NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF COMMUNICATION AND INFORMATION SCIENCE
DEPARTMENT OF JOURNALISM AND MEDIA STUDIES
INTRODUCTION TO INFORMATION TECHNOLOGY (IJM 1105)
JULY 2005 SUPPLEMENTARY EXAMINATION
TIME ALLOWED: 3 HOURS

INSTRUCTIONS TO CANDIDATES

 i)   Section A is **compulsory.**
 ii)   Answer **three** questions from section B.
iii)   Poor spelling and grammar will be penalised.
iv)   Start each answer on a new page.

SECTION A: COMPULSORY

Question 1

"PETRO-CANADA TURNS TO PARALLEL PROCESSING."

Petro-Canada, an oil refiner in Calgary, Alberta, with $3,5 billion in annual revenue, had run its information systems on a variety or departmental and mainframe computers. Many of its information systems were none grown and did not work together to provide the company with a unified picture of its operations or data. So Petro-Canada decided to implement SAP's R/3 software, which integrates a wide range of business functions, including manufacturing inventory, accounting, and human recourses, so that they would automatically share data. An order entered by the sales department, for example could be viewed by the factory and the warehouse to help them with scheduling. Headquarters could tap into up-to-the-minute data on sales, inventory, and production. The company could access single views of its business data with this new applications but it also meant that Petro-Canada's computers would have to process an enormous volume of data to do so. The company believed that computers with conventional processing could not do the job.

Petro-Canada turned to parallel processing. It decided to use IBM's RS/6000 SP server to store this information because the server could handle parallel operations on data while producing users with a single view of data. The RS/6000 SP has up to six processing units, each with 512 megabytes of memory and a total of 300 gigabytes of disk storage. Petro-Canada opted for IBM's 7133 serial storage Architecture (SAA) disk drives, which are faster than the parallel SCSI drives conventally used in parallel processing systems. The RS/6000 is returned to 2000 PCs, which will handle e-mail, fax, and panting services.

The company started the system transition by using the new RS/6000 and the SAP software – the refineries and Petro-Canada's natural gas exploration and production activities started using the new system later. The system was completely rolled out by the end of 1996.

The lost savings from the new system have not yet been calculated, but the company believes that the system will improve its bottom line.

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SOURCE: Barbara DePompa, "Petro-Canada Goes Parallel,"
            Information Week, April 8, 1996

1a)   What was wrong with Petro-Canada's conventional processing system?   **[10 marks]**

1b)   Discuss the advantages of the RS/6000's networked component to Petro-Canada.
        [10 marks]

1c)   How did parallel processing technology help Petro-Canada achieve its business goals?
        [10 marks]

1d)   Discuss the relevancy of Petro-Canada's parallel processing system to Zimbabwe.

        [10 marks]
        TOTAL: [40 marks]

SECTION B: ANSWER ANY THREE QUESTIONS

Question 2

What is an integrated software package? How would a journalist use the features of an integrated package?   **[20 marks]**

Question 3

a) What is desktop publishing?   **[5 marks]**
b) Highlight the key considerations in designing a brochure for the faculty of communication and information science.   **[15 marks]**
        TOTAL: [20 marks]

Question 4

How has information technology affected journalists and modern media practitioners in Zimbabwe?   **[20 marks]**

<u>Question 5</u>

Explain the purpose of each of the following Internet tools and capabilities:

a) Telnet   **[4 marks]**
b) F.T.P   **[4 marks]**
c) Veronica   **[4 marks]**
d) Archie   **[4 marks]**
e) E-mail   **[4 marks]**
                                          TOTAL: [20 marks]

<u>Question 6</u>

Discuss the major **<u>TYPES</u>** of software used by journalists and modern media practitioners.

[20 marks]