

## PART A:

# Research Questions (Short Answers)

### 1. What new improvements were introduced in Gemini 3.0?

Gemini 3.0 is built on a foundation of **state-of-the-art reasoning** and is the most intelligent model family to date. The core improvements include:

- **World-Leading Reasoning:** Delivers measurable and significant progress across complex technical and ethical tasks, providing genuine insight.
- **Enhanced Agentic Capabilities:** Masters **agentic workflows** and complex zero-shot tasks, with significantly improved tool use for building multi-step agents.
- **Industry-Leading Context:** Supports long-context performance, capable of consuming entire codebases, long technical documents, and video segments in a single reasoning pass.

### 2. How does Gemini 3.0 improve coding & automation workflows?

Gemini 3.0 elevates developer productivity by enabling **Agentic Coding** and deep code reasoning:

- **Agentic Coding:** It excels at synthesizing information (code, text, and images) and following complex, multi-part instructions, showing a **50% improvement** over previous versions in solved coding benchmark tasks.
- **Codebase-Level Reasoning:** Developers can feed large codebases or documentation into the model for high-level reasoning, code review, and bug identification.
- **Rapid Prototyping:** It accelerates concept-to-execution by generating high-fidelity frontend prototypes from natural language prompts.
- **CLI Automation:** The **Gemini CLI** leverages this enhanced reasoning to allow users to generate complex shell commands using simple natural language.

### 3. How does Gemini 3.0 improve multimodal understanding?

Gemini 3.0 provides **unified multimodal reasoning**, which means it processes and synthesizes different data types in a single reasoning pass:

- **Unified Analysis:** It analyzes text, images, video, audio, and code all at once, providing a unified view of data.

- **Contextual Interpretation:** It excels at tasks where multiple data types inform each other, such as reading slide decks, analyzing recorded meetings, and **generating code from UI screenshots**.
- **High-Resolution Vision:** It offers granular control over vision processing to improve its ability to read fine text or identify small details in visual inputs.

#### **4. Name any two developer tools introduced with Gemini 3.0.**

1. **Google Antigravity:** A new **agentic development platform** for building and exploring Gemini 3 Pro capabilities.
2. **Gemini CLI (Command Line Interface):** The enhanced command-line tool that supports natural language control for complex operating system and engineering tasks.

### **PART C: Self-Test MCQs**

#### **1. Which capability represents a core improvement in Gemini 3.0's reasoning foundation?**

**Answer:** b) World-Leading Reasoning across complex technical tasks

#### **2. How does Gemini 3.0 primarily accelerate coding workflows?**

**Answer:** c) By enabling Agentic Coding and deep codebase-level reasoning

#### **3. What feature defines Gemini 3.0's advancement in multimodal understanding?**

**Answer:** b) Unified multimodal reasoning in a single pass

#### **4. Which new developer tool was introduced with the Gemini 3.0 ecosystem?**

**Answer:** b) Google Antigravity

# PART B: Practical Task (Screenshot Task):

## Update the Gemini 3.0 Model

The task was to update the active Gemini model using the `/model` command in the Gemini CLI to the latest version, `gemini-3-pro-preview`.

### Practical Step Description:

1. The user launched the `gemini` CLI in the terminal.
2. The command `/model` was executed to display the list of available models.
3. The model was then successfully updated using the command: `/model gemini-3-pro-preview`.

### Proof of Completion:



The screenshot shows a terminal window titled "Gemini - aflat". The window displays the following text:

```
Gemini - aflat
> GEMINI
Gemini 3 is now available.
Join the waitlist at https://goo.gle/enable-preview-features

Tips for getting started:
1. Ask questions, edit files, or run commands.
2. Be specific for the best results.
3. Create GEMINI.md files to customize your interactions with Gemini.
4. ./help for more information.

> /model

You are running Gemini CLI in your home directory. It is recommended to run in a project-specific directory.

Select Model
Gemini 3 is now available.
To use Gemini 3, enable "Preview features" in /settings.
Learn more at https://goo.gle/enable-preview-features

• 1. Auto
   Let the system choose the best model for your task.
  2. Pro (gemini-2.5-pro)
   For complex tasks that require deep reasoning and creativity
  3. Flash (gemini-2.5-flash)
   For tasks that need a balance of speed and reasoning
  4. Flash-Lite (gemini-2.5-flash-lite)
   For simple tasks that need to be done quickly

To use a specific Gemini model on startup, use the --model flag.

(Press Esc to close)
```

*(The image must show the terminal with the command `/model gemini-3-pro-preview` and the confirmation message.),,*