



THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY  
DEPARTMENT OF MATHEMATICS & COMPUTER SCIENCE

**SECOND SEMESTER EXAMINATIONS – 2021**

**FIRST YEAR BACHELOR IN COMPUTER SCIENCE**

**CS123 –ADVANCED INFORMATION & COMMUNICATION  
TECHNOLOGY**

**TIME ALLOWED: 3 HOURS**

#### **INFORMATION FOR CANDIDATES**

1. Write your name and student number clearly on the front of the examination answer booklet.
2. You have 10 minutes to read this paper. You must not begin writing during this time.
3. This paper contains two parts, PART A and PART B. Part A consists of Multiple Choice questions worth 20 marks and Part B consists of Short Answer questions worth a total of 80 marks which totals to 100 marks. You should attempt all the questions.
4. All answers must be written in examination answer booklets provided. No other written materials will be accepted.
5. Start the answer for each question on a new page. Do not use red ink.
6. Notes, textbooks, mobile phones and other recording devices are not allowed in the examination room.
7. No cheating of any form is allowed. If you're found to be cheating you will be PENALIZED.

#### **MARKING SCHEME**

Marks are indicated at the beginning of each question. Total mark is 100.

**PART A: Multiple Choice Questions.**

**[1 mark each = 20 Marks]**

1. What does it mean to edit a document?
  - (a) Write a new document.
  - (b) Create a new Excel workbook.
  - (c) Checking spellings, changing the font type, size and color.
  - (d) Opening a new document.
2. When creating a new document, which of the below options will be your last step?
  - (a) Open a new document and save it.
  - (b) Save a new document and create it.
  - (c) Saving and printing.
  - (d) Editing and saving.
3. You want to invite 100 of your friends to your 20<sup>th</sup> birthday party celebrations. Which is the fastest and easiest way to write and send the letters to your friends without having to do a lot of typing?
  - (a) Create a database.
  - (b) Create a list.
  - (c) Do mail merging.
  - (d) None of the above answers are correct.
4. In Excel spreadsheet, cell A7:B7 is referred to as a:
  - (a) Cell value.
  - (b) Cell range.
  - (c) Cell block.
  - (d) Cell name.
5. What is a Data Source?
  - (a) A database.
  - (b) A generic letter.
  - (c) A list.
  - (d) A generic letter and a list.
6. When mail merging, what are you merging?
  - (a) A generic letter.
  - (b) A database report.
  - (c) A generic letter to a list.
  - (d) A generic letter to a list and a database report.
7. The best definition of a spreadsheet cell is,
  - (a) Where column and the cell reference meet.
  - (b) The intersection point where a column and a row meet.
  - (c) A single data entry.
  - (d) A range of the cells.
8. In Excel spreadsheet, what would be the best name you can provide/give for =Sum (A1 : A5) ?
  - (a) A formula.
  - (b) A function.
  - (c) A reference.
  - (d) A range.
9. What would be the best name you would give for =A1+A2?
  - (a) Formula.
  - (b) Function.
  - (c) Reference.
  - (d) Range.

10. When you open or create a new workbook, cell A1 is selected by default. How do we refer to the selected cell?
  - (a) Selected cell.
  - (b) Selected cell A1.
  - (c) Active cell.
  - (d) Name box.
11. Which Windows operating system is known by this codename “Whistler”?
  - (a) MS DOS.
  - (b) Windows XP.
  - (c) Windows 10.
  - (d) Windows 2000.
12. Windows Vista was developed as an operating system and was completed on which of the dates below?
  - (a) 8/11/2006.
  - (b) 10/11/2006.
  - (c) 8/11/2005.
  - (d) 9/11/2006.
13. Which Windows operating system, codenamed Vienna and formerly Black Comb, is a personal computer operating system?
  - (a) Windows 2000.
  - (b) Windows NT.
  - (c) Windows 7.
  - (d) Windows Vista.
14. What type of program would you need if you are to run more than one program at a time?
  - (a) A boss program.
  - (b) A manager program.
  - (c) A sales program.
  - (d) A control system program.
15. Which of the operating systems listed below was one of the first OS for personal computers?
  - (a) Windows 2000.
  - (b) MS-DOS.
  - (c) Windows NT.
  - (d) Windows 95.
16. Which of these operating systems for personal computers, primarily uses the Command Line Interface?
  - (a) MS-DOS.
  - (b) Mac OS.
  - (c) Windows XP.
  - (d) None of the above answers.
17. Which of the terms below fits this statement “A single, specific occurrence of an entity”?
  - (a) Attribute.
  - (b) Instance.
  - (c) Field.
  - (d) Column.
18. Which of the terms listed below best matches this description, “Is a unique identifier of records in a table”?
  - (a) Foreign Key.
  - (b) Primary Key.
  - (c) Record.
  - (d) Field.

19. Which of the terms listed below best matches this description, “A Key field that appears (usually) as a non-key field in one relation and as a key field in another relation”?
- (a) Foreign Key.
  - (b) Primary Key.
  - (c) Record.
  - (d) Field.
20. Which of the data models listed below is the oldest of the models?
- (a) Flat file.
  - (b) Network.
  - (c) Hierarchical.
  - (d) Relational.

## SECTION B: SHORT ANSWER QUESTIONS

Question 21:

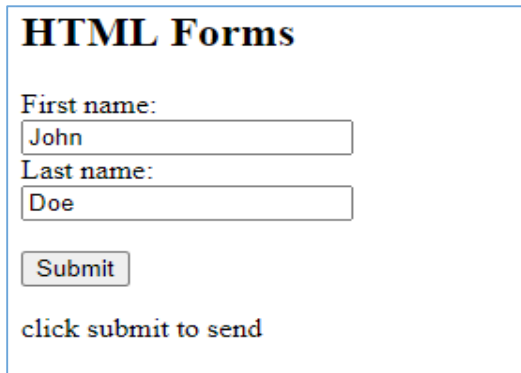
**[9 + (4 + 4 + 4) + 3 = 24 Marks]**

- (a) Define the following terms?
- i. Database.
  - ii. Field.
  - iii. Record.
  - iv. Entity.
  - v. Relationship.
  - vi. Primary Key.
  - vii. Foreign key.
  - viii. Parent Table.
  - ix. Child Table.
- (b) Draw ERD (Entity relationship diagram) for each of the following rules, using the appropriate symbols. Make sure to use **crow notation** to indicate its relationship type.
- i. Mr. Kolalio teaches a student.
  - ii. Students take more than one subject being taught by Mr. Kolalio.
  - iii. Mr. Kolalio teach these students. Many of those students were taught by Mr. Kolalio.
- (c) Name the type of relationships that each of the rules in (b) represent.

QUESTION 22:

[10 + 18 + 3 = 31 Marks]

(a) Carefully write down the html code that will display the output as seen below.



**HTML Forms**

First name:  
John

Last name:  
Doe

Submit

click submit to send

(b) What would be the appropriate html statement/code for the output displayed below?



## Basic HTML Table

GivenName	SureName	Age	Province
Jill	Smith	50	Enga
Eve	Jackson	94	Morobe
John	Doe	80	Madang

(c) In Html, there are three required tags that you will write when you are creating a webpage or a website. Can you write out these three required tags?

QUESTION 23:

[4 + 1 + 2 + 2 + 2 + 2 = 13 Marks]

(a) Write a Macro code that will output the output shown below.



- (b) What is an Excel Macro?
- (c) Name the two main types of procedures.
- (d) Define the types of procedures you've named in (c) above.

- (e) When reading a macro, you will use two types of cell references. What are the names of the two types of cell references?
- (f) Where does your macro run when using either of the cell references named above?

QUESTION 24:

**[6 + 1 + 5 = 12 Marks]**

- (a) List three advantages and three disadvantages of having ICT in our daily lives as students.
- (b) What is software piracy?
- (c) List an advantage each for having ICT in employment, education, home, medicine and banking.

END OF EXAMINATION