Four types of API exam questions

TYPE 1 QUESTIONS:

Verbatim wording quote

Q. The stresses imposed on a vessel during a pressure test are effectively?

Ans. *Static*

TYPE 2 QUESTIONS:

Based on loose paraphrase or 'intent'

Q. The stresses imposed on a vessel during a pressure test ignore?

Ans. *Fatigue conditions*

QUESTIONS ARE BASED ON SOURCE MATERIAL APPEARING SOMEWHERE IN THE CODES... LET'S SAY THIS IS IT:

The *objective* of pressure tests is sometimes misunderstood. It is part of the system of verifying the integrity of a vessel but it has its limitations. The stresses imposed on a vessel during a pressure test are effectively static; they impose principal stresses and their resultant principal strains on the vessel. This means that what they test is the resistance of the vessel only to the principal stress and strain fields, not its resistance to cyclic loadings (that cause fatigue), creep or the other mechanisms that have been shown to cause vessels to fail. Hence the pressure test is *not* a full test of whether the vessel will fail as a result of being exposed to its working environment and the incidence of steel vessels actually failing catastrophically under a works pressure test is quite small . A pressure test **is not** a 'proving test' for vessels that have not been properly checked for defects (particularly weld defects). It is also not a proving test for vessels where unacceptable defects have been found – so that the vessel can be somehow shown to demonstrate integrity, in spite of the defects.

TYPE 3 QUESTIONS:

Elimination or 'least wrong' answers

Q. A pressure test on a vessel is?

(a) Unlikely to result in failure
(b) A test for fitness-for-purpose
(c) A test for all defects
(d) A proving test

Ans. (a) It may not always be correct in all contexts, but it is the *least wrong* based on the code text it was sourced from.

TYPE 4 QUESTIONS:

Based on general knowledge that may not be directly traceable to the form of words in the code.

Q. Pneumatic tests are?

Ans. *Performed in a blast-pit or underwater for safety reasons*