# MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO

###### DEPARTMENT OF BIOMEDICAL ENGINEERING

SECOND TERM THIRDYEAR (10-BIOMEDICAL BATCH)

SESSIONAL THEORY TEST 2012

#### BIOMEDICAL CONTROL SYSTEMS

Date**: 29-08-2012** Time Allowed**: 20 Minutes.** Max: Marks. **05.**

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| **PROBLEM: If *Z1*(s) is the impedance of a 10 µF capacitor, and *Z2*(s) is the impedance of a 100 kΩ resistor, find the transfer function, *G*(s) = *Vo*(s)/*V*i(s), if these components are used with;**   1. **An inverting operational amplifier as shown in Figure (a).** 2. **A non-inverting amplifier as shown in Figure (b).**   **Solution:**  **The transfer function of inverting amplifier is** |

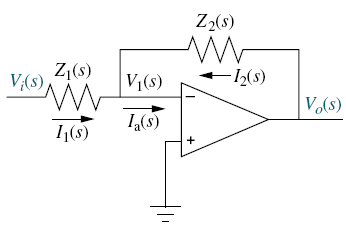


Figure: (a)



**The transfer function of noninverting amplifier is**

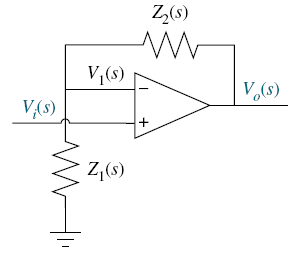


Figure: (b)

