H1 – MANAGEMENT INFORMATION SYSTEMS
SOLUTIONS & MARKING SCHEME. JUNE 20

PART A:
Answer A1.

Typical solutions will note that the very fine grained[1] aspects of sales orders/delivery notes/packing advice/picking notes/prices/quantities/addresses[1] at the operational level will flow into the Transaction Processing System (TPS) [1] losing much of their identity[1] and fine granularity as they move upward in a summarised form[1] through the Management Information Systems (MIS) [1]. MIS will further consolidate[1] the data into a form usable by the higher level Decision Support Systems (DSS) [1]. Note may be made of the time scales[1] increasing as the upward flow progresses. **[LO1 AC1.1 T3 Ch 3]** ***One mark per valid point to the maximum* of 5 marks.**

Answer A2.

Whilst a definition of Moore's Law itself is not required, just the principle that by whatever metric that is applied, the IT equipment will become smaller/faster/cheaper in a relatively short time frame. The impact for the buyer is to accept the upgrade will become quickly "obsolete" and any future proofing that can be applied should be. Compatibility may quickly become a concern. Typical influences are:
smaller/faster/cheaper/short time frame/compatibility/obsolescence.
[LO2 AC2.1 T1 Ch5] ***One mark per point to the maximum of* 5 *marks***

Answer A3.

Responses are to be targeted towards General Systems Theory (GST) i.e. input/process/output/feedback/boundary. Positive[1] (amplifying[1]) or negative[1] (diminishing[1]) feedback in GST context loops[1] back from the model outputs to modify[1] subsequent inputs. **[LO3 AC3.1 T3 Ch2]** ***Responses demonstrating understanding of the role of feedback to gain 5 marks.***

Answer A4.

Disaster recovery software forms part of the disaster recovery plan[1] (details of the plan not required for this response). Typical plans will include mirror sites[1] where that software will assume the role of the site under threat[1]. Simpler solutions may only include software rollback to previous secure states[1]. Response to concentrate[1] upon the software aspects, which software is time critical, which software can be left for later recovery[1], software that can safely have reduced priority[1] or reduced servicability[1].
[LO4 AC4.2 T3 Ch 11] ***5 marks in total.***

Answer A5.

Candidates are expected to demonstrate[1] the holistic viewpoint of systems (Aristotelian[1] or Gestalt[1]). Within this framework noting that emergent properties (caused by the unexpected interrelation between the components[1]) arise within this framework. Without consideration[1] of the holistic view the emergent properties may be overlooked[1]. **[LO5 AC5.1 T3 Cp2] 5 marks.**

Answer A6.

Broadly 1 mark per point, better answers will probably ascend as follows.

Stage	Point[1]
Alignment	Customer focus financial, operational goals with stakeholder expectations
Assessment	Assess core strategies & operational processes
Linking	Link core strategic/operational processes
Develop	Produce process performance plan
Priority	Prioritise process based on strategic objectives

[LO6 AC6.2 T2 Cp14] (5 marks)

Answer A7.

One mark Available for the description of a CSF and four marks for the details offered. The example will be judged on its merit; the most likely example will follow from the candidates reading of the set text[1] viz: focussing upon styling, quality and cost of reaching these goal(s) hence enabling an increased market share, with a view to increased profits. CSF[1] follow a generalised Pareto's Law, i.e. focussing on key 20% of the factors under consideration. CSF offered might include: what sales objective[1] does the Motor Company have for the cars e.g. prestigious[1] marque /volume sales/mass market/after service[1]/supplier of components for other manufacturers[1]? Alternative CSF example is allowed and will be judged using the examiners discretion.
[LO1 AC1.2 T1 Ch14] (5 marks)

Answer A8.

A General Systems Theory viewpoint is expected: "the whole is greater than the sum of the parts". Some solutions may cross reference Aristotle, systems boundaries and or Emergent Properties. Holistic viewpoint captures the entire range of inputs/outputs/process/boundaries and provides a greater understanding of the system.
[LO5 AC5.1 T3 Ch2] ***One mark per point.*** **(5 marks)**

PART B.

Answer B9.

(a) Probable response will be

Typical offering	Comment
Cheap	Warning that reliability needs to be confirmed[1]. Adequate citations important[1] (but mass held views can still be wrong[1]!). Become an author[1] and contribute[1] to the citations.
Ease of access	Vast store[1] of information available (but also to competitors[1])
Internet	Requires good Internet access[1]

Information System users can research the database[1] as an aid[1] to decision making, confirmation[1] of hypotheses or market research may be necessary as required[1] by the particular circumstance. **[LO6 AC6.4 T2 Ch4]** ***Each point can gain one mark, maximum five.***

(b) Any level may be chosen provided response is relevant to the level. Possible responses tabled below. *Broadly one mark for correctly identified level and four marks for the perceived usefulness.* **[LO6 AC6.4 T1 Ch12]** ***Ditto for second choice up to overall maximum of ten.***

Level	Usefulness[4]
Strategic[1]	Demographic/Population trends to predict future pathways
Tactical[1]	Statistics from similar sectors to adjust sales campaigns
Knowledge[1]	Research into materials to redesign/improve products
Operational[1]	Information regarding terminology e.g. the meaning of 802.11

(c) ***Two marks for the whom, three marks for the what***. Business Intelligence is a contemporary term for data and software tools that analyse data hence they are more likely to be found at the managerial level (but not exclusively). An example is tabled below. Other examples are acceptable

Area	Uses[3]	Typical User[2]
Sales	Forecasts, performance, cycle times	High level managers
Call Centre	Satisfaction survey, churn	Middle managers
Marketing	Loyalty, attrition rate	Tactical manager
HRM	Productivity churn	Tactical manager

[LO3 AC3.1 T1 Ch2, Ch12] **(Total 20 marks)**

Answer B10.

(a) Any five will be acceptable with potential solutions tabulated below. ***Two m... per correctly identified and described components.*** **[LO1 AC1.3 T3 Ch2]**

Term[1]	Meaning[1]
Customer	Victims/beneficiaries of the change
Actors	Those that perform the change
Transformation	The process of changing the inputs into outputs
World	How does the system fit the larger picture
Owners	Who owns the process
Environment	Influences beyond the immediate system

(b) Typical responses will offer a pictorial representation of a system using cognised standard pictograms, for example crossed swords for areas of conflict ✂ and telephones to indicate communications☎. A possible example might be barriers to entry into the expanded sales domain. Examples are to be judged by their relevance. ***A mark for the rich picture[2], description[1], standard symbols[1], relevant example[2] up to 5 marks.*** **[LO1 AC1.3 T3 Ch2]**

(c) A discussion of Risk per see (i.e. probability of a hazard) is not required and will not attract marks. A discussion of the usefulness of a Rich Picture, as a tool for clearly demonstrating the risk in a manner that can be readily assimilated, is being sought. ***Five marks available for the clarity of presentation.***
[LO4 AC4.1 T1 Ch8, T3 Ch2] **(20 marks)**

Answer B11.

(a) Some possible differences that could be offered for bricks v clicks:

Premises based (bricks)[1]	Internet based (clicks)[1]
Physical store	Virtual storefront
Geographically limited	Global
Face to face interaction	Driven by computers
Monetary transactions	Electronic funds transfer (EFT)

[LO6 AC6.2 T3 Ch8]

Other possible pairs may be allowed. ***Maximum of five marks.***

(b) Candidates to demonstrate an awareness[1] of how market forces are driving bricks to become, at least in part clicks. Possible drivers are: cheaper sales[1], wider reach for sales[1], fewer premises[1], overheads reduced[1], potential for multi lingual sales[1]. Other factors may be allowed. **[LO2 AC2.3 T1 Ch7]** ***One mark per point to the maximum of five.***

(c) Responses should show an understanding of Data Mining and Decision Support Systems, assumed at the strategic level. Some responses may cross reference Non Obvious Relations Analysis (NORA) [2]. Data mining delves[2] into data

warehouses[2], retrieves[2], collates[2], analyses trends[2] and produces meani
reports of past actions[2] and possible futures[2]. When such output is aligned
DSS a strategic decision can be improved[2]. **[LO3 AC3.3 T2 Ch12]** ***Two marks per point to the maximum of ten marks.*** **(20 marks)**

Answer B12.

(a) The two words "financial transparency" is a useful summary. Sarbanes & Oxley have provided investors[1] a measure[1] of confidence[1] in financial statements[1] issued by companies both for internal company[1] and external stakeholder[1] use. This provides a measure of legal protection[1] for investors from unscrupulous business men[1], who have in the past attempted to defraud[1] investors. The Olympus Camera Company is a recent prime example. Sarbanes & Oxley applies to USA and companies with links thereto. Local national Acts will be accepted. **[LO1 AC1.2 T1 Ch1, Ch8]** ***5 marks.***

(b) Many answers are possible, modal value will be financial flows ***out***[1] of the organisation for dissemination[1] to the wider world[1] e.g. Annual Financial statements[1] provided for rating agencies for example Standard & Poor's[1]. Upward data flows will be disallowed. **[LO1 AC1.1 T3 Ch3]** ***Five mark potential***.

(c) Objective responses are allowed, the question is intended to probe the realisation that with globalisation, systems operating across many geographical and cultural boundaries require all due care. It is assumed that values across nations are variable. Responders may argue for or against the proposition with equal validity.
[LO1 AC1.3 T1 Ch4.8] ***Marks will be awarded for logical development of the response.***

(20 marks)

Answer B13.

(a) Various answers may be offered: the set text suggests the ability[1] of businesses[1] to respond rapidly[1] to changes[1] in the supply chain[1] affecting other business[1] and to implement suitable remedial actions[1].
[LO2 AC2.3 T2 Ch7 LO6 AC6.2 T3 Ch8]*Five marks available for solutions relying upon the B2B model.*

(b) Possible solutions are structured[1], semi structured[1] or un-structured. It would need great skill to defend structured in the context of emerging technologies.
The modal choice may be: Semi structured[1] with justification of: a tactical decision[1] with a relatively short time scale (mobile telephone technology continues to evolve and long term horizons unclear[1]), cost relatively modest in company terms but care needed for systems compatibility[1]. Calculation of operating costs reasonably predictable[1] with existing tariffs. **[LO3 AC3.1 T2 Ch 12]*Candidates who defend their choice with plausible and vigorous arguments to gain five marks.***

(c) Herbert Simon proposed 4 stages tabled below. A non linear model in the classical waterfall mode with some feedback at each stage.

Customer	Meaning	Mark
Intelligence	Data gathering & unbiased interpretation	Two marks
Design	Options with feasible solutions	Two marks
Choice	Selection from best options	Two marks

Implement	Implementation	Two marks
Feedback	"splash back" to previous stages i.e. some feedback occurs to the preceding stage	Two marks

[LO3 AC3.1 T1 Ch 12] **(20 marks)**

End of Examination.