

Class VIII

Lesson 1 OpenShot Video Editor

1. Define Timeline and Play Head

Timeline – Area where video, audio, and image clips are arranged in sequence.

Playhead – Indicator showing the current position in the timeline.

2. Differentiate between Transition effect and Visual Effect

Transition Effect – Smooth change between two clips.

Visual Effect – Changes appearance of a clip (e.g., color, brightness).

3. Differentiate between ruler and zoom slider

Ruler – Shows time scale on the timeline.

Zoom Slider – Adjusts zoom level of the timeline view.

4. What is Openshot?

A free, open-source video editing software.

5. Write the name of the main components of the openshot interface.

Menu Bar, Toolbar, Project Files Area, Preview Window, Timeline.

6. What is the preview window?

Displays how the video will look when played.

7. What is timeline in Openshot?

Section where you arrange and edit clips in sequence.

8. What is a transition and how do you apply it?

Smooth change between clips; **Apply** – Drag a transition from Effects to overlap two clips.

9. Write down the steps for adding text to a video.

Click *Title* → Choose style → Type text → Save → Drag to timeline.

Lesson 2 Inkscape- Vector Designing

1. Define Blur, Opacity and Node

Blur – Softens edges of an object.

Opacity – Controls transparency of an object.

Node – Point that defines shape of a path.

2. Difference between Canvas and Document Page

Canvas – Entire working area in Inkscape.

Document Page – Printable area within the canvas.

3. Difference between Artistic Text and Paragraph Text

Artistic Text – Single line of styled text.

Paragraph Text – Multi-line block of text.

4. Name two basic shapes that can be created in Inkscape.

Rectangle, Circle.

5. Which shortcut key is used to open the 'Fill and Stroke' dialog box ?

Shift + Ctrl + F

6. What is the function of the zoom tool?

Magnifies or reduces view of the canvas.

7. What is the default file format for saving documents in Inkscape?

SVG.

8. What is Inkscape?

Free, open-source vector graphics editor.

9. How can you select an object in Inkscape?

Click it with *Select Tool*

10. Explain how to convert a line into an arc in Inkscape.

Convert Line to Arc – Select line → Switch to Node Tool → Click “Make Selected Segments Curved.”

Lesson 3 Emerging Technologies

1. Difference between virtual reality and augmented reality.

Virtual Reality – Fully computer-generated environment.

Augmented Reality – Adds digital elements to the real world.

2. What is a virtual Assistant?

AI program that performs tasks via voice/text commands.

3. For Which device was Alexa developed initially?

Initially for *Amazon Echo*.

4. What is the purpose of BCI?

Connects brain signals to external devices for control.

5. "Metaverse is a virtual world". Elaborate the statement.

A shared 3D virtual space for interaction, work, and play.

6. Explain about blockchain.

Secure digital ledger storing data in linked blocks.

7. What is RPA?

Robotic Process Automation; uses software bots to do repetitive tasks.

8. Explain the concept of 3D Printing.

Creating 3D objects by layering material from a digital design.

Lesson 4 MySQL

1. Differentiate between Data and Information.

Data – Raw facts.

Information – Processed, meaningful data.

2. What are the commands of DDL and DML?

DDL – CREATE, ALTER, DROP.

DML – SELECT, INSERT, UPDATE, DELETE.

3. Write the syntax to create a new table.

```
CREATE TABLE table_name (  
    column1 datatype,  
    column2 datatype  
);
```

4. What are the components to RDBMS?

RDBMS Components – Tables, Fields, Records, Keys.

5. How can you create a new database in MYSQL?

```
CREATE DATABASE db_name;
```

6. Write about MySQL queries.

Commands to retrieve or modify data in MySQL.

7. Explain Relational Database management system (RDBMS).

Software that stores data in related tables with unique keys. Eg. MySQL, MS Access, etc.