



NOVEMBER 2012 EXAMINATION

DATE: 14 NOVEMBER 2012

TIME: 14H00 – 16H00

TOTAL: 100 MARKS

DURATION: 2 HOURS

PASS MARK: 40%

(BS-IS)

INFORMATION SYSTEMS

THIS EXAMINATION PAPER CONSISTS OF 3 SECTIONS:

<u>SECTION A:</u>	CONSISTS OF: (i) 10 MULTIPLE-CHOICE QUESTIONS (ii) 5 TRUE OR FALSE QUESTIONS (iii) 10 MATCHING-STATEMENT QUESTIONS ANSWER <u>ALL</u> THE QUESTIONS	(10 MARKS) (10 MARKS) (10 MARKS)
<u>SECTION B:</u>	CONSISTS OF 10 SHORT QUESTIONS ANSWER <u>ALL</u> THE QUESTIONS	(10 MARKS)
<u>SECTION C:</u>	CONSISTS OF 4 LONG ANSWER QUESTIONS ANSWER <u>ALL</u> THE QUESTIONS	(60 MARKS)

INSTRUCTIONS:

1. Read the following instructions *carefully* before answering the paper, as failure to act upon them will result in a loss of marks.
2. Write your answers in your answer book, which is provided in the exam.
3. Ensure that your name and student number are clearly indicated on your answer book.
4. Write your answers in either blue or black ink in your answer book.
5. Read each question very carefully before you answer it and number your answers *exactly* as the questions are numbered.
6. Begin with the question for which you think you will get the best marks.
7. Note the mark allocations for each question – give enough facts to earn the marks allocated. Don't waste time by giving more information than required.
8. You are welcome to use diagrams to illustrate your answers.
9. Please write neatly – we cannot mark illegible handwriting.
10. Any student caught cheating will have his or her examination paper and notes confiscated. The College will take disciplinary measures to protect the integrity of these examinations.
11. If there is something wrong with or missing from your exam paper or your answer book, please inform your invigilator immediately. If you do not inform your invigilator about a problem, the College will not be able to rectify it afterwards, and your marks cannot be adjusted to allow for the problem.
12. This paper may be removed from the examination hall *after* the examination has taken place.

Examiner: K Rentzke

ANSWER ALL THE QUESTIONS

(i) MULTIPLE-CHOICE QUESTIONS

Choose the correct option for each of the following. Write only the question number and your chosen answer. For instance, if you think that the correct answer for number 1 is (a), then write it as 1. (a).

1. Which of the following is a collection of data, rules, procedures and relationships that must be followed to achieve value?
 - (a) knowledge base
 - (b) expert system
 - (c) AI program
 - (d) database

2. What is today's corporate mainframe generally used for?
 - (a) end-user applications
 - (b) information processing and data storage for large systems
 - (c) Internet applications
 - (d) DSS

3. Which one of the following is *not* an output of an ERP system?
 - (a) information for managing production
 - (b) information for managing customer relationships
 - (c) employee data
 - (d) accounting information

4. What is a system that helps a company manage all aspects of customer encounters called?
 - (a) a CRM system
 - (b) production and supply chain management
 - (c) sales ordering system
 - (d) financial accounting system

5. Which of the following is *not* an e-commerce activity?
 - (a) distribution
 - (b) general ledger
 - (c) buying
 - (d) selling

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6. Which one of the following is an example of e-commerce where consumers sell directly to other consumers?
 - (a) B2B
 - (b) eBay
 - (c) B2M
 - (d) B2C

7. Which of the following is one of the first steps of disaster planning?
 - (a) employee screening
 - (b) the identification of potential threats or problems
 - (c) the summarisation of costs
 - (d) employee training

8. Which system development phase follows systems design and development?
 - (a) analysis
 - (b) review
 - (c) maintenance
 - (d) implementation

9. Which one of the following statements is true with regard to the object-oriented software development approach?
 - (a) COBOL programming becomes much easier.
 - (b) Systems analysts look for classes rather than entities.
 - (c) Designers need to interact with users to a lesser degree.
 - (d) Software managers can more easily track development.

10. Which of the following is the cause of most computer-related mistakes?
 - (a) poor policies
 - (b) faulty hardware
 - (c) faulty software
 - (d) human error

[10]

(ii) TRUE OR FALSE QUESTIONS

Choose whether the following are True or False. Motivate all your answers.

1. A scheduled computer report or printout is developed to give a decision-maker relevant information upon request.
2. A primary key is a unique field.
3. A reorder point is an excellent example of a parameter that will trigger an exception report.
4. Direct conversion of a new IS system is generally the most desirable approach because it happens so fast.
5. Downsizing reduces the workforce without necessarily cutting costs.

[5 × 2 = 10]

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(iii) MATCHING-STATEMENT QUESTIONS

Match the statements in Column B to the terms in Column A. Write down the answers only, for example 1. (a).

Column A	Column B
1. forecasting	(a) the individual who benefits from an expert system
2. ROI	(b) a widely used transport-layer protocol that most Internet applications use with IP
3. thin client	(c) the individual who designs and develops an expert system
4. laptop	(d) the process of estimating the future, for instance sales quantities, and using the estimates to order the right quantities of goods or materials before a shortage occurs
5. TCP	(e) a measure of the additional revenue generated by a new system development project as a percentage of the investment in the project
6. heuristics	(f) a low-cost, centrally managed computer, with limited capabilities
7. knowledge user	(g) the science of designing and positioning computer equipment to reduce health problems
8. knowledge engineer	(h) used for identification instead of fingerprints
9. retina scan	(i) rules of thumb often used in decision making
10. ergonomics	(j) a small light-weight pc

[10]

[30]

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SECTION B: SHORT QUESTIONS

(10 MARKS)

ANSWER ALL THE QUESTIONS

QUESTION 1

What is the world's largest network called? [1]

QUESTION 2

What do we call a network that applies web technology within a company? [1]

QUESTION 3

What do we call a network that applies web technology within a company and also allows selected outsiders to access authorised resources? [1]

QUESTION 4

What is a TPS? [1]

QUESTION 5

What branch of computing deals with devices that can perform dangerous or boring jobs requiring high precision? [1]

QUESTION 6

What do we call a website that people create and use to write about their observations, experiences and feelings? [1]

QUESTION 7

Distinguish between e-commerce and m-commerce. [1]

QUESTION 8

What is technology diffusion? [1]

QUESTION 9

What is an ERP system? [1]

QUESTION 10

What device is used to connect one LAN to another? [1]

[10]

SECTION C: LONG ANSWER QUESTIONS

(60 MARKS)

ANSWER ALL THE QUESTIONS

QUESTION 1

- (a) What is the traditional view that distinguishes data from information? (2)
- (b) Name any five characteristics of valuable information. (5)
- (c) What are the three most important components of an information system? (3) [10]

QUESTION 2

- (a) Give six advantages of the database approach to data storage and management. (6)
- (b) What is a DML? (2)
- (c) Give the name of a universally used DML for relational databases. (1)
- (d) What are the four stages or steps for designing a relational database? (4)
- (e) Distinguish between a database and a DBMS. (4)
- (f) What is a data warehouse? (3) [20]

QUESTION 3

The four main elements of a computer hardware system are:

- Central Processing Unit
- Input Devices
- Storage Devices
- Output Devices

Answer the following related questions:

- (a) Name the two main components of the Central Processing Unit. (2)
- (b) Give four examples of input devices. (4)
- (c) Give two examples of primary storage. (2)
- (d) Give four examples of secondary storage. (4)
- (e) Give four examples of output devices. (4) [16]

QUESTION 4

You have been appointed the Information Systems Manager of a small e-commerce retail store. The development team is fully committed and running behind schedule on project deadlines. On your first day in your new job, the company finance director tells you that she needs a new integrated accounting system because all the accounting is done on various PCs using spreadsheets, which are not properly controlled. Data is duplicated, inconsistent, and scattered all over the company's network. Management reporting is unreliable and the data cannot be trusted. There are over 20 000 sales transactions per month. There are 55 ledger accounts and 15 cost centres. The company needs an accounting system to capture all transactions and post them to a finance database which will be able to provide essential, accurate management information.

Answer the following related questions:

- (a) When acquiring the new software you have the choice to *make* or *buy*. Which do you think is the most suitable alternative for the required accounting system? (1)
- (b) Give two reasons for your answer to (a) above. (2)
- (c) What type of data storage system are you likely to need? (1)

The project is launched and you conduct a feasibility study. After the feasibility study has been completed, the board approves the project and you are required to do the systems analysis work.

- (d) Name three methods you would use to collect information on existing procedures, work methods, controls and information needs. (3)
- (e) Name three types of diagrams that you could use for process or activity modelling. (3)
- (f) Where would you document information about all the elements of data that make up the system? (1)
- (g) Name three types or levels of testing that you would use. (3) [14]

[60]

Section A: 30 marks

Section B: 10 marks

Section C: 60 marks

TOTAL: 100 MARKS