PROFESSIONAL ENGINEER
Summary Statement

Competency Element	A brief summary of how I have applied the element	Paragraph in the career episode(s) where the element is addressed
PE1 KNOWLEDGE BASE		
PE1.1 Knowledge of science and engineering fundamentals	➢ Knowledge in basic electronic circuit design was used in generating desired signals, sensing voltage variations and solving other circuit anomalies ➢ Knowledge of the internal circuitry of NE555 gave me enough flexibility in design ➢ Knowledge of microcontrollers helped me to utilize them for frequency regulation ➢ Knowledge in mathematics helped in design	CE 1.3.2, CE 1.3.4, CE 1.3.5, CE 1.3.6, CE 2.3.2, CE 2.3.2, CE 2.3.2, CE 3.3.2 CE 3.3.3
PE1.2 In-depth technical competence in at least one engineering discipline	➢ My expertise in electronic circuits helped me to design the product according to practical conditions ➢ I used advanced designing and simulation tools for better product	CE 1.3.2, CE 1.3.3, CE 1.3.4, CE 1.3.5, CE 1.3.6, CE 2.3.2, CE 2.3.3, CE 2.3.4, CE 1.3.6, CE 2.3.5, CE 3.3.8

	➢ Expertise in assembly language helped me to make the code for microcontroller	CE 3.3.3
PE1.3 Techniques and resources	➢ I did detailed research and even a market study about my topic of project ➢ I made project plan for the smooth and optimal running of our project ➢ I used design software like 'Circuit Maker' and 'Work Bench' ➢ I used software packages like Microsoft Office for the documentation	CE 1.3.1, CE 2.3.1, CE 2.3.2, CE 3.3.2 CE 1.3.8, CE 2.2.5, CE 3.3.9 CE 1.3.7, CE 2.3.5 CE 1.3.9, CE 2.3.6, CE 3.3.9
PE1.4 General Knowledge	➢ My knowledge about the peculiarity of redial facility in ordinary land phones really helped us and it was a turning point in our project design ➢ I was aware of the current status of water level controllers in local market ➢ I was aware of the chances of microcontroller in the project	CE 1.3.2 CE 2.3.1 CE 3.3.2

PE2 ENGINEERING ABILITY		
PE2.1 Ability to undertake problem identification, formulation, and solution	➢ The drawback in our project was identified and rectified by adding a dialer section ➢ Lack of audibility of alert message was identified and solved by introducing a series resistance ➢ Problem of overheating at the IC solved ➢ Selected a suitable design strategy for Water Level Controller ➢ Chance of corrosion of electrodes are minimized by using series resistors ➢ I had created a mock output signal from UPS by using a regulated power supply circuitry	CE 1.3.3 CE 1.3.4 CE 1.3.4 CE 2.3.2 CE 2.3.4 CE 3.3.6
PE2.2 Understanding of social, cultural, global, and environmental responsibilities and the need to employ principles of sustainable development	➢ Identified the need for a reliable, less expensive water level controller ➢ Frequency controller that we were developing has to meet stringent specifications	CE 2.3.1 CE 3.3.1
PE2.3 Ability to utilize a systems approach to complex problems and to design and operational	➢ I made project plan for each and every projects that I have undertaken to ensure	CE 1.3.1, CE 1.3.8, CE 2.2.5, CE 3.3.9

performance	a superior operational performance ➢ The idea of adding a dialer section our project made it perfect standalone electronic equipment ➢ I selected custom design criterion for the development water level controller	CE 1.3.3 CE 2.3.2
PE2.4 Proficiency in engineering design	➢ My proficiency in circuit design helped the whole team to finish the project successfully ➢ I used advanced design tools like 'Circuit Maker' and 'Work Bench' for design work ➢ I calculated the expense of my product and compared it with similar products available in market ➢ My knowledge in assembly language programming helped in writing the code for microcontroller	CE 1.3.2, CE 1.3.4, CE 1.3.5, CE 1.3.6, CE 2.3.2, CE 2.3.3, CE 2.3.4, CE 3.3.6 CE 1.3.7, CE 2.3.5 CE 2.3.6 CE 3.3.3
PE2.5 Ability to conduct an engineering project	➢ As a team leader, I coordinated the whole project work while maintaining a proper communication with the other authorities related to our project	CE 1.2.1, CE 1.2.5, CE 1.3.3, CE 1.3.4, CE 1.3.8, CE 1.3.9, CE 3.2.3, CE 3.2.5, CE 3.3.2, CE 3.3.4, CE 3.3.9

	work ➢ I was able to come forward with apt solutions for various difficulties that we faced during the project work ➢ I prepared a well organized project plan for each and every project which helped me to finish the work before the deadline ensuring the expected quality of delivery	CE 1.3.2, CE 1.3.3, CE 1.3.4, CE 1.3.6, CE 2.3.3, CE 2.3.4, CE 2.3.5, CE 3.3.6 CE 1.3.1, CE 1.3.8, CE 2.4, CE 3.3.9
PE2.6 Understanding of the business environment	➢ I finished all of my project well before the deadline in excellent quality ➢ Understood the current market status about the water level controllers ➢ Worked as team with senior professional engineers	CE 1.3.8, CE 2.4, CE 3.3.9 CE 2.3.1 CE 3.3.4, CE 3.3.5, CE 3.3.9, CE 3.4
PE3 PROFESSIONAL ATTRIBUTES		
PE3.1 Ability to communicate effectively, with the engineering team and with the community at large	➢ I conducted regular group meetings for my team members to express their ideas ➢ I prepared a detailed documentation of my project work and took seminars where ever	CE 1.3.2, CE 1.3.3, CE 1.4, CE 3.3.9 CE 1.3.9, CE 2.3.6, CE 3.3.9

	necessary ➢ I was able to interact and work with professional engineers those who are working with a large corporation	CE 3.3.4, CE 3.3.5, CE 3.3.9, CE 3.4
PE3.2 Ability to manage information and documentation	➢ I did a detailed research about the project ➢ Prepared reports and presentation slides using advanced software packages	CE 1.3.1, CE 2.3.1, CE 3.3.2 CE 1.2.3, CE 1.3.9, CE 2.3.6, CE 3.3.9
PE3.3 Capacity for creativity and innovation	➢ Suggested the idea of transmitting the alert message through telephone network ➢ Used NE555 to design a reliable, less expensive controller ➢ Used series resistors to avoid corrosion ➢ Suggested the idea of creating a mock signal for UPS output	CE 1.3.1 CE 2.3.2 CE 2.3.4 CE 3.3.6
PE3.4 Understanding of professional and ethical responsibilities, and commitment to them	➢ I gave due importance in following occupational health and safety standards at KELTRON ➢ My project at KELTRON helped me feel myself as a professional engineer and understand the ethical responsibilities as an	CE 3.3.9 Whole of CE 3

	electronics engineer	
PE3.5 Ability to function effectively as an individual and in multidisciplinary and multicultural teams, as a team leader or manager as well as an effective team member	➢ As a team leader I always listened to my team members and solved the issues within the group ➢ Handled the responsibilities as a team leader ➢ I did an individual project under less flexible working conditions	CE 1.3.3, CE 1.4, CE 3.3.9 CE 1.2.1, CE 1.2.5, CE 1.3.3, CE 1.3.4, CE 1.3.8, CE 1.3.9, CE 3.3.2, CE 3.3.4, CE 3.3.9 CE 2.2.3
PE3.6 Capacity for lifelong learning and professional development	➢ I improved my proficiency in English which assisted me in continuously improving my engineering knowledge ➢ I had undergone several training programmes to increase my knowledge base	In all three episodes Continuing Professional Development
PE3.7 Professional Attitudes	➢ I prepared the professional documentations with advanced technology to demonstrate the outcomes of our projects ➢ Worked under less	CE 1.3.9, CE 2.3.6, CE 3.3.9 CE 2.2.3

	flexible working conditions ➢ Followed the industry standards	CE 3.3.7, CE 3.3.8, CE 3.3.9s