As a Minister of Higher & Technical Education, Maharashtra State, I take great pride to say that the Directorate of Technical Education publishes quarterly DTE Newsletter. The activity may seem small, but the outcome has an immense impact on students, parents and the leaders of the industry. Maharashtra State is continuously making a great contribution towards providing the skilled manpower to the industry by way of various students centric activities. DTE News letter keeps informed and updated all the stake holders of the DTE. Focus is given on the latest activities happened in the institutes, new schemes launched by the Government and current trends in the field of technical education. DTE organizes joint activities with the industry thereby enhancing the industry-institute interaction. In order to provide opportunities for getting internships to the students, the State government and DTE/institutes are doing MoUs with the industries. Steps are also taken to improve the employability by organizing workshops for the students. I sincerely hope that this activity of DTE will share rewarding activities, plans and data among technical education fraternity, through the news letter.

Shri. Uday Samant
Hon’ble Minister, Higher & Technical Education
Maharashtra State

I feel extremely proud of this initiative of DTE to publish the quarterly newsletter. This Newsletter will act as a sound platform where all stakeholders can join hands to project the activities conducted in institutes. It is becoming an instrument for the student community to get updated about the current events happening in the technical institutes. Students' achievements have been published which in turn inspire other students too. DTE is consistently moving ahead with quality concerns and organizing events to open more opportunities for the students to explore their ideas. Students are encouraged to showcase their ideas, innovations, models in the technical events. DTE shall take efforts that every outgoing student shall be industry-ready and ready to take up the challenges. I am sure that, through this news letter, DTE is going to provide a platform for the faculty, students and industry to come together and share knowledge.
I wish all success to this newsletter and offer my wholehearted contribution forever.

Shri. Prajakt Tanpure
Hon’ble Minister of State Higher & Technical Education
Maharashtra State
The entire world is under the influence of pandemic Covid 19. The routine of daily life have been affected due to series of lockdown in our country also. In our state the education institutes were closed since the 16th of March. Most of the institutes were on the verge of completion of their academic activities however no institute has finished the academic term. The students have asked to vacate the hostel and sent them home. They duration of lockdown has been increased afterwards. Till date the Technical Education is fighting for maintaining quality through various reforms such as introduction of induction programme for first year students, conduct of base line test, remedial coaching and internship in industries to all students. Due to lockdown the everybody is at home so big question mark was there for continual of the ongoing activities. The covid 19 pandemic has created new challenges. The big issues were:

i- how to continue the teaching /learning process and complete the course content.

ii- how to maintained the quality of education.

iii- how to monitor the activities during lockdown period etc.

This particular situation has been taken care by Directorate of Technical Education by doing certain activities in proactive approach. What we have done in our state after getting information from the Government on 16th of March 2020, immediately all the educational activities where stopped and then the first lockdown period was declared till end of March 2020. Considering the situation and acting immediately the directorate of technical education started a dedicated portal for online activities during the work from home period. This all-inclusive portal was launched to monitor, implement and assess the effectiveness of online activities and the initiatives taken by institutions, head of the departments, principals and faculties during the lock down period. This, work from home portal consist of eight major areas such as:

- Online courses completed by faculty using the platform of Swayam NPTEL
- Different learning resources like audios and videos created by faculty for the help of students.
- The third party audio video and learning resources used by the faculty members for better understanding of the subject.
- Different types of assignments, quizzes, tests, group discussion, role plays given to the students and record of the same.
- Classes conducted using the online platform provided by Google, WebEx, zoom and similar third party live streaming sessions and number of sessions conducted
- Then a separate record was created for or using the virtual lab sessions for different types of laboratories to complete the remaining part of curriculum.
- Creation of online question bank, setting question papers, creating learning resources like lab manual, teacher notes and hand books and similar effective learning material.

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<thead>
<tr>
<th>SN</th>
<th>Activity</th>
<th>No. of Institutions</th>
<th>No. of Faculties</th>
<th>No. of Activities</th>
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<tr>
<td>1</td>
<td>Online Courses</td>
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<tr>
<td>2</td>
<td>Audio / Video</td>
<td>97</td>
<td>1330</td>
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<td>3</td>
<td>Third Party learning Resources</td>
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<td>2073</td>
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<tr>
<td>4</td>
<td>Assignments / Quizze/ Tests/ Group Dis. Tasks, Role Plays, Exercises</td>
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<td>2438</td>
<td>18411</td>
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<td>5</td>
<td>Third Party Live Streaming Sessions</td>
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<td>6</td>
<td>Virtual Lab Sessions</td>
<td>79</td>
<td>595</td>
<td>1230</td>
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<tr>
<td>7</td>
<td>Preparation of Question Bank/ Paper/ Lab Manuals</td>
<td>100</td>
<td>1808</td>
<td>6537</td>
</tr>
<tr>
<td>8</td>
<td>Administrative Work (NBA/ Project/ Lab de vel. / Equip.List/ etc)</td>
<td>94</td>
<td>1808</td>
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</tbody>
</table>

The Government institutes and Government Aided Private institutes were actively participated in these activities. It was emphasized that this online culture has to be now a routine part of the duties in the next coming period because as it has been said at the national level and state level that now we have to live with corona.

During MahTPO Webinar on 29thApril, I have insisted the development of e-contents to make it possible for staff to be ready for e-delivery of curriculum knowledge and skills so as to counter balance classroom teaching during difficult situations, such as COVID 19. We shall go for e-examination too once e-contents and e-delivery reach to the matured level. Further it is my opinion that engineering students and Diploma engineering students should not only be the job seekers but the job providers by way of Entrepreneurship.

Naturally if you give your best to the world, the best will come back to you. Hence, one must think and implement the best possible ways and try hard with best efforts for students of technical community so as to reap the benefits of Technical education.

Dr. Abhay Wagh
Director
Technical Education, M.S.
During this unprecedented time, the Directorate of Technical Education (DTE) seeks to ensure equitable educational opportunities for all students while prioritizing their health and well-being. Looking to the scenario of other countries COVID-19 situation, we have predicted that in India, the lockdown period may be more than that of other countries. Hence, it was very much essential to go for alternative teaching-learning method. At the flag end of the term, lockdown has started from 24th March 2020 onwards. Under the guidance of Hon. Minister Shri. Uday Samant and Hon. Secretary H&TE Shri. Saurabh Vijay, Director Technical Education Dr. Abhay Wagh has taken a lead role in propagating Online teaching – learning system through ICT. Hon. DTE appealed all the Principal and faculty of the Institutions to start conducting online classes through video conferencing, zoom meeting, Skype and other online options, social media platforms to deliver their teaching-learning process and complete the remaining 10-20% course curriculum.

This was a major decision and provided new direction to the technical education in the State. Under the guidance of Dr. Abhay Wagh, all the Principals and faculties have taken initiative and started imparting education to complete the balance curriculum through various ICT modes. The shift to online teaching is a major and challenging change for both staff and students. We are in an unprecedented situation and all involved - our students, academic staff and the professional staff who supported the systems and processes on which new delivery will run - will need patience, kindness and understanding as we work things out and try new ways of doing things. Guidance have also been developed to help faculty adapt their teaching and they are being supported by DTE’s Information Technology Development Team, who have developed a portal for Work From Home (WFH). On this portal all the faculty has to register first and post their online activities. This portal enables the administrators (Director, Joint Directors, Principal and Head of the Dept.) to get the status of teaching learning process and the feedback of the stakeholders. The online teaching timetable is prepared by individual faculty and displayed to students on their whatsapp groups.

**Pre-recorded lectures**
- Mostly lectures are of pre-recorded so students can view them as per their convenience. Lectures are also broken up into smaller parts. Lecturers are likely to be recording content from their desks at home.

**Seminars and discussions**
- As the real-time seminars are not possible so lecturers have instead set up discussion boards on the Virtual Learning Platforms (like MOODLE) and post seminar subjects regularly.
- There may be times when students and lecturers are not able to actively participate, for example if they themselves are unwell or are caring for unwell family members, in that case the students can view the recorded videos on you tube.
- We are also encouraging student groups to self-organise and to set up their own whatsapp groups and virtual spaces where they can exchange ideas and talk about the course materials and feedback.
- In fact some of the institutions have taken online feedback of students and parents, which was very much encouraging.

**Online Webinars, FDP and Students Training Programs**
- Few institutions have organised online seminars, webinars and training programs in collaboration with Industries on various Technical Issues to enrich the knowledge of the faculty and students.
- During the implementation, we came across that many institutions have done wonderful activities and some innovative experiments, which are highlighted in this issue as case studies.

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Dr. Suresh Yavalkar  
I/C Joint Director  
Technical Education, M.S.

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**MOOCS and Online activities conducted by Government College of Engineering, Nagpur**

Government College of Engineering faculty members along with visiting faculty carried out Online courses, Learning audio/video aids, Third party learning Resources, Live streaming mode, Virtual Labs, academic various online tools such as Google Class room, Google Hang out Meet, WhatsApp Group, Zoom, Google forms along with administrative work and almost completed the portion along with practical and project work. In addition to this institute has conducted on line sessional examination thorough Google class-room and examination score was declared on the same day. In addition to these regular activity, Various subject wise on line groups are created to help the low score.

HoDs are having regular faculty interaction through Google hangout meet. Some of the innovative activities conducted during lock down period are
- **Online Expert talk/webinar on Advancement in Farm work Technology** on 18th April 2020 conducted by ACC cement and arranged by Principal Dr. M. B. Kumthelkar. Around 300 participant from Construction Industry, academic Institutes and Architects were enrolled for same.
- Faculty members Dr. R.R. Chaudhari and Dr. R.B. Yarasu Mechanical Department of this Institute offered their expertise service for verifying the specifications as per standards of cold storage in Indira Gandhi Medical College Nagpur for COVID-19, by visiting the actual site
- **COVID Tracker application** was developed by Zaveria Kulsoom and Uday Rao of Computer Science and Engg Department students.

Dr. M. B. Kumthelkar  
Principal  
Govt. College of Eng. Nagpur
Shah And Anchor Kutchhi Engineering College, Mumbai entered into the Memorandum of Understanding with The University of Naples Federico II, “Università degli Studi di Napoli Federico II at Naples, ITALY for international Cooperation between SAKEC and The University of Naples Federico II on Educational development, student exchange, Faculty training etc. The Memorandum of understanding was signed on at SAKEC, Chembur, Mumbai by Director of Interdepartmental Research Center in Urban planning “Alberto Calza Bini, Dr Pasquale De Toro and Dr. Maria Cerreta, Prof. of Environmental Assessment and education from The University of Naples “Federico II” from the Italian side and from the Shah and Anchor Engineering College side Mr. Navinbhai Shah, Managing Trustee of Mahavir Education Trust and Dr Bhavesh Patel, Principal of Shah and Anchor Kutchhi Engineering College.

Shah and Anchor Kutchhi Engineering College was established in Mumbai, 1985 for the purpose of imparting quality technical education for students in Maharashtra state. The college is managed by Mahavir Education Trust. The college is recognized by AICTE, New Delhi and Government of Maharashtra, and is affiliated to University of Mumbai. It also offers Post Graduate courses in Computer Engineering, Information Technology, Electronics Engineering under the university of Mumbai. UG Programs in Computer Engineering and Information Technology of the College have been awarded accreditation by National Board of Accreditation (NBA) from A.Y. 2019-20 for 3 Years. The University of Naples Federico II was founded by emperor of the Holy Roman Empire Frederick II on 5th June 1224.

It is the world’s oldest state supported institution of higher education and Research. One of the most famous student was Roman Catholic theologian and philosopher Thomas Aquinas. Despite its huge size, The university with 13 faculties are the still one of the best universities in Italy being particularly notable research. The University of Naples Federico II is the only generalist Italian university in the Times higher education reputation, which consider the best 200 best universities in the world.

Dr. Bhavesh Patel
Principal

World is facing a challenge of Covid-19 pandemic which is threatening lives and livelihood. Our country has declared lockdown and urged for social distancing with emphasis on work from home. Government Polytechnic, Ahmednagar under leadership of Principal Mr. M. S. Satarkar is effectively running the teaching-learning process through online mode. All 50 teaching staff along with more than 70 visiting faculties have engaged almost all the students of the institute through various activities. The remained 8-10% portion before the semester ends was covered through various online modes like Google classroom, virtual labs etc. Staff are associated with different student activities like assignments, quiz, test series, group tasks etc. Many teachers used concept of virtual lab sessions. Media took the cognizance of the efforts taken by the institute and gave wide publicity. Teachers are also in contact with the parents for the admissions for A.Y. 2020-21. Already they have approached to more than 70 schools through ‘School Connect Program’ directed by MSBTE. Apart from this most of the teaching staff upgraded their knowledge through various online courses conducted by AICTE, HRD under NITTTR, SWAYAM, ATAL. These courses have brought revolutionary change among them like critical thinking, impact analysis, individual and team work, creativity, problem solving etc. With the acquired knowledge, many staff created learning audio/video, face book live sessions for students.

Conducted class assessment examination through google class room. Preparing Question Bank for various courses and making available to all students for their ready references and making them ready for forthcoming examinations. The staff has been taking online tests from MSBTE exam point of view as well as directing the students to be aware from the Corona virus. Social distancing, avoiding public gatherings, corona quiz and following government guidelines etc. are some of the messages perculated among students.

Prof. M. S. Satarkar
Principal
Government Polytechnic Ahmednagar
MOOCs and Online activities conducted by Government Polytechnic Karad

As the world continues to reel under the deadly Coronavirus pandemic and educational institutes remain standstill due to the imposed lockdown, it becomes necessity of all of us to take care of students; both physically and mentally. In this crucial period, Government Polytechnic, Karad continued serving nation by strategic planning various activities online for the benefit of the students. Firstly, the Institute faculty and staff harmoniously created awareness among the students regarding cleanliness, social distancing & social behavior during lockdown to avoid the corona infections. Once the physical comfort of students, faculty and staff is ensured, every department in the Institute started functioning in online manner. In spite of various challenges such as widely spread student community, network connectivity in rural areas, availability of limited resources etc. The Institute aggressively implemented various activities for the benefit of students and faculty.

1) To keep the academic work in progress, about 17 lectures were delivered in real time on Zoom platform through Live streaming sessions.

2) Many faculty developed their own videos of lecture using screencastomatic software and shared with students on platforms such as Google classroom, what’s app etc. By this an opportunity has been given to the students to learn as per their convenience and pace.

3) More than 50 question banks were developed by the faculty and shared with the students through what’s app, Google classroom etc. The students have been instructed to prepare the answers for all the questions and discuss them in their what’s app group.

4) The faculty from all the departments shared third party learning resources such as You-tube videos, e-books, slideshow presentations with the students for better understanding on various platforms such as what’s app, Google classroom etc.

5) To enhance the learning, the student centered activities were implemented in the form of Quiz, Assignments, Sample tests using Google forms. The students found very much satisfied with this, as the moment they finish their examination, they came to know their performance, grades obtained and importantly, the mistakes they made in the examination.

6) For laboratory experiences, tool of Virtual laboratory is utilized by 06 faculty.

7) Thus with the help of various online educational activities, the syllabus is completed by all the faculty, also questions/problems were given for practice.

8) As a part of Institutional Social Responsibility, the Department of Electrical Engineering has organized Online Practice Test Series for five units in the subject 22628: Emerging Trends in Electrical Engineering, for all final year students of Electrical Engineering in Maharashtra. Government Polytechnic, Karad is always ready to face any challenge, for the development of its students!!!!

Dr. Rajendra K. Patil
Principal
Government Polytechnic Karad

CAREantine Event - An initiative by A.P. Shah Institute of Technology, Mumbai

The lockdown imposed to prevent the spread of Covid-19 virus gave rise to some complications. People were forced to stay at home, give up their everyday lifestyle, change their pace and routine. However, seeing this as an excellent opportunity to help the people focus on their mental, physical, spiritual, emotional and social health, Antarang APSIT and Enroot Mumbai joined hands for a one-of-a-kind initiative, the CAREantine event. This event was special as it was conducted entirely with the help of technology, right from planning and coordination of the volunteers, promotions for the event to pulling off the actual event. Social media played a huge role in this. It started on 18th April and ends on 3rd May 2020.

The idea behind the event was simple yet effective. Participants were given activities for each day. These activities covered various aspects like mental health, spirituality, family bonding, creativity, etc. The activities themselves weren't tough or time consuming. After completing the activity for the day, the participants had to upload the results on a private link shared by the organisers. All through this, privacy of the participants was maintained. 16 activities were carried out in total. The event kicked off on 19 April, with the first activity being "Give yourself an amazing DIY gift", in which the participants had to craft a gift for themselves with whatever material they had at hand. It promoted self-care and creativity. The next activity was "Blast from the Past", where the participants had to share an old picture of theirs and memory associated with it. It was aimed to be a trip down the memory lane and a bonding experience for the whole family. Next came "Unclutter - Make Space for Yourself" which had the participants clearing out and

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A "Dancercise" session was held the next day on Google Meet, to promote a healthy and creative lifestyle. "Clear Your Phone" activity was held the next day. Virtual space has become just as important as physical space today, and this activity promoted healthy management of the same. The tenth activity was "The Art of Letting Go", which encouraged the participants to forgive themselves and others, and letting go of the past. This would improve mental health considerably. As of writing this report, it's the eleventh day and the activity held today was "Home made Decor", in order to promote creativity and thrifty lifestyle. The activities planned after this are game activities "And we twist" and "surprise challenge" for thinking out of the box and a fun bonding experience, "Mr. And Ms. CAREantine" to promote self-care and confidence boost and "Meditation" for a healthy living habit.

CAREantine was aimed to be a bright spot in these uncertain times. It gave its participants an opportunity to look at themselves, realise their strengths and work on their weaknesses. The participants gave a good response to this initiative, and were trusting enough to upload their personal moments. Thus the organisers' and volunteers' hard work has paid off. This unique collaborative effort between Antarang APSIT and Enroot Mumbai was a success. Looking forward to more such collaborations and events in the future! It was success because of the support of the Management of APSIT and the initiative by Darshana Jain, Counseling psychologist of APSIT. APSIT has a learning management system called moodle where our faculties have uploaded their lecture notes, ppt. etc. for student’s reference. Also our faculties have uploaded all required study resources like e books, latest three years’ paper solutions, video lectures & shared youtube recorded lectures. Most of faculty members used various tools like Zoom, Cisco WebEx for completion of curriculum and some faculty members recorded lecture and uploaded on YouTube. They have cleared their difficulties by online as well as on WhatsApp groups. We get very good support from Coursera Campus Program platform, for Coursera Total courses enrolled are 8000+. Total learning hours @21000+ and total lessons learned are 32000+. Total courses completed 4000+ and total students enrolled students are 1500+. Also many faculties completed various FDP offered by Spoken Tutorials, AICTE, ISTE & courses offered by TCS also. Our Counsellor has organised various online events in association ENROOT MUMBAI to encourage and motivate our students. Our TPO organised various webinar, online sessions with companies and organised events which will useful for placement purposes and also interacted through Instagram with all students and guided to students for placement.

Dr. Uttam D. Kolekar
Principal
A. P. Shah Institute of Technology, Thane
During Corona Lockdown, work from home (WFH) directives were issued by Dr. Abhay Wagh, honorable Director Directorate of Technical Education, to carry out academic activities online. These directives are implemented very effectively at Government Polytechnic Washim through various online academic activities. Though this institute is in the rural zone and Washim is not a technologically advanced district, Government Polytechnic Washim adhered to technology with time. Approximately 85% students of the institute have smartphones. Whatsapp groups were already formed by all departments for various classes and they were used for disseminating academic information as well as various institutional notices. This Whatsapp group is used in a big way during Corona lockdown. Principal, Dr. V. R. Mankar conducted online meeting on Zoom cloud meet android app to sensitize the teaching faculty regarding use of online platforms for completing the curriculum online. Accordingly, the teaching faculties made them ready for use of various online education technologies. Already some faculties were creating YouTube videos as well as using Google classroom occasionally. Those technosavvy staff shared their hands on experience with other teaching faculties. Thus, all the teaching faculties are oriented towards adopting the online educational technology as per need. All the departments conducted some online sessions on Zoom App. Many staff created their own educational videos and uploaded on YouTube. Links are shared using Whatsapp and Google classroom. Accordingly, assignments are given with deadlines. Multiple choice questions are also designed and given to students using Google classroom. Various third party Youtube videos are also shared with students on Whatsapp. Practical sessions are conducted with the help of virtual classroom facility created by IIT Bombay and other institutes. Students are motivated to use these facilities. They responded very positively. They attended online sessions, submitted assignments and appeared in online examinations.

Overall, it was a very fruitful experience. Teaching faculties also learnt a lot through new approach of imparting education which is the need of time and need of future. Many faculties also completed various online MOOC courses to sharpen their knowledge. This all could be achieved through constant encouragement of Honorable Director and quantified, systematic website created by IT Cell of DTE. Now the faculties are ready to face new challenges and acquire new education technology. Corona lockdown and timely motivation by honorable Director gave a new positive insight and changed the mindset of teaching faculty. The institute wish to thank our honorable Director Dr. Abhay Wagh Sir wholeheartedly for his dynamism and vision during tough time.

Under the guidance of Principal Dr. M. R. Lohokare Government Polytechnic Beed, Electronics and Telecommunication department had conducted Covid 19 awareness campaign, where on the basis of quiz, certificate were awarded those who have successfully completed quiz. Many faculty members all departments of Government Polytechnic Beed has participated in Covid 19 awareness campaign conducted by Sivaji University Kolhapur, Govt. Polytechnic Miraj, P. L. Govt. Polytechnic Latur, Govt. Polytechnic Awasri (K), etc.
MOOCS and Online activities conducted by Government Residential Women’s Polytechnic Latur

"Government Residential Women’s Polytechnic, Latur (DTE CODE: 2016, MSBTE CODE: 0136)" is a renowned Women’s Polytechnic Institute in Aurangabad division of Maharashtra state. Institute enjoys 100 percent admission status since many years. Academic results are excellent and normally range between 85 to 95 percent for Diploma examinations. Institute is sprawling on the 15 acres of residential campus with excellent academic facilities. All five academic departments, viz. Electronic and telecommunication, Computer Engineering, Medical Engineering, Civil Engineering and Dress Designing and Garment Manufacturing Dept. are awarded with "Excellent" grades in external academic monitoring by MSBTE, Mumbai during 2017-18 and 2018-19.

Keeping the track of worldwide news about the outbreak of COVID-19 since February 2020 and anticipating similar stage in India too, Principal Dr. A.M. Agarkar asked all the staff members to conduct extra classes, as and when possible, so as to complete syllabus at the faster rate. This enabled teachers to complete 85 to 90 percent syllabus by 10th March, 2020 through conventional teaching methodology.

During the lockdown period which is imposed by the Government in the third week of March 2020 due to the outbreak of COVID-19, Principal Dr. A. M. Agarkar provided timely guidance, directions and provided all relevant information about online teaching - learning to all the Heads of Departments of the institute. Many a times, the valuable guidance from Hon. Director Dr. Abhayji Wagh Sir about online teaching learning platforms and its effective use has helped us a lot. This made it easier to complete the remaining 10 to 15 percent syllabus of each course and prepare students for final exams by contacting the students of the institute online during the lockdown period.

All the department heads have completed the rest of the course in a planned manner through online mode and have also completed the work of submission by giving guidance from time to time.

During this period, all the department heads of the institute have also taken subjectwise feedback from the students of all classes in the department. The parents of the students also provided the video feedback enthusiastically and appreciated the Distanced Teaching-Learning Process conducted by the lecturers of this institute.

One or more ways mentioned below are implemented and effectively monitored by all the teaching staff. Some representative examples are given here.

1. Mr. C.K. Dholgande, I/C Head of Science Department got completed all the remaining syllabus of his department through Zoom App for all the first year students of the institute by conducting video lectures on remaining units of subjects AMI-22224 and AME-22210. Mr. C.K. Dholgunde is the best Mathematics teacher and has given highest result in the Mathematics, many times. Also, the lecturers of all the other subjects in this department got solved the assignments, Micro Project, MSBTE question papers from the students through the online WhatsApp group and completed the submission work.

2. Electrical Engineering - EEC - 22210 subject teacher Mr. R.B. Kakade made his own video lectures and uploaded it on YouTube and completed the course.

3. Mr. S. V Chavan, I/C Head of Computer Engineering Department and all the lecturers in the same department conducted MCQ examinations of all subjects online with the help of Google Forms. Also completed the courses for third year and second year computer students by providing video links on ETI-22618, NIS-22620 and JPR-22412 on SWAYAM, NPTEL, MOOCS, Coursera etc. portals. Lecturers Ms. R. D. Kasar, Mrs. A. S. Patil and Mr. A.D. Ambure used Virtual Lab Provided by IIT Mumbai was used for PCI-22226, NIS-22620, DCC-22414, SEN-22413 etc. to complete the laboratory experiments. Submissions were completed through soft copy using Google Classroom for Assignments, Microprojects, and Solved MSBTE Question Papers. As per new syllabus of the third year students, in view of the final online examination of MGT-22509 and ETI-22618, online examinations were conducted for all the units of these two subjects through Google Quiz Forms. Also additional question sets of the relevant subject were provided to the students along with correct answers. Mr. S.V Chavan and Ms. M G Mulge personally conducted the examination by preparing the questionnaire using Google Quiz form.

4. Mrs. S.A. Agarkar, lecturer In Electronics and Communication dept. in addition to online video lectures, has successfully given classroom feeling through whatsapp study group to the students by conducting mock test of subject Optical Networks and Satellites (22647) and took continuously the review of results of mock test through screen shots thereby giving students a chance to improve marks. Question banks were supplied and teacher continuously motivated all the students to complete the assignments using class note book, the way students would have completed these assignments in the regular class in stipulated time. This is done to give students a feeling of the classroom activity. Mrs. Agarkar shared the sample question papers and asked students to sit continuously for three hours at their home to solve sample question papers just so that students can get the feel of the exam hall. Students really enjoyed these simple techniques and cheerfully completed all the tasks given to them from their home. The video feedback given by these students showed their...

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level of confidence and attainment of the knowledge level. Students were also given the chance to improve their performance in an online test (screenshots attached). Online results were monitored using whatsapp by Mrs. Agarkar and students responded positively by reappearing for the test again. Improvement in the results is seen in the screenshots attached below.

5. Mr. P.M. Kudale, Lecturer in ET conducted MCQ examinations of the students from time to time using the websites www.examradar.com, www.examsbook.com under the guidance of HOD (ET) Mr. A.S. Laturkar. All other lecturers in ET department used the Zoom app to take video lectures and completed online assignments, micro projects. Dr. Seema Yardi Madam has submitted a report on lockdown activities as annexed in this report.

6. In view of Covid-19 preventive measures (we predicted possible infiltration of COVID-19 in February 2020!) DDGM department conducted the "Ideal Mask Making" competition for 35 third year students under the guidance of Principal Dr. A.M. Agarkar HOD (DDGM) Mrs. A.N. Yadav. Students made beautiful and useful masks. The third year student of DDGM Vaishnavi More (who is now incubatee of Incubation Centre) has implemented the skills she learnt in the Department and skillfully converted those skills into entrepreneurship and made more than 1000 masks and distributed these masks with no cost to Police Department, Tehsil Office Kalmab, Rural Hospital Kalmab, other government establishments and needy citizens and students as a part of social service (the estimated cost of 1000 masks at market price of Rs. 30/- each is around Rs, 30000/-). She has also sold more than 9000 masks at very low cost and thus created awareness about preventive measures against spreading of COVID-19. Hon. MLA of Osmanabad-Kalamb Constituency Shri. Kailash ji Ghadge Patil ji has appreciated her work by awarding a letter of appreciation. The initiative taken by Vaishnavi More is being appreciated all over the city of Kalmab and Latur. This activity was given a wide coverage by social media and news papers. Some special photographs of this activity are attached here.

7. Mrs. S.A. Hartalkar, Lecturer in Department of Medical Electronics, provided online classroom and examination medium to the students using Medicalexpo.com and bensonmedical.com portal. Medical Electronics is the special branch available at select places in the state of Maharashtra. Around 26 students of Medical Electronics are motivated to participate in state level Online Quiz on Diagnostic Equipments being organised by Medical Electronics Dept of GP Miraj. Most of the students scored more than 65 percent in the mock test conducted by GP Miraj. Miss. Nikita Sanjiv Kalwane of MU –III Year scored 95 percent in this MCQ Mock test. Certificate copy is attached herewith.

All the lecturers in the institute have used and are using various online tools/ mediums and dedicating themselves whole heartedly to online teaching-learning process during lockdown period. Being residential campus, all GRWPL students (barring a very few) are having smartphones which is must for security purpose too. Hence, online teaching learning process is being effectively implemented. Mock tests of most of the subjects with online examination have been started and are still being regularly scheduled and conducted. Otherwise also, our students are in constant touch with faculty members, wardens and Rector by way of Whatsapp group as the campus is fully residential. This helped us immensely while implementing Google classroom, zoom app class etc for online teaching learning process. Both the staff and students are putting sincere and extra efforts to be 100 percent ready for MSBTE exams. This confidence is quite evident from the video feedbacks of many parents and the most of the students. We all are following the directions, guidelines and are using relevant online sources being suggested by Hon. Director Dr. Abhayji Wagh Sir time to time to make students of GRWPL Latur self reliant and confident to face MSBTE exams after lockdown. We are sincerely thankful to you Sir for that.

We are sincerely thankful to Hon. Director of MSBTE Dr. Mohitkar Sir, Hon. Joint Director Sh. Maheshji Shivankar Sir and RBTE Deputy Secretary Dr. Anand Pawar Sir for encouragement and necessary support for making online teaching learning process successful during lockdown period. We are sincerely thankful to all the parents, students, all the faculty members and all the Heads of the Departments of GRWPL, all known and unknown persons sharing online sources, video lectures to make online teaching and learning process a big success.

Prof. A.M. Agarkar
Principal
Government Residential Women’s Polytechnic Latur
MOOCs and Online activities conducted by Government Polytechnic, Nashik

Government Polytechnic Nashik, under the visionary leadership of Prof. D. P. Nathe, Principal and I/c Joint Director of Nashik region accepted this unforeseen, disastrous and distressing situation with patience. GP Nashik planned effective measures and methods to handle this situation in fine tune with the concept of ‘work from home’ devised by Dr. Abhay Wagh Hon. Director of Tech. Education, through a online portal. During ‘Lockdown’ period from last week of March 2020 due to Covid-19, GP Nashik undertook various academic activities, mainly student-centric and outcome based. Faculty members of the GP Nashik conducted online lectures on Zoom, Google, Face book live for students Assignments shared through Google class room, videos from the You tube and NPTEL (Swayam) Mentor (faculty) already appointed for guidance and counselling has now been extended to each class and division for circulation and sharing of academic learning material for revision, practice and creating confidence within students through personal care, clearing doubts and motivation of students during this depressing phase.

Whatsapp groups for each batch already existed as a customised practice of Institute. This platform was used sharing PDF notes, power point presentations, video links and virtual lab links. Project work/term work was monitored online and assessed by each faculty and accordingly the corrections were suggested to students for improvements, so as to complete the hard copy of Project / term work. Work completion with the help project guide; shared project report and get verified from Guide (One of our finalize project https://www.aaofgpn.com/ Project Name: alumni of GPnashik web portal)

Poster making competitions were also organized for students to create awareness about the COVID-19, a pandemic, regarding how to fight against COVID-19, precautions, safety measures, being united, social distancing, stay home – stay safe, etc. The mentors are in continuous contact with the students of his/her allotted batch to resolve and minimise possible confusions, anxiety/depression during this critical unforeseen situation (Lockdown period). Feedback from many beneficiary students and parents as stake holders has also being taken through videos to assess the effectiveness of the methods used, the extent of benefits to stake holders and appropriateness of measures taken from our end.

Created video using Screencast-O-Matic screen recorder software and posted on YouTube for student. PPTs / NPTEL / You Tube videos lectures created / shared by faculty. Apart from regular whatsapp group meetings of faculty that are being practiced since three years, now departmental meetings were also being conducted on digital platform to take the review of academic activities carried out by the department for the students, curriculum revision work, content detailing of each course, laboratory equipment purchase list, online FDP – various MOOCs, NPTEL courses and so on. All faculty members are now, attending online lectures of certified courses, webinars, and awareness certification on Covid-19 etc.

A few faculty members have also prepared research papers and submitted in National/International conferences or journals of repute. All departments completed the compilation of data sheet related to MSFDA-TNA, Training Needs Analysis work and submitted to DTE. During this lockdown, as per directives received from Government authorities, Government Polytechnic Nashik is working with a minimum 10% staff till date, continuously monitoring the situation for better tomorrow. Students and teachers has developed Submit to application for online submission and evaluation of assignments

Prof. Dnyandeo P. Nathe
Principal
Government Polytechnic Nashik
Faculties have created class wise WhatsApp groups, Google classrooms. Through these tools the students are informed about the online curricular activities. The following online activities are then conducted for the completion of the curriculum.

**Teaching/Learning activities:**
1) Online live streaming of lectures using various aids like PPTs, PDFs, White Boards, e-Books etc. using ZOOM and other live streaming platforms.
2) Recorded audio/videos lectures uploaded on YouTube, WhatsApp, Google classrooms and self-created websites and shared with students.
3) Third party readymade videos from YouTube, NPTEL etc. shared with students via links through WhatsApp and Google classrooms.
4) Other learning resources like self-prepared notes, PPTs, third party notes, third party study material, practical write-ups, virtual lab links shared with students via email, WhatsApp and Google Classrooms.
5) Live follow up sessions conducted to take review of the project works
6) Overall, 95% curriculum is completed till date.

**Assessment/Performance Evaluation activities:**
1) Question banks with answer key developed and shared with students.
2) Theoretical and Practical assignments designed and given to students. The students are asked to submit the solved assignments scanned copies in PDF format to the email ids of respective faculties.
3) Periodically, the Online test exams using Google forms, Moodle etc. conducted to evaluate the performance of the students and accordingly corrective action taken.  

**Co-curricular and Extra-curricular activities:**
1) Conducted online Quizzes on general and technical topics.
2) Conducted Role playing activities.
3) Students are counselled and motivated to –
   - Participate in online career oriented courses being offered by various organizations free of cost e.g. Career Edge- Knockdown the lockdown from TCS iON, etc
   - Participate in online technical, General knowledge Quiz competitions, online Poster competitions by other institutes
   - Attend webinars on technical and on-technical topics
   - Attend online Art of Living- Happiness program

**Self development and Other activities by faculties:**
1) During the lockdown period, many faculties completed online courses/FDTPs being offered by agencies like MOOCS, SWAYAM, Capability Development Programs by TATA Steel, NMEICT programs, ELIS free courses by AICTE, CORONA-19 awareness certification programmes etc.
2) Many faculties attended special NPTEL- Lecture series
3) Faculties of Mechanical Engg. department carried out third party inspection of Kolhapur Municipal Corporation Tankers with Spray Unit
4) Some faculties have generously donated to the activities conducted for quarantined people and the Raw food kit distribution by some social organizations.
5) Faculties were also involved in research activities like- Peer review of technical journal papers etc.
6) Under curriculum revision project- MPECS 2020-Phase I, majority of faculties are involved in revising the assigned courses effectively during the lockdown period.

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Prof. P. L. Patalwar  
Principal  
Government Polytechnic Kolhapur

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Activities being done during Lockdown period for students:
01. Creating whatsapp group for every class for effective communication.  
02. Assigning responsibility of a class to two teachers to communicate with every student in a suitable time interval.  
03. Conducting Zoom session with all faculty members every 3-4 days.  
04. Talking to students in all possible manners.  
05. Created class coordinators in every class.  
06. Created and supported the creation of electronic classrooms using Piazza & Google classroom.  
07. Developed the capability to conduct test on line using free software like Google form & Testmojo.  
08. Conducting regular assignments of students and keeping electronic record of it.  
09. Collected and provided youtube or other video links for the students.  
10. Forwarded the message of Hon Director regarding available books.  
11. Downloaded and created repository of books of
Online Activities of Institute During Lockdown

Online activities conducted by Government Polytechnic, Beed

Under the guidance of Principal Dr. M. R. Lohokare Government Polytechnic Beed, HoD Civil Engineering department, Online test was conducted on Solid Waste Management by Prof. Mrs. Kale S.S., where on the basis of quiz, certificate were awarded those who have successfully completed quiz. Many students participated in online test on Maintenance of Structure organised by Applied Mechanics department of Govt. Polytechnic Miraj.

The facility of TCS online Classroom conduction, Online tests etc were conducted by Department of Mechanical Engineering under guidance of Dr. Ajay K Waghmare Hod Mech. Dept. on Emerging Trends and Management.

Using “gnomio - Moodle ”platform Prof. Parag D. Nathe launch https://printpdn.gnomio.com” web site and offers Online Certificate course on Topic - “Color - Essentials and Theory”. The course offers resource material, on that resource material they need to complete “Learn and Do Activity” to proceed on next level and for final completion of course Graded assignment is given to student.

Online E paper presentation Competition had conducted by Government Polytechnic Beed for all branches on 08/05/2020 under guidance of Principal Dr. M. R. Lohokare, Prof. Abdul F. H. from E &Tc Department Coordinated this activity.

Dr. Mohan R. Lohokare
Principal
Government Polytechnic Beed

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- interest and providing to teachers and students.
- Created large number of powerpoint lecture in every subjects.
- Collected & distributed pdf files of importance & relevance to all staff and students.
- Provided motivational talks and videos to students via TPO cell to every class and faculty.
- Communicating with every family of teaching faculty to avoid stagnancy and to give comfort.
- Supporting all non teaching the way they need.
- Continuously in contact with FDA for the necessary discussions.
- Motivating people in cultivating useful habits which can engage them and their children.
- Prepared and distributed 1500 masks in government office, police and nearby families.
- Prepared and distributed hand sanitizers to RO, Office, traffic police and few hospitals.
- Conducting social awareness campaign in society.
- Generated more than 500 saplings of Karanj plant and are available for distribution in the society.
- Created the inhouse facility to prepare 100 liter of hand sanitizer in case any emergency.

Dr V.K.Mourya
Principal,
Govt. College of Pharmacy, Aurangabad