BCS Higher Education Qualification

Profession Graduate Diploma

May 2021

EXAMINERS' REPORT

MANAGEMENT INFORMATION SYSTEMS

General comments
As in previous sessions, candidates should ensure that they understand all aspects of the curriculum, that they read a question fully before attempting it, and that they provide a suitable and comprehensive answer for the question set. When a question explicitly states that a diagram is required, candidates should ensure that they provide a suitable diagram as there will typically be marks specifically allocated to that diagram. The same is true of any examples and/or models explicitly requested.

PART B

Question number: A1
Syllabus area: The nature of decision making, Decision support systems (DSS)
Total marks allocated: 25
Examiners' Guidance Notes
Just over half the candidates attempted this question. Answers evidenced a general lack of understanding of the principal topics of the question: there were only one or two candidates that fully understood the question and produced high quality, complete answers. In Part a), several candidates did not realise that the term 'management decision making' was to be described, instead providing an overview of MIS subtypes (which was largely irrelevant content). Indeed, the examiner expected a definition of management as well as decision making as part of the answer, with reference to a suitable model of either (e.g., Simon (1960)'s decision making model) to support the narrative: very few candidates were able to provide such an answer. For Part b), many candidates were unable to offer any specific, quality descriptions of the three mathematical modelling techniques. There were vague mentions of 'best solution' in part (b) (i), 'modelling of a real-life situation' in part (b) (ii) and 'prediction' in part (b) (iii), which accrued one or two marks, but how these were provided within the specific modelling techniques (e.g., in the case of optimisation, by formulating an objective function and a set of constraint equations, these using defined variables that need their values to be set to ensure the best value of the objective function is achieved - be it a maximum or minimum as stated) was not covered. The forecasting technique descriptions tended to be better than those for optimisation and simulation, perhaps because of the former's inclusion in common software such as spreadsheets.

One or two candidates omitted to attempt one or two elements of this question: candidates should ensure that they attempt <u>all</u> parts of a question, as not doing so immediately reduces the maximum amount of marks that is possible to achieve.

Question number: A2	

Syllabus area: **Syllabus coverage:** Relationship of MIS to Transaction Processing Systems (TPS) and Enterprise Resource Planning (ERP) systems, IS within functional areas, Group Decision Support Systems (GDSS), Knowledge Based Systems (KBS)

Total marks allocated: 25

Examiners' Guidance Notes

This was a very popular question, with 86% of candidates attempting the question. Overall, many candidates evidenced some understanding of each of the three applications albeit to varying levels of detail and quality. However, very few were able to effectively evaluate the application's value to HR management: indeed, some candidates misread the requirement, evaluating the application's value to management in general or to the HR function as a whole (i.e., not just its management).

Part i) highlighted some excellent understanding of ERP systems, where candidates explained their integration of key operations across the business, including marketing, sales, production and HR, by using a centralised data(base) repository. Good answers provided supporting diagrams to visualise the ERP concept and its cross-business integration capabilities. The best answers recognised the importance of the centralised data repository to provide the data (which may be used to populate a data warehouse) for subsequent HR-related management reporting and presented examples of these reports.

Part ii) highlighted some useful Group DSS (GDSS) understanding of its focus (i.e., the support of group decision making rather than individual) and its variety of functionality: unfortunately, one or two candidates described individual DSS, rather than group DSS, and therefore were not able to score highly on the question. The best answers provided examples to illustrate the various techniques (e.g., voting, nominal group technique, meeting recording) and technologies (e.g., decision rooms, video-based communication systems such as Zoom, Skype and Teams) employed, and were able to discuss when GDSS might be employed to support HR management decision making e.g., to support a group or managers together making candidate recruitment decisions.

Part iii) was probably the best part answered, as most candidates understood that this was an application that emerged from the field of AI, and typically utilises a knowledge base related to a specific narrow domain of expertise and an inference engine to derive one or more possible solutions to a given problem situation within that domain. Good answers accompanied their descriptions with a suitable diagram of an Expert System and/or explained how solution(s) are derived (e.g., using forward or backward chaining mechanisms). The best answers were, additionally, able to articulate when an expert system could be applied to support HR management decision making, e.g., within recruitment selection decision situations, and when they could not be utilised.

Question number: A3
Syllabus area: Management planning and control, Strategic planning within an organization, On-line Analytical Processing (OLAP) and Business Intelligence (BI)
Total marks allocated: 25
Examiners' Guidance Notes
This was only attempted by a 38% of candidates. Some candidates were awarded low marks often due to the lack of detailed understanding evident in answers regarding the corporate strategic planning process. Part a) required candidates to explain what is meant by a top down corporate strategic planning process. It was expected that answers would evidence general understanding of the corporate strategic planning process along with specific understanding of a top down, as opposed to a bottom up, approach to its development. In reality, candidates' answers focused on the overall purpose of corporate strategic planning and what top down means, but very few candidates were able to offer any detailed description of the corporate strategic planning process and the activities undertaken therein (e.g., .identifying and evaluating a company's strengths and weaknesses, and the opportunities and threats that come from both the micro- (e.g., competitors, substitutes) and macro-environment (e.g., technical, political, social, legal), and articulating actions/plans to reduce threats, seize opportunities, minimise weaknesses and/or capitalise on strengths). As such, candidates were unable to gain maximum marks on this part. There were some useful positives (such as alignment of purpose/focus throughout the organisational levels) and negatives (such as the time is can take to plan, by which time the derived strategy may be out of date) mentioned in several candidates' answers. Part (b) requires candidates to discuss how a BI system could help senior management in their monitoring of achievement against corporate goals/plans. Most candidates were able to articulate some aspects of a BI system that could be useful (e.g., dashboards, KPI/CSF monitoring, drill down) although these were variable in their level of description quality and detail. Some answers focused on BI systems' use by management in general rather than just senior (i.e., top) management, and several candidates did not explicitly link their described BI systems' applications to the monitoring of corporate goal/plan achievement; this served to reduce the marks these candidates attained. Also, this sub-question explicitly requested the use of one or more supporting diagrams, so there will be marks explicitly earmarked for such diagrams: a few candidates failed to provide any diagrams and several were not very useful as provided.

Question number: B4
Syllabus area: 3.2 Managing MIS projects   3.3 Techniques and methodologies for supporting MIS development
Total marks allocated: 25
Examiners' Guidance Notes   a) This part of the question asked for 4 stages which should take place during MIS project planning. While some candidates tackled this subject well, providing responses which matched industry expectations, others gave only very vague and skeletal answers. In some cases, the four answers were very similar – and did not score well.   Project management is a core part of MIS and should be familiar to all candidates.   b) Only a few candidates provided good responses to this section. It appeared that many did not have knowledge or experience relevant to the subject matter.

Question number: B5
Syllabus area: 4.1 Developments in hardware, software and communications capabilities   4.4 MIS and social media
Total marks allocated: 25
Examiners' Guidance Notes   This question discussed the evolving relationship between social media and MIS. While many candidates wrote at some length on this, much of the material provided lacked focus and did not successfully address the question.   Candidates should ensure that they read the question carefully and provide an answer which addresses the question as written. Providing a long discourse on social media in general, without reference to issues at hand, will not score well.