📘 Compiler Design UNIT–1 PYQ Analysis (RGPV)

🔥 Most Repeated Questions Analysis (2017–2020)

Maine uploaded PYQ papers analyze kiye aur UNIT–1 se related sabhi questions extract kiye.
Ye analysis exam pattern samajhne ke liye bohot useful hai.

🎯 UNIT–1 Topics

UNIT–1 syllabus:

- Introduction of Compiler
- Compiler Structure
- Analysis-Synthesis Model
- Phases of Compiler
- Lexical Analysis
- Input Buffering
- Tokens, Lexemes & Patterns
- LEX Tool
- Bootstrapping & Porting
- Major Data Structures in Compiler

🔥 MOST REPEATED QUESTIONS (VERY IMPORTANT)

Question	Frequency	Importance
Explain phases of compiler with diagram	⭐⭐⭐⭐⭐	VERY HIGH
Explain lexical analysis	⭐⭐⭐⭐⭐	VERY HIGH
Explain input buffering	⭐⭐⭐⭐	HIGH
Explain LEX tool	⭐⭐⭐⭐	HIGH
Explain tokens, lexemes and patterns	⭐⭐⭐⭐	HIGH
Explain compiler structure	⭐⭐⭐⭐	HIGH
Explain Analysis-Synthesis model	⭐⭐⭐	HIGH
Explain Bootstrapping	⭐⭐⭐	IMPORTANT
Front end and back end of compiler	⭐⭐⭐	IMPORTANT

📅 YEAR-WISE PYQ ANALYSIS

🔥 DECEMBER 2020 PAPER

✅ Q1(a)

What is front end and back end of compiler?

What are the advantages of breaking up the compiler functionality into these two stages?

📌 Related Topic:

- Analysis-Synthesis Model
- Compiler Structure

⭐ IMPORTANT

✅ Q1(b)

What are the various components of lexical specification file? Illustrate with example.

📌 Related Topic:

- LEX Tool
- Lexical Analysis

⭐ VERY IMPORTANT

✅ Q4

Discuss the role of lexical analyzer in detail.

📌 Related Topic:

- Lexical Analysis

⭐ MOST REPEATED

✅ Q5

What do you mean by Bootstrapping of compiler?

📌 Related Topic:

- Bootstrapping

⭐ IMPORTANT

✅ Q6

What do you mean by LEX? Explain in detail.

📌 Related Topic:

- LEX Tool

⭐ VERY IMPORTANT

✅ Q8(a)

Describe the synthesis-analysis model of compiler.

📌 Related Topic:

- Analysis-Synthesis Model

⭐ MOST IMPORTANT

✅ Q8(b)

Discuss input buffering and preliminary scanning in lexical analysis.

📌 Related Topic:

- Input Buffering
- Lexical Analysis

⭐ VERY IMPORTANT

🔥 JUNE 2020 PAPER

✅ Q4

What are the typical entries in a symbol table? What are the various data structures used to implement the table?

📌 Related Topic:

- Symbol Table
- Major Data Structures

⭐ IMPORTANT

✅ Q7

What do you mean by LEX? Explain in detail.

📌 Related Topic:

- LEX Tool

⭐ REPEATED

🔥 DECEMBER 2017 PAPER

✅ Q1(a)

What is meant by Input Buffering? Explain the use of sentinels in recognizing tokens.

📌 Related Topic:

- Input Buffering
- Token Recognition

⭐ VERY IMPORTANT

✅ Q1(b)

Explain the various phases of compiler with the help of diagram.

📌 Related Topic:

- Phases of Compiler

⭐ MOST REPEATED QUESTION

✅ Q2(a)

Write a lexical specification and pattern matching routine to display the identifier and line number of its occurrence.

📌 Related Topic:

- Lexical Analysis
- Tokens & Patterns
- LEX

⭐ IMPORTANT

🔥 FINAL ANALYSIS (MOST EXPECTED QUESTIONS)

⭐ TOP 5 MOST IMPORTANT QUESTIONS

1️⃣ Explain phases of compiler with neat diagram.

🔥 Asked multiple times
🔥 Highest probability in exam

2️⃣ Explain lexical analysis in detail.

🔥 Repeated continuously

3️⃣ Explain LEX tool with example.

🔥 Frequently repeated

4️⃣ Explain input buffering.

🔥 Important theory question

5️⃣ Explain Analysis-Synthesis model of compiler.

🔥 Repeated in multiple papers

🎯 MOST IMPORTANT SMALL TOPICS

Topic	Chance in Exam
Tokens	HIGH
Lexemes	HIGH
Patterns	HIGH
Symbol Table	HIGH
Front End & Back End	HIGH
Bootstrapping	MEDIUM-HIGH
Porting	MEDIUM

🔥 PREDICTED QUESTIONS FOR UPCOMING EXAM

Based on PYQ repetition pattern:

⭐ VERY HIGH CHANCE

1. Explain phases of compiler.
2. Explain lexical analysis.
3. Explain LEX tool.
4. Explain input buffering.
5. Explain compiler structure.

⭐ HIGH CHANCE

6. Explain tokens, lexemes and patterns.
7. Explain front end and back end of compiler.
8. Explain symbol table.

⭐ MEDIUM CHANCE

9. Explain Bootstrapping and Porting.
10. Explain Analysis-Synthesis model.

⚡ SMART STUDY STRATEGY FOR UNIT–1

If Exam Is Tomorrow 😄

MUST DO FIRST:

✅ Phases of compiler

✅ Lexical analysis

✅ LEX tool

✅ Input buffering

THEN STUDY:

✅ Tokens & patterns

✅ Compiler structure

✅ Analysis-Synthesis model

LAST:

✅ Bootstrapping

✅ Symbol table

✅ Porting

🔥 ONE NIGHT REVISION PRIORITY

1. Phases of Compiler
2. Lexical Analysis
3. Input Buffering
4. LEX Tool
5. Tokens/Lexemes/Patterns
6. Analysis-Synthesis Model
7. Compiler Structure
8. Bootstrapping