QUIZ 6.1 – 6.2 – NO CALCULATOR

**Multiple choice Questions**  [6]

1. A) B) C) D)
2. What is the average value of on the interval ?  
     
   A) B) C) D)
3. Which of the following is the solution of the differential equation ?  
     
   A) B) C) D)

A graphing lines on a paper

Description automatically generated

1. Which differential equation corresponds to the following slope field?  
      
     
   A) B) C) D)
2. If , then   
     
   A) B) C) D)
3. If and when , then   
     
   A) B) C) D)

**Free Response Questions:**

1. Determine the following indefinite integrals: [8]  
   a)   
     
     
     
     
     
   b)   
     
     
     
     
     
     
     
   c)   
     
     
     
     
     
     
   d)
2. Determine the following definite integrals: [6]  
   a)   
     
     
     
     
   b)   
     
     
     
     
   c)
3. Find the average value of the function over the interval . [2]
4. Determine an equation for a function *f* such that and . [2]
5. Determine whether each of the following function is a solution of the differential equation: [3]  
      
   a) b)
6. Match the differential equation with its slope field. [2]  
     
   \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_  
     
   A graphing of a graph on a graph

   Description automatically generated A graphing of a function

   Description automatically generated A graphing of a function

   Description automatically generated A graph of a function

   Description automatically generated  
     
     
    A) B) C) D)
7. Solve the following differential equations [4]  
     
   a) no condition  
     
     
     
     
     
     
   b) Initial condition: