

Session 24

Multiple-Choice Examination

1.5 hours – 50 questions

Sample Questions (used on 3D3 tests)

1. On an N-Z plot of neutron number (N) versus proton number (Z) and with the original nucleus at (N,Z), which of following is the result after K-shell electron capture:
 - (a) (N-1,Z)
 - (b) (N-2, Z-2)
 - (c) (N+1, Z-1)
 - (d) (N-1,Z+1)
 - (e) (N,Z+1)
2. A major disadvantage of the CANDU reactor is:
 - (a) The reactor needs to be shutdown for refueling.
 - (b) Regulating its neutron flux distribution is difficult.
 - (c) Its lack of containment.
 - (d) Its dependence on foreign enrichment facilities.
 - (e) Pressure tube degradation due to radiation-induced creep.
3. Yellowcake consists mainly of:
 - (a) Milled uranium metal powder
 - (b) Refined UO_3 .
 - (c) Raw U_3O_8 leached from ore
 - (d) UF_6 .
 - (e) Uranyl nitrate.
4. Which of the following reactor types has a light water moderator:
 - (a) Advanced CANDU reactor
 - (b) PWR
 - (c) Advanced Gas Reactor
 - (d) Magnox reactor.
 - (e) RBMK
5. Which one of the following statements about the Chernobyl nuclear accident is FALSE?
 - (a) The Chernobyl accident was a LORA.
 - (b) The neighbouring three reactors operated for many years after the accident.
 - (c) The reactor was sealed in an air-tight sarcophagus
 - (d) There were about 30 immediate deaths at the time of the accident.
 - (e) About 300,000 people had to be evacuated from radioactively contaminated areas.