

## Possible test questions

1. Give a general overview of the condensation process to treat polluted gas streams.
2. Give a general overview of the adsorption process to treat polluted gas streams.
3. Give a general overview of the membrane technology to treat polluted gas streams.
4. Give a general overview of the chemical waste gas treatment (combustion).
5. Using schematic figures illustrate and explain the possibilities of heat recovery in chemical waste gas treatment.
6. Write a material and a heat balance on the combustor (after-burner), determine the fuel demand and explain the effect of the different operational parameters on the (specific) fuel demand.
7. Give a general overview of the biological waste gas treatment.
8. Explain the processes to decrease the  $\text{NO}_x$  content of waste gas streams including the chemical reactions taking place.
9. Give a general overview of the absorption and show the application of the absorption.
10. List and explain the standpoints to select the absorbent for absorption, explain their roles.
11. Explain the role of chemical reactions to treat environmental problems, give the chemical reaction, the chemical equilibrium constant and explain its role in treating environmental problems using chemical absorption.
12. Give a general description of the absorbers and characterize them.
13. List the different equipment applied within the absorption plant and explain their roles.
14. Explain the flow sheet for the absorption of sulphur dioxide from stack gases giving the chemical reactions (Figure attached, but explanations removed).