Basics

Pointers

*

Shell

C, C++, J, P

20 — 2

× Count
× Radix

NCA

C	C++ OOP STL	Java OOP Collection	Python OOP R

Bubble
Merge
Quick
Selection
Insertion
Heap → Tree

Compare

* 1972 → Accepted Worldwide → Denis Ritchie

Dr. AIT
ANSIT
EWIT } AICTE ×, NAAC ×, NBA ×

degree ×

PL ⇒ ANSI

1st Std Ver → 1989
↓
ANSI - C

Developer → C + SIMULA = C++

RUST   Bjarne Stroustrup

; ⇒ 1991 → Python (Guido van Rossum) Monty Python Flying Circus

C + C++ = Java = 1995

James Gosling [Sun Microsystems]
Oracle

javac

Java
Python → □

No Pointers
* Both Compiled & Interpreted

errors □ →

C
C++

Pointers

Only Compiled

.c
□
→ lib
gcc
mingw
↓
□
object
↓
#include<>
.exe
o/p

Data Types in C

Primary — Void — Enumerated — Derived

Integer
int short long
(4) (2) (8)

Floating
float double

Character
char → 1 byte

void
i → -2^{31} to $2^{31}-1$
Int Min, Int Max
s → -128 to 127

[enum]
Named Constants
Jan - Dec
Mon - Sun
default - int
4 bytes

Arrays
Strings
Struct
Union
Pointers
class

```
#include <stdio.h>      (f.c) ⇒ filename
int main () {
⇒ printf ("AIML");

  return 0;
}
```

Self POL Class

* Encapsulation

AIT.java

```
⇒ ⇒class AIT {
public static void main (String[] args) {
System.out.println ("AIML");
}
}
```

Rate Of Int
⇒ Pascal Case
rate Of Interest
rate_of_int

Intellij Idea Community Edition

Compile → Errors + Syntax

Compiler → javac
↓
JDK → Java Development Kit

javac filename.java ⇒ compiled ⇒ filename.class
⇓
byte code
(Symbolic language)

Env Vars → path   Scripts

JRE Env Vars → path   C:/ jdk17/bin

↳ Java Runtime Environment

JDK + JRE

bytecode → portable

PI JVM ⇒ Java Virtual Machine

WORA

any java code → java Filename

[JDK → java]

This PC → Right Click → Properties
↳ Adv System Setting → Env Vars

System Vars → New Variable

Name : JAVA_HOME
Value : path of your JDK
C:/Program Files/Java/JDK-17

Path : Edit → New → "Path"/bin

cmd ⇒ java --version → validate

OOPs ⇐ Loops / Conditional Statements / Functions / C / Python

* if
* if - else
* if - else - if - else
* nested if - else
* Switch case

match - case
Python

for i in range (20): $^{n-1}$ (range) (-1)

range (start, stop, step)

* Looping Statements
while
* do - while ×
* for
* for - each

Operators : (i) Arithmetic   +, -, /, *, %   //, ** Python

(ii) Assignment   =, +=, -= ...
↳ Augmented / Short hand
a = 2
a = a+3
a += 3

(iii) Logical → && || !
and or not

Boolean ← (iv) Comparison / Relational : >, <, >=, <=, ==, !=

JS, C, C++, Java (v) Unary Operation ++, --

Placements (vi) Bitwise Operators : & | ^ >> << ~

Bit Manipulation
Bit Masking

BIN

Int
5 - 0101
8 - 1000
Int
0000 & = 0
1101 | = 13
1101 ^ = 13

int
S - 0
D - 1

Toggle

O/P
T	F
F	T

NOT Table

O/P
1	0
0	1

6 candidates
⇓
Apti
+
Coding
+
F2F

3 candidates Screening

5 → 0101
~5 → 1010 = 10

why ~5 != 10 = -6
-6 = 10

-6 ⇒ Negative (×)

VOLTE H+ LTE

abs (-6) = 6 → 0110

TV

1's com 1001
+1 0001

Bit Not → 2's Com → Double Negation

(10) ← 1010

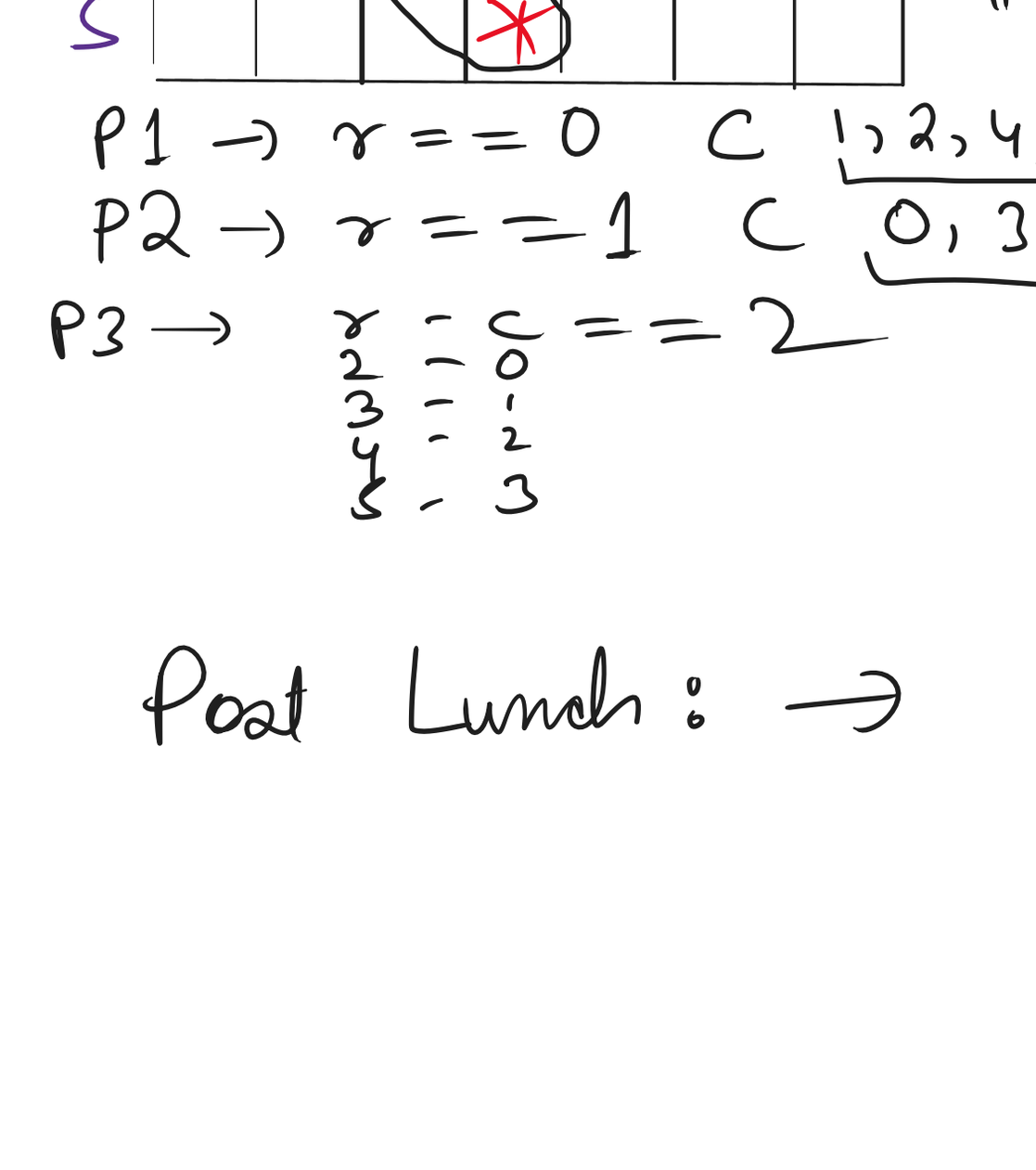
MCQs → ~5

(a) 2 (b) 3 (c) 4 (d) -6

~n ⇒ -n-1

6 ⇒ -6-1 = 7

(-6) ⇒ -(-6)-1 = 5



P1 → r == 0   c 1, 2, 4, 5
P2 → r == 1   c 0, 3, 6
P3 → r - c == 2
2 - 0
3 - 1
4 - 2
5 - 3

3.5 6 mins TCS - Basic
4 5 mins NQT
* × 4.5 4 mins TCS - Ninja
# × 5 3 mins Accenture
× 6.5 2 mins Infosys
LPA

→ c % 3 != 0
⇒ c % 3 == 0

P4 r+c == 8
2+6
3+5
4+4

Post Lunch : → Methods / Functions

OOPs Concepts

Basic Differences
C / C++ / Python / Java