

	Outcome	Comment
1	Define, investigate and analyse complex engineering problems	<p><b>Do not state:</b></p> <p>I was involved in:            Circuit Breaker size calculation and Cable size calculations            Circuit protection mentions and additional safeties (isolator, cb, fuse, surge protection, ups)            Instrument specification identification (resolution, accuracy, process connection, documentation required)            P&amp;ID review and formulation. To determine how a plant will be automated and what is required to such.            Detailed control philosophy documentation to be submitted to system integrators for implementation, continuous process and batch processing (ISA-88).            Conceptual Panel design and specifications (Identify SANS regs, ensuring panel is built to site and client spec)            Manage and co-ordinate hazardous area classifications</p> <p><b>[Comment]</b> This is information you put on a CV and not in a document in which other engineers are going to evaluate your performance. We need to see actual calculations. What was the problem? How did you go about investigating the specific problem? We need to see actual examples.</p>
2	Design or develop solutions to complex engineering problems	<p><b>Do not state:</b></p> <p>Design templates and calculation tables to ensure that repeatable and accurate calculations and design work is done correctly.            Created a instrument datasheet to ensure fair and informative information is issued to the suppliers for tender            Created internal company electrical installation specification, used for all submissions to tender.</p> <p><b>[Comment]</b> Now you should discuss the development of the solution, i.e. the load and other requirements that influenced your design – once again a specific example.</p>
3	Comprehend and apply advanced knowledge: principles, specialist knowledge, jurisdictional and local knowledge	<p><b>Do not state:</b></p>

		<p>Following regulations and standards          Conversions between different units of electrical measurement          Basic instantaneous and accumulative power calculations</p> <p><b>[Comment]</b> These are only broad statements – we are looking for actual facts.</p>
4	Manage part or all of one or more complex engineering activities	<p><b>Do not state:</b></p> <p>I am a lead automation engineer as well as a project manager, so I am involved in and manage all Electrical, control and instrumentation activities associated with my projects within my company. I am also involved co-ordinating all tasks requiring approval from my contractors.</p> <p><b>[Comment]</b> We need to see examples</p>
5	Communicate clearly with others in the course of his or her engineering activities	<p><b>Do not state:</b></p> <p>In all my projects, I have constant communication with my internal E,C&amp;I Team, other internal engineering disciplines, the client, contracted contractors and other engineers possibly involved in the projects under the clients supervision.</p> <p><b>[Comment]</b> We need to see examples</p>
6	Recognise and address the reasonably foreseeable social, cultural and environmental effects of complex engineering activities	<p><b>Do not state:</b></p> <p>I promote and incorporate energy efficient designs and solutions to my client.          I ensure any of the by-products of my designs and implementations have a limited negative effect on the environment.          I promote local labour and detailed design teams to be used in the projects I am involved in.</p> <p><b>[Comment]</b> We need to see examples</p>
7	Meet all legal and regulatory requirements and protect the health and safety of persons in the course of his or her complex engineering activities	<p><b>Do not state:</b></p> <p>I ensure my design and the implemented projects follow all required SANS and OHS requirements.</p> <p><b>[Comment]</b> We need to see examples: Which SANS standards?</p>

		<p><b>Do not state:</b></p> <p>As I am in the pharmaceutical industry, I study and follow various south African pharma regs (MCC/SAPHRA) and international regs (PIC/s, FDA, ISPE).</p> <p>On all of my projects I am responsible for ensuring my contractors meet the H&amp;S requirements with regards to their documentation (detailing in tender documents as well as inspection of files), and during my site supervision responsibilities I enforce onsite compliance with these requirements.</p> <p>I am also obligated to follow these requirements during supervisor or commissioning periods onsite.</p> <p><b>[Comment]</b> We need to see examples of where this was applied in one of your complex engineering activities.</p>
8	Conduct engineering activities ethically	<p><b>Do not state:</b></p> <p>I work ethically</p> <p><b>[Comment]</b> Do you know what ECSA says about ethical behaviour? Please check this out and them document examples of where you applied this.</p>
9	Exercise sound judgement in the course of complex engineering activities	<p><b>Do not state:</b></p> <p>I ensure that the correct approval projects is followed throughout the lift cycle of the project.</p> <p>I ensure that all laws and regulations that are required to be followed during a project are identified before the design is completed.</p> <p>I ensure the required risk and impact assessments are executed accordingly.</p> <p>Ensure that all testing and commissioning protocols are detailed and executed properly.</p>

		<p>The concept associated with our company is to manage the link between the client and the industry. I ensure that the fair tenders are submitted, and that fair recommendations are made with regards to who should form part of the detail design and construction team. Each tender submitted required 3 fair submissions. Which are judge on technical, commercial and financial aspects. I ensure that our clients get the best product possible available in their allowable budget, and explain to the client if the budget does not allow a certain solution, the risks associated with the new design. I also ensure that my contactors are not take advantage of by the large corporations, and ensure fair progress payment and remuneration from extra work completed.</p> <p><b>[Comment]</b> We need to see examples. In one of your complex engineering activities, tell us what the problem was, which options you had, which one you chose and why and what the end result was.</p>
10	Be responsible for making decisions on part or all of complex engineering activities	<p>Is this not the same as item 4?</p> <p><b>[Comment]</b> In Item 4 you are requested to show examples of where you managed a complex engineering activity. Manage means getting the job done through other people. In this item you need to show an example of where you were solely responsible for the decision(s) taken in a complex engineering activity.</p>
11	Undertake professional development activities sufficient to maintain and extend his or her competence	<p><b>Do not state:</b></p> <p>I have done various courses associated with recommended engineering practises in the pharmaceutical industry.</p> <p>I have be come involved in SAIMC as senior member, and have tried to promote the sharing of knowledge throughout the industry.</p> <p><b>[Comment]</b> We need to see examples of courses done.</p>