TRADE (TECHNICAL) TEST QUESTIONS – QAPCO, QATAR

1. In a desorption column, which tray is the sensitive tray?
   Answer: Top tray where temperature is controlled.
2. Why is CBD carried out in boilers?
   Answer: For better steam quality.
3. In surging, what is the main cause?
   Answer: Suction low flow.
4. Which parameter is checked in wastewater effluent?
   Answer: Chemical Oxygen Demand (COD).
5. Why is demineralized water pH kept slightly basic?
   Answer: To avoid corrosion.
6. Polymerization process is:
   Answer: Exothermic.
7. 6 g of carbon is equal to:
   Answer: 0.5 mole.
8. In case of fire, first action is:
   Answer: Inform CCR.
9. In case of sulfur smell, first action is:
   Answer: Use escape mask and inform CCR.
10. Forklift entry in operating area requires:
    Answer: Valid work permit.
11. Why is saturated steam used in reboilers?
    Answer: To reduce heat duty.
12. Boiling point is:
    Answer: Temperature at which vapor pressure equals system pressure.
13. What is flooding?
    Answer: High accumulated level in the column.
14. Who authorizes scaffolding?
    Answer: Safety section.
15. What is cavitation?
    Answer: When NPSH available < NPSH required.
16. How is flow controlled in a centrifugal pump?
    Answer: By throttling the discharge valve.
17. Which action is wrong to control flow in a PD compressor?
    Answer: Throttling the discharge valve.
18. What is a volumetric pump?
    Answer: Positive displacement (PD) pump.
19. Why are polymers solid at ambient temperature?
    Answer: Due to higher molecular weights.
20. Which statement is not a quality policy?
    Answer: Maximum production.
21. Which is not a quality policy?
    Answer: Traceability of product is optional.
22. What shows chemical properties?
    Answer: MSDS (Material Safety Data Sheet).

23. Which is saturated steam?
    Answer: Steam at saturated pressure.
24. Why is saturated steam used?
    Answer: Due to latent heat.
25. How is demineralized water conductivity checked?
    Answer: Because it is a good conductor after ion-exchange process.
26. How is viscosity checked?
    Answer: By allowing liquid through a calibrated diameter orifice.
27. Why is fast purging done in boilers?
    Answer: To remove sludge and dirt.
28. Which are greenhouse gases?
    Answer: CO2 and methane.
29. Why are hosepipe couplings kept flexible?
    Answer: To facilitate operator handling.
30. What is the color of mandatory signs?
    Answer: Blue.
31. What are disadvantages of sulfur dust?
    Answer: Irritation and toxicity.
32. What does latent heat do?
    Answer: Causes phase change while temperature remains constant.
33. Is the ethylene process fast or slow?
    Answer: Fast.
34. What is the meaning of "correction"?
    Answer: Rework.
35. Demin water pH:
    Answer: 8 (basic).
36. Why is steam turbine heating carried out?
    Answer: To avoid thermal shock.
37. Why is O2 kept in excess in a furnace?
    Answer: For complete combustion.
38. In a refrigeration compressor, if suction pressure goes high, what happens?
    Answer: Cooling reduces and process temperature rises.
39. In solid handling, what is used for dilute phase conveying?
    Answer: Air at 3 bar pressure.
40. Why are double block and bleed valves used?
    Answer: To isolate the system.
41. How are N2 leakages detected?
    Answer: None of these (no odor, color, or smell).
42. Why are additives used in polymers?
    Answer: For customer satisfaction.
43. Which affects polyolefins more: oxygen, water, or acetylene?
    Answer: Acetylene.
44. If O2 is 21% in a container under atmospheric pressure, what is O2 concentration if the same container is pressurized with 6 kg/cm² nitrogen?
    Answer: 3.5%
45. Some chemical equations to write on answer sheet:

- $CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$
- $S + O_2 \rightarrow SO_2$
- $7O_2 + 2C_2H_6 \rightarrow 4CO_2 + 6H_2O$
- $2NaOH + CO_2 \rightarrow Na_2CO_3 + H_2O$
- $2NaOH + H_2S \rightarrow Na_2S + 2H_2O$