

BINGHAM UNIVERSITY, KARU, NASARAWA STATE
FACULTY OF SCIENCE AND TECHNOLOGY,
DEPARTMENT OF COMPUTER SCIENCE
END OF FIRST SEMESTER EXAMINATIONS 2021/2022
COURSE CODE: CMP 325;

COURSE TITLE: OBJECT – ORIENTED PROGRAMMING IILANGUAGE (JAVA)
TIME: 3 (THREE) HOURS; CREDIT UNITS: 3

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER 3

1. Write a program that generates the UI below and a function that returns each number of the Fibonacci sequence using the number entered as the length of the series to print. Handle two possible exceptions [15 Marks]



- Explain inheritance with code example [2 Marks]
 - Explain Encapsulation with code example [2 Marks]
 - Explain Polymorphism with code example [2 Marks]
 - Explain data parsing with code example [2 Marks]
 - Why is data parsing necessary? [2 Marks]
2. Write a java method to sum the value of an array [5 Marks]
- Write a java method to find the minimum and maximum values of an array [5 Marks]
 - Briefly define the following in relation to Java as an Object Oriented Programming Language (OOJPL):
 - Package [1 Marks]
 - Class [2 Marks]
 - Interface [2 Marks]
3. Write a java method to check if a string is valid password using the following rules:
- Password must have a length of at least 10 characters
 - Password must contain a mix of characters and digits [5 Marks]
- b. Given the array {6,7,8,4,9,8,5,7,5} print the index with the value 9 and replace it with 17 [5 Marks]
- c. What are Method Overloading and overriding? [5 Marks]
4. Write a method to find the number of even numbers in an array [5 Marks]
- Write a method to find duplicate numbers within an array [5 Marks]
 - Mention the rules governing method overriding [5 Marks]
5. Write a method to tell if a number is a prime number or not [5 Marks]
- Write a program that prints the square of numbers between 20 to 45. [5 Marks]

COURSE CODE : CMP 309
- THE SYSTEMS ANALYSIS &

- b. What is Java Platform? Mention and explain the Java platform components. [5 Marks]
6. Write a method to copy the values of an array into a new array. [5 Marks]
- a. What are variables and data types? Give examples each of variable declaration and initialisation. [5 Marks]
- b. When a data member is declared private, explain the accessibility and or, otherwise the access limitation of such a data. [2 Marks]
- c. Differentiate between Abstraction and Encapsulation.