

HSC Software Engineering: non-writing questions cheat sheet

Multiple choice

1. Read the stem, then **cover the options** and predict.
2. Cross out options you can prove wrong.
3. Code tracing: do the trace, don't guess.
4. Never leave blank.

Multi-select

1. Check how many are correct (2 marks: all right).
2. Judge each box true/false on its own.
3. Tick every true box; re-check the count.

2025 Q10 sample: 1 mark for 3 of 5 correct.

Drag into order

1. Find the first and last step.
2. Place those, then the rest.
3. Read it top to bottom once.

Fill in the blanks

1. Read the whole sentence before choosing.
2. Pick the term that fits grammar and meaning.
3. Do not use a word twice unless allowed.

Matching / tables

1. Match the sure ones first.
2. Eliminate used options.
3. Test data: valid, invalid, boundary.

Trace tables

1. Columns for every variable and the output.
2. One line at a time; new row on every change.
3. Test the condition exactly (> vs >=).

Drawing: symbols

DFD	entity = rectangle · process = circle (verb) · store = open rectangle · labelled arrows
Flowchart	terminator (Start/End) · rectangle = process · parallelogram = input/output · diamond = decision, Yes/No labels
Structure chart	rectangles · empty circle = data couple · filled circle = flag · diamond = selection · curved arrow = repetition
Class diagram	name / attributes / methods · arrow child → parent = inheritance · multiplicity 1, 0..*, 1..* · shared attributes go UP once
Decision tree	question nodes, labelled branches, outcome leaves · remove tests that never change the result
UI / storyboard	label every feature · screens in order with labelled arrows · error area, hint text, masked password

Pseudocode

BEGIN Name ... END Name · capital keywords in pairs · Get / Display · IF...ELSE...ENDIF · WHILE...ENDWHILE (tests first) · REPEAT...UNTIL (tests after) · FOR...NEXT · RETURN · indent · initialise before loops.

Python

def f(x): ... return · **indent** · for / while · lists [] and dict { } · call your function · parameterised SQL: cur.execute("... WHERE id = ?", (id,)) · commit after INSERT/UPDATE/DELETE.

SQL

Order: SELECT ... FROM ... JOIN ... ON ... WHERE ... GROUP BY ... ORDER BY. Text in quotes. Aggregates COUNT SUM AVG MIN MAX. Join on the foreign key = primary key. INSERT INTO t (cols) VALUES (...) · UPDATE t SET c = v WHERE ... · DELETE FROM t WHERE ... (never forget WHERE).

CSS

.class · #id · tag · id beats class beats tag · braces, colon, semicolon.

Online exam

80 marks · 2 h 30 incl. 10 min reading · wired headphones · **1.75 min per mark** (1 ≈ 2 min, 3 ≈ 5, 4 ≈ 7, 5 ≈ 9, 6 ≈ 10.5) · objective first, then code and drawing, then written · flag and return · never leave a blank.

Derived time per mark = 140 min ÷ 80. Symbols and rules are from the course specifications; multi-select marking is from the 2025 NESA sample guidelines; the step lists are general advice. A study aid, not an official NESA document.