SVNIT manufactured simple and cheap 'Face Shield' and 'Face Mask' using 3D printing

In line with the nation in fighting the deadly corona virus, SVNIT Surat is also contributing in this fight through its laboratory work. Considering the shortage of protective devices, Director Prof. S. R. Gandhi called upon the faculty and students to come up with some easy to use protective devices utilizing the in-house capabilities of the institute. Taking this call, Dr. Harshit Dave and Dr. Shailendra Kumar from Mechanical Engineering Department came up with a simple and cheap face shield and face mask with the support of their research scholars, Ashish Prajapati, Swapnil Vyavahare, Ravi Teja Karumuri Rahul Narkhede and Labh Chand Dhakar. 3D printing is an upcoming manufacturing process which is being widely investigated in Advance Manufacturing Laboratory and Research Lab of the institute. The team used PLA material which is a biocompatible material having negligible impact on environment. Face shield and face mask so fabricated weigh only **15 gram** and **70 gram** respectively and can be easily worn. After its use for some time, these can be easily cleaned in lukewarm water or sanitized before further use. These face shield and face mask provide protection against spread of virus through sneezing and coughing of others.

Institute is distributing these face shields and face masks amongst its security staff, mess and cleaning staff to protect them against any possible health hazard. The team is working round the clock to print face shields and face masks and plans to distribute these amongst COVID-19 fighters (e.g. traffic police, health and cleaning staff etc.) in consultation with district administration. The effort put by the institute staff and students in this social service utilizing its own available resources along with maintaining proper social distancing is widely appreciated.

FACE SHIELD

FACE MASK