



**ADVANCED**  
**General Certificate of Education**  
**2024**

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## **Professional Business Services**

Assessment Unit A2 1

*assessing*

Technology in Business

**[APB11]**

**MONDAY 10 JUNE, MORNING**

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**MARK  
SCHEME**

## **General Marking Instructions**

### ***Introduction***

The main purpose of the mark scheme is to ensure that examinations are marked accurately, consistently and fairly. The mark scheme provides examiners with an indication of the nature and range of candidates' responses likely to be worthy of credit. It also sets out the criteria which they should apply in allocating marks to candidates' responses.

### ***Assessment objectives***

Below are the assessment objectives for **GCE Professional Business Services**.

Candidates should be able to:

- AO1** Demonstrate knowledge and understanding of terms, concepts, theories, methods and models used by professional business services firms and their client businesses.
- AO2** Apply knowledge and understanding of concepts, theories, methods and models used by professional business services firms and their client businesses.
- AO3** Investigate, analyse and evaluate concepts, theories, methods and models as used by professional business services firms and their client businesses.

### ***Quality of candidates' responses***

In marking the examination papers, examiners should be looking for a quality of response reflecting the level of maturity which may reasonably be expected of a 17- or 18-year-old which is the age at which the majority of candidates sit their GCE examinations.

### ***Flexibility in marking***

Mark schemes are not intended to be totally prescriptive. No mark scheme can cover all the responses which candidates may produce. In the event of unanticipated answers, examiners are expected to use their professional judgement to assess the validity of answers. If an answer is particularly problematic, then examiners should seek the guidance of the Supervising Examiner.

### ***Positive marking***

Examiners are encouraged to be positive in their marking, giving appropriate credit for what candidates know, understand and can do rather than penalising candidates for errors or omissions. Examiners should make use of the whole of the available mark range for any particular question and be prepared to award full marks for a response which is as good as might reasonably be expected of a 17- or 18-year-old GCE candidate.

### ***Awarding zero marks***

Marks should only be awarded for valid responses and no marks should be awarded for an answer which is completely incorrect or inappropriate.

### ***Marking calculations***

In marking answers involving calculations, examiners should apply the 'own figure rule' so that candidates are not penalised more than once for a computational error. To avoid a candidate being penalised, marks can be awarded where correct conclusions or inferences are made from their incorrect calculations.

### **Types of mark schemes**

Mark schemes for tasks or questions which require candidates to respond in extended written form are marked on the basis of levels of response which take account of the quality of written communication. Other questions which require only short answers are marked on a point for point basis with marks awarded for each valid piece of information provided.

### **Levels of response**

In deciding which level of response to award, examiners should look for the 'best fit' bearing in mind that weakness in one area may be compensated for by strength in another. In deciding which mark within a particular level to award to any response, examiners are expected to use their professional judgement.

The following guidance is provided to assist examiners.

- **Threshold performance:** Response which just merits inclusion in the level and should be awarded a mark at or near the bottom of the range.
- **Intermediate performance:** Response which clearly merits inclusion in the level and should be awarded a mark at or near the middle of the range.
- **High performance:** Response which fully satisfies the level description and should be awarded a mark at or near the top of the range.

### **Quality of written communication**

Quality of written communication is taken into account in assessing candidates' responses to all tasks and questions that require them to respond in extended written form. These tasks and questions are marked on the basis of levels of response. The description for each level of response includes reference to the quality of written communication.

For conciseness, quality of written communication is distinguished within either three or four levels of response.

Where there are three levels of response, quality of written communication is distinguished as follows:

Level 1: Quality of written communication is basic.

Level 2: Quality of written communication is good.

Level 3: Quality of written communication is excellent.

In interpreting these level descriptions, examiners should refer to the more detailed guidance provided below:

**Level 1 (Basic):** The candidate makes only a limited selection and use of an appropriate form and style of writing. The organisation of material may lack clarity and coherence. There is little use of specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

**Level 2 (Good):** The candidate makes a reasonable selection and use of an appropriate form and style of writing. Relevant material is organised with some clarity and coherence. There is some use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are sufficiently competent to make meaning clear.

**Level 3 (Excellent):** The candidate successfully selects and uses the most appropriate form and style of writing. Relevant material is organised with a high degree of clarity and coherence. There is widespread and accurate use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are of a sufficiently high standard to make meaning clear.

Where there are four levels of response, quality of written communication is distinguished as follows:

Level 1: Quality of written communication is basic.

Level 2: Quality of written communication is satisfactory.

Level 3: Quality of written communication is good.

Level 4: Quality of written communication is excellent.

In interpreting these level descriptions, examiners should refer to the more detailed guidance provided below.

**Level 1 (Basic):** The candidate makes only a basic selection and use of an appropriate form and style of writing. The organisation of material may lack clarity and coherence. There is little use of specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

**Level 2 (Satisfactory):** The candidate makes a satisfactory selection and use of an appropriate form and style of writing. Relevant material is organised with some degree of clarity and coherence. There is some use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are of a satisfactory standard to make meaning evident.

**Level 3 (Good):** The candidate makes a good selection and use of an appropriate form and style of writing. Relevant material is organised with good clarity and coherence. There is good use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are of a good standard to make meaning clear.

**Level 4 (Excellent):** The candidate successfully selects and used the most appropriate form and style of writing. Relevant material is organised with a high degree of clarity and coherence. There is widespread and accurate use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are of the highest standard to make meaning absolutely clear.

**1 AO1**

Responses may include:

- Communication
- Managing People
- Financial Management
- Business Operations

(4 × [1])

[4]

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**2 AO1, AO2**

**(a) Management Information Systems (MIS)**

Responses may include:

- Data collection – Easy Read Publishers could use a management information system to store data. The management information system stores the information in one or two database systems. The first kind of database, the relational database, stores input from users of Easy Read Publishers, then relates that information to other information throughout the system. The database subsequently puts information into graphs or charts so users of Easy Read Publishers can compare data. The second kind of database, the hierarchical database, stores data in the order that it was received, but provides no comparison tables for the user of Easy Read Publishers.
- Report Generation – while the Management Information System serves to store data, it also uses that data to generate reports. Users/ employees using the MIS determine the types of reports, with specific templates available in the system for various types of reporting. When prompted by the user of Easy Read Publishers, the system compiles the reports required, inserting data into the template, then prints the report for the business.
- Integration – the Management Information System functions with open access. Open access means that the primary Management Information System can be connected to, or integrated with, other systems within Easy Read Publishers, enabling changes to data from different sources and from multiple locations. This function provides two important outcomes. Easy Read Publishers can update the system to provide information in conjunction with policies and regulations, and the system can be maintained without specialists.
- Scalability – an important feature of a Management Information System is that Easy Read Publishers can purchase a small version of a system and then, over time, add to it as finances allow. Easy Read Publishers can add increased data capabilities, as well as system features, to the initial system as Easy Read Publishers grows, eliminating the need for the Easy Read Publishers to purchase an entirely new system every few years.

All valid responses will be given credit

[1] benefit identified

[2] benefit identified with a basic description or application to Easy Read Publishers

[3] benefit identified with a good description and application to Easy Read Publishers

[4] benefit identified with an excellent description and application to Easy Read Publishers

(1 × [4])

[4]

**(b) Performance Management Systems (PMS)**

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Responses may include:

- Storage and/or integration – employee records and other relevant data can be stored and integrated in one central system by Easy Read Publishers. Managers and employees will be able to access the relevant information to prepare and complete performance reviews, and to store information for ongoing use.
- Monitoring performance – Easy Read Publishers will be able to monitor employee performance more effectively as the PMS provides a facility for recording and tracking information related to performance, such as objectives or targets achieved.
- Improved communication – a PMS may enable a more efficient flow of information for Easy Read Publishers related to the outcomes of a performance review, for example communications to the Finance Department via an automatically generated report if a bonus is to be paid for meeting targets, or to the HR Department if further training is required.

All valid responses will be given credit

[1] benefit identified

[2] benefit identified with a basic description or application to Easy Read Publishers

[3] benefit identified with a good description and application to Easy Read Publishers

[4] benefit identified with an excellent description and application to Easy Read Publishers

(1 × [4])

[4]

8

**3 AO1, AO2, AO3**

Responses may include:

Secure Socket Layer (SSL)

SSL is a standard security technology for establishing an encrypted link between Easy Read Publishers server and their client (customer) – typically a web server (website) and a browser, or a mail server and a mail client (e.g. Outlook). Secure socket layer allows sensitive information such as credit card numbers and login credentials to be transmitted securely.

Advantages of SSL

- Security – SSL adds a layer of security to the online transactions. This security certificate helps protect personal payment information that customers enter on the Easy Read Publishers website. SSL encrypts information using a unique process that turns information into random letters, numbers, and symbols to make data intercepted look garbled and useless.
- Trust – Easy Read Publishers can get an EV (Extended Validation) certificate, proof of which shows as a green address bar in the browser; this gives customers a sense of trust. Customers will appreciate any effort that demonstrates Easy Read Publishers are taking their security seriously.
- Verification – SSL provides Easy Read Publishers customers with the facility to verify their payments online.
- Integrity of data – Easy Read Publishers is guaranteed the integrity of data. With an SSL certificate, Easy Read Publishers will be able to intercept data going to and from the webserver, as well as change it.
- Prevent data breaches – Easy Read Publishers will be able to defend the company's brand and status and adhere to the security regulations set.

Programmes for encryption and traffic management can thwart attackers' threats of using encryption to hide malicious information.

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#### Disadvantages of SSL

- Cost of certificate – the SSL providers need to set up a trusted infrastructure and validate Easy Read Publishers' identity. This involves high costs for Easy Read Publishers.
- Performance – this leads to performance issues for Easy Read Publishers as it takes more server resources than if the information was not encrypted.
- Expired certificate – Easy Read Publishers will need to renew their SSL certificate periodically. When it expires, customers visiting their website get a pop-up message saying that the SSL certificate in their website has expired and it is no longer considered secure.

All valid responses will be given credit

[0] is awarded for a response not worthy of credit

#### Level 1 ([1]–[4]) Basic

- Basic knowledge and understanding of Secure Socket Layer (SSL).
- Basic application to Easy Read Publishers.
- Analysis and evaluation are basic.
- Basic judgement made.
- The quality of candidate's written communication is basic.

#### Level 2 ([5]–[8]) Satisfactory

- Satisfactory knowledge and understanding of Secure Socket Layer (SSL).
- Satisfactory application to Easy Read Publishers.
- Analysis and evaluation are satisfactory.
- Satisfactory judgement made.
- The quality of candidate's written communication is satisfactory.

#### Level 3 ([9]–[12]) Good

- Good knowledge and understanding of Secure Socket Layer (SSL).
- Good application to Easy Read Publishers.
- Analysis and evaluation are good.
- Good judgement made.
- The quality of candidate's written communication is good.

#### Level 4 ([13]–[16]) Excellent

- Excellent knowledge and understanding of Secure Socket Layer (SSL).
- Excellent application to Easy Read Publishers.
- Analysis and evaluation are excellent.
- Excellent judgement made.
- The quality of candidate's written communication is excellent. [16]

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#### 4 (a) AO1, AO2

Responses may include:

Copyright, Designs and Patents Act 1988 – The Copyright Designs and Patents Act is the main law in the UK which protects copyright holders, and it also applies to copyright material stored on computers and accessible via the Internet.

- Easy Read Publishers can limit the reuse of copyright materials by a third party.

- Copyright is a property right, so can be transferred or sold. Easy Read Publishers could make it a condition of the publication that the copyright is transferred to them for their benefit.
- Copyright is an automatic right which applies to a wide range of creative works in material form, giving creators of original works the right to control the use of their material by third parties, for a fixed period of time. Easy Read Publishers can be subject to this or make a contract with the author to obtain those rights.
- If Easy Read Publishers own the rights, they may be in a better position to pursue someone for an infringement than an author. Financial costs – infringement is usually a civil offence, and any damages would be awarded at the discretion of the court on a case-by-case basis. Additional damages could also be awarded.
- Copyright could be limited for Easy Read Publishers if not obtained 70 years after the author's death.

All valid responses will be given credit

[1] feature identified

[2] feature identified with explanation or application to Easy Read Publishers

[3] feature identified with explanation and application to Easy Read Publishers

(2 × [3])

[6]

**(b) AO1, AO2, AO3**

Responses may include:

Client needs – A Customer Relationship Management System (CRM) is useful to Easy Read Publishers when trying to meet their customer needs. Technology assists in making processes more streamlined. This can lead to increased client and customer satisfaction as well as aid efficiencies both in terms of time and money.

A CRM system will enable Easy Read Publishers, as a client, to:

- Enhance relationships with customers ensuring their needs can be quickly and efficiently attended to. This will put Easy Read Publishers in a better position to sell more products to their customers. They can effectively cross-sell and up-sell at the right moments, with higher success rates.
- Automate tasks – which may have been previously considered laborious. For example, having customer details already populated in respect of new books or related products.
- Ensure there are no information gaps – greater consistency and certainty about their products or services. This will also enable Easy Read Publishers' customers to perceive that their expectations are being met and managed adequately.
- Enhance customer retention – this will give Easy Read Publishers a well-rounded view of their customers.
- Empower employees – tasks can be completed effectively anywhere through mobile apps, web interface and offline access for their customers. This can be measured through the increase in repeat business as well as increased spending per customer.

Time – A CRM system can help reduce the time taken because it can streamline various processes within Easy Read Publishers leading to better business efficacy. A CRM system will enable Easy Read Publishers to:

- Automate marketing activities – which saves time in terms of the customer and employees leading to a tangible increase in revenue.

- Increase customer satisfaction.
- Improve service – through faster response time.
- Manage time – this means that Easy Read Publishers can allocate time to other activities.

Cost – A CRM system can help reduce costs by using electronic methods for marketing activities. A CRM system will enable Easy Read Publishers to:

- Reduce costs – due to the automation of tasks such as completing sales or retrieving customer information quickly.
- Information garnered – the system can indicate customer trends, repeat business and improve sales or indicate where potential savings can be made.
- Market more effectively – leading to increased revenues and reductions/savings on advertising.

Security – A CRM system can help increase security both for Easy Read Publishers and for its customers. A CRM system requires having processes and procedures to protect business and customer data. A CRM system will enable Easy Read Publishers to:

- Provide greater protection – control access to their important customer and business information by securely storing data. With advanced protection and automatic back-up, this data is protected from unexpected events such as a virus or if the system crashes.
- Increase customer confidence – by securely storing customer data, Easy Read Publishers can provide reassurance that customer information will remain confidential.

All valid responses will be given credit

[0] is awarded for a response not worthy of credit

#### **Level 1 ([1]–[4]) Basic**

- Basic knowledge and understanding of the effectiveness of a CRM System.
- Application to Easy Read Publishers is basic.
- Basic analysis.
- The quality of candidate’s written communication is basic.

#### **Level 2 ([5]–[8]) Satisfactory**

- Satisfactory knowledge and understanding of the effectiveness of a CRM System.
- Application to Easy Read Publishers is satisfactory.
- Satisfactory analysis.
- The quality of candidate’s written communication is satisfactory.

#### **Level 3 ([9]–[12]) Good**

- Good knowledge and understanding of the effectiveness of a CRM System.
- Application to Easy Read Publishers is good.
- Good analysis.
- The quality of candidate’s written communication is good.

#### **Level 4 ([13]–[16]) Excellent**

- Excellent knowledge and understanding of the effectiveness of a CRM System.
- Application to Easy Read Publishers is excellent.
- Excellent analysis.
- The quality of candidate’s written communication is excellent. [16]

Responses may include:

Client needs and users in the scenario are both Easy Read Publishers.

#### Client Needs

- Monitoring – this enables the senior management team to have an efficient monitoring of finance control.
- Training – the benefits of training staff to work with spreadsheets is most evident in Easy Read Publishers where employee development and management tracking programmes are implemented.
- Decision Making – spreadsheets can be used to manipulate complex data, supporting decision making, e.g. analysis of data, goal seeking, scenarios, regression and data mining.

#### Users

- Training – although considered to be a very user-friendly system, human errors may cause issues that may lead to Easy Read Publishers making decisions based on incorrect data. It is therefore of the utmost importance that all employees at Easy Read Publishers are given the proper tools and training which will enable them to produce accurate information gathered from the spreadsheets.
- Specialist features – spreadsheet features that would benefit Easy Read Publishers' financial decision making are:
  1. Format cells, rows and columns, specifying for example, the alignment of text, number of decimal points, height and width of cells.
  2. Copy cell contents to other locations with automatic adjustment of formula from, e.g. B9 to C9.
  3. Determine the effect of several different hypothetical changes of data. This facility is termed a 'What-if' calculation.
  4. Insert, move or delete rows and columns.
  5. Use functions such as SUM, AVERAGE, MAX, MIN in formulae.
  6. Write macros to automate common procedures.
  7. Create templates – spreadsheets with formats and formulae already entered, into which new figures may be inserted.
  8. Create multi-dimensional spreadsheet using several sheets, and copy data from one sheet to another.
  9. Create many different types of charts and graphs.

#### Time

- Time Saving – with the help of spreadsheets Easy Read Publishers employees will be able to track, measure and monitor data, this will save time.

#### Cost

- Cost Saving – through proper training, Easy Read Publishers employees will become more familiar with work practices and shortcuts that would ultimately make their job easier. This could lead to Easy Read Publishers employees taking the initiative to find innovative ways to sort or prevent any potential issues, enabling them to make decisions to benefit Easy Read Publishers in a positive and profitable way.
- Increased efficiency – if only beginning with the basics of spreadsheets Easy Read Publishers employees will already show more efficiency in their daily tasks, leading to greater savings for the company.

#### Security

- Password protected – the use of passwords enables restricted access to

confidential information and also ensures that Easy Read Publishers comply with Data Protection Act.

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All valid responses will be given credit

[0] is awarded for a response not worthy of credit

**Level 1 ([1]–[5]) Basic**

- Basic knowledge and understanding of the effectiveness of a spreadsheet to support the financial decision making.
- Application is basic with limited reference to Easy Read Publishers.
- Analysis and evaluation are basic.
- Judgement is limited and may or may not be supported by the candidate's own knowledge, analysis and evaluation.
- The quality of candidate's written communication is basic.

**Level 2 ([6]–[10]) Satisfactory**

- Satisfactory knowledge and understanding of the effectiveness of a spreadsheet to support the financial decision making.
- Application is satisfactory with some reference to Easy Read Publishers.
- Analysis and evaluation are satisfactory.
- Judgement is partially reasoned and supported by the candidate's own knowledge, analysis and evaluation given.
- The quality of candidate's written communication is satisfactory.

**Level 3 ([11]–[15]) Good**

- Good knowledge and understanding of the effectiveness of a spreadsheet to support the financial decision making.
- Application is good with reference to Easy Read Publishers.
- Analysis and evaluation are good.
- Judgement is reasoned and supported by the candidate's own knowledge, analysis and evaluation given.
- The quality of candidate's written communication is good.

**Level 4 ([16]–[20]) Excellent**

- Excellent knowledge and understanding of the effectiveness of a spreadsheet to support the financial decision making.
- Application is excellent with clear reference to Easy Read Publishers.
- Analysis and evaluation are appropriate, clear and logical.
- Judgement is fully justified and informed by candidate's own knowledge, analysis and evaluation given.
- The quality of candidate's written communication is excellent. [20]

20

**6 AO1, AO2, AO3**

Responses may include:

Benefits of Easy Read Publishers using data analytics may include:

- Key Performance Indicators will be generated, these will provide Easy Read Publishers with information relating to their performance and highlight areas for improvement.
- Easy Read Publishers can use data analytics to gain competitive advantage by organising the available information in an accurate and easily interpretable format.
- Easy Read Publishers will interrogate the information gathered to decide which items are important to assist with decision making.
- Storing vast amounts of data will allow Easy Read Publishers to utilise

Artificial Intelligence to identify trends through dashboards and the generation of reports to assist in Easy Read Publishers remaining competitive.

- Cost savings to Easy Read Publishers.
- Fraud can be detected the moment it happens, and proper measures can be taken to limit the damage to Easy Read Publishers.
- Improved sales insights which could lead to additional revenue for Easy Read Publishers.
- Easy Read Publishers can keep up with customer trends.

Drawbacks of Easy Read Publishers using data analytics may include:

- The number of Key Performance Indicators generated can be difficult to manage and action.
- Data analytics can be prone to data breaches so increased security may be needed.
- Easy Read Publishers will require more storage to manage the complex data.
- Use of real time insights may provide a different way of working within Easy Read Publishers.
- Predictions and correlations are not always accurate and miscalculations can have very problematic consequences.

All valid responses will be given credit

[0] is awarded for a response not worthy of credit

#### **Level 1 ([1]–[5]) Basic**

- Basic knowledge and understanding of the use of data analytics to support decision making in Easy Read Publishers.
- Application is basic with limited reference to Easy Read Publishers.
- Analysis and evaluation are basic.
- Judgement is limited and may or may not be supported by the candidate's own knowledge, and analysis and evaluation.
- The quality of candidate's written communication is basic.

#### **Level 2 ([6]–[10]) Satisfactory**

- Satisfactory knowledge and understanding of data analytics to support decision making in Easy Read Publishers.
- Application is satisfactory with reasonable reference to Easy Read Publishers.
- Analysis and evaluation are satisfactory.
- Judgement is partially reasoned and supported by the candidate's own knowledge, analysis and evaluation given.
- The quality of candidate's written communication is satisfactory.

#### **Level 3 ([11]–[15]) Good**

- Good knowledge and understanding of data analytics to support decision making in Easy Read Publishers.
- Application is good with appropriate reference to Easy Read Publishers.
- Analysis and evaluation are good.
- Judgement is reasoned and supported by the candidate's own knowledge, analysis and evaluation given.
- The quality of candidate's written communication is good.

#### **Level 4 ([16]–[20]) Excellent**

- Excellent knowledge and understanding of data analytics to support decision making in Easy Read Publishers.

- Application is excellent with clear reference to Easy Read Publishers.
- Analysis and evaluation are appropriate, clear and logical.
- Judgement is fully justified and informed by candidate's own knowledge, analysis and evaluation given.
- The quality of candidate's written communication is excellent.

[20]

**Total**

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**90**