Section B

Answer **all** questions

11. A business's computer system needs to be updated.

(a) (i) Identify **one** stakeholder to be considered when planning the new system. [1]

(ii) Outline **one** consequence of not including all stakeholders in the design of the new system. [2]

(b) Describe **two** appropriate techniques to gather the information needed to find a suitable solution for the updated system. [4]

(c) Outline **one** reason testing should take place at every stage of the development process. [2]

The new system is now ready for implementation.

(d) Evaluate **two** methods the business could use to implement the new system. Include the benefits and drawbacks of each. [6]

12. A teacher would like a simple program to store the names, marks and grades of students in a set of three parallel one-dimensional arrays called `NAME[]`, `MARK[]` and `GRADE[]`.

The grade boundaries for the individual grades are shown below:

Mark	Grade
80 and above	Distinction
60 and above	Merit
40 and above	Pass
Below 40	Fail

The class has 30 students.

(a) Identify **two** components in a conditional statement. [2]

(b) Construct an algorithm using pseudocode to take the marks that have been stored in `MARK[]`, convert them into the appropriate grade and store the calculated grades in `GRADE[]`. [5]

(c) Outline how the name, mark and grade in the three arrays correspond to the same student. [2]

(d) Construct an algorithm using pseudocode to output the names and grades of all students who achieve a grade of Merit or Distinction. [3]

(e) Explain how you would change your algorithm in **part (d)** to allow a user to choose a grade and output the names and marks of the students who have achieved this grade. [3]