

APS112&113 Winter 2017 Quiz #2 – Additional Grading Info for Question #32

32a) Correct descriptions of the risk equation elements or a partially complete risk equation (i.e. $\text{risk} = \text{probability} \times \text{severity}$) will gain students half marks (0.5/1). Full marks (1/1) are awarded for the full risk equation (i.e. **risk = probability of hazard x severity of consequence**).

32b) Noting that an engineering operation may more safe in the presence of less risk and that an engineering operation may be less safe in the presence of more risk will gain students half marks (0.5/1). Full marks (1/1) are awarded to students who acknowledge **safety as a process to minimize risk** (to an acceptable level) in any engineering operation.

32c) For a reasonable definition of an 'accident' that contains the words 'hazard', 'unintended', 'preventable', or 'unforeseen', half marks (0.5/1) will be awarded. Full marks (1/1) are awarded for the engineering definition as outlined in the textbook: "An **unintended exposure** to a hazard."

32d) i) Description of a real-world situation involving a hazard and a consequence (1/1).

ii) Simply naming a hazard relating to the real-world situation given earns half marks (0.5/1). Description of a **relevant hazard**, including an indication of how the hazard has the **potential to cause damage** (e.g. exposure of a human to a hazardous material, causing injury or death) earns full marks (1/1).

iii) Description of a relevant and direct consequence of the hazard given (1/1).