

SAMPLE QUESTIONS 4B (MULTIPLE CHOICE)

(NOTE: These questions are intended as representations of the style of questions that may appear on examinations, they are not intended as study material and, as such, may not be in line with any current examination syllabus)

Currently all the 4B SOPEEC examinations are delivered in a multiple-choice format. Examination candidates have 3.0 hours to answer 100 multiple choice questions. This works out to be 1.8 minutes per question.

To use your time wisely it is recommended that you read through the questions and answer only the questions for which the answer comes to you quickly. Leave other questions and calculation questions for later.

Besides lubricating the bearings on a turbine, the lubricating oil is required to

- A. remove heat**
- B. remove additives
- C. warm the oil sump
- D. clean the oil strainer

Before starting a pump always check that the

- A. packing is drip free
- B. lantern ring turns freely
- C. area around the pump is cool and dry
- D. suction and discharge valves are in their proper positions**

A safety valve is a fitting that will prevent the boiler pressure from exceeding a set maximum by

- A. being manually opened
- B. slowly opening to bleed off the pressure
- C. popping open and reducing the pressure**
- D. opening under the control of a remote sensor

High pressure is a common unsafe condition found in hot water boilers and is mainly due to the failure of the _____ valve to open at the set pressure.

- A. stop
- B. thief
- C. check
- D. safety relief**

Laying up a boiler means

- A. setting the boiler on its foundation
- B. lifting up the boiler for annual inspection
- C. taking the boiler down for an annual overhaul
- D. preparing a boiler for a period of storage in such a manner as to prevent corrosion**

Boiler feedwater is treated in order to prevent

- A. scale from forming in the stack
- B. the pressure in the boiler from going too high
- C. scale from forming on boiler internal surfaces**
- D. combustible gasses from building up in the stack

What are the two basic classifications of steam turbines?

- A. Reaction and impulse**
- B. Manual and automatic
- C. Rotary and reciprocating
- D. Low pressure and high pressure

What type of permit must be obtained before entering a sump pit?

- A. WHMIS permit
- B. Confined space entry permit**
- C. Alberta Energy Regulator permit
- D. Occupational Health and Safety Code permit

In an absorption system, when the temperature of a strong unsaturated solution is lowered so far that its salt concentration exceeds the maximum concentration possible at the lower temperature, what process occurs in the solution?

- A. Dissociation
- B. Vapourization
- C. Crystallization**
- D. Fractionization

The ratio of the mass of moisture contained in the air compared to the mass of moisture the air is capable of holding at the stated temperature is termed the

- A. dryness fraction
- B. relative humidity**
- C. water equivalent
- D. thermal capacity

When fan belts show signs of fraying, cracking, and wear, they should be

- A. repaired
- B. reported
- C. replaced**
- D. realigned

Vapour bubbles in a pump can cause the pump to

- A. stall
- B. rotate
- C. cavitate**
- D. lose power