Report of a Workshop on Research Methodology in Engineering Sciences

Department of Physics of Alva's Institute of Engineering and Technology has organized a Workshop on Research Methodology in Engineering Sciences RMES-2016 during August 26-27, 2016. Dr. Ramaprasad A.T. was the coordinator of the workshop and Prof. Rajesh Kumar was the sub-coordinator of the workshop. 38 participants from the various disciplines of engineering sciences were the present during this workshop and many of the participants were research scholars. All the sessions were systematically arranged keeping in mind the need of the research scholars. The sessions were as follows:

Dr. Ramaprasad, Head physics dept. welcomed the participants and gave an introductory speech as well as introduced Dr. A.N Prabhu, MIT Manipal was the resource person of day I: Research culture and how to write journal papers. Dr. Ramaprasad A.T, Department of Physics of Alva's Institute of Engineering and Technology felicitated Dr. A.N Prabhu with a buckeye.

Day I: Application of softwares in Science and Engineering Research taken by Dr. A.N **Prabhu.** Sir began his session with the meaning of variable. According to him, when information is measured then this measurement is called as the variable. He also talked about the types of variables – Dichotomous variable and Ordinal Variable. He discussed various data analysis techniques which are quantitative analysis and qualitative analysis. He explained that qualitative analysis is based on content analysis, meta analysis and SWOT/C analysis i.e. strength, weakness, opportunity, treats & challenge. He also discussed the analysis techniques used in association/ relationship. In this he talked about standard product moment correlation, point- biserial correlation and spearman's correlation. He explained very adequately how to do data analysis using softwares.

Day II: Sampling Methods and Techniques by Dr. Sujaya. Madam discussed the meaning of sampling which means a process used in statistical analysis in which a predetermined number of observations are taken from a larger population. She pointed out the various sampling methods used in probability sampling – simple random sampling, stratified sampling, cluster sampling, systematic sampling and multistage sampling. She also highlighted non-probability sampling techniques – quota sampling, convenience sampling, purposive sampling, self-selection sampling and snowball sampling.

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