Chhetri Academy

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GCSE COMPUTER SCIENCE

2.2

OCR J277 | Specification point 2.2.2

Data types

Untiered

Answers and examiner comments

1	2021	Untiered
question groups	available papers	tier

Using this booklet

1. Answer numbers match the companion question booklet.
2. Follow the original question number on marking tables.
3. Examiner comments are included where available.

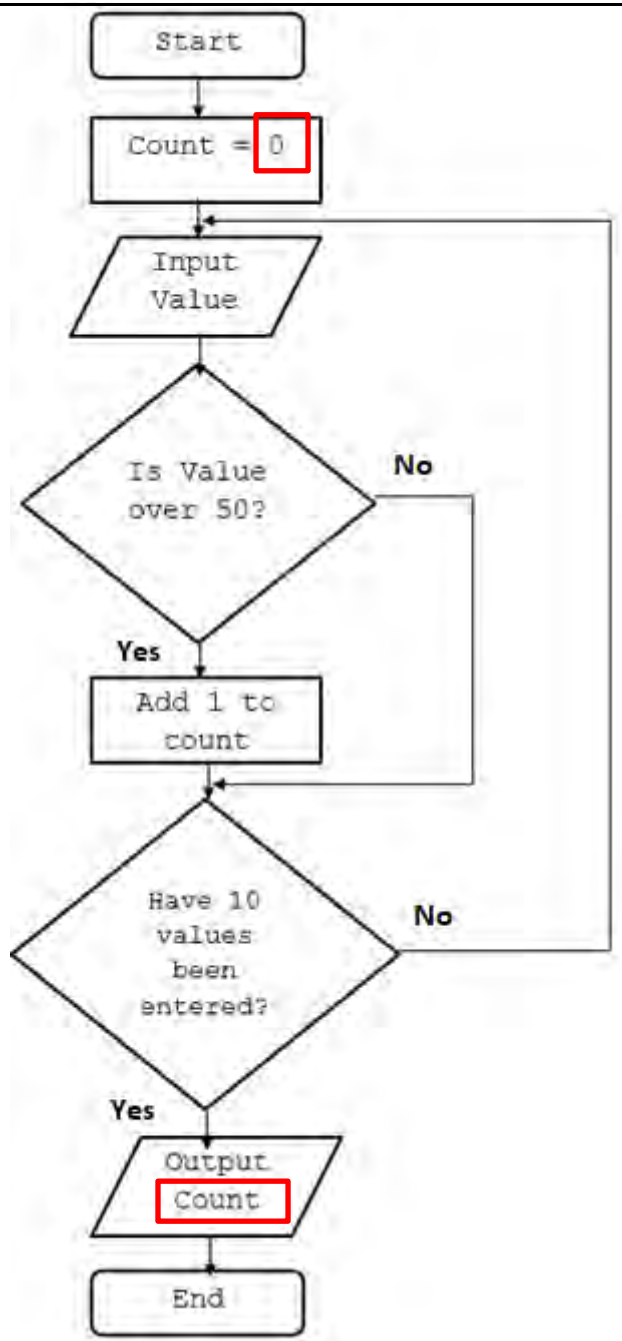
Name _____ **Date** _____

Some entries use full source marking material in an appendix. Any unavailable mark schemes are identified beside the relevant answer.

Question			Answer	Mark	Guidance

3	(a)		• Initialises (total) as 0 (outside loop if present)
			• Inputs a number and stores the value
			• Adds the input **to the total** (initialised in BP1 if present)
			• Prints the total
			• Iterates over BP2-4 (if present)…
			• …until total is **over** 100
				6	Example answer
					`total = 0`
					`while total <=100`
					`  x = input("Enter a number")`
					`  total = total + x`
					`  print(total)`
					`endwhile`

	(b)	(i)	• Number with a decimal / fractional part • Suitable example (e.g. 17.24)	2	One mark for definition, one mark for example Do not accept float as definition Allow fractions as example
		(ii)	• Whole number // number with no decimal / fractional part • Suitable example (e.g. 17)	2	One mark for definition, one mark for example

	(c)	(i)	• Count = **0** • Output **Count** • All non-decision boxes and YES from decision boxes linked in a sequential fashion from Start to End. • NO from first decision box linked to skip over increment of count • NO from second decision box linked back to INPUT Ignore superfluous instructions as long as they do not affect the outcome of the algorithm. BOD misspelling of `Count` as long as it is recognisable Ignore capitalisation.	5	

		(ii)	1 mark per bullet point, max 5
			• Initialises a count variable to 0
			• asks user for an input
			• Check if input is over 50…
			• … increment count variable if True
			• Repeats BP 2 and 3 (if present) until 10 numbers have been entered
			• Outputs count once 10 numbers have been entered
				5	Example answer
					
					`count = 0`
					`for x = 1 to 10`
					`  value = input("enter a value")`
					`  if value > 50 then`
					`  count = count + 1`
					`  endif`
					`next x`
					`print(count)`
					
					Response must be in pseudocode as per question, flowcharts or structured English are NAQ.

	(d)		e.g. • Abstraction • … focussing on the important elements // ignoring elements that do not contribute to the solution // simplifying the problem • Decomposition • …breaking a problem down (into its constituent parts) • Algorithmic thinking • …set out the steps needed to solve the problem // represented in a flow chart / as pseudocode	4	Mark in pairs. 1 mark for name, 1 mark for description. Description must match technique (if given).