

# Advance Image Processing

## Mid Term

Ques1. Mention any 6 difference between GIMP and Photoshop software.

- a) Ans1:- GIMP is a FREE image editing software whereas Photoshop is a PAID image editing software.
- b) GIMP and Photoshop both contains numerous plugins, but photoshop plugins are designed by the famous photo brands like Phase One, Kodak, and more.
- c) GIMP contains fewer tools while Photoshop contains a lot of tools.
- d) You cannot use GIMP to edit pictures on the smartphone while Photoshop can be used to edit pictures on the smartphone.
- e) As GIMP is communal software, standards are not classified on the other hand, Photoshop runs on industrial standards.
- f) GIMP is used for general purposes, and Photoshop is used professionally.

Ques2. How to export a GIMP raw file to PNG format? Write all the steps.

Ans2:-

- a) Open the XCF file you wish to convert in GIMP.
- b) Select File > Export As.
- c) Click on Select File Type (above the Help button).
- d) Select PNG Image from the list, then select Export.
- e) Adjust the settings to your liking, then select Export again.

Ques3. What are smart objects? Do we have them in GIMP?

Ans3:- Smart Objects are layers that contain image data from raster or vector images, The contents of a Linked Smart Object are updated when its source image file changes.

GIMP has something similar to Smart Objects which is called LINKED LAYERS

Ques4. What are filters?

Ans4:- Filters are one of the most used features for photo editing. It is a unique tool that takes an input layer or image, applies a mathematical algorithm to it, and provides a layer or image in a modified format.

Ques5. How can we use filters in GIMP? Write all the steps.

Ans5:- Steps to apply filters:-

1. Select the Brush Tool

2. Draw Something
3. Select Filters > Map > Fractal Trace
4. Select the filter you like
5. Click ok

Ques6: Differentiate between monochrome and polychrome light?

Ans6:- **Poly-chromatic light:-**

The term poly-chromatic means having several colors. It is used to describe light that exhibits more than one color, which also means that it contains radiation of more than one wavelength. The study of poly-chromatics is particularly useful in the production of diffraction gratings.

**Monochromatic light:-**

The term monochromatic comes from the Greek words mono, meaning single, and chroma, meaning color. So monochromatic light literally means light of one color. In scientific terms, it means light of a single wavelength.

Ques7. What is HDR?

Ans7:- HDR or high-dynamic-range imaging is the set of techniques used to reproduce a greater range of luminosity than that which is possible with standard photographic techniques.

Ques8. Mention any 5 tools in GIMP?

Ans8:-

1. Bucket Fill.
2. Pencil.
3. Paintbrush.
4. Eraser.
5. Airbrush.

Ques9. How can we sharpen an image in GIMP?

Ans9:- 1. Open Image.

Use File>Open command in the top menu or else just press Ctrl+O.

The "Open Image" dialog will appear.

Click the image you want to open.

Click the Open button.

2. Duplicate Layer.

Preserve your original image by duplicating the image layer.

Go to Layer>Duplicate Layer or else just press Shift+Ctrl+D.

Open the image and then duplicate the layer.

3. Zoom Image up to 100%.

Use View> Zoom>1:1 (100%). This option maximizes the image.

4. Apply the Unsharp Mask filter On Duplicate Layer.

Activate the duplicate layer by clicking on it then use Filters>Enhance>Sharpen (Unsharp Mask).

This will open Unsharp Mask pop-up window.

Enter a value for the Radius, Amount and Threshold either through the up and down arrows or with the slider.

Once you are satisfied with the result, click "OK" to apply them to the image.

Applying unsharp mask fil

5. Save Your Document.

Use File>Save command in the top menu or else just press Ctrl+S.

The "Save Image" dialog will appear, allowing you to type your document's name in the "Name" box and save it.

Ques10. What are the benifits of using layers in GIMP?

Ans10:-

The main advantage of layers is that can make every edit easy to reverse, by edits on separate layers. One option here is to have a foundation layer, then a retouching layer, then a layer for any other added objects (text, gradient filters, lens flares, etc.) and a layer for color toning.