

OCR

AS Computer Science

Summer Work

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Name:

AS Computer Science – Summer Work 2020 – TOTAL 25 MARKS

1. The hospital would like to update the system so that it automatically delivers doses of certain drugs to patients based on the readings taken rather than leave delivery to medical staff.

Discuss the ethical benefits and drawbacks of this approach, explaining whether you would recommend making this update.

(12 marks)

2. Convert the denary number 72 to an unsigned 8-bit integer.

(2 Marks)

3. Convert the unsigned binary number 10000101 to denary.

(2 Marks)

4. Convert the denary number 104 to hexadecimal.

(2 Marks)

5. Given the following pseudocode:

```
d= 5
```

```
if ((a > b) OR (b >= c)) then if ((c < a ) XOR (c < b)) then // Check  
to see if one or the other
```

```
// comparisons are TRUE, but not both
```

```
d = 15
```

```
else
```

```
    d = 16 endif
```

```
else
```

```
    d = 14 endif
```

```
print(d)
```

- (a)** State the value of d if a=42, b=41 and c=42

(b) State the value of d if a=42, b=36 and c=4

(c) State the value of d if a=42, b=36 and c=36

(d) Give **one** potential value of b if the output value of a=42, c=44 and d=14.

(4 MARKS)

6. When a booking is made on the website it is stored in a database.

Describe **one** of the tables you might expect to see in this database.

7. For this Karnaugh map what is the expression

		B	
		0	1
A	0	1	1
	1	1	0

(3 Marks)

END OF QUESTIONS