

**MAY 2020 PROFESSIONAL EXAMINATIONS
BUSINESS MANAGEMENT & INFORMATION SYSTEMS (PAPER 1.2)
CHIEF EXAMINER'S REPORT, QUESTIONS AND MARKING SCHEME**

EXAMINER'S GENERAL COMMENTS

The overall performance of candidates was generally below expectation, although it was an improvement upon the November 2019 examination performance, given that the questions were within the syllabus and were equally spread over same. Most of the candidates did not seem to have directed their minds to some portions of the syllabus.

STANDARD OF THE PAPER

The Business Management and Information Systems paper was of standard quality. The marks allocated followed the weightings in the syllabus.

There were neither grammatical errors nor typing or other errors in the questions. There were also no ambiguities in the questions and none of the questions was 'too loaded'. The marks allocated to questions were appropriate. The questions were fairly spread across the syllabus.

PERFORMANCE OF CANDIDATES

The performance of candidates was quite good, compared to the previous examinations. We recorded a 68% pass mark, compared to the 53% pass mark recorded in November 2019. Out of the one hundred and forty-five (145) candidates who took the Paper, ninety-seven (99) of them passed.

Although the general performance falls below expectation, some candidates did very well. We do not have evidence to suggest there was any form of copying or collusion at any centre.

QUESTION ONE

- a) Organisations can be categorised into the following types:
- Business organisations
 - Public sector organisations
 - Non-government not-for-profit organisations.

Required:

To which category or categories of organisation do the following entities belong, and why?

- i) A charity receiving 60% of its annual funding from central government.
- ii) A basic school.
- iii) State-owned Electricity Company.

(6 marks)

- b) Within the same business organisation, some decision-making might be centralized, with decisions made by senior management. Other decisions might be decentralised, and taken by managers or employees involved in operations.

A company owns and operates five private hospitals. It has a head office, a management team and staff in each hospital (including medical staff such as doctors and nurses).

Decisions now need to be made on the following:

- i) Decisions about the medical treatment or surgical treatment for individual patients.
- ii) Establishing policy on hygiene standards in the hospitals.
- iii) Scheduling operations in the operating theatres of each hospital.
- iv) Discharging patients from hospital.
- v) Deciding the visiting times for patients in each hospital.
- vi) Prescribing drugs for the treatment of patients.
- vii) Hiring new staff, such as hospital porters and nurses.
- viii) Dealing with payments from insurance companies for the treatment of insured patients.

Required:

For each of the decisions above identify from the list below whom you would expect to make the decision and briefly explain why.

- Head Office Management
- The Management of each hospital
- Staff in each hospital

(8 marks)

- c) Charles Handy identified four types of culture that are found in organisations.

Required:

Which of these cultures is most likely to exist in each of the following organisations? Give your reasons.

- i) A large department store with fifteen departments spread across six floors of a building, with an accounts and administration office.
- ii) A rail transport company providing passenger transport services.
- iii) A firm of architects specialising in the design of small office buildings: the founder of the firm is the senior architect, and there are six other junior architects, none of them partners in the firm.
- iv) A software company with a team of eight software experts, providing bespoke software to corporate and government clients.

v) A school providing education to children between the ages of 7 and 18.

(6 marks)

(Total: 20 marks)

QUESTION TWO

a) You are the Accounts Officer of Seafarers Cafe, a company that sells cocoa drink to a wide range of consumers. The company sells a cup of cocoa drink for GH¢2.00, which yielded a sales output of 10 million cups for the year ending 2017. As part of a promotional package to celebrate its silver jubilee, the company reduced its price to GH¢1.50 which increased its total sales output to 15 million cups for the year ending 2018.

Required:

i) Calculate the Café's price elasticity of demand. (4 marks)

ii) Explain **FIVE (5)** factors that might have determined the company's price elasticity of demand. (10 marks)

b) A typical product life cycle has four main phases: introduction, growth, maturity and decline.

Required:

Twelve products are listed below. Match these products to the stage they have probably reached in their life cycle, by filling in the following table.

Products:

- Online music downloads
- SMS messaging
- (Hand-written) postcards
- Personal identity cards using 'iris-based' technology
- Folding screen mobile phones
- Credit cards
- Personal computers
- Fifth generation (5G) mobile telephones
- Cheque books
- Typewriters
- Smart cards (in banking)
- E – Conferencing

Introduction	Growth	Maturity	Decline

(6 marks)

(Total: 20 marks)

QUESTION THREE

- a) Strategies in organisations develop in different ways and one way of explaining strategies is to make a distinction between *deliberate strategy*, *emergent strategy* and *incremental strategy*.

Required:

Explain each of the strategies outlined above. (12 marks)

- b) The management of Megalab Company Limited is concerned with how weak and less cohesive the groups in the company are, and its effect on general organisational performance. The management is currently investigating reasons for this poor group cohesion and you have been approached for possible factors that could be responsible.

Required:

Identify and explain **FOUR (4)** of such possible factors. (8 marks)

(Total: 20 marks)

QUESTION FOUR

- a) A fishing boat manufacturing company at Elmina intends to expand its business and has decided to locate another production facility at Winneba.

Required:

Identify and explain the most appropriate plant layout for the company's operations and explain **FOUR (4)** advantages associated with the selected plant layout.

(10 marks)

- b) Explain **FIVE (5)** health and safety measures to facilitate a working environment devoid of accidents for the company's employees. (10 marks)

(Total: 20 marks)

QUESTION FIVE

- a) Your company's website has been shut down as a result of a cyber-attack.

Required:

Explain **FIVE (5)** types of attacks that might have caused the shutdown. (10 marks)

- b) Boston Consulting Group (BCG) matrix analysis is used to classify Strategic Business Units (SBUs) within an organization's portfolio of products and services based on their respective market share and growth rate. It is a key aspect of strategic capability to ensure that the portfolio is strong.

Required:

Identify and explain the **FOUR (4)** categories in the model. (10 marks)

(Total: 20 marks)

SOLUTION TO QUESTIONS

QUESTION ONE

a)

- i) A charity is a non-government not-for-profit organisation, even when it receives most of its funding from the government.
- ii) A school is a public sector organisation when it is owned by the government. However, there are also private schools. Private schools in Ghana might be established as business organisations, whose purpose is to make a profit. Alternatively they may be established as charities which are funded by school fees; in the latter sense they would be non-government not-for-profit organisations.
- iii) A state-owned electricity company is a public sector organisation. However, it might be required to operate at a profit, in which case it is also a business organisation.

(2 marks for each well explained point = 6 marks)

b)

- i) These decisions will be taken by medical staff – the doctors.
- ii) Policy on hygiene standards should be set by head office, because common standards should be applied in all five hospitals. Responsibility for enforcing the standards should be delegated to hospital management.
- iii) Scheduling operations in the operating theatres should be the responsibility of the hospital management. However, in a centralised organisation, these decisions might be taken at head office.
- iv) Decisions about discharging patients should be taken by medical staff.
- v) The policy on visiting times for patients might be decided centrally by head office management. However, policy on visiting times might be delegated to hospital management, with each hospital allowed to decide its own visiting times.
- vi) Drugs should be prescribed by medical staff. However, head office might establish policies on drugs that should not be used in the hospitals – for example because they are too expensive.
- vii) Hiring employees might be the responsibility of head office (in a centralised management structure) or hospital management (in a decentralised structure).
- viii) Dealing with medical insurance companies about payments for patients is likely to be the responsibility of an accounts department at head office, because all five hospitals would otherwise have to deal separately with the same insurance companies.

(1 mark for each point = 8 marks)

(c)

- i) The department store is likely to have a formal organisation structure, with hierarchical lines of authority from store manager to floor workers and administrators, and clearly-defined roles for each employee. A role culture will apply here.
- ii) For similar reasons to those in (a), the rail transport company will have a role culture. Other cultures might possibly exist within parts of the company.

- iii) The firm of architects is most likely to have a power culture (spider's web culture), because the founder of the firm is the senior architect and none of the other architects seems to have similar status or seniority. The founder of the firm is therefore likely to dominate decision-making. If the founder/owner of the firm is 'democratic' in outlook, a task culture might exist. A person culture will not exist, because there are junior architects doing some professional work, and the role of the other employees is not solely to provide services to the founder/owner.
- iv) The software firm is fairly small, and a task culture might well exist. Work for clients is probably performed by project teams, and project team working encourages a task culture.
- v) A school has a role culture. Each employee has one or more clearly-defined roles, such as teacher, subject head, head of department, and so on. The nature of teaching in schools means that a task culture is difficult to achieve.

(6 marks)

(Total: 20 marks)

EXAMINER'S COMMENT

Being a compulsory question, all the candidates answered it with some scoring very good marks. It was a straightforward standard question.

QUESTION TWO

a)

i) Price Elasticity of Demand

$$\text{Price elasticity of demand} = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in price}}$$

$$\text{Percentage change in quantity demanded} = \frac{15\text{million}-10\text{million}}{10\text{million}} \times 100 = 50\%$$

$$\text{Percentage change in price} = \frac{\text{GHC}1.50-2.00}{2.00} \times 100 = -25\%$$

$$\text{Price elasticity demand} = \frac{50\%}{-25\%}$$

$$\text{Price elasticity of demand} = -2.0$$

(4 marks)

ii) Factors Determining the Café's Price Elasticity of Demand

- Availability of substitutes. The existence of close substitutes to the cocoa drink sold by the company could cause the changes in the shops price elasticity of demand. When other competitors sell close substitutes like coffee products, buyers would have a choice, hence reducing their dependence on the company for their breakfast meals which can then affect the company's price elasticity of demand.
- Degree of necessity. The importance buyers attach to the breakfast meals sold by the Café can also affect the price elasticity of demand. If the kind of meals sold by the Cafe is considered as a basic necessity of life, then people will continue to buy from them even if they increase the price. Alternatively if people consider the kind

of breakfast sold by the Cafe as luxurious, then they will not buy even if the price is not increased hence affecting the price elasticity of demand.

- Consumers' income. The disposable income of the buyers can also influence the price elasticity of demand of the company's products. If consumers earn enough income, then they would not be affected by any price increase because they can buy the company's cocoa drink no matter the increase in price. On the other hand if consumers are not earning enough income then any insignificant increase would be considered as high and affect their buying patterns.
- Adjustment period. Certain goods have elastic demand over the long run than over the short run and as a result price adjustment may take some time before it takes effect. With reference to the cocoa drink sold by the Café, an upward price adjustment would reduce demand because people would decide not to buy the cocoa drink but rather buy other food item. This can affect the price elasticity of demand for the Café's cocoa drink.
- Scope of the market. The price elasticity of demand for sugar and liquid -based breakfast may be low or high depending on the perception of the market and availability of other substitutes. If the market perceives sugar-based breakfast as unhealthy, then any price increase would result to low elasticity of demand. Alternatively if the market perceives sugar-based breakfast as a sign of good living then any price increase would not affect the demand for the company's cocoa drink.
- Consumer sensitivity. The general sensitivity of consumers to price changes could influence the elasticity of demand for the Café's products.

(Any five points for 2 marks each=10 marks)

b)

Introduction	Growth	Maturity	Decline
Personal identity cards using 'iris-based' technology	Smart cards (in banking)	Credit cards	Cheque books
Fifth generation (5G) mobile telephones	Online music downloads	Personal computers	Typewriters
Folding screen mobile phones	E-conferencing	SMS messaging	Postcards

(6 marks evenly spread using ticks)

(Total: 20 marks)

EXAMINER'S COMMENT

Most candidates who answered this question performed very poorly. It appears to be the case that majority of them did not read that portion of the syllabus.

QUESTION THREE

a)

Deliberate strategy

Deliberate strategy is also called perspective strategy and rationally-planned strategy. It is the outcome from a former strategic planning process, in which management;

- Carry out a strategic position analysis
- Identify and evaluates the strategic alternatives
- Make strategic choices, and
- Implement the chosen strategies, which are set out in a formal business plan or strategic plan.

The business plan is reviewed regularly and amended if necessary. For example, if a company produces a formal five-year business plan, it might review the plan every year and amend it if necessary. It might also add another year to the end of the plan so that a rolling five-year plan is produced on an annual basis.

Formal strategic planning also involves the use of management aids and planning techniques, such as SWOT analysis and the use of models such as Porter's diamond and Porter's Five Forces model.

Emergent strategy

An emergent strategy is a strategy that is not formally planned, but which emerges in response to the unforeseen developments and opportunities. Ideas for an emergency strategy might come from employees or fairly junior managers, rather than senior management. However, once a new strategy has emerged, the entity applies a strategy consistently.

A company might develop both deliberate strategies and emergent strategies. These two methods of strategic development are not inconsistent with each other. There might be a formal business plan, containing deliberate strategies, but the company's management might be willing to develop new strategies whenever unexpected opportunities arise, even though they are not in the formal plan.

A strategy that begins as an emergent strategy might be included in a future formal business plan, so it eventually becomes a part of deliberate strategy.

Incremental strategy

Incremental strategy is strategy that is developed slowly over time, by making small changes to existing strategy. Changes to strategy are not large or far-reaching, because the management of the entity cannot see the need for any substantial changes.

When the entity's business environment is changing, small changes to existing strategies are unlikely to be sufficient to ensure the survival of the entity, and incremental change might be associated with aimlessness and a lack of strategic direction ('strategic drift')

Incremental strategy is only 'safe' when an entity operates in a very stable environment where changes over time are small and gradual.

(4 marks for each well explained point = 12 marks)

b) Factors that impact group cohesiveness include the following:

Factor	Explanation
Size of group	Smaller group tend to display greater cohesion than larger groups
Heterogeneous vs. Homogeneous	Homogeneous groups who share common characteristics such as race, gender and religion will typically demonstrate greater cohesion than groups who are more diverse (heterogeneous) sharing fewer common characteristics
Group success	This is arguably a 'self-fulfilling prophecy' - the more successful a group the greater the incentive to be part of it and hence the greater the cohesion. The less successful the lower the cohesion.
Barriers to entry and prestige	Human nature means that the more difficult it is to become a member of a group the greater the desire for outsiders to join the group. Subsequently the group becomes prestigious and more cohesive. A good example might be an elite academic institution.
Task cohesion	The greater the need for a task to be completed by a group rather than individuals (e.g. a sports team or military operation) the more cohesive the group becomes as member on the whole accept the need to work together to achieve the shared objective.
Rewards and punishment	The availability of reward for membership and/or punishment for leaving can have a bearing on the attractiveness of being part of a group and hence influence group cohesion.
Competition from external groups	A lack of competition from alternative groups can lead to erosion in cohesion as members do not feel any pressure to perform. However, with the emergence of competition, groups typically become more cohesive as their competitive instincts amplify and the desire to defeat a rival drives them on.
Location	Groups who enjoy segregation from others will tend to be more cohesive as strong interpersonal communication patterns develop a sense of visible identify builds.
Leadership style	An effective leadership style that matches the skills and personalities of the group can have a significant impact on promoting group cohesion. An ineffective leadership style for that particular group of people is likely to have the opposite effect and erode group cohesion.
Social cohesion	Social cohesion is the degree to which group members enjoy each other's company and how much they like each other. Group cohesion will be highest when members enjoy the social side of being part of the group.

(Any four points at 2 marks each = 8 marks)

(Total: 20 marks)

EXAMINER'S COMMENT

This was a good question which most of the candidates answered. Unfortunately, only about one-third of those who answered it obtained the pass mark.

QUESTION FOUR

a) Plant Layout for the Fishing Boat Manufacturer

The most appropriate plant layout for the fishing boat manufacturer is the fixed-position layout.

The fixed -position layout is a type of plant layout in which the product(in this situation the fishing boat) remains stationary for the entire manufacturing cycle and workers, materials and equipment are moved about as needed.

(2 marks)

Advantages of Fixed-Position Plant Layout

- Reduction in damage. There is reduction in damage to the product. This is because the product is stationary at one place and damage that may occur as a result of product movement is prevented.
- Cost reduction. There is also reduction in operational cost. The reason is that the company would not incur any additional cost by moving the product from one location to another.
- Reduced need for re-planning. There is reduced need for continual re-planning for the product or project site. This is because there is continuity of work until the manufacturing process is completed.
- Reduced worker monotony. There is reduced worker monotony. This is because employees with different skills are used per the stage of the production process and when their job responsibilities are completed they are moved and another set of employees are brought to continue from where the previous group left.
- Fast completion. Projects that use the fixed-position layout are characterised with fast completion periods. The reason being that there is continuous flow of work until the project is completed.
- Project supervisor skill development. Fixed-position layout often serves as a training ground for project supervisors. The reason is that project supervisors get the opportunity to work with different groups with different skills and from each of these groups he/she can gains experience.

(Any four points for 2 marks each = 8 marks)

b) **Health and Safety Measures to Prevent Accidents**

- Effective employee resourcing. The company must structure its people resourcing strategy. This is to ensure that the right people with the right skills are employed to fill vacant positions.
- Establish safety policy. The company must establish a health and safety policy to guide all employees in the dispensation of their assigned responsibilities. Such a policy must emphasise the company's desire to have an accident-free working environment.

- Reduce job overload. Employees must be assigned with moderate work responsibilities. This ensures that employees are able to dispense their work within the appropriate time duration without the need for rushing to beat time or schedules.
- Risk assessment. The company must also conduct regular risk assessment for all jobs and assignments. Such an assessment would enable the management of the company to easily identify all risks associated with all jobs and the necessary preventive measures implemented.
- Constant review. There should be constant review of all of protective and preventive measures. This would determine whether protective and preventive measures implemented are working according to plans and where deviations are identified corrective measures would be put in place.
- Training. The company should conduct training for employees on safety and health related issues. Such training would be very important for all employees especially newly recruited employees as it would instruct them on safe practices and procedures and also alert them on all potential signs of dangers in the dispensation of their work.
- Provision of protective clothing. The company must provide all employees with the required protective clothing. Such clothing would include helmets, goggles, gloves and overalls to protect employees against imminent dangers at work.
- Existence of appropriate disciplinary measures.

(Any five points for 2 marks each = 10 marks)
(Total: 20 Marks)

EXAMINER'S COMMENT

The question, although a straightforward one, was not properly answered by a lot of the candidates, especially the sub-question a.

QUESTION FIVE

a) Attacks Causing the Shutdown of the Company's Website

- Identity theft. The website might have been shut down as a result of identity theft. This is where an imposter obtains key pieces of employees' identity information in order to impersonate them. The information could then be used to obtain credit, merchandise or services in the name of the victims. The company can shut down the website upon detection of such an activity for the necessary corrective actions to be taken.
- Hacking. This is an unauthorized access to information on the Company's website. The hackers might have been monitoring the employees' e-mails or file transfers to extract passwords or steal files or information for their personal use.
- Phishing. This is where an individual attempts to obtain secured and sensitive information from users of the Company's website for their malicious personal use. When such an activity is detected, the website may be shut down for the necessary corrective measures and devices to be installed to prevent similar attacks in the future

- Electronic spamming (spams). This involves the sending of unsolicited messages to the Company's e-mail users. With this approach, unscrupulous people transmit repeated messages over e-mails, instant messengers, news groups, forums and blogs which can cause data jams and cause the website to shut down(if it has been programmed like that) . The danger is that such spams may contain executable files that can cause damage to the company's website hence causing its shut down.
- Virus. This is a computer program that replicates and transfers itself to other computer programs and cause destruction to the programs and files in the Company's website. Massive virus attack can cause the shutdown of the company's website.
- Worms. A worm is a parasitic computer program that operates unaided and seeks to replicate and spread itself with the goal of consuming and exhausting computer resources and then causing the Company's website or computer systems to fail.
- Trojan horse. This is a malicious program that disguises itself as a useful application and purposefully does something the user does not expect and then cause destruction to the programs and files in the Company's website.

(Any five points for 2 marks each =10 marks)

b) **The four business types based on BCG matrix are as follows:**

- **Stars (high growth rate and high market share)**

Stars grow rapidly and therefore they use large amounts of cash. Stars nearly always show reported profits, but they may not generate all of their own cash. If these products stay the leaders, however, they will become large cash generators when growth slows and their investment requirements diminish. Stars have both high growth rate and relative market share. However, since they are leaders, they also generate large amount of cash. Normally, such products are about in balance in net cash inflow. Over time all growth slows. The star eventually becomes cash cow, providing high volume, high margin, high stability, security, and cash throw-off for reinvestment elsewhere. If they fail to hold market share, they become Dogs with disastrous consequences.

- **Cash Cows (low growth rate and high market share)**

Cash Cows are products/businesses that have high market share with low growth rate. Characteristically, they generate large amounts of cash, in excess of the reinvestment required to maintain market share. They Cash Cows make use of low cash due to slow growth rate and yet generate large amounts of cash as a result of high market share. Cash cows have higher net cash inflow compared to Stars.

- **Question marks/Problem Children/Wildcats (high growth rate and low market share)**

Their cash needs are great because of their high growth rate. Yet, their cash generation is very low because their market share is low. They almost always require far more cash than they can generate. Hence, these products generate negative cash flow. If cash is not supplied, they fall behind and die. Question marks are products or businesses that compete in high growth markets but where market share is relatively very low. A new product launched into a high growth market with an existing market leader would normally constitute a Question Mark. High expenditure is required to develop and launch the product, and consequently, it is unlikely to be profitable and may instead require subsidy from more profitable products. Once the product is established, further investment will be required if the company attempts to claim leadership.

- **Dogs/Pets (low growth rate and low market share)**

Dogs have both low growth rate and market share. Dogs often report a profit even though they are net cash users. They may show an accounting profit, but the profit must be reinvested to maintain market share, leaving no cash throw-off. They are essentially worthless products, except in liquidation. They are cash traps.

All products eventually become either cash cows or dogs. The value of a product is completely dependent upon obtaining a leading share of its market before the growth slows.

(4 points for 2.5 marks each =10 marks)

(Total: 20 Marks)

EXAMINER'S COMMENT

This was a good question but rather surprisingly, only a few candidates out of the many who answered it performed fairly.

CONCLUSION

We believe that the above-average performance of candidates was largely due to the fact that most candidates did not take time to prepare well for the examinations. They did not seem to have read certain parts of the syllabus.

We would repeat our appeal for close collaboration between the Institute and the private tuition providers in order to guide them and candidates in their studies towards the examinations.

It is our hope that the new Study Texts would greatly assist candidates in their studies in order that we could register higher performances in the coming days.