**Term 1 - 2023**

**COMPUTER STUDIES (451/2)**

**PAPER 2**

**FORM FOUR (4)**

**Time: 2 ½ Hours**

**Name**: …………………………………………………………. **Adm** **No**: ……………….

**School**: ……………………………………………………….. **Class**: …………………..

 **Signature**: …………………………………………………….. **Date**: …………………...

**INSTRUCTIONS TO CANDIDATES**

1. Write your name and admission number at the top right hand corner of each print out
2. Write your name and admission number on the diskette/CD-R provided
3. Write the name and version of software used in each question on the answer sheet
4. Answer **ALL** the questions
5. Passwords **should not be used** while saving in the diskette/CD-R
6. All answers **MUST** be saved in the diskette/CD-R
7. Make print out of answers on the answer sheet provided
8. This paper consists of 3 printed pages. Candidates should check to ensure that all pages are printed as indicated and no questions are missing

**FOR EXAMINER’S USE ONLY.**

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| --- | --- |
| **Question** | **Candidate’s score** |
| **1** |  |
| **2** |  |
| **Total score** |  |

**Question One**

(a) Type the following passage exactly as it appears using a word processor and save it as Information System (20 marks)

**PROCESS OF INFORMATION SYSTEM DEVELOPMENT**

 **INTRODUCTION TO INFORMATION SYSTEM DEVELOPMENT**

 The methodology area can justly be described as a jungle. Firstly there appears to exist many hundreds of the system development methodologies. Longworth (1985) in a recent study identified over 300. If all these are different, then it is no wonder that there is so much confusion. However, it may be that the differences are trivial and are made solely to differentiate methodologies in the market place.

 ***WHAT IS A METHODOLOGY?***

 The term methodology is not well defined either in Literature or by practitioners. There is very little agreement as to what it means other than at a general level. The term is usually used very loosely and yet it is used very extensively.

 This loose use does not mean that there are no definitions, simply that there are no universally agreed definitions. At the general level, it is regarded as a recommended series of steps and procedures to be followed in the course and developing an information system. In a brief *adhoc* survey, this proves to be about the maximum that people will agree to and of course such a definition raises many more questions than it answers.

 For example:

* What is the difference between a methodology and a method?
* Does a methodology include a specification of the techniques and tools which are to be used?
* Does a collection of techniques and tools constitute a methodology?
* Should the use of a methodology produce the same results each time?

 The questions that arise are fundamental as well as numerous. Unfortunately the most that can be achieved is to air the issues. The information system community is in the process of debating the meaning of the term methodology in an information system context, and it may one day have a universal definition. However, it may be more realistic to assume that this will never be achieved. An information system’s methodology has been defined as *a recommended collection of philosophies, phase, procedures, rules, techniques, tools, documentation, management and training for developers of information systems.* (Madison 1983).

 According to this definition, a methodology has a number of components.

 Which specify:

1. How a project is to be broken down into stages
2. What tasks are to be carried out at each stage
3. What outputs are to be produced
4. When they are to be carried out
5. What constraints are applied
6. What support tools may be utilized

 In addition, the methodology is supposed to specify how the project is to be managed and controlled and support the training needs of the users of the methodology. This is all encompassed in a view or philosophy concerning the important and critical aspects of information systems development.

 **Required to**

1. Remove the underline from all the underlined and change the text to bold and italics. Apply hanging indent to the first two paragraphs. (5 marks)
2. Proof read the document. (2 marks)
3. On the paragraph starting with “The questions……….apply in margin drop cap covering two lines. (3 marks)
4. Apply expanded character spacing on the sub heading “What is Methodology” at 10 points. (3 marks)
5. Select the text starting from the words “For example:….. information systems development” (at the end of the passage) and move it to a new page. (3 marks)
6. Convert the entire document it to two columns of the separated by a line. (3 marks)
7. Double space the first paragraph. (2 marks)
8. Insert your name into the passage as a footer so as to appear as © your name (3 marks)
9. Insert page number at the top of the page of the format x of y at the center. (4 marks)
10. Save the changes as Methodology. (1 mark)
11. Print information system and methodology (2 marks)

**Question Two**

The table below shows the payment schedule of Sunshine Company Employees.

 Below is a list of allowances and basic salaries for ten employees in the month of July 2022.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| --- | --- | --- | --- | --- | --- |
| NAME | REGION | MEDICAL ALLOWANCE | HOUSE ALLOWANCE  | BASIC SALARY  | HARDSHIP ALLOWANCE |
| MURTAZA | EAST | 5,000 | 10,000 | 20,000 |   |
| WASIM  | EAST | 3,000 | 8,000 | 16,000 |   |
| MWANGI  | WEST | 3,500 | 8,000 | 16,000 |   |
| ISHO  | WEST | 6,000 | 12,000 | 25,000 |   |
| MITESH  | WEST | 2,500 | 6,500 | 12,000 |   |
| MITHEU  | EAST | 2,500 | 6,500 | 12,000 |   |
| KRISHNA  | EAST | 7,000 | 15,000 | 30,000 |   |
| MBUGUA  | WEST | 3,500 | 8,000 | 16,000 |   |
| KASOO  | WEST | 3,500 | 8,000 | 16,000 |   |
| SARU  | WEST | 3,500 | 8,000 | 16,000 |   |

 |  |  |  |
|  |  |  |  |

1. Using the above information, design an appropriate spreadsheet and enter the given sample data. Give the spreadsheet an appropriate title and save as Sunshine.(10 marks)
2. Insert heading titled. SUNSHINE COMPANY EMPLOYEES’ PAYROLL. (2marks)
3. Format the title as follows: bold, underline, font size 21, font color blue, background color yellow, merge the cells to center. (3 marks)
4. Count the number of employees from West and East respectively. (2 marks)
5. In cell B15 and C15 inset the 20% and 30% respectively. Given that employees from East were paid Hardship allowance of 20% of basic salary and those from West were paid 30% of basic salary. Using absolute cell reference calculate hardship allowance for all the employees. (9 marks)
6. Gross salary is calculated as the total of basic salary and all the allowances. Calculated the gross salary for all employees in column G. (3 marks)
7. All the employees pay tax of 15% in column H calculate the tax for all the employees.

 (3 marks)

1. In column I calculate the net salary of the employees as Gross salary less Tax. (3 marks)
2. In cell G14 calculate the average gross salary, and cell I14 count the number of employees whom are paid 30,000 and above. (4 marks)
3. Create a bar chart comparing every employee and the net salary, label the chart title, axis appropriately and place the chart on its own sheet. (6 marks)
4. Copy the data in sheet 2 and calculate the subtotal of the net of every region and the grand total. (4 marks)
5. Print the two sheets and the graph. (3 marks)