SOLUTION: M.I.S. AND BUSINESS SYSTEMS NOV 2007

QUESTION 1

(a) (i) Some of the subsidiaries within the Group already share customers. However, the incompatible systems mean that such customer information cannot be exploited to the Group's advantage. A centrlised policy should provide a consistent hardware and software structure that will make it easy to pass data from one application to another and to share information across applications and subsidiaries and to eliminate duplication and redundancy.

This will provide new sales leads for cross-selling since customers from one part of the Group are offered services and products produced in another part. It will also allow the Group to build up a comprehensive profile of their customers that can be used to provide a competitive edge in the market.

(ii) The current situation is such that IT expertise is very localized and cannot be effectively shared throughout the subsidiaries.

In the centralized arrangement, IT staff will constitute one large department where they will have access to greater opportunities provided by working in projects across all subsidiaries. This will make the company less reliant on individuals and able to tackle larger and more difficult projects by calling a larger pool of staff and other resources.

(iii) The centralised arrangement should result in economies of scale in the purchase of hardware, software and consumables, by way of bulk discounts and through Group-wide licencing agreements.

Similarly a stronger, centrally-driven IT arrangement will allow easier definition and enforcement of standards in systems development. Common hardware and software used in one physical site provides a much better basis for standards definition and enforcement.

(b) The centralization approach may require a network of a mainframe or minicomputer with a number of smart and dumb terminals, communications interface devices, peripheral devices to facilitate inputs and outputs, a multi-user operating software, communications software, and appropriate applications software.

QUESTION 2

a) Electronic commerce is the application of advanced technology to increase the effectiveness of commercial practices.

It may be defined as "trading on the Internet". E-commerce, in recent years, has been referred to as the 'use of the Internet and Websites in the sale of products and services'. Through e-commerce, Danpa Group will be able to establish a value added network of all its

subsidiaries and thus reduce expensive sales and distribution workforce, while offering new marketing opportunities seven days, around the clock.

b) The benefits that will accrue to the company through e-commerce will include:

(i) The company can tap into worldwide information about its own products and services.

(ii) Danpa Group will find it cheaper to provide information on its roofing sheets and other products in electronic form than it will be to employ staff to man the telephone on an enquiry desk.

(iii) The Internet allows the company to reach potentially millions of customers from diverse locations at the same time.

(iv) Through e-commerce, the company will be able to extend its trading time to seven days, around the clock.

c) Problems that may come the way of the Group through the use of e-commerce will include:

(i) Difficulty in managing staff: E-commerce involves an unusual mix of people, including security staff, web technology people, designers, marketing people, etc, and it may be difficult managing them.

(ii) Link up with existing business systems: Since the Group may be starting e-business from scratch, any new technology installed will probably need to link up with existing business systems, and this could potentially take a very long period of programming.

(iii) Possible lack of consumer trust: Internet merchants need to elicit consumer trust when the level of perceived risk in a transaction is high. This may not be so with products like roofing sheets.

(iv) Risk with payment over the Internet: The Group will have to deal with issues such as fear of invasion of privacy and abuse of customer information (e.g. about their credit cards or account numbers)

QUESTION 4

a)

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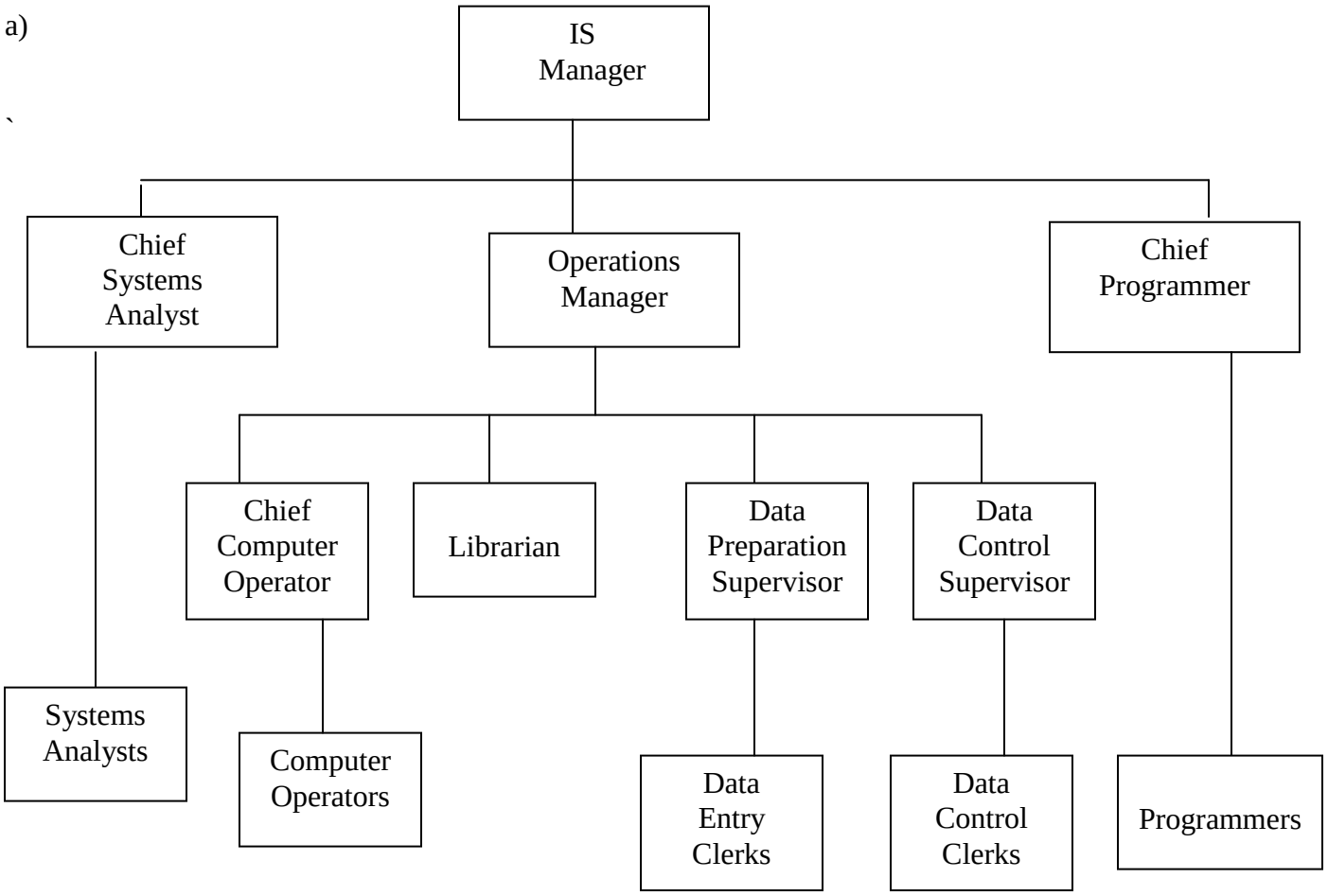

Departmental chart: by function or activity

(b) The responsibilities of the stated personnel are:

IS Manager:

(i) interpretation and execution of IS policy as defined by the IS steering committee or Board of directors;

(ii) controlling immediate subordinates in the attainment of project objectives;

(iii) participation in policy formulation;

(iv) liaison with user departments to ensure their interests are fully provided for;

(v) ensuring that company policy is adhered to;

(vi) assessing the suitability of security procedures, etc.

Programmer:

(i) liaison with systems analysts to determine philosophy of proposed systems and agreement on programming language to use;

(ii) defining test data requirements and monitoring test runs;

(iii) writing (coding) new programs as and when required;

(iv) maintenance of existing programs whenever these become necessary;

(v) reporting status of program development to the chief programmer, etc.

Librarian

(i) principal custodian of all backing storage media;

(ii) releasing media to authorised staff on request;

(iii) responsible for all file backups;

(iv) ensuring a proper register is kept and maintained for all media;

(v) ensuring that no media are left lying about at any time;

(vi) ensuring that all backing storage media are safely stored in a fire-proof cabinet, etc.

QUESTION 5

a) Factors for Form Design

- Identification – form title and number
- Purpose of form
- Origination of document – Place and means of origination
- Contents of Document
- Sequence of data to be entered
- Volume of use – maximum, minimum, average
- Frequency of preparation
- Distribution of forms/documents
- Type of data (Numeric, Alphanumeric)
- Serial design

b) **Sequence Codes** are simply given the next available numbering in ascending order to new items. Thus new items can only be inserted at the end of the list.

For example: Cheque books receipt books, bus tickets, etc.

Block Codes provide a different sequence for each different group of items. Made up of for example: fields that help with identification of entity

South east code numbers 10000 – 19999

South west code number 20000 – 29999

Wales code number 30000 – 39999

QUESTION 6

a) In-house software are application program developed by the technical IT staff of an organization and possesses the following advantages:

- Less costly
- Easy to maintain and enhance
- Well tailored to user's needs
- Good for staff development

b) Off-the-shelf application software is application programs which are developed by Software house or Computer Bureau for the Business Industry.

Examples are:

- Sun Accounts Package
- Micro Banker Package
- Tally Accounts

c) Computer high level languages are English-like and use English words which can be easily understood by humans

Examples are: Java, BAS and C++

QUESTION 7

a) The term Electronic mail or E-mail is used to describe various systems of sending data or messages electronically through the Internet.

The advantages are:

- Speed of transmission
- Security
- Less costly
- Document can be saved and resent

The disadvantages are:

- User training costs may be high
- Could be used to commit fraud and deception
- Mail set large
- Can use a lot of memory

b) Electronic Data Interchange (EDI) is a form of electronic mail involving more specific business uses. The idea behind EDI is for businesses trading with each other to exchange electronically documents as purchase orders, invoices, statements of account, contractual documents etc.