TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

SOCIAL SCIENCES

UNIVERSITY EXAMINATION FOR:

BIS Y2 S2

HIS 4207: INFORMATION TECHNOLOGY IN LIBRARIES AND

INFORMATION CENTRES

SERIES: DEC 2021

TIME: 2 HOURS

DATE: DEC 2021

Instructions to Candidates
You should have the following for this examination
-Answer Booklet, examination pass and student ID
This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.
Do not write on the question paper.

Question ONE

a. Compare and contrast the following:

   i. Open Source software Vs Proprietary software (5 Marks)
   ii. Reprographic technology Vs Micrographic technologies (5 Marks)
   iii. Optical Reprographics Vs Digital Reprographics (5 Marks)
   iv. Operating system Vs web browser (5 Marks)

b. Discuss key elements of Dublin core metadata schema (10 Marks)

Question TWO

The Gutenberg printing press is considered one of the most important inventions in modern times. Discuss (20 Marks)

Question THREE

(a) What is digitalization? (5 Marks)

(b) Discuss the importance, issues to be considered and challenges involved in digitization projects (15 Marks)

Question FOUR

(a) Why are the Integrated Library Systems important? (5 Marks)

(b) Discuss the main modules available in Integrated Library Systems and their functions (15 Marks)

Question FIVE

(a) Describe the information security concept (4 Marks)

(b) Discuss key technologies used to provide security in libraries and information centers (16 Marks)

Question ONE

i. Open Source software Vs Proprietary software (5 Marks)

Open source software is a computer *software* whose source code is available openly in internet and programmers ca can modify it to add new features and capabilities without any cost. Here the software is developed and tested through open collaboration. This software is managed by an open source community of developers. It provides community support as well as commercial support if available for maintenance. We can get it for free of cost. This software also sometimes comes with license and sometimes does not. This license provides some rights to users like.

Unlike open source, there are some software the source code of which can only be modified by the individual or organization who created it.

The owner or publisher of the software holds intellectual property rights of the source code exclusively. We call this type of software "proprietary software" because only the original owner(s) of the software are legally allowed to inspect and modify the source code.

ii. Reprographic technology Vs Micrographic technologies (5 Marks)

Reprographics is the process of reproducing graphics through electrical or mechanical means such as photography or xerography. Photography and printing services are the biggest examples of businesses and entities that make use of reprographic equipment. In the simplest terms, reprographics is the reproduction of visual elements such as graphic images and even text documents either as print or as digital data. Reprographics is also known as reprography.

Micrographics is the process of transferring information onto film. such as microfilm or microfiche, which requires enlargement to be readable. The production, handling and use of microfilm and microfiche. Images are created by cameras or by COM units that accept computer output directly.

The documents are magnified for human viewing by readers, some of which can automatically locate a page using indexing techniques.

    iii. Mechanical Reprographics Vs Digital Reprographics

Digital Reprographics
Digital reprographics includes the fax machine, laser print-ers, and the new digital copiers. With the introduction of digital technology, it was no longer necessary that the original have a physical form. If it did have a physical form, the revolution made it possible for the original and the copy to be in different locations.

Mechanical Reprographics
Mechanical Reprographics include the Gutenberg press which signaled the beginning of the era of mechanical reproduction using modular reusable masters. Mechanical reprographics substituted the human efforts in reproductions for flexible, moveable type and mechanical reproduction

    iv. Operating system Vs web browser

The OS is the software that controls your device's basic functions, such as running programs, controlling peripherals like a keyboard, and allowing your device to understand what you want when you tap the touchscreen. ... A browser is a program that allows you to use the Internet.

  b.   10 well explains Dublin core metadata schema elements 1 Mark each
        Title, subject, description, creator, publisher, contributor, date, type, format, identifier, sources, language, relation, coverage, rights

Question TWO

The Gutenberg printing press is considered one of the most important inventions in modern times. Discuss

Description of the Gutenberg printing press and how it changed printing (*Well explained 5 Marks*)

    5   *well explained reasons as to why the invention was important, 3 marks each)*

1. It spread knowledge and ideas to more people,

2. It fueled the Renaissance, during which scientists, inventors, philosophers and artists changed the world.

3. press spread literature to the masses for the first time in an efficient, durable way

4. Lead to low cost of book

5. Lead to increased literacy levels

Question THREE

What is digitalization

- Digitization is a process of capturing an analog signal into digital form.

- It's the process of making an electronic version of a 'real world' object or event, enabling the object to be stored, displayed and manipulated on a computer, and disseminated over networks and/or the World Wide Web.

- Image may be captured using a scanner or a digital camera and to optimize the clarity, OCR software may be employed to the electronic image.

Discuss the importance, issues to be considered and Challenges involved in digitization projects

Importance

1. Access
2. Preservation
3. Reduced costs of Handling
4. Organization and dissemination

Issues to be considered

1. Identify the User community of the digitized objects/information
2. Identification of information material to be digitized
3. Consider copyright issues
4. Workflow involved in conversion of analog material into digital format
5. Determine whether the work will be done In-house or out-source
6. Deciding upon the use of Information Technology (IT)
7. Infrastructure, personnel and financial requirements
8. Digital Preservation

Challenges

1. Data Size
2. Documents type

3. Multilingual Text Support
4. Technology Obsolescence
5. Copyrights

Question FOUR

Why are the Integrated Library Systems important? (5 Marks)

A library management system, also known as an automated library system, is software that has been developed to handle basic housekeeping functions of a library.

The software may be focused on one library system only or

May be capable of integrating two or more basic functions

Discuss the main modules available in Integrated Library Systems and their functions

(4 *well explained philosophies, 3marks each)*

- circulation,

- cataloging,

- acquisition,

- serials management, and

- reference.

Question FIVE

Describe the information security concept (*Well explained definition of information security 4 Marks*)

Discuss key technologies use to provide security in libraries and information centers
(4 *well explained technologies, 4 marks each)*

1. CCTV
2. EM
3. RFID
4. Biometric