6-A-Day – Computer Science GCSE (31)

Q1

Each user can upload several pictures. Each picture has a date and a comment.

The personal data of users is stored in a table called USER. The data about the pictures is stored in a separate table called PICTURE.

Explain why the data about the pictures should be in a separate table, and how the tables can be linked.

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.... **[4]**

Q2

Jim is writing a program to calculate the wages of workers in a teddy bear factory.

(a) Jim uses an Integrated Development Environment (IDE) to create the program.

Describe **two** tools in an IDE that can help Jim when creating the program.

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[4]

Q3

State **one** difference between ROM and RAM, other than the size and the purpose.

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.... **[1]**

Q4

Workers sometimes get a £50 bonus.

Here is the algorithm used to calculate whether a worker should get a bonus.

```
Limit = 200
INPUT WagesEarned
IF WagesEarned < Limit THEN
    Pay = WagesEarned
ELSE
    Pay = WagesEarned + 50
END IF
```

State the value of Pay after this code is executed for each of the following values of WagesEarned.

WagesEarned = 50   Pay = ...

WagesEarned = 200   Pay = ...

[2]

Q5

The wages earned by a worker is either £2 for every teddy bear they have made or £5 for every hour they have worked, whichever is larger.

Write an algorithm that:
- allows the user to input the number of teddy bears made and the number of hours worked
- calculates the wages for the number of teddy bears made
- calculates the wages for the number of hours worked
- outputs the larger of the two results.

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Q6

Convert the binary number 01101001 to denary, showing your working.

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