

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE

DEPARTMENT OF HUMAN CAPITAL MANAGEMENT

INFORMATION SYSTEMS I

BS217

TIME: 3 Hours

NOV 2023

INSTRUCTIONS TO STUDENTS

1. Answer any four questions.
2. Each question carries 25 marks.
3. Start each question on afresh page.
4. Credit will be given for the use of relevant examples.
5. No cell Phones are allowed in the Examination Room.

Question One

- a) Using the excel order of operation find the value of $150+150/(2+12)*12/4$. (5)
- b) The spreadsheet below shows the annual incomes of sales reps in an organisation.

	A	B	C	D	E
1	Name	Taxable Gross Income	Fixed Tax Amount	Tax Rate	Net Income
2	Peter	358000			
3	Sarah	279000			
4	Thabo	155000			
5	Hazel	86000			
6	Chipso	198600			
7	Cathrine	123000			
8	Privilege	670000			
9	Debra	220000			
10					
11					
12	Tax Table				
13	Lower bracket	Upper bracket	Fixed Tax Amount	Tax rate above lower limit-1	
14	1	150000	0	18%	
15	150001	235000	27000	25%	
16	235001	325000	48250	30%	
17	325001		75250	35%	
18					
19					
20					
21					
22					

Required

- i) Write a 'what-if' statement that will calculate fixed amount in C2. (8)
- ii) Write a 'what-if statement that finds the tax rate in D2. (8)
- iii) Write a formula that will calculate net income in E2. (4)

[25 Marks]

Question Two

Explain any **five** types of information systems used in organisations.

[25 Marks]

Question Three

- a) Identify and explain the **four** types of operating systems. (20)
- b) Describe the functions of utility software. (5)

[25 Marks]

Question Four

Explain any **five** types of network topologies found in organisational networks. [25 Marks]

Question Five

Discuss the main problems associated with file processing that led to the development of the database approach. [25 Marks]

Question Six

a) Explain the following terms as used in data processing:

- i) Batch processing (4)
- ii) Data mart (4)
- iii) Data warehouse (4)
- iv) Real-time processing (4)

b) Use examples to distinguish between following data processing methods

- i) batch output and interactive output. (4)
- c) centralized data processing and distributed data processing. (5)

[25 MARKS]

END OF PAPER