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The questions on this worksheet have been taken from the OCR A-Level Computer Science Practice Paper 1.1

"3-a-day" A-Level Exam Practice Unit 1 (023)

Question 1	
A set of logic gates are connected as below.	
(i) Write a Boolean expression equivalent to S.	[1]
S ≡	
Question 2	
(ii) Write a Boolean expression equivalent to C _{out} .	[2]
C _{out} ≡	
Question3	
A database stores information about songs on a music streaming service.	
One of the tables called Song has the fields.	
Title, Artist, Genre, Length	
(a) Explain why none of these fields would be suitable as a primary key.	
	[2]

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Answer 1		
$S \equiv A \underline{\vee} B \underline{\vee} C_{in}$	AO2.2	Accept XOR instead of $\underline{\vee}$
	1	Accept \oplus instead of \vee
Answer 2		
$\mathrm{C}_{out} \equiv$ ((A $\underline{\lor}\mathrm{B}$) \land C_{in}) \lor (A \land B)	AO2.2	Accept XOR instead of <u>∨</u>
	2	Accept \oplus instead of \vee
One mark for ((A $\underline{\vee}$ B) \wedge C _{in})		Accept AND instead of \wedge
One mark for \vee (A \wedge B)		Accept OR instead of \vee
		Accept + instead of \lor
Answer 3		
 A primary key must have a unique very record The values for all these fields con (1 per -) 		AO1.1 (1) AO1.2 (1)
		2