

# Mid-Term of Advanced Image Processing

**Q1: Mention any 6 difference between GIMP and Photoshop software.**

**Answer.**

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

**Q2: How to export a GIMP raw file to PNG format?  
Write all the steps.**

**Answer.**

1. Open the XCF file you wish to convert in GIMP.
2. Select File > Export As.
3. Click on Select File Type (above the Help button).
4. Select PNG Image from the list, then select Export.
5. Adjust the settings to your liking, then select Export again.

6. The PNG file will be saved in the same location as the original XCF file.

### Q3: What are smart objects? Do we have them in GIMP?

Answer. GIMP does not (yet) support smart objects like in Photoshop. Smart Objects are layers that contain image data from raster or vector images, such as Photoshop or Illustrator files. Smart Objects preserve an image's source content with all its original characteristics, enabling you to perform nondestructive editing to the layer.

### Q4: What are filters?

Answer. Filters apply special art effects that give your image the appearance of a sketch or impressionistic painting, or create unique transformations using distortions and lighting effects. You can change the appearance of an image or part of an image by altering the shades and colors of the pixels in some manner. Filters are used to increase brightness and contrast as well as to add a wide variety of textures, tones and special effects to a picture.

### Q5: How can we use filters in GIMP? Write all the steps.

Answer.

1. Select the Brush Tool. Click the "Brush" icon on the main toolbar. This selects the brush as our current tool. ...
2. Draw Something. Draw a little stick man on your blank image. ...
3. Add a Filter. Now comes the fun part! ...
4. Add a Filter. A dialog will open that enables you to change the settings for this filter.
5. Good to go now.

## Q6: Differentiate between monochrome and polychrome light?

Answer.

- 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*

## Q7: What is HDR?

Answer. High Dynamic Range photography is the method of merging images to create a final photo. The method involves taking many pictures and then stitch them together. Each image captures the scene at different exposures. When merged, the picture provides an overall correct exposure.

## Q8: Mention any 5 tools in GIMP?

Answer.

- Bucket Fill.
- Pencil.
- Paintbrush.

- Eraser.
- Airbrush.

## Q9: How can we sharpen an image in GIMP?

Answer.

Sharpening a snapshot in GIMP is quick and easy: simply select the Filters > Enhance > Sharpen command from the main menu. A “Sharpen” dialog box pops up showing a single “Sharpness” slider to control the amount of sharpening to be applied, and a thumbnail to preview the effect visually.

## Q10: What are the benefits of using layers in GIMP?

Answer.

Layers give you more control and flexibility over your image compositions. Layers enable you to stack images on top of other images — all within the same image. Therefore, you can have multiple layers of images, stacked on top of each other.