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**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS**

**UNIVERSITY EXAMINATION FOR THE DIPLOMA**

**1ST YEAR 1st SEMESTER**

**(AUGUST 2016)**

**COURSE CODE: ICT 2111**

**COURSE TITLE: INTRODUCTION TO COMPUTER APPLICATIONS**

**EXAM VENUE: STREAM: E-LEARNING**

**DATE : 08/09/16 EXAM SESSION: 2:00 – 3:30 pm**

**TIME : 1 ½ HRS**

**Instructions:**

1. **Answer all questions in Section A and any other 2 questions in Section B**
2. **Candidates are advised not to write on the question paper**
3. **Candidates must hand in their answer booklets to the invigilator while in the examination room**

QUESTION 1 (30 Marks)

1. Define the following
   * 1. animation
     2. Multimedia (2 marks)
2. Explain the function of the following computer components
   * 1. Arithmetic/Logic unit
     2. Control unit

(4 marks)

1. Describe **two** ways in which computer viruses are spread from one computer to another. (4 marks)
2. Discuss four factors to consider in purchasing a computer hardware. (10 marks)
3. Explain the various advantages and uses of computers in organizations. (10 marks)

QUESTION 2 (20 MARKS)

1. Distinguish between the following as used in IT environments
2. Hardware and Software (2 marks)
3. Mainframe and Minicomputers (2 marks)
4. RAM and ROM (2 marks)
5. Files and Directories (2 marks)
6. Data and information (2 marks)
7. Explain the purpose of a network in an organization. (10 marks)

QUESTION 3 (20 MARKS)

1. Explain the importance of the following applications to individuals,
   * 1. Ms Word
     2. Ms PowerPoint (4 marks)
2. Using a well labeled diagram, explain the functional components of a computer system.

(8 marks)

1. Use the Excel worksheet below to answer the questions that follow.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** |
| **1** | **NAME** | **HOURS WORKED** | **HOURLY RATE** | **BASIC PAY** | **GROSS PAY** | **TAX DEDUCT** | **N.S.S.F**  **CONTRIBUTION** | **ALLOWANCE** | **NET PAY** |
| 2 | John | 8 | 200 |  |  |  |  |  |  |
| 3 | Peter | 12 | 444 |  |  |  |  |  |  |
| 4 | Sam | 22 | 454 |  |  |  |  |  |  |
| 5 | Njogu | 3 | 567 |  |  |  |  |  |  |
| 5 | Gerald | 45 | 88 |  |  |  |  |  |  |
| 6 | Totals |  |  |  |  |  |  |  |  |

Write the formulas that would compute the following

1. BASIC PAY = HOURS WORKED \* HOURLY RATE. Less 2% of hourly rate.
2. ALLOWANCES ARE allocated at 7.5% of the BASIC PAY.
3. GROSS PAY = BASIC PAY + ALLOWANCES
4. TAX DEDUCT is calculated at 20% of the GROSS PAY.
5. NET PAY = GROSS PAY - TAX DEDUCT.
6. NSSF CONTRIBUTION = 3.82 % of the BASIC PAY.
7. The totals for each column (8 marks)

QUESTION 3 (20 MARKS)

1. Discuss three advantages of the Internet. (6 marks)
2. State the importance of the following on the Internet
   * 1. Search engines
     2. Email services
     3. World Wide Web (6 marks)
3. Based on end user license there are four basic types of software; commercial,

shareware, open source and freeware. Briefly describe these software’s. (8 marks)

QUESTION 4 (20 MARKS)

1. Briefly describe the following
   * 1. System Software
     2. Application Software
     3. Programming languages (6 marks)
2. Explain the difference between a field and a record in a database. (2 marks)
3. Discuss the role of a Database Management System (4 marks)
4. Describe any five data types that can be assigned to table fields in Access. Give examples of values that can be stored in them. (8 marks)