

Faculty
Development
Programme



Report On

**Five Days Research Methodology Workshop
From 22-08-2022 to 26-08-2022**

Theme: FDP On Research Methodology

**Organized by:
KC Group of Research & Professional Institutes,
Pandoga
In Collaboration
with
National Institute of Technical Teacher Training,
Chandigarh**

The e-brochure for the webinar was as follows:

KC GROUP OF RESEARCH & PROFESSIONAL INSTITUTES,
PANDOGA, UNA (HIMACHAL PRADESH)

In Collaboration with
NITTTR, CHANDIGARH

ORGANISING
Online SHORT TERM COURSE
on
RESEARCH METHODOLOGY
(22 - 26 August, 2022)



For Registration 

A Five days research methodology workshop was organized by KC Group of Research and Professional Institutes, Pandoga in collaboration with National Institute of Technical Teacher Training, Chandigarh from 22-08-2022 to 26-08-2022 On Google Meet. Dr. U N Roy, Professor, NITTR Chandigarh was the Co-Ordinator of this short-term course on Research Methodology.

Day One:22-08-2022, Monday

Session 1: Inaugural Address and Discussion with the Participants (10:00am-11:30am)

The workshop started with the inauguration at 10:00AM on 22-08-2022. The program was inaugurated by Dr. U N Roy Professor at NITTTR, Chandigarh and Dr. Archana K Roy, IIPS Mumbai, and Dr. Gaurav Kumar, NITTR Chandigarh and Er. Amardev Singh, NITTTR, Chandigarh by giving a felicitation speech for the programme and introduced the Workshop to the audience.

Further, Dr. U N Roy encouraged the participants to engage in reading more books highlighting that mere use of Google for the access of information would not be able to generate new knowledge. In conclusion to his address, he wished the participants a fruitful stay and hoped that they would return with rich knowledge and pleasant memories.

Session 2: Importance, Concept and Types of Research (11:30am-1:00pm)

The next session was by Dr. U N Roy, NITTTR, Chandigarh who spoke on the Importance, Concept and Types of Research. He Said that Research is a process to discover new knowledge to find answers to a question. The word research has two parts re (again) and search (find) which denote that we are taking up an activity to look into an aspect once again or we want to look for some new information about something. He told about Research is conducted with a purpose to:

- Identify potential and new customers
- Understand existing customers
- Set pragmatic goals
- Develop productive market strategies
- Address business challenges
- Put together a business expansion plan
- Identify new business opportunities

He also mentioned that Exploratory, Descriptive and Explanatory are the three main purposes of Research. Apart from this. He explained that the Research can be classified into Fundamental and decisional Research on the basis of Application, Descriptive and co-relational on the basis of Objectives, Structural and unstructured on the basis of inquiry mode, and Analytical, Fundamental, Qualitative, Quantitative, Empirical Research are other Researches.

Session 3: Distinction between Engineering and other areas of Research (2:30pm-4:00pm)

After Lunch, In the Evening session Dr. U N Roy Said that distinction between sciences is irrelevant and the difference between engineers and researchers is rather in their objectives. Both are dealing with challenging the limits of the state-of-the-art. However, while the goal of researchers is to understand reality, that of engineers is to master it. Research is about pushing the boundaries of knowledge, whereas engineering is about increasing our capacity to act on our environment.

Day two:23-08-2022, Tuesday

Session 1: Identifying/ Defining Research Problems (10:00am-11:30am)

On 23/08/2022, in the first Session, Dr. Sunil Dutt explained how to identify and define Research Problems. He said a research problem is a definite or clear expression [statement] about an area of concern, a condition to be improved upon, a difficulty to be eliminated, or a troubling question that exists in scholarly literature, in theory, or within existing practice that points to a need for meaningful understanding and deliberate investigation. A research problem does not state how to do something, offer a vague or broad proposition, or present a value question. It is not always easy to formulate the research problem simply and clearly. It may take years to decide for some and just a few minutes for others to decide the research problem to be studied. The social issues may provide a broader prospect but it may not suggest a specific one. E.g., understanding economic background of society may not address the issues of unemployment in the same society therefore unemployment needs to be studied differently and individually to assess the underlying problems. The availability of resources like money, time, manpower, etc. also affects the selection of research problem.



A Glimpse of Faculty Members of KC Group of Institution, Pandoga Attending FDP with Geo Tag.

Session 2: Literature Review and Gap Analysis (11:30am-1:00pm)

Dr. U N Roy started session of Literature Review and Gap Analysis after Dr. Sunil Dutt shed light on Identification and definition of Research Problems. He enumerated that once the problem is formulated, a brief summary of it should be written down. It is compulsory for a research worker writing a thesis for a Ph.D. degree to write a synopsis of the topic and submit it to the necessary Committee or the Research Board for approval. At this juncture the researcher should undertake extensive literature survey connected with the problem. For this purpose, the abstracting and indexing journals and published or unpublished bibliographies are the first place to go to. Academic journals, conference proceedings, government reports, books etc., must be tapped depending on the nature of the problem. In this process, it should be remembered that one source will lead to another. The earlier studies, if any, which are similar to the study in hand should be carefully studied. A good library will be a great help to the researcher at this stage.

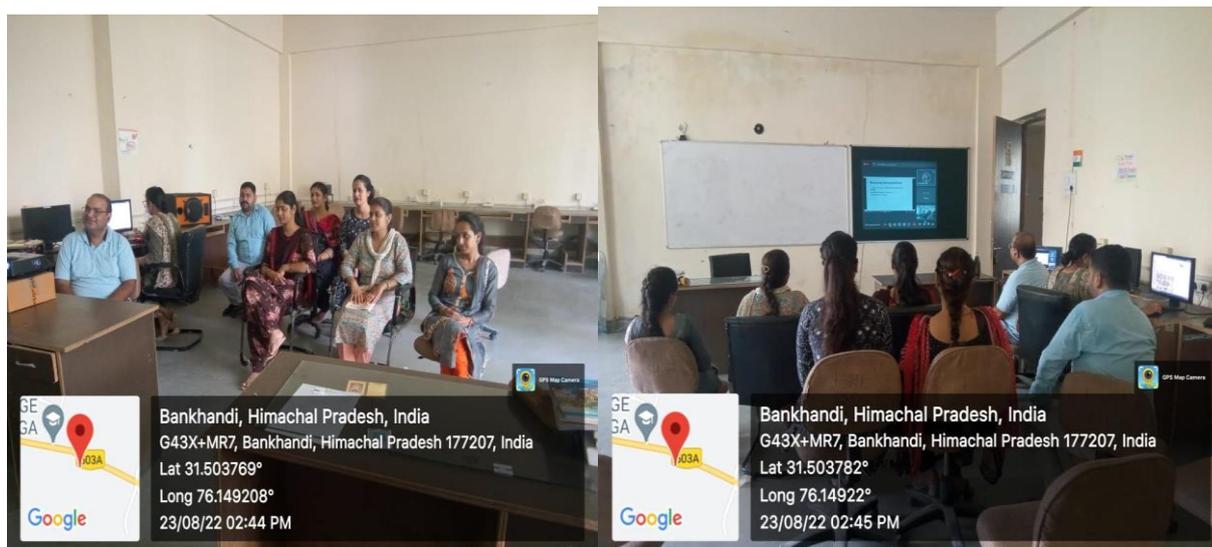
Session 3: Methods of Data collection and Design of Questionnaire (2:30pm-4:00pm)

Er. Amandeep Kaur Said The task of data collection begins after a research problem has been defined and research design/ plan chalked out. While deciding about the method of data collection to be used for the study, the researcher should keep in mind two types of data viz., primary and secondary. The primary data are those which are collected afresh and for the first time, and thus happen to be original in character. The secondary data, on the other hand, are those which have already been collected by someone else and which have already been passed through the statistical process. The researcher would have to decide which sort of data he would be using (thus collecting) for his study and accordingly he will have to select one or the other method of data collection. The methods of collecting primary and secondary data differ since primary data are to be originally collected, while in case of secondary data the nature of data collection work is merely that of compilation. We describe the different methods of data collection, with the pros and cons of each method.

She also explained methods of collecting primary data, particularly in surveys and descriptive researches. Important ones are: (I) observation method, (ii) interview method, (iii) through questionnaires, (iv) through schedules, and (v) other methods which include (a) warranty cards; (b) distributor audits; (c) pantry audits; (d) consumer panels; (e) using mechanical devices; (f) through projective techniques; (g) depth interviews, and (h) content analysis

She Further explained the collection of data through Questionnaires. She said this method of data collection is quite popular, particularly in case of big enquiries. It is being adopted by private individuals, research workers, private and public organizations and even by governments. In this method a questionnaire is sent (usually by post) to the persons concerned with a request to answer the questions and return the questionnaire. A questionnaire consists of a number of questions printed or typed in a definite order on a form or set of forms. The questionnaire is mailed to respondents who are expected to read and understand the questions and write down the reply in the space meant for the purpose in the questionnaire itself. The respondents have to answer the questions on their own. Er. also said that the method of collecting data by mailing the questionnaires to respondents is most extensively employed in various economic and business surveys.

There are some Glimpses of Faculty members of Kc Group of Institution, Pandoga Attending workshop on Research Methodology.



Day Three:24-08-2022, Wednesday

Session 1: Sampling and Types of Sampling (10:00am-11:30am)

There was also a session on sampling methods handled by Dr. U N Roy, NITTTR, Chandigarh. He was focusing on the different types of sampling techniques that the researchers can adopt from random sampling to non-random sampling methods. He was able to convey the participants on the methods by which adequate number of samples can be identified for a particular type of research. He said a sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure the researcher would adopt in selecting items for the sample. He also explained the various steps in sampling design like, Universe type, Sampling unit, Source List, Size of Sample, Parameters of Interest, Budgetary Constraint and Sampling Procedure.

Besides this, Dr. also explained the criteria of selecting a sampling procedure. He also shed light on probability sampling and non-probability sampling.

Session 2: Innovation and Startups. (11:30am-1:00pm)

Dr. Harshvardhan Samalia throw light on Innovation and startups. Besides this, he also discussed some case studies. He said that the essence of the session was to demonstrate how the knowledge of intellectual property right holds importance and must be kept in mind while building a startup business. The workshop provided the students with vast knowledge on intellectual property rights, it's accounting and valuation which will be of immense help for the students with startup ideas looking forward to build their own startups. After the session came towards the end, the students and our faculty raised their queries related to the topic. The session was concluded with the key takeaway of the session was to impart knowledge on the IPR 's importance in today's startup-oriented economy.

Session 3: Testing of Hypothesis using Z test, t test and chi square test (2:30pm-4:00pm)

Dr. Archana k Roy, IIPS Mumbai started third session after lunch on testing of Hypothesis using Z test, t test and chi square test. she said a hypothesis is a proposition or a set of propositions set forth as an explanation for the occurrence of some specified group of phenomena either asserted merely

as a provisional conjecture to guide some investigation or accepted as highly probable in the light of established facts. Quite often a research hypothesis is a predictive statement, capable of being tested by scientific methods, that relates an independent variable to some dependent variable.

She Explained various steps involved in hypothesis testing like, making a formal statement, selecting a significant level, deciding the distribution to use, selecting a random sample and calculation of the probability.

She explained that the z-test is based on the normal probability distribution and is used for judging the significance of several statistical measures, particularly the mean. This is a most frequently used test in research studies. Moreover, she said z-test is also used for judging the significance of difference between means of two independent samples in case of large samples, or when population variance is known. z-test is also used for comparing the sample proportion to a theoretical value of population proportion or for judging the difference in proportions of two independent samples when n happens to be large. Besides, this test may be used for judging the significance of median, mode, coefficient of correlation and several other measures.

After Z-test she explained that t-test is based on t-distribution and is considered an appropriate test for judging the significance of a sample mean or for judging the significance of difference between the means of two samples in case of small sample or samples when population variance is not known. She further said that if two samples are related, we use paired t-test for judging the significance of the mean of difference between the two related samples. It can also be used for judging the significance of the coefficients of simple and partial correlations. The relevant test statistic, t, is calculated from the sample data and then compared with its probable value based on t-distribution at a specified level of significance for concerning degrees of freedom for accepting or rejecting the null hypothesis. She also said that t-test applies only in case of small sample or samples when population variance is unknown.

She explained that Chi-square test is based on chi-square distribution and as a parametric test is used for comparing a sample variance to a theoretical population variance.

Some glimpses of faculty members of KC Group of Institution, Pandoga are



Day Four:25-08-2022, Thursday

Session 1: Research Portal for Literature Review, Open software Tools for Research in Engineering and Technology (10:00am-11:30am)

Dr. Gaurav Kumar on the fourth day of the workshop on Research Methodology Briefed the participants about Research Portal for Literature Review, Open Software Tools for Research I Engineering as well as in Technology. He said, various concepts behind the open-source movement, like peer production, shared code, and software as a public good have been around since the beginning of the computing era, use of the term “open source” is a relatively recent phenomenon. He explained various source software tools like GNU Linux, Firefox, Unpaywall, Zotero, LibreOffice, and LaTeX that will make your literature review much easier.

Session 2: Research Project Formulation in Various Disciplines (11:30am-1:00pm)

In Second session, Dr. U n Roy explained that Research project formulation is one of the important tasks of the students pursuing various programmes in Extension and Development Studies. The research project formulation comprises many steps starting from the choosing of a research topic up till the budget and time line fixation.

He said the first step in any research project is to write a research proposal. The research proposal indicates the research problem that you will study, and shows the road map to undertaking the research project. A research proposal is intended convince others that you have a worthwhile research project and that you have the competence and the work plan to complete it. Generally, a research proposal should contain all the key elements involved in the research process, and include sufficient information for the readers to evaluate the proposed study. He explained firstly the researcher has to identify a problem that he aims to study. The logical next step is to find an answer or solution to the problem through a systematic step by step approach. good proposal increases the chances of getting funding, and is also necessary for efficient research and valid results. He also said a good proposal contains a clear statement of the problem to be studied, a review of relevant literature, objectives of the study, methodology, time, budget, and references.

He Explained the outline of proposal format is as:

- 1) Title of research project
- 2) General introduction/ Background
- 1 Importance of Study/Statement of Problem
- 3) Review of relevant literature
- 4) Objectives
- 5) Methodology
- 6) Time Frame
- 7) Budget
- 8) References

Session 3: Application of SPSS For data Computing and Analysis (2:30pm-4:00pm)

Dr Archana K Roy, IIPS Mumbai elucidated the SPSS Software and its application for computing and analysis of data. She said the SPSS stands for Statistical Package for the Social Sciences and is commonly used in social sciences and health fields. Government entities, educational institutions, survey companies, market researchers, marketing organizations, health researchers, data miners, and many others use it for analyzing survey data.

She also laid emphasis on the importance of SPSS by mentioning it is a popular tool for research, experimentation, and decision-making. Furthermore, we got to know that it is one of the most widely used statistical software worldwide in the world for its attractive features. Some of its Features are:

- 1) Spreadsheet to solve arithmetic, algebraic and trigonometric operations.

- 2) Database manager so that the data can be dynamically processed. It also allows updating the operating changes and making customized reports.
- 3) Report generator allows you to prepare attractive reports of an investigation carried out, incorporating the text, tables, graphs and statistical results of the report in the same file.
- 4) Using SPSS users can extract all the information from a file for the execution of descriptive, inferential and multiple variant statistical procedures.

Day Five:26-08-2022, Friday

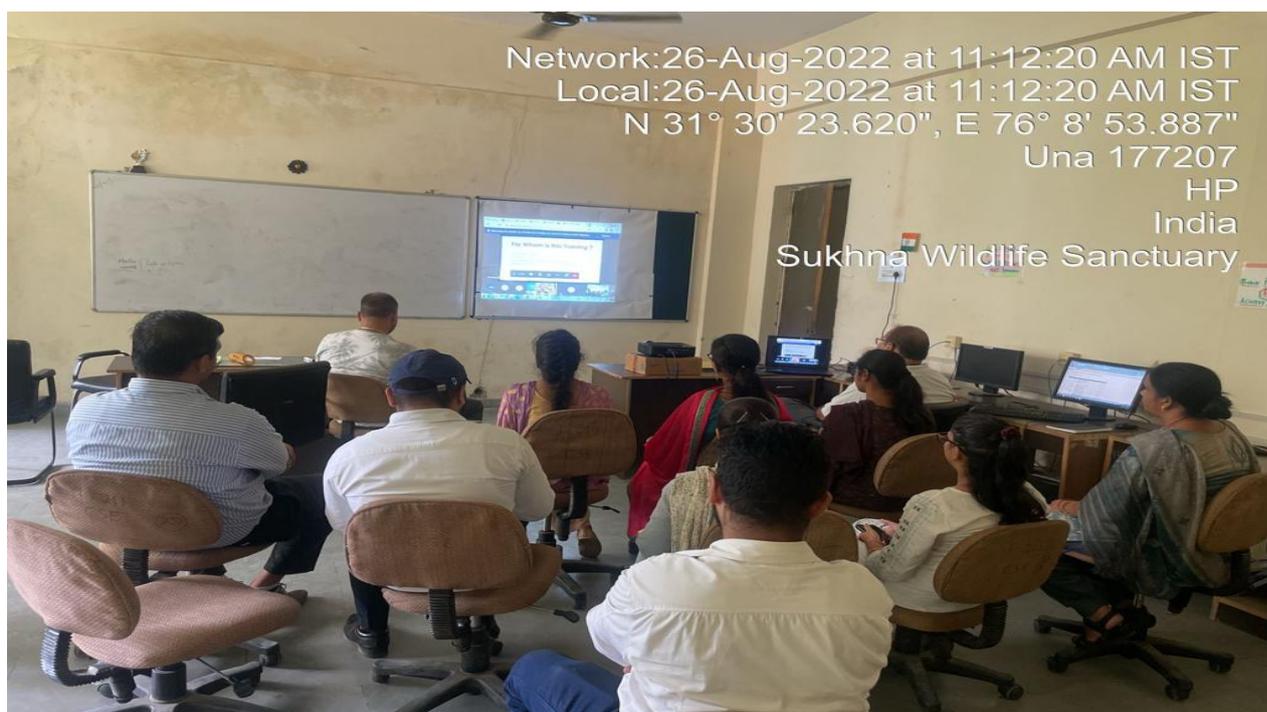
Session 1: Research, Patents and IPR (10:00am-11:30am)

On the Fourth day of the workshop, in the Morning session Er. Amardev Singh shed light on Research, Patent and Intellectual property rights (IPR).

He explained that a patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem. Furthermore, he said that One of the major functions of the patent system is the dissemination of technical information. Patent information is a valuable and comprehensive source of technical, commercial and legal information that can be used directly for scientific and experimental purposes and as a basis for stimulating the adaptation and improvement of the technology described in patent documents immediately after their publication.

He said that intellectual property rights help protect creations of the mind that include inventions, literary or artistic work, images, symbols, etc. If you create a product, publish a book, or find a new drug, intellectual property rights ensure that you benefit from your work. These rights protect your creation or work from unfair use by others.

A glimpse of Faculty members attending Workshop on Research Methodology with Geo tag.



Session 2: Quiz test (11:30am-1:00pm)

A Quiz test was held on last day of the workshop in which most of the staffers of KC Group of institutions, Pandoga had participated. All the Faculty members of college apply their knowledge that they grabbed during attending FDP on Research Methodology and performed well in the online quiz test.

Session 3: Valedictory Session (2:30pm-4:00pm)

Finally, the last session was devoted for the participants to share their experience. The course convenor gave enough time for participants to share their experience and also to point out the drawbacks of the workshop. Most of the participants had an opinion that this was the most valuable and memorable workshop that they have attended because it covered all aspects of research like, from identifying a research problem, to formulating a research problem, developing a research design, developing a research hypothesis, preparing questionnaire and interview schedule, collecting data, entering it in SPSS, doing data analysis, doing qualitative research, case study, phenomenology and finally report writing.

To conclude the research methodology workshop for Participants turned out to be a rich experience, raising their confidence to proceed with scientific research and produce quality output.

In this way a five days Research Methodology workshop successfully completed with valuable collaboration with KC Group of Research & Professional Institutes, Pandoga and National Institute of Technical Teacher Training, Chandigarh.

NATIONAL INSTITUTE OF TECHNICAL TEACHERS' TRAINING & RESEARCH
SECTOR 26, CHANDIGARH-160 019

DEPARTMENT OF EDUCATION AND EDUCATIONAL MANAGEMENT

Name of Short Term Course on "Research Methodology" (Online Mode)

W.E.F. 22nd August to 26th August 2022

Remote Centre: KCLRPI Pandoga (NCT/HP)

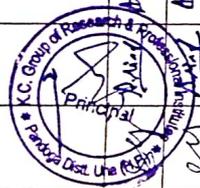
OPLAN No. ICT-192

192

Coordinator: Dr. UN Roy, Professor and Head

ATTENDANCE SHEET:

Sr. No	Name with Desig. (in Block Letters)	Name of Institution & Address (in Block Letters)	Dates					NAME IN HINDI	Contact No. & /E-mail ID	Govt/ Pvt	M/F	SC/ST/OB C/Gen.
			22/8	23/8	24/8	25/8	26/8					
1	Dr. Mithlesh Shasra (AP)	KCLRPI Pandoga	✓	✓	✓	✓	✓	मिथलेश शर्मा	94783-90453 MITHLESH20@gmail.com	Pvt	M	Gen
2	Ms. Jyoti (AP)		✓	✓	✓	✓	✓	ज्योती	8580982838 jdhiman1220@gmail.com	Pvt	F	OBC
3	Mr. Ramankant Sharma (AP)		✓	✓	✓	✓	✓	रमण कान्त शर्मा	8894120303 ramankant1845@gmail.com	Pvt	M	Gen
4	Mr. Saurabh (AP)		✓	✓	✓	✓	✓	साुरभ	9882339660 saurabhpanjla1301@gmail.com	Pvt	M	OBC
5	Mr. Deepak Sharma (AP)		✓	✓	✓	✓	✓	दीपक शर्मा	9805674099 drshdeepak@gmail.com	Pvt	M	Gen
6	Mr. Abinadh (AP)		✓	✓	✓	✓	✓	अबिनाध	9816363135 abiradha01@gmail.com	Pvt	M	Gen
7	Mr. Sudhpreet Singh (AP)		✓	✓	✓	✓	✓	सुधप्रीत सिंह	70090-38477 Singhsudhpreet677@gmail.com	Pvt	M	Gen
8	Mr. Surya Kant Singh (AP)		✓	✓	✓	✓	✓	सुर्या कान्त सिंह	94184-67545 jambalsurya@gmail.com	Pvt	M	Gen



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Remote Centre: KCGRPI Pandoga Una (H.P.)

OPLAN No. ICT-192

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			22/8	23/8	24/8	25/8	26/8					
9	POOJA (AP)	KCGRPI PANDOGA	Present	Present	Present	Present	Present	ਪ੍ਰੀਤਾ	—	Govt	F	Gen
10	MR HARDEEP KUMAR (AP)	11	Present	Present	Present	Present	Present	ਹਰਦੀਪ ਕੁਮਾਰ	9478322847	Govt	M	OBC
11	MS PRIYA MANKOTIA (AP)	11	Present	Present	Present	Present	Present	ਪ੍ਰਿਯਾ ਮਨਕੋਟੀਆ	86279-09933 priyamankotia14@gmail.com	Govt	F	Gen
12	MS PRIYANKA (AP)	11	Absent	Absent	Absent	Absent	Absent	ਪ੍ਰਿਯੰਕਾ	9805661918 priyankachandel41@gmail.com	Govt	F	Gen
13	MS Neety Bala (AP)	11	Absent	Absent	Absent	Absent	Absent	ਨੀਤੀ ਬਾਲਾ	8219428089 Neetibala211@gmail.com	Govt	F	SC
14	MS PRIYA SHARMA (AP)	11	Present	Present	Present	Present	Present	ਪ੍ਰਿਯਾ ਸ਼ਰਮਾ	7087357191	Govt	F	GEN
15	MR RAHUL RATHOD (AP)	KCIHM&CT PANDOGA UNA	Absent	Absent	Absent	Absent	Absent	ਰਾਹੁਲ	8988504740	Govt	M	GEN
16	MS SURINDER KUMAR (AP)	11	Present	Present	Present	Present	Present	ਸੁਰਿੰਦਰ ਕੁਮਾਰ	8049872478	Govt	M	SC



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			22/8	23/8	24/8	25/8	26/8					
17	MR GAGANDEEP SINGH (AP)	KCIM, Pandoga	Absent	Absent	Absent	Absent	Absent	गगनदीप सिंह	—	Put	M	Gen
18	MS SONIA (AP)	KC POLYTECHNIC PANDOGA	Absent	Absent	Absent	Absent	Absent	सोनिया	—	Put	F	Gen
19	MS NAMRATA (AP)	KCIPS PANDOGA	Normal	Normal	Normal	Normal	Normal	नम्रता	9816795802 namrataraj1994@gmail.com	Put	F	OBC
20	MS DIKSHA (AP)		do	do	do	do	do	दिक्शा	8580461085	Put	F	GEN
21	MR SAMIL (AP)		Absent	Absent	Absent	Absent		सामिल	9805848083	Put	M	OBC
22	MS KANIKA		Normal	Normal	Normal	Normal	Normal	कानिका	9404782031 kanikabudhwar413@gmail.com	Put	F	GEN.

