books

Computer Science Books (https://www.sanfoundry.com/best-reference-books-computer-science-engineering/)
Algorithm & Programming Books (https://www.sanfoundry.com/best-reference-books-programming-hot-technologies)
Electronics Engineering Books (https://www.sanfoundry.com/best-reference-books-electrical-electronics-engineering/)
Electrical Engineering Books (https://www.sanfoundry.com/best-reference-books-electrical-electronics-engineering/)
Chemical Engineering Books (https://www.sanfoundry.com/best-reference-books-chemical-engineering/)
Civil Engineering Books (https://www.sanfoundry.com/best-reference-books-civil-engineering/)
Mechanical Engineering Books (https://www.sanfoundry.com/best-reference-books-mechanical-engineering/)
Industrial Engineering Books (https://www.sanfoundry.com/best-reference-books-industrial-engineering-operations-research/)
Instrumentation Engg Books (https://www.sanfoundry.com/best-reference-books-instrumentation-engineering/)
Metallurgical Engineering Books (https://www.sanfoundry.com/best-reference-books-metallurgical-engineering/)
All Stream Best Books (https://www.sanfoundry.com/best-reference-books-tech-engineering-sciences/)

Questions and Answers

1000 C Questions & Answers (https://www.sanfoundry.com/c-interview-questions-answers/)
1000 C++ Questions & Answers (https://www.sanfoundry.com/cplusplus-interview-questions-answers/)
1000 C# Questions & Answers (https://www.sanfoundry.com/1000-csharp-questions-answers/)
1000 Java Questions & Answers (https://www.sanfoundry.com/java-questions-answers-freshers-experienced/)
1000 Linux Questions & Answers (https://www.sanfoundry.com/technical-interview-questions/)
1000 Python Questions (https://www.sanfoundry.com/1000-python-questions-answers/)
1000 PHP Questions & Answers (https://www.sanfoundry.com/1000-php-questions-answers/)
1000 Hadoop Questions (https://www.sanfoundry.com/1000-hadoop-questions-answers/)
Cloud Computing Questions (https://www.sanfoundry.com/1000-cloud-computing-questions-answers/)
Computer Science Questions (https://www.sanfoundry.com/computer-science-questions-answers/)
All Stream Questions & Answers (https://www.sanfoundry.com/)

India Internships

Computer Science Internships (https://www.sanfoundry.com/internships-computer-science-engineering/)
Instrumentation Internships (https://www.sanfoundry.com/internships-instrumentation-engineering/)
Electronics Internships (https://www.sanfoundry.com/internships-electronics-electrical-engineering/)
Electrical Internships (https://www.sanfoundry.com/internships-electronics-electrical-engineering/)
Mechanical Internships (https://www.sanfoundry.com/internships-mechanical-engineering/)
Industrial Internships (https://www.sanfoundry.com/internship-industrial-engineering/)
Systems Internships (https://www.sanfoundry.com/internships-systems-control-engineering/)
Chemical Internships (https://www.sanfoundry.com/internships-chemical-engineering/)
Civil Internships (https://www.sanfoundry.com/internships-civil-engineering/)

IT Internships (https://www.sanfoundry.com/internship/)
All Stream Internships (https://www.sanfoundry.com/internship/)

About Sanfoundry

About Us (https://www.sanfoundry.com/about/)
Copyright (https://www.sanfoundry.com/copyright/)
Terms (https://www.sanfoundry.com/tos-privacy-policy/)
Privacy Policy (https://www.sanfoundry.com/privacy-policy/)
Jobs (https://www.sanfoundry.com/jobs/)
Bangalore Training (https://www.sanfoundry.com/coursesfees/)
Online Training (https://www.sanfoundry.com/online-training-san-linux-kernel-device-drivers/)
Developers Track (https://www.sanfoundry.com/salary-50l/)
Mentoring Sessions (https://www.sanfoundry.com/professional-mentoring-coaching-career-guidance-cto/)
Contact Us (https://www.sanfoundry.com/contact/)
Sitemap (https://www.sanfoundry.com/sitemap_index.xml)