

SAMPLE QUESTIONS 2A3 (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 2A3 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.

Which of the design fundamental requirements for a boiler considers the ability to transfer a maximum of the heat available in the fuel to the water and steam within the drums and tubes?

- A. Safety
- B. Reliability
- C. Efficiency**
- D. Serviceability

In a black liquor recovery boiler when molten smelt comes into contact with water _____ is produced.

- A. an explosion**
- B. weak black liquor
- C. strong black liquor
- D. a mild chemical reaction

Attemperation is a method of controlling steam temperature by _____ the steam.

- A. reheating
- B. superheating
- C. removing heat from**
- D. adding sensible heat to

When performing a hydrostatic test on a newly constructed boiler, the water used in the test must be no less than

- A. 21°C**
- B. 25°C
- C. 40°C
- D. 60°C

When inspecting boiler tubes, headers, and drums, which non-destructive examination uses high frequency sound with transducers and instrumentation to determine the wall thickness?

- A. Ultrasonic testing**
- B. Radiographic testing
- C. Liquid penetrant testing
- D. Magnetic particle testing

Chemical cleaning of a high-pressure boiler is done by the circulation method or the

- A. overfill method
- B. recycle method
- C. soaking method**
- D. fill and flush method

When completing the dry out process in commissioning of a new boiler, which of the following would cause the main fuel valve to trip to the closed position?

- A. Sootblower failure
- B. Loss of main flame**
- C. Deaerator high level
- D. Loss of a boiler feedwater pump

Two common types of chemical feed pumps are the electronic impulse type and the _____ type.

- A. Rotor
- B. Screw
- C. Plunger**
- D. Sliding Vane

What has been called the universal solvent that can dissolve, to some extent, most naturally occurring substances on the earth?

- A. Water**
- B. Gasoline
- C. Crude oil
- D. Turpentine

Which water impurity found in power plant equipment gives the water a turbid appearance?

- A. Hydrocarbons
- B. Dissolved gases
- C. Suspended solid**
- D. Dissolved substances

What type of corrosion occurs when two dissimilar metals come in contact with each other in the cooling water system?

- A. Stress
- B. Pitting
- C. Crevice
- D. Galvanic**

Which of the following is a basic type of cooling water system?

- A. Direct-contact
- B. Counter current
- C. Reverse Osmosis
- D. Open recirculating**