



National University of Science and Technology

FACULTY OF COMMERCE

DEPARTMENT OF ACCOUNTING

FIRST SEMESTER EXAMINATION PAPER

DATE: JANUARY 2013

SUBJECT: INFORMATION TECHNOLOGY: CAC 1203

TIME ALLOWED: THREE (3) HOURS

MARKS: 100

INSTRUCTIONS TO CANDIDATES

1. Answer **4 out of 6** Questions
2. Use the examination book provided
3. Use black or blue pen
4. Begin each question on a new page and
5. Submit all answer books

QUESTION ONE [25 MARKS]

(a) Explain the following in relation to computer programs:

- i. Machine Language [2]
- ii. First-generation language [2]
- iii. Second-generation language [2]
- iv. Third-generation languages [2]
- v. Fourth-generation language (4GLs) [2]

(b) Describe software and its categories as shown on the diagram in figure 1.1. Use examples in each case. [15]

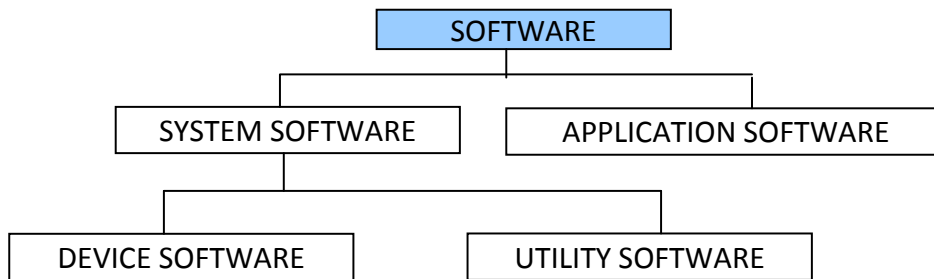


Figure 1.1 Software Categories

QUESTION TWO [25 MARKS]

(a) The central processing unit (CPU) is the brains of a computer hardware system. It has three major components. Explain on them. [10]

(b) Elaborate on an operating system (OS) and explain how the OS interacts with hardware as illustrated in the following diagram on figure 2.1. [15]

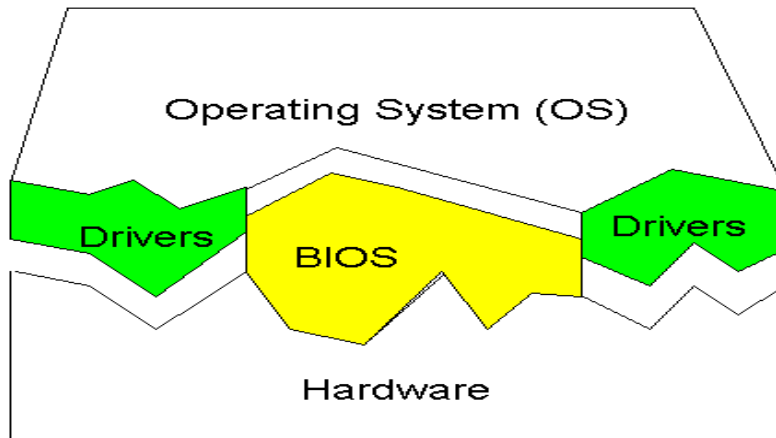


Figure 2.1: Operating System and Hardware Interaction Diagram

QUESTION THREE [25 MARKS]

- (a) With the aid of a diagram illustrate the device that is necessary in computer data communication to transmit data from a computer network over a public switched telephone network (PSTN) [10]
- (b) Discuss the following network topologies:
- i. Ring [5]
 - ii. Star [5]
 - iii. Bus [5]

QUESTION FOUR [25 MARKS]

- (a) Input devices are computer hardware peripherals used to capture data into the computer. State and describe any five Human Data Entry Input Devices and any three Source-Data Automation Input Devices. [16]
- (b) Differentiate between the internet, intranet and extranet. [9]

QUESTION FIVE [25 MARKS]

- (a) Define the following concepts used in information systems:
- i. Data [2]
 - ii. Database [2]

- iii. Database management system (DBMS) [2]
 - iv. Field [2]
 - v. Record [2]
- (b) What is an information society? Distinguish an information society from a knowledge society. [5]
- (c) Discuss computer ergonomics and the health related issues that need to be considered by data capture clerks who spend most of their working hours on the computer. [10]

QUESTION SIX [25 MARKS]

- (a) If you purchase a software application with minimum requirements of a processor speed with 1.2 GHz, 128 MB of RAM and 100MB of free memory space. This software can be smoothly installed on a microcomputer with hardware of a Pentium IV microprocessor, 512 MB of main memory and a hard disk drive of 120 GB. Explain the underlined terms and Justify that the software will be successfully installed. [25]

THE END OF EXAMINATION PAPER