



CEX7112 - Management Information Systems for the Construction Industry

FINAL EXAMINATION - 2015/2016

Time Allowed: Three Hours

Date: 2016 - 12 - 11 (Sunday)

Time: 0930 - 1230 hrs

The paper contains Six (06) questions. Answer any Four (04) questions.

Q1.

- i.) State the salient features of the 'Systems Concept' and describe the main characteristics of the 'Systems Method'. You may use an island wide Super Market chain as an example to demonstrate your answer.
(Marks 08)
- ii.) In the "Development Process" for a system, three (03) major stages are identified. Describe these stages with specific references to Management Information System development.
(Marks 08)
- iii.) One of the most common techniques adopted in the development of "Systems" such as a Management Information System is "Systems Development Life Cycle Model". Describe the four (04) phases of this technique highlighting the bearing on Management Information System development.
(Marks 09)

Q2.

- i.) Describe the 'Bottom - up' approach in the development of a Master Plan for an MIS and discuss the advantages and disadvantages of the method.
(Marks 08)
- ii.) Discuss the historical development of Management Information Systems (MIS) with particular emphasis on recent trends in four (04) specific areas related to Engineering and Management, which gave rise to more efficient, adaptive and large scale MISs to supplement the management of large enterprises of today.
(Marks 08)
- iii.) Discuss the bearing of the invariable 'Human Factor' on the success or failure of a MIS with descriptive examples from the construction industry.
(Marks 09)

Q3.

- i.) Describe the concepts and principles of Programming languages in line with the four (04) categories to which programming instructions are grouped.
(Marks 08)
- ii.) When a new MIS is introduced to an organization, it should not be done in an abrupt manner since every organization has a MIS in some form or other. The transition or the conversion can be handled in one of the four (04) well known methods. Describe these methods.
(Marks 08)
- iii.) How could an International level bridge construction contractor utilize a customized construction Management Information System to improve Productivity, Competitive edge, Reputation for reliability and Profit?
(Marks 09)



Q4.

i.) "During the past five years, capacities, efficiencies and reliability of data storage media for computer applications have progressed at an even more rapid pace than the first decade of the 21st Century". Inline with this statement, discuss the physical types, interface technologies and capacities of currently popular storage media for use with microcomputers.

(Marks 08)

ii.) Discuss the conceptual meaning of "Artificial Intelligence" (AI) as applied to computer and information technology. Use a possible application of AI in the construction industry to illustrate the future use of such technology.

(Marks 08)

iii.) Describe the functions expected of an "Operating System" for a microcomputer and present an account of the development of operating systems to the sophistication of present day, indicating levels of utility and user-friendliness of these systems at each stage.

(Marks 09)

Q5.

i.) Discuss the historical development and working concept of the "Internet" and elucidate the possible avenues available for the construction industry to exploit the worldwide coverage of Internet.

(Marks 08)

ii.) Describe and discuss the main components that should be available in the "System Unit" of a micro-computer with multimedia, networking and communication facilities via mobile telecommunication networks.

(Marks 08)

iii.) Cable (wire) based short range communication between computing and communication devices has substantially shifted from Cables to Wire-less technologies. Describe *three* (03) such wire-less technologies popular in the present day.

(Marks 09)

Q6.

i.) Describe a "computer virus", which is major threat to computer and electronic communication based MISs, with reference to various forms in which they afflict computer systems. Further, give a brief account of the way "anti-virus" programmes detect and clean viruses.

(Marks 08)

ii.) Describe *two* (02) popular topologies available for networking computers indicating preferred uses for each type.

(Marks 08)

iii.) Today, the conventional postal mail system has been almost completely made obsolete by the electronic mail (e-mail). Discuss how the e-mail system works and useful features available with the system with reference to postal mail and other useful facilities available through the e-mail system as well as negative realities of the e-mail culture.

(Marks 09)

