Hong Kong Examinations and Assessment Authority

Hong Kong Diploma of Secondary Education Examination 2012

Information and Communication Technology

School-based Assessment (Project Titles)

Candidates should choose one of the following project titles and follow the guidelines and assessment criteria stipulated by their teachers to complete the project assignment. Teachers can provide other school-based project titles to suit their needs when necessary.

Candidates should define the scope of the project well, produce a prototype and write a report for the compulsory part and the corresponding option of the elective part in the curriculum.

In the report, candidates should consider including the following elements under the selected option. Candidates may include other elements. For each element mentioned, describe and justify its uses.

Option A (Databases)

- Database design for the system
  - database schema
  - ER diagrams
- Functionality of the system
  - application level
  - SQL implementation

Option B (Data Communications and Networking)

- Network design for the system
  - network infrastructure design
  - IP address management
- Network management and security
  - monitoring and troubleshooting
  - access control and data security

Option C (Multimedia Production and Web Site Development)

- Production of multimedia elements
  - attributes of the elements
  - integration of the elements
- Web site development
  - user interface design
  - dynamic and interactive web pages

Option D (Software Development)

- Program design
  - modularity
  - reusability
- Program implementation
  - data structures
  - algorithms

Title 1: Public Examination System

A large public examination will be held in school halls and classrooms in a district. The examination provider would like to set up an information system to monitor the examination process. The information system will be able to

(i) perform seat allocation for candidates,
(ii) record attendance,
(iii) allow instant messaging at the workstations in the halls and classrooms for centre supervisors,
(iv) record videos in the halls and classrooms, and
(v) accommodate various issues arising from the use of ICT.

You are the IT project manager responsible for the project. You are going to provide solutions for some of the above requirements for the examination provider.

Title 2: English Vocabulary Game

An English language learning centre would like to provide an information system for children to play English vocabulary games which improve their English vocabulary.

You are the IT project manager responsible for the project. You are going to provide solutions for the English language learning centre.

END OF PAPER