Academic Year 2011/2012 –3rd Year Examination – Semester 5

IT5104 - Professional Issues in IT
Structured Question Paper with Model Answers

03rd March, 2012
(TWO HOURS)

To be completed by the candidate

BIT Examination Index No: ....

Important Instructions:

- The duration of the paper is 2 (two) hours.
- The medium of instruction and questions is English.
- This paper has 4 questions and 12 pages.
- Answer all questions.
- All Questions carry equal marks.
- Write your answers in English using the space provided in this question paper.
- Do not tear off any part of this answer book.
- Under no circumstances may this book, used or unused, be removed from the Examination Hall by a candidate.
- Note that questions appear on both sides of the paper.
  If a page is not printed, please inform the supervisor immediately.

Questions Answered

Indicate by a cross (×), (e.g ☒) the numbers of the **four** questions answered.

	Question numbers			
To be completed by the candidate by marking a cross (×).	1	2	3	4
To be completed by the examiners:				

1) (a) For each of the following two clauses in the Code of Ethics of the Computer Society of Sri Lanka (CSSL) explain the purpose of the clause.

(i) Clause 4: Develop knowledge, skill & competence in the field of ICT

(04 marks)

ANSWER IN THIS BOX

Keep yourself informed of new technologies, practices and standards that are

relevant to your work, so that your knowledge up-to-date to perform.

Encourage your colleagues and staff to do the same to improve own effectiveness,

advance their capabilities and take on additional responsibilities.

(ii) Clause 5: Perform services only in areas of competence

(04 marks)

ANSWER IN THIS BOX

Accept only work as you believe you are competent to perform.

Always be aware of your own limitations and not knowingly imply that you have

competence you do not possess.

Obtain additional expertise from appropriately qualified individuals where

advisable.

(b) What action should one take if he/she gets to know of any significant violation of the code of ethics/conduct by a professional?

(01 mark)

ANSWER IN THIS BOX

Should be brought to the attention of the relevant professional body.

(c) BCS The Chartered Institute for IT, code of conduct has four sections namely: Public Interest, Professional Competence and Integrity, Duty to Relevant Authority and Duty to the Profession.

(i) What are the issues that come under Duty to Relevant Authority?

(08 marks)

ANSWER IN THIS BOX

Carry out your professional responsibilities with due care and diligence in accordance with the Relevant Authority's requirements whilst exercising your professional judgement at all times.

Seek to avoid any situation that may give rise to a conflict of interest between you and your Relevant Authority.

Accept professional responsibility for your work and for the work of colleagues who are defined in a given context as working under your supervision.

Do NOT disclose or authorise to be disclosed, or use for personal gain or to benefit a third party, confidential information except with the permission of your Relevant Authority, or as required by Legislation.

Do NOT misrepresent or withhold information on the performance of products, systems or services or take advantage of the lack of relevant knowledge or inexperience of others.

(ii) What are the issues that come under Duty to the Profession?

(08 marks)

ANSWER IN THIS BOX

Accept your personal duty to uphold the reputation of the profession and not take any action which could bring the profession into disrepute.

Seek to improve professional standards through participation in their development, use and enforcement.

Uphold the reputation and good standing of BCS, the Chartered Institute for IT.

Act with integrity and respect in your professional relationships with all members of BCS and with members of other professions with whom you work in a professional capacity.

Notify BCS if convicted of a criminal offence or upon becoming bankrupt or disqualified as a Company Director and in each case give details of the relevant jurisdiction.

Encourage and support fellow members in their professional development.

2) (a) Outline five (5) tasks that are expected to be undertaken by the Human Resource Department in an Organization in order to ensure that the organization has the workforce that it needs.

(05 marks)

ANSWER IN THIS BOX

Ensuring that recruitment, selection and promotion procedures comply with anti-discrimination legislation;

Staff training and development;

Setting up and monitoring remuneration policy;

Setting up and monitoring appraisal procedures;

Administering dismissal and redundancy procedures;

Dealing with contracts of employment;

Workforce planning;

Administering grievance procedures;

Being aware of new legislation affecting employment rights and advising

management of what the organisation must do to comply with it;

Dealing with health and safety;

Administering consultative committees;

[Ref 1: pg. 113]

(b) Explain the distinction between the two terms recruitment and selection.

(02 marks)

ANSWER IN THIS BOX

Recruitment mans soliciting applications.

Selection means selecting the applicants to whom offers will be made.

[Ref 1: pg. 113]

5

(c) Write brief notes on the following three selection techniques and outline their advantages and disadvantages.

(i) Interview by a panel

(06 marks)

ANSWER IN THIS BOX

Advantages

Help to prevent nepotism and other forms of corruption;

Disadvantages

Despite extensive research evidence demonstrating its unreliability this technique

is widely used, particularly in the public sector;

It favours smooth talkers;

Panel may neither contain professionally competent or operationally involved

people;

[Ref 1: pg. 114]

(ii) Psychometric tests

(06 marks)

ANSWER IN THIS BOX

Advantages

Verbal and numerical skills can be checked through Ability tests;

Potential to learns skills needed for a job can be checked through Aptitude tests;

Characteristics of a person and who they behave with others can be checked

through Personality tests;

Disadvantages

Difficult to design satisfactory tests for higher-level skills;

Although there are several competing theories of personality their value is far from

clear;

[Ref 1: pg. 114]

(iii) Task assessment

(06 marks)

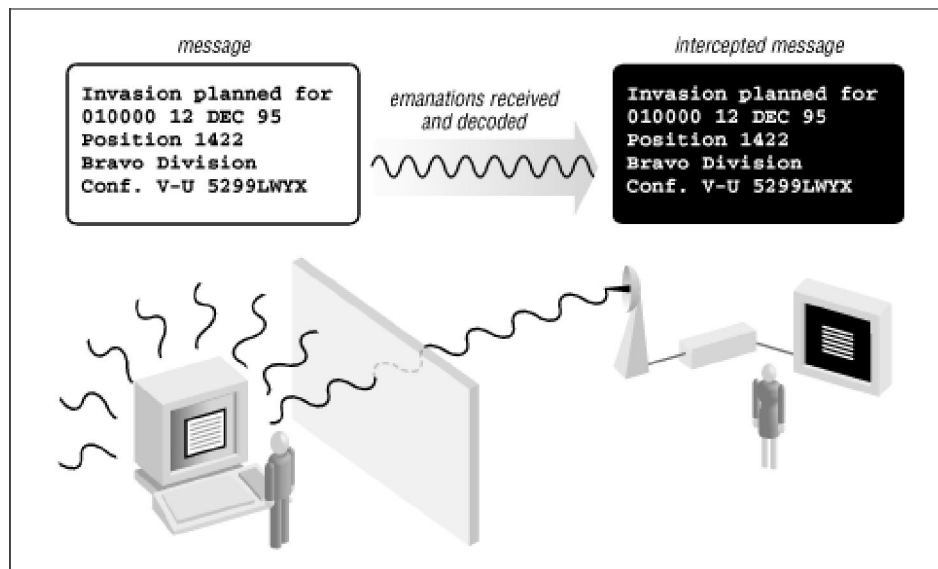ANSWER IN THIS BOX

Advantages

Candidates can be asked to carry out some of the tasks that they will be required to

do in the job;

Disadvantages

Job involves some skills that cannot be assessed including complex tasks;

[Ref 1: pg. 115]

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3) The following figure illustrates electronic emanations from computer equipment being intercepted.

(a) Describe briefly the section of the Computer Crimes Act No. 24, 2007 of Sri Lanka under which the above action can be found guilty of a computer crime.

(06 marks)

ANSWER IN THIS BOX

Section 8. Any person, who, knowingly or without lawful authority intercepts; [1]

Continued...

Any subscriber information or traffic data or any communication, to, from or within

a computer ; or [2.5]

Any electromagnetic emissions from a computer that carries any information,

shall be guilty of an offence; [2.5]

(b) If a person is convicted of the above crime what would be the punishment he/she would be given?

(06 marks)

<u>ANSWER IN THIS BOX</u>

On conviction be liable to a fine not less than one hundred thousand rupees and

not exceeding three hundred thousand rupees or

to imprisonment of either description for a term not less than six months

and not exceeding three years, or

to both such fine and imprisonment

(c) Consider the following action.

A programmer planted a computer virus in his employer's computer system which wiped off all the payroll records. It was activated as a time bomb, doing its damage two days after he was fired. The program was written to search for his name among pay-roll records and if not found to activate the time bomb, thereby deleting all the records.

Describe briefly the section of the Computer Crimes Act No. 24, 2007 of Sri Lanka under which the above action can be found guilty of a computer crime.

(08 marks)

ANSWER IN THIS BOX

Section 5. Any person who, intentionally and without lawful authority causes a computer to perform any function knowing or having reason to believe that such function will result in unauthorised modification or damage or potential damage to any computer or computer system or computer programme shall be guilty of an offence.

For any unauthorised modification or damage or potential damage to any computer or computer system or computer programme to take place, any one of the following may occur:

(1) impairing the operation of any computer, computer system or the reliability of any data or information held in any computer; or

(2) destroying, deleting or corrupting, or adding, moving or altering any information held in any computer;

(3) makes use of a computer service involving computer time and data processing for the storage or retrieval of data;

(4) introduces a computer program which will have the effect of malfunctioning of a computer or falsifies the data or any information held in any computer or computer system.

ANSWER IN THIS BOX

(d) If the person is convicted of the above crime what would be the punishment he/she would get.

(05 marks)

ANSWER IN THIS BOX

on conviction be liable to a fine not exceeding three hundred thousand rupees or to

imprisonment of either description for as term which may extend to five years or to

both such fine and imprisonment

4) (a) What are greenhouse gases?

(05 marks)

ANSWER IN THIS BOX

carbon dioxide

water vapour

nitrous oxide

ozone

Methane

(b) Briefly explain three anthropogenic causes of global warming and how they contribute to global warming.

(12 marks)

ANSWER IN THIS BOX

Deforestation - Deforestation occurs in major levels today, to obtain wood for paper

and furniture production and to clear land for farms, buildings and cities.

Trees and other plants collect carbon dioxide (CO2), which is a greenhouse gas

thereby reducing greenhouse gases in the environment. When trees are cut (CO2) is

Continued...

simply released to the atmosphere.

Transportation - When driving it burns fossil fuels. This process releases carbon

dioxide and other greenhouse gases.

Production of electricity - Nearly 40% of carbon dioxide emissions come from burning

fossil fuels to make electricity

Alternate acceptable answers will be considered

(c) Give "good housekeeping" user initiatives that can be used to decrease the environmental impact of computing.

(02 marks)

ANSWER IN THIS BOX

Put a computer into a "standby" or "sleep" mode to save a lot of power, To actually

prevent a desktop computer from using power, after being shut down it must either

be switched off at the wall socket, or turned off using the small rocker switch on the

back of the power supply.

(d) Beyond the "good housekeeping" user initiatives, there are a number of more fundamental steps that can be taken to significantly decrease the environmental impact of computing. What are these steps?

(06 marks)

ANSWER IN THIS BOX

Lower power hardware

Virtualization

Continued...

Cloud computing

Energy efficient coding

Improved repair, re-use, recycling and disposal

Less pollutant manufacture

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