Institute of Chartered Accountants – Ghana (ICAG)

Paper 1.2

Business Management and Information Systems

Final Mock Exam 1

Marking scheme and suggested solutions

DO NOT TURN THIS PAGE UNTIL YOU HAVE COMPLETED THE MOCK EXAM
Question 1

Marking scheme

(a) Maximum 1 mark for each reason identified and explained. Note that reasons must be advantages for the employer 5 max

(b) 1 mark for explaining each method of changeover:
- Direct, parallel, pilot, phased
- 1 mark for selecting and justifying direct (or phased, or pilot by location) as a suitable method for air traffic control.

4 max

1 max

(c) 1 mark for each way in which an EIS could help a clothing retailer. Capped at 2 if no reference made to a clothing retailer.

5 max

(d) 1 mark per relevant principle of TQM. NB the suggested solution covers all seven aspects of PRECEPT – any five of these would be sufficient to score full marks.

5 max

20

Suggested solution

(a) **Reduced office space**

By having fewer staff on site, the employer can save on office space. Depending on the location, this saving can be substantial.

**Reduced overheads**

As well as saving space, if an entire office can be closed there is no need to maintain the related infrastructure and facilities (eg canteen, security etc).

**Improved motivation**

Many people find the flexibility of working from home as highly attractive. In return for this opportunity, they are likely to be more amenable to managers' requests for additional assistance.

**Improved recruitment**

When it comes to recruiting new staff, employers will have access to a wider pool of potential applicants – most notably parents returning to work.

**Increased productivity**

Although some employers fear a fall in productivity due to reduced supervision, many staff who work from home are more productive in part because the time they spend commuting can be spent working.

(b) **Direct changeover**

The existing system is turned off as soon as the new system is turned on.

**Parallel running**

When the new system is turned on, the old system continues to operate. This allows the new system to be checked for accuracy by comparing its output with the output of the existing system.

**Pilot running**

One part of the new system is trialled in parallel with the existing system. This can involve one part of the new system across all locations (eg the sales ledger part of a new accounting package) or one geographical location.
Phased running
Phased running is the same as a pilot but, whereas a pilot implementation may be delayed or even cancelled, a phased implementation involves committing to a roll out schedule at the start of the implementation.

Most appropriate for air-traffic control
It is unrealistic for an air traffic control system to be only partly implemented or run in parallel with an existing system as there could be confusion over which data is correct. As a result, the most effective method of implementation would be direct, although this would only be appropriate after intensive testing.

(c) An Executive Information System (EIS) combines internal and external information to inform senior strategic managers. In the case of an online clothing retailer, this could offer the following support:

Dashboard
Senior managers could view internal and external data on a user-friendly dashboard that conveys key messages quickly and clearly. In this case, this could include sales by clothing type as well as competitor activity.

Drill-down functionality
Having seen a high level sales trend (eg demand for a particular product range increasing), the EIS would allow manager to drill down to identify what has driven this trend (eg a particular product or customer type).

Competitor analysis
The EIS could gather and present competitor data. This would not be easy to obtain, although significant volumes of data can be obtained through the internet.

Measuring performance
The competitor's data could be compared to the organisation's own performance (eg relative market share, top-performing product ranges, stock availability).

Support for decision-making
All of this data can be used as a basis for strategic decision-making. The EIS is particularly valuable here as it combines internal and external information.

(d) Total Quality Management has seven principles (only five of the below required to answer this question):

Prevention
The basis of TQM is that prevention is better (and cheaper) than cure. TQM advocates investing in prevention and appraisal costs in order to save on internal and external failure costs.

Right first time
Under TQM, failure is not an option. Every effort must be made to get it right first time by investing in the prevention and appraisal costs described above.

Eliminate waste
TQM does not set out to minimise waste – the expectation is that it will be eliminated. Until that is achieved, work must continue. In reality, TQM is not a project but an ongoing philosophy.

Continuous improvement
TQM sees quality as something that can always be improved upon. No matter how good the current offering, TQM challenges staff to improve it further.

Everybody's concern
Quality is not the responsibility of a "Quality Control" department; it is the responsibility of every single member of staff and should therefore be considered whenever a decision is made, no matter how large or small.
Participation
With quality being everybody's concern, TQM emphasises the importance of allowing staff at all levels of the organisation to contribute ideas.

Teamwork and empowerment
As well as involving all staff, TQM recognises the need for staff to work towards a shared vision of quality as a single team. Individuals are empowered to take action if it will assist the organisation in achieving this vision.
Question 2

Marking scheme

| (a) Limited answer: a brief description of PEST ie simply stating what factors make up the model would earn 1–2 marks | Marks |
| Pass standard answer: a clear but limited explanation of its purpose would earn 3 marks | |
| Strong answer: a comprehensive explanation with reference to FlySmart would earn 4–5 marks | 5 |
| (b) Limited answer: a definition of each of the PEST factors with general (non-FlySmart) examples would earn 6–7 marks | |
| Pass standard answer: identification of specific issues facing the industry with some explanation would earn 8–11 marks | 15 |
| Strong answer: a comprehensive explanation of issues clearly linked to the scenario would earn 12–15 marks | 20 |

Suggested solution

(a) All companies are subject to environmental influences and it is important for a business to consider the impact that any changes in its environment will have on future activities and potential growth.

This is particularly important for companies that trade in a number of different countries as the environmental factors will be different in every country. A business needs to be able to identify these factors and assess the risk that they pose to the company's operations. For a company like FlySmart who conducts activities in many African countries it is important to monitor and if necessary react to (or anticipate) changes that may arise.

An analysis model like PEST will allow a company to take a structured approach to evaluating its environment. The PEST model focuses on political, economic, social and technological factors so a business can identify the external issues it is facing and decide appropriate strategies. This approach means that companies are able to be pro-active and can attempt to reduce the impact of any adverse occurrences that could occur in its environment. By doing so businesses can recued the likelihood of being taken by surprise.

(b) The PEST model consists of political, economic, social and technological factors:

**Political**

Issues in this category tend to focus on problems that occur for the organisation due to non-market factors, usually government policy and instability. Instability in countries such as Egypt has impacted travel in recent years.

*Possible new legislation* – If the retirement age and personal contributions to pensions are increased this will be a threat to the travel industry due to individuals having to work more and also having less disposable income where luxury items like holidays may be cut in favour of more essential items like mortgages.

*Pollution/emissions* – Public awareness of this issue has become more prominent and because of this level of growing interest it is increasingly likely that governments may decide to collaborate on action to reduce emissions. This could mean an increase in costs for FlySmart while they look at ways to reduce harmful emissions.

One way for governments to address part of this issue would be to increase taxes to force companies to reduce their emissions. This would be a major problem for the air travel industry as they would have to pass on the extra costs to customers which could reduce demand or absorb the extra costs themselves which would reduce their margins. Some African governments have imposed onerous taxes on fuel and tickets, and airlines are charged higher insurance premiums than established airlines in other countries.
This could also be a potential opportunity for FlySmart to demonstrate their Corporate Social Responsibility by being pro-active on this issue. This could be a potential marketing tool due to the rise of green consumerism.

**Economic**

Factors to consider here could be economic growth/slump, inflation, exchange rates, interest rates. These factors affect demand for and ability to acquire goods and services.

*Reduced disposable income* – This will have a definite impact on demand for air travel. In the current global financial crisis rising prices and restrictions on lending, coupled with lower levels of job security will cause people to cut their spending on leisure. However as FlySmart is operating in the lower cost air travel sector this could present as an opportunity for them as people will be looking to save money and may decide to switch to a low cost operator.

*Fuel costs* – Prices are rising due to uncertainty over supply of oil and increasing demand. An increase in prices could have a major impact on FlySmart as fuel is 25% of their operating costs. Again there is the dilemma of passing these costs to customers or accepting reduced margins.

**Social**

This section of the model looks at the beliefs, morals, behaviour and structure of society. Culture and attitudes are very difficult to change.

*Demographic changes* – It has been identified that key changes are taking place with the aging population and the associated increase in the number of retired people dependent on state pensions. The requirement for working people to increase their pension contributions will reduce disposable income, and could limit the growth of the sector.

*Changing trends* – Increasingly, business travellers are turning to low-cost airlines. As a low cost airline this should be an area that FlySmart should consider as a target market.

**Technological**

The scope for this category includes protection of intellectual property, standards of education, technical infrastructure, ease of communication and so on.

*Online facilities* – This is essential to FlySmart's business model as it relies entirely on online bookings. Internet access has become an essential part of everyday life so this will increase the size of the potential market and in turn revenues. FlySmart may need to consider allocating funds for investment in IT/IS to maintain current service levels and allow them to be flexible to the macro-economic influences.

*Improvements in engine efficiency* – This is important as these developments could help to reduce emissions and make more economical use of fuel. This would mean for FlySmart that it would incur a certain level of short term costs to upgrade their fleet but should save money long-term and improve their corporate image.

The PEST analysis shows that the air travel industry is complex and dynamic. Changes in the environment present FlySmart with both threats and opportunities. FlySmart must monitor their environment and be able to respond quickly and effectively to any changes.
Question 3

Marking scheme

<table>
<thead>
<tr>
<th>Marking</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) One mark for each aspect explained with reference to the scenario including an introduction</td>
<td>5</td>
</tr>
<tr>
<td>(b) One mark per relevant point related to the scenario</td>
<td>5</td>
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<tr>
<td>(c) One mark for each issue addressed</td>
<td>5</td>
</tr>
<tr>
<td>(d) Brief outline of Herzberg's theory</td>
<td>2</td>
</tr>
<tr>
<td>Application to MediaConz</td>
<td>3</td>
</tr>
</tbody>
</table>

Total | 20 |

Suggested solution

(a) Service quality

MediaConz provide a wide range of services. To be successful they need to meet their client's needs consistently. The main aspects of service quality that they will need to address are:

Reliability

It is important that the services are provided whenever the customer requires them without undue delay. The cost to customer could be large if MediaConz were to let them down on access to legal advice or contract completion.

Accuracy

MediaConz need to ensure that their staff are skilled and knowledgeable so that they provide the best advice and provide the best deals for their customers.

Consistency

The level of performance of MediaConz staff and service needs to be consistent to ensure that they meet the needs of the customer.

People

Being a service organisation it is imperative that the staff are seen as professional, capable and people that the customer finds they can trust and feel comfortable working with. This goes back to recruitment and training needs of MediaConz.

(b) Response to threat of loss of customer

There are a range of potential responses to the threat of losing the BBC contract. One approach is suggested below:

1. Review the contract details and performance
2. Identify key decision makers in BBC
3. Assess the weaknesses that have lead to the quality concerns from the client
4. Draw up a plan for improving performance issues in the short, medium and long term
5. Assess the costs and benefits of improving performance versus losing the contract
6. Decide whether to continue with contract; and if so
7. Contact client and sell improvement approach
8. Put improvements in place emphasising the importance of quality to staff.

9. Consider other quality initiatives – eg quality circles, quality control and a review of procedures and processes to increase assurance (ie avoidance of error).

Other sensible answers will gain credit.

(c) **Management development programme**

Management development is the process of developing management talent in the organisation by training, coaching, job design, mentoring and other associated activities (eg secondment).

For MediaConz it would address the following problems:

- **People management skills**

  Whilst staff are seen as technically good a weakness has been identified relating to people skills. This may be addressed by a mixture of training and on the job support including mentoring (perhaps by external consultants) or executive coaching. Key objectives related to staff management need to be in place to measure success and to incentivise managers. The benefit should be increased motivation and productivity and greater retention of staff.

- **Language skills**

  This is a key objective to underpin European market penetration. This will be more likely to be adopted if taken on by the managers who can provide leadership in this respect.

- **Loss of team cohesion**

  Increased management skills both in terms of team building and communicating objectives will prevent some of the loss of cohesion when busy and allow managers to have a greater oversight over what the priorities need to be at those times. This in turn should reduce staff stress and increase motivation.

- **Increasing turnover of support staff**

  A management development activity could be to recognise the contribution made by all staff – not just professional staff. By building a whole team managers may reduce turnover and hence the costs related to disruption and recruitment that it brings.

- **Threat from US companies**

  When a company is under threat from competition improved management skills is a key defence in terms of managing the resources of the business and seeking to grab opportunities in the marketplace. For example, if quality can be improved by a more focused and skilled management team then our customers may be unwilling to switch to a US competitor due to loyalty to MediaConz.

(d) **Motivating staff other than with cash**

Relevant theory is that of Herzberg who identified two main factors related to motivation (ie the urge to act):

- **Hygiene factors** (context of work) – such as basic pay, relationships and working conditions; these will lead to dissatisfaction if insufficient but will not actually motivate.

- **Motivators** (content of work) – such as the job itself, recognition and advancement will motivate.

Wage levels in the market are rising and so MediaConz staff could work elsewhere for increased wages.

MediaConz have two main possible options:

1. **Increase wages to meet the market** rates – this will reduce the scope for performance related bonuses and puts more of the committed wage bill into a hygiene factor (ie basic pay – paid regardless of performance and achievement).

2. **Don't increase basic pay** but increase the motivators such as the job content, empowerment and recognition.
MediaConz managers can therefore look at job design – rotation, enlargement and enrichment – as well as teamwork and delegation to attempt to increase motivation. Should this lead to increased performance then recognition can be given not only by staff meeting or exceeding objectives but also in the form of financial bonuses. It is possible that the overall financial package will be enhanced if performance can be improved significantly as a result. (Note – performance requires more than just motivation and so MediaConz should also look at training and other ways of increasing skill levels.)
Question 4

**Marking scheme**

| Explanation of the value chain and value system | 5 |
| Identification of weaknesses – one mark per point applied | 5 |
| **Total** | **10** |

| (b) HR planning issues – one mark per point made | 6 |
| Mitigating actions related to issues raised above | 4 |
| **Total** | **10** |
| **Total** | **20** |

**Suggested solution**

(a) **Value chain and value system**

The value chain was developed by Michael Porter to describe the activities within an organisation that create value as perceived by the customer. The value chain comprises two main sets of activities:

- **Primary activities** – which when combined actually convert inputs to outputs; they are inbound logistics (stock management), operations (conversion of raw inputs to finished product/service), outbound logistics (warehousing and distribution), sales and marketing and service (e.g. warranties, spare parts or help lines).

- **Support activities** – which include infrastructure (strategic management, finance etc), human resources, technology development (IT support and R&D activities) and procurement (purchasing and any other activity related to acquiring inputs and assets).

Porter emphasised the links between the value chains of businesses along the supply chain. They work together to create a **value system** so that value created by our suppliers can enhance the value perceived by our own customers (e.g. supplier's outbound logistics efficiently linking into our inbound logistics).

**TWG value chain potential weaknesses**

Areas of concern for TWG include:

- Planning – the infrastructure activity seems to be struggling with planning the event as evidenced by the mix up over dates.

- Facilities – the facilities provided are basic and this may put some customers off; this may be a weakness in the operations side.

- Range of suppliers – this may be valued by customers and make up for some of the basic facilities, however, it may cause concern for the exhibitors who may see the showground food as an unwelcome competitor.

- Refrigeration – relies upon central storeroom being well labelled and organised and the effectiveness of the local generators used by exhibitors; if food goes off or even worse causes a public health hazard then this will detract from TWG reputation as much as the exhibitors.

(b) **HR planning is the process of forecasting, reviewing and matching the supply and demand for staff.**

**Demand (the number and skills of staff required)**

TWG need a range of staff at different times in the year. During the conferences their time there they need staff to set up the showground, help customers when they arrive, steward during the event and help when they leave and clear up afterwards.

TWG require customer-focused staff with a ‘can do’ attitude. This may be difficult, given many staff will be casually employed for three weekends a year.
TWG have two locations. The ideal may be to find staff who are willing to travel, reducing the need for training. They perhaps want to retain the skills of these staff so that they come back each year.

Other key skills will include an awareness of public health and safety and first aid as well as how to pitch a tent and/or site a caravan!

Rewards will need to be sufficient to gain the staff with the required skills and attitudes but not be so excessive as to make the venture unprofitable.

Contracts will be very short term and be clear on issues such as working days and hours, holiday pay and sick pay. TWG must ensure that they make appropriate arrangements for payment and legal duties related to employment.

The teams will come together for a short time so TWG should allow some time for familiarisation and team building, so that staff can work efficiently.

Managers and supervisors will be important and should be hired with experience of organising this type of event. They may consider making use of showground expertise to advise and/or direct given their local knowledge.

Full time staff will be small in number and ideally would be multi-skilled in both office and field activities to provide flexibility.

Supply (the population available to recruit from)

The conference staff will come from a pool in the labour market that are willing to take on short term activities. This would likely include students and the unemployed – anyone not in full time employment.

The challenge for TWG is to recruit staff that are available and willing to take such a short term assignment that also have the skills and attitude required.

These issues may be summarised as:

- Ensuring an appropriate number of staff
- Ensuring staff have the skills required
- Ensuring appropriate and effective rewards
- Contractual arrangements
- Organisation and teamwork

Actions to help mitigate the risks associated with these HR planning issues may be summarised as:

- Pay above market rates
- Provide training in key skills
- Provide food and accommodation
- Members scheme – providing access to ‘Good Food’ members’ offers
- Simplify the offering to customers to reduce the skill set required of staff
Question 5

Marking scheme

<table>
<thead>
<tr>
<th>(a)</th>
<th>Explanation of the PEST model</th>
<th>2</th>
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<tbody>
<tr>
<td></td>
<td>Application of the model – up to two marks per section</td>
<td>Max 8</td>
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<tr>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>(b)</td>
<td>Identification of an issue with explanation – up to two marks per well explained issue to a maximum of ten marks</td>
<td>10</td>
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<td>20</td>
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</table>

Suggested solution

(a) The PEST framework can be used to analyse the environment a business operates in. The model focuses on political, economic, social and technological factors and will indicate to Nathan the various risks and influences upon his decision and help him decide upon its suitability or otherwise for the business.

**Political**

The local council is likely to be split between supporting Concrete Tough (CT) for its employment opportunities and other contributions that it makes to the local economy (such as payment of national non-domestic rates and supply of products) and responding to the pressure from residents who object to the noise and pollution from its activities.

The council in the rival town is likely to welcome any relocation of the business to its own site, but is likely to have the same pollution concerns.

Legal limits on poisonous emissions and noise levels must be also considered.

**Economic**

The decision to take up the opportunity with the new company would involve redundancies in the local community, which already has high unemployment levels.

For CT, however, an entire new market would be opened up and would reduce the current reliance on a relatively slow and seasonal local economy as the new blocks can be sold all year and into a much wider geographical area.

**Social**

Redundancies would have an impact on the social framework of the local area as the new contract will create some jobs but CT will have to make a significant number redundant.

In addition the local residents are concerned about the impact of the activities on their health and object to CT’s current activities and the new venture will worsen the pollution situation.

**Technology**

The current processes are very low-tech, but this new opportunity would require significant investment in new CAM technology, with a trained workforce to operate it.

This would be a fundamental change to the usual business environment that CT operates in and will have significant resource implications in that CT will need to find funding to invest in the new equipment and recruit staff that are more highly skilled than their usual grade of labour.
(b) The issues that CT are facing with the potential system installation include:

**Funding**
CT need to determine where the company will source the funding from for the system and also decide a feasible budget for the new system. If the company does not have the cashflow to pay for the system then CT will have to borrow the money which may mean approaching the bank with a comprehensive business plan.

**Ensure accurate determination of requirements**
CT should establish what processes and activities the new system will need to be capable of doing in order to determine whether they will buy an off-the-shelf package or will need to have a bespoke system designed. This could be difficult as the company have no experience of this process so will need to bring in a consultant or get expert advice from the large civil engineering company who are offering them the contract.

**Finding a supplier**
Once CT have determined the requirements of the new system they will then need to find an appropriate supplier. There should be a tendering process done for the job so that CT can evaluate all options. Again the other company may be able to offer a recommendation as its likely they use a similar system.

**Timescale, budget and project personnel**
As soon as the supplier selection has been done, CT and the supplier need to decide the timescale for the project and which personnel are going to be involved in managing the installation. CT should decide an appropriate representative from their company and the supplier should also have representation.

**Selection of hardware**
CT need to ensure that they purchase the correct hardware to run the system in terms of servers and user hardware.

**Testing**
The software should be tested extensively before the system goes live to ensure production when it goes live is unaffected and CT can start meeting their new requirements quickly. This will be vital to ensure they can generate the higher profits to pay back all the initial investment in technology.

**Recruitment**
The new technology will require skills that CT don't have at the moment so the company needs to focus on recruiting staff that have experience in operating this type of technology. In addition CT may decide that they need to now have a small number of IT staff.

**Training**
Staff retained by CT will need to be trained on the new system. In addition, any new staff recruited with experience of CAM, will still training on how CT are using the technology and the type of products they are manufacturing. This will need to be done prior to the system going live.

**Service level agreement**
CT need to negotiate the SLA to ensure response times for system failures, how often maintenance will be run on the system, agree service costs and duration of the contract and also determine the penalties for failure to meet the SLA.

**Security**
The technology will be vital to CT once installed so it is essential that the company place controls around the system. These controls should include the physical security in terms of a secure location with limited personnel access and also implement user controls like passwords and specific access levels for the different grades of staff. As it is likely that CT will need to have external service support, then there will also need to be an external network link to that company which also means that firewalls and virus applications will need to be installed.

*Note: Any other relevant issues identified and explained would be given credit.*
**Question 6**

**Marking scheme**

<table>
<thead>
<tr>
<th></th>
<th>Marks</th>
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<tbody>
<tr>
<td>(a)</td>
<td>One mark for identifying the four stages of the Produce Life Cycle (introduction, growth, maturity, decline)</td>
</tr>
<tr>
<td></td>
<td>One mark for relating each stage to a smartphone manufacturer</td>
</tr>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td>(b)</td>
<td>One mark for each segment identified</td>
</tr>
<tr>
<td></td>
<td>Answers could include: brand, age, gender, income, use</td>
</tr>
<tr>
<td>(c)</td>
<td>Up to 2 marks for each explanation to a maximum of 5 marks</td>
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<tr>
<td></td>
<td>1 marks for describing each alternative</td>
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<tr>
<td>(d)</td>
<td>1 mark for an accurate description of each activity:</td>
</tr>
<tr>
<td></td>
<td>Inbound logistics, operations, outbound logistics, sales &amp; marketing, service</td>
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**Suggested solution**

(a) **Introduction**

The manufacturer introduces a new model incorporating new technology to the mobile phone market. A premium is able to be charged for this product due to its novelty.

(b) **Growth**

An increasing number of customers want the product, which stimulates growth. The price starts to fall reflecting the move of the product into the mainstream. At the time of writing (December 2014), the iPhone 6 is at this stage.

(c) **Maturity**

The market stops growing and competition intensifies. Manufacturers try to maintain customer interest by fine-tuning the product. This can be done by making minor tweaks to what is essentially the same product. Standard internet-enabled phones would fall into this category.

(d) **Decline**

The phone has been superseded by a newer piece of technology and demand falls. The manufacturer lowers the price to get rid of any remaining inventory. This would apply to monochrome screen phones.

(b) **Brand**

Customers may choose a fragrance based purely on the brand. For example, cosmetic brands are often linked to a particular celebrity who appeal to a particular age demographic.

**Age**

Different types of fragrance will appeal to different age demographics, linked to how the fragrance is marketed.

**Gender**

Females and males buy different cosmetic products, for example aftershave versus perfume.

**Income**

Fragrances can vary dramatically in price. Some fragrances are marketed as mainstream products, and others are marketed and priced as aspirational products, aimed at those on high incomes looking for an exclusive product.

**Use**

Fragrances can be used for different purposes, for example an everyday daytime fragrance and a special occasion/evening fragrance.

*Note: Other reasonable market segments would be given credit.*
(c) **Product orientation**

The company concentrates on producing a sophisticated product, seeing product features as the key to success. The organisation sees the customer as a rational-economic purchaser who weighs up the features of competing products in an objective manner.

**Production orientation**

The company focuses on efficient production of products it believes customers will buy – without trying to find out if there is a market for its goods. Products are usually mass produced as efficiently and cheaply as possible.

**Selling orientation**

The organisation sees customers as not being naturally inclined to buy, so the company has to push the product through active promotion. Selling orientated believe that almost any product or service is sellable if the potential transaction is approached the right way.

(d) **Inbound logistics**  Activities relating to the receiving, handling and storing of inputs for production, for example warehousing and transport.

**Operations**  Activities that convert inputs into outputs, for example the production process.

**Outbound logistics**  Activities relating to the storing of the product and its distribution to customers.

**Marketing and sales**  Activities that inform the customer about the product, for example advertising and promotion.

**Service**  Activities relating to after-sales service, for example installation, repairs, returns and upgrades.
Question 7

Marking scheme

(a) Definition of ERP system
Benefits: Up to 2 marks for each well explained benefit linked to scenario
Single database – no duplication of data
No need for reconciliations between systems (time and cost)
More reliable information collection/ transmission
Faster information collection, allowing faster decision-making
Better quality analysis and reporting
Less risk of human error
Link to other business functions (e.g. procurement, inventory management)
Ease of access via a shared network
Better security due to single data location

Marks

(b) Up to 2 marks for each well explained point from the following list
Ensure file conversion is accurate
– Agree original records (‘flash’ and accounts)
– Record data in suitable format
– Import into ERP system
– Validate and correct as necessary
Installation of hardware and software
– Prepare sites in shops and Head Office (comm’s links)
– Install hardware and software (specialist contractors)
Training of staff
– Training course for Head Office staff/data analysts
– On-the-job training for shop staff
Documentation
– User manuals and online Help
– Clear procedures for change
Testing (realistic/contrived/volume/acceptance)
– Recommend appropriate testing methods
Changeover (direct/parallel/pilot/phased)
– Recommend appropriate changeover (probably parallel or phased)

Suggested solution

(a) TripleJuice is intending to install an ERP system. An ERP system is an integrated, company-wide database and information management system that links all elements of the business. It is likely to include modules for finance, logistics and human relations.

TripleJuice should expect the following benefits from its new system:

- The ERP system is a single database which removes the duplication caused by operating the ‘flash’ spreadsheet and the accounts package.
- The single system will eliminate the need for time-consuming reconciliations or, as is the case now, two conflicting versions of the same data.
- The opportunity for human error in recording and transferring data is dramatically reduced. Transactions are automated and transaction data is sent immediately to Head Office.
- Information will now be available faster. This, combined with the improved accuracy due to the removal of human error, will ensure accurate, timely information is available for decision-making purposes.
The ERP system will enable more sophisticated reporting. A wide range of standard and/or bespoke reports will be available, based on the accurate underlying database. These reports will facilitate better quality decision making at all levels of the organisation.

An ERP system can include additional business processes, for example procurement and/or inventory. This would enable more effective sourcing, purchasing and management of raw materials.

Being based on a single networked database, the ERP system will enable access to many users at the same time. This would not be possible with the 'flash' spreadsheet.

The ERP system will incorporate higher levels of security of the data such as access controls and data encryption, ensuring data is kept confidential.

(b) The TripleJuice steering group could help ensure the successful implementation of the ERP project through the following actions:

File conversion
The source data ('flash' or accounts package) will need to be identified and then formatted in a way that enables automated conversion/import to the ERP system. This may involve translating source data into a different format or structure, suitable for the ERP system. This data can then be transferred onto the ERP system and validated/corrected as required.

Installation of hardware and software
The sites at Head Office and each store will need to be prepared. In particular, the network communications links will need to be set up. Once this is done, the hardware and software can be installed. In TripleJuice's case, this should be done by specialist contractors due to the lack of in-house technical skills.

Training
Staff will need to be trained in how to use the new system. For many users, this may be able to be achieved using online tutorials. However, Head Office staff who will be performing more complex tasks (eg customised report writing) would likely benefit from face-to-face training.

Documentation
All staff should have a user manual which relates to their responsibilities and tasks. This documentation should also record how the system is structured and what the process for changing it is (eg who to contact for authorisation). The system should include context-sensitive online Help.

Testing
The system will need to be tested before it goes live. This could include realistic (a typical day's transactions), contrived (sensitive or complex transactions), volume (ensuring that the system will cope at peak times) and user acceptance (users using the system as it will be used when 'live' to ensue users are comfortable with the system).

Changeover
A number of changeover methods are available; direct, parallel, pilot or phased. In this situation, a parallel changeover (for a limited time) is likely to be appropriate. This would involve continuing to run the current accounting system at the same time as the ERP system, and comparing the results. When comfortable that the new system is operating as it should, the old system is 'turned off'.