IMIS HIGHER DIPLOMA QUALIFICATIONS

Management Information Systems (H1)

Monday 2nd June 2014 10:00hrs – 13:00hrs

DURATION: 3 HOURS

Outline Solutions H1 June 2014

Answer 1

One mark per pointer chosen from:

Pointer	Comment	Mark
Production	Improved flows	❶
Cost	Should see cost savings	❶
Collaboration	Enhanced & simpler	❶
Customer	Easier communication & enhanced service	❶
Developments	Future developments should be simpler	❶
Other	Judged by the examiner on a case by case basis	❶

(5 marks maximum)

Answer 2

There is often an assumption that software growth will be linear❶ rather than exponential❶ and may have little impact❶ on software trends provided❶ original software was scalable. It may be argued that new software will emerge❶ from the growth❶ in use offering previously unanticipated❶ features. *Well considered discussions to gain 5 marks.*

Answer 3

A complete flow diagram will suffice else a description of the stages viz

Stage	Comment/questions	Order	Mark
Intelligence	Data gathering stage leads to	⇩	❶
Design	All feasible options considered	⇩	❶
Choice	Whence systematic choice is made hence	⇩	❶
Implementation	Solution is installed	⇩	❶

One mark per stage plus one mark for overall sequence to the maximum of 5 marks.

Answer 4

Discussion is likely to offer five of the following

Pointer	Comment/questions	Mark
Sufficiency	Does the scope of the audit meet requirements	❶
Omissions	Actions for omitted areas	❶
Essential	Are essential areas covered	❶
Effective	Are the controls effective	❶
Separation	Are staff responsibilities distinct	❶
Legislation	Are controls sufficient for compliance	❶
Outputs	Can these be checked	❶
Reports	Are reporting procedures in place	❶

One mark per cogent pointer to the maximum of 5 marks.

Answer 5

Responses are likely to focus on the difficulty❷ of defining the boundaries❷ for the decision model. It may also be difficult to define the inputs ❷and outputs❷, the scope of the inputs in the uncertain world of human decision making. *Broadly two marks for well presented pointers to the maximum of five marks.*

Answer 6

One mark per point to the maximum of five.

Pointer	Rationale	Mark
Scenarios	There may be too many to cope with manually, hence use of DSS	❶
Time	Time may be of the essence, DSS can work quickly	❶
Parameters	Multiple parameters with complex interactions requires DSS	❶
Geographical	Manager and data sources may be disparate, DSS can combine	❶
Forecasts	Easy for DSS to produce several forecasts	❶
Combine	DSS offers a one stop shop	❶

Answer 7

One mark per pointer to the maximum of five. The cloud model of computing is: a model ❶that provides access❶ to a pool of data,❶ services ❶and resources❶. Such clouds can be accessed easily on as and when basis reducing❶ fixed costs. *Maximum 5 marks*

Answer 8

Responses to demonstrate an understanding❶ of seeking to change parameters❶, to predict outcomes❷, either forwards❷ to predict the result from repeatedly changing❷ input parameters or working backwards❶ from a desired result. Emphasis on the former. *Maximum 5 marks*

Answer 9

Broadly one or two marks per pointer with all four areas to be attempted (otherwise pro rata). It important that responses to be targeted at competitive advantage, for both marks. Summarised potential pointers are tabled below

Item	Competitive Advantage (CA)
Knowledge Acquisition	Storage *per see* not as important as ability to access accurately❷ and speedily❷ the data to feed into CA system
Knowledge Storage	Fundamental starting point, use of On Line Analytical Processing (OLAP)❷, data mining❷, Non Obvious Relations Analysis (NORA)❷ contribute to knowledge based intelligence to aid CA
Knowledge Dissemination	Speedy❷ and accurate❷ dissemination essential via portals❷/Wikis❷/social or other networks❷ to influence CA decisions
Knowledge Application	The most obvious value for CA❷ with respect to the competitors

(Total 20 marks)

Answer 10

(a) The Internet is the technical backbone infrastructure that hosts a variety of protocols including the World Wide Web (WWW). WWW is an application that runs on the Internet. WWW has a core set of standards and provides the most contemporary front end available. *One mark per pointer to a maximum of five.*

(b) The better responses will combine❶ the usefulness of the Mashup approach (combining application elements from the Internet and woven together to form a new solution❷) and the Aristotelian view that system components combine to form a system greater than the sum of the parts❷. *Responses that successfully combine the terms to gain five marks or pro rata.*

(c) The Delphi approach is enhanced by the Internet❷ which freely allows the interchanges❷ of the expert panel❷ and facilitator❷, as they converge❷ upon their consensus❷ approach to the problem under consideration. Some may note the potential for a wider geographic❷ spread of experts, hence a larger pool❷ to come to their speedy median conclusions. *10 marks available for well targeted responses.* Total (20 marks)

Answer 11

The required emphasis is on risk acceptance and not upon implementation techniques themselves.

Technique	Likely Risk level *(2 marks per cell)*	Example *(3 marks per cell)*
Plunge	Very high as difficult to go back if it fails	suitable for non critical system such as staff training records
Parallel	Less risk of failure but higher probability of implementation costs rising	Sales recording MIS
Pilot	High risk at implementation site but very low for other sites	Suited for Geographically distributed sites for e.g. Ford Motor MIS on different continents
Phased	More difficult to specify precise the risk	May be used Sales MIS and then extended to less critical MIS for example Human resources

Marks awarded for each cell of the matrix on a row basis of 2:3 to the maximum of 20 marks

(Total 20 marks)

Answer 12

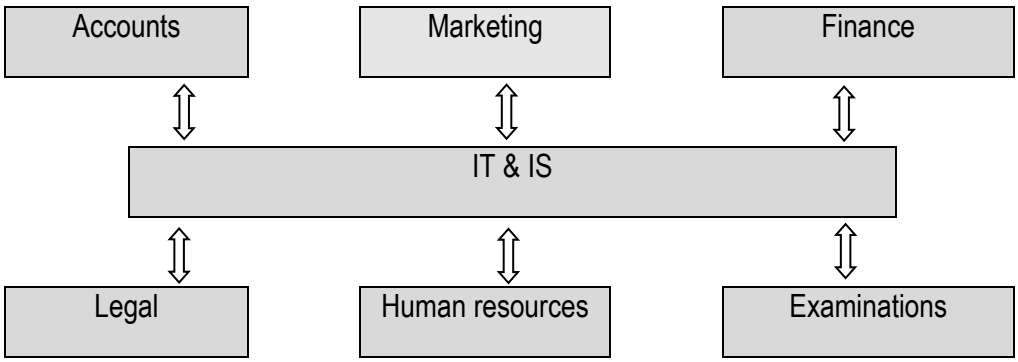
(a) The Luhn provides a quick❷, accurate check❷ to data input❷; alone it cannot provide certainty❷ but does ensure a plausible entry. *1 mark per point to the maximum of 5 marks*

(b) Luhn offers a self contained❷ algorithm that is performed on the fly❷ without need for access❷ to communications and storage resources. Incorrect initial storage is averted and does not carry the updating of valid accounts overhead❷. Luhn allows blocking access at the point of entry. *One mark per pointer to the maximum of five.*

(c) It is anticipated the response will draw the system boundary❷ such that a convincing argument can be made for classifying Luhn as a closed system. Rationale broadly: algorithms tend to be by nature closed ❷systems. The calculation does not require external input to determine validity and is self contained. Potentially the binary❷ response from Luhn may cross a system boundary to render the whole an open system. This question explores the nature of the boundary of a system, i.e. the interface❷ between the internal system❷ and the environment❷. *Two marks per pointer to the maximum of ten.* (Total 20 marks)

Answer 13

(a) The inter component flows are to be two way interactions. These interactions are organisation dependent and these are but one possibility. *1 mark for each pair of flows up to the maximum of 6.*



(b) For the diagram above the annotations would be:.

Source	Sink	Element	Need
IT	Accounting	Billing	Cash flow essential
Accounting	IT	Reports	Decision making
IT	marketing	Advertisements	Preserving IMIS image
Marketing	IT	Market research	Competitive advantage
IT	Finance	Budget reports	Decision making
Finance	IT	Budget data	Needed for outputs
IT	Legal	Alerts	Maintain image
Legal	IT	Legislation changes	Raw input
IT	Human resources	Workforce reports	Competitive advantage
Human resources	IT	Staff data	Raw data
IT	Examinations	Finalised results	Essential housekeeping
Examinations	IT	Raw student data	Fundamental

One mark per cell offered to the maximum of fourteen. (Total 20 marks)