**The answers on this worksheet have been taken from the Additional OCR GCSE Computing Specimen Paper**

# 6-A-Day – Computer Science GCSE (6)

| Q1 | The school decides to use the star topology to create the LAN. Describe what is meant by a star topology. You may use a diagram. <br><br> A hub / server at the centre of the network (1).All computers attached to the hub/server (1). Resources (e.g. printer) can also be attached to hub/server (1) <br> An appropriate diagram to represent this information is also acceptable. <br> Max 2. | [2] |
|----|----|----|
| Q2 | State the final values of the variables A and B if the values at the beginning of the code are <br> A = 4   B = 9 <br> Final value of A = 4 <br> Final value of B = 9 <br><br> A = 6   B = 2 <br> Final value of A = 2 <br> Final value of B = 2 | [2] |
| Q3 | Rewrite the code so that the contents of the variables are swapped correctly. <br> Example: <br> If A > B Then <br> Temp = A <br> A = B <br> B = Temp <br> End If <br><br> Award Marks for: <br> • Contents of one variable stored in a temp variable <br> • Second variable swapped into first <br> • Temp variable used to update second variable <br> (accept solutions with 2 temp variables) <br> Max 3. | [3] |

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## Q4

Possible test cases include:

| Test data | Reason for test | Expected outcome |
|---|---|---|
| 298 | To see if numbers shorter than 4 digits are rejected | Error message: The number entered is too short. |
| Exactly 4 digits (and in the member file) | To confirm that it works | Success |
| More than 4 digits | To see if numbers longer than 4 digits are rejected | Error message: The number entered is too long. |
| Input missing | To see if input is required | Error message: No number has been entered |
| Non numeric characters | To see if non numeric characters are accepted | Error message: The data contains non numerical characters |
| A PIN which does not exist in the customer file (accept any test data with explanation) | To see if any 4 digit number can be entered | Error message: The number entered does not exist in the customer file. |

Do not allow marks if the reason for test is repeated (e.g. two tests for numbers shorter than 4 digits).
[Award 1 mark per box]

[6]

## Q5

State the output(P) of the circuit if the inputs are:
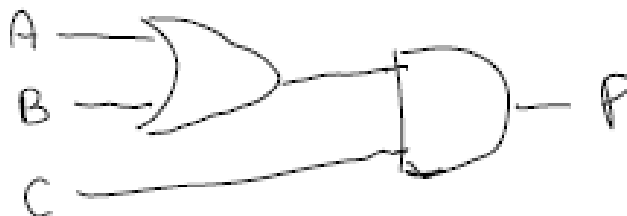
A = 1     B = 0

- P = 1

[1]

A = 1     B = 1

- P = 0

[1]

## Q6

Example:



- A and B OR'ed in the circuit
- The output is AND'ed with C

[2]