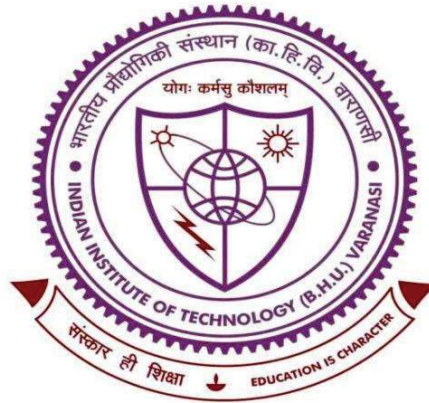


**OPTICAL PHANTOM BASED *IN-VITRO* STUDY FOR  
DEVELOPING NON-INVASIVE BLOOD GLUCOSE  
MONITORING TECHNIQUE USING MODULATED  
ULTRASOUND AND INFRARED LIGHT**



**THESIS SUBMITTED FOR THE DEGREE OF**

**Doctor of Philosophy  
in  
Biomedical Engineering**

**By**

**Anuj Shrivastav**

**Supervisor**

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