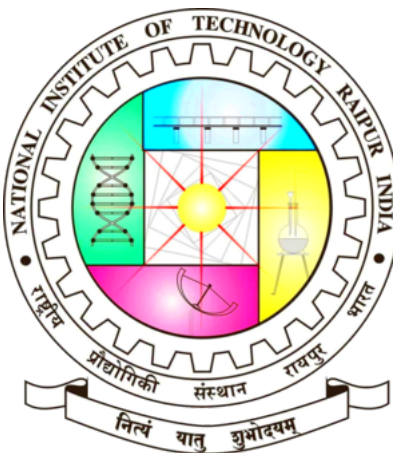


# NATIONAL INSTITUTE OF TECHNOLOGY (NIT)RAIPUR (C.G.)

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ASSINMENT-6  
ON  
5 SOLUTION TO COVID-19 PROVIDED BY BIOMEDICAL ENGINEERS

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## Contents

<b>1</b>	<b>ROLE OF BIOMEDICAL ENGINEER'S IN COVID-19</b>	<b>3</b>
<b>2</b>	<b>5 SOLUTION TO COVID-19 PROVIDED BY BIOMEDICAL ENGINEERS</b>	<b>3</b>
2.1	USE OF RAPID TESTING KIT . . . . .	4
2.2	USE OF COVID TRACKING APP . . . . .	5
2.3	USE OF ANTI STRESS APP . . . . .	6
2.4	USE OF HEALTH MONITORING DEVICE . . . . .	7
2.5	USE OF LOW COST OXYGEN GENERATOR . . . . .	8

# **1 ROLE OF BIOMEDICAL ENGINEER'S IN COVID-19**

Few year ago The COVID-19 come in our world . COVID-19 has infected and killed millions of people .COVID WORRIORS is a new concept ,and a new word in our world. Thousands of doctor died due to covid ,we call them as COVID WORRIORS ,but we forgot our unsung hero's , The BIOMEDICAL ENGINEERS.In this critical situation BIOMEDICAL ENGINEERS are develop many technology ,device's and applications that help's people .Many scientist and engineer predict that the covid never end form our world .It will live with us just like any other flu.

# **2 5 SOLUTION TO COVID-19 PROVIDED BY BIOMEDICAL ENGINEERS**

There are 5 Solutions to Covid-19 provided by Biomedical Engineer's-

1. USE OF RAPID TESTING KIT
2. USE OF COVID TRACKING APP
3. USE OF ANTI STRESS APP
4. USE OF HEALTH MONITORING DEVICE
5. USE OF LOW COST OXYGEN GENERATOR

## 2.1 USE OF RAPID TESTING KIT

Rapid tests[FIGURE 1 ], also known as rapid diagnostic tests or RDTs, are easy-to-use tests that provide quick results, usually in 10 to 20 minutes . The most standard tests, which have to be sent to a lab, rapid tests are done and provide results at the point of care. Biomedical engineers built an affordable fast testing kit so that many people may buy it and test themselves without need to go to a test lab.



Figure 1: RAPID TESTING KIT.

## 2.2 USE OF COVID TRACKING APP

Nowaday's covid case rapidly increase ,every city has covid patient ,every body want to safe travel .but that is only possible when we use covid tracking app[FIGURE 2 ]. The app work when two registered users come within Bluetooth range of each other, their Apps will automatically exchange unique Digital IDs and record the time and GPS location at which the contact took place. The information collected from the User's App will be securely saved on the other registered user's mobile device and will not be viewed by that user . If another registered user tests positive for COVID-19, the data from his or her mobile device will be securely uploaded and kept on the Server. This information is again used to start the contact tracing process and identify all possible people who also had close contact with the person who tested positive for COVID-19. From this you may safe from covid.



Figure 2: COVID TRACKING APP.

### 2.3 USE OF ANTI STRESS APP

It's critical to manage stress. Smartphone apps (apps) are increasingly being used in stress therapies because they provide consumers with the most flexibility. Anti-stress applications have a positive effect on individual stress perception, according to early study results. The COVID-19 pandemic has significantly impacted mental health, mobile mental health apps and anti stress app [FIGURE 3] can be efficient and helpful tools In large-scale crisis. Smartphone app that provides skills and resources that help people to manage with COVID-19 related stress.



Figure 3: Figure show covid impacted on mental health .

## 2.4 USE OF HEALTH MONITORING DEVICE

A Health Monitoring System [FIGURE 4 ](HMS) is a complex technology that provides an alternative to the current patient and health management. It consists of a wearable wireless device, like bracelet, that has sensors and is linked to an application that allows a doctor to access medical data. In current covid situation everybody think about own health .It is not possible to go hospital everytime for monitoring health status like bp,heartbeat ,pulse rate .So the other alternative way to monitoring own health status is health monitoring bracelet. From this you can see your health status each and everytime when you want.



Figure 4: HEALTH MONITORING DEVICE.

## 2.5 USE OF LOW COST OXYGEN GENERATOR

The oxygen is fundamental and necessary thing for live ,no one can live without oxygen[FIGURE 5 ] .Our atmosphere contain 21% oxygen but our engineer can't fullfill the medical oxygen demand in current covid situation. Few month ago India faces a shortage of oxygen. Many people died in covid because the shortage in oxygen . Nowaday the new technologies are develop , many engineer are develop low cost oxygen generator .we don't know about future what will happing next .so engineer's makeing a very low cost affordable oxygen generator, if India again faces shortage in oxygen the low cost oxygen generator full fill that demand and save life.



Figure 5: LOW COST OXYGEN GENERATOR.