

Q 4.

$$\left[\pi \{ s.snum, s.sname \} \right. \\ \left. \left(\sigma (s.year > 2) (p_s(student)) \right) \right]$$

$$- \left[\pi \{ s.snum, s.sname \} \right. \\ \left. \left(\sigma (s.snum = m.snum \wedge m.grade < 85 \wedge m.cnum \text{ LIKE } 'CS./.') \right. \right. \\ \left. \left. (p_s(student) \times p_m(mark)) \right) \right]$$

$$- \left[\pi \{ s.snum, s.sname \} \right. \\ \left. \left(\sigma (s.snum = e.snum \wedge p.dept \neq 'CS' \wedge c.pnum = p.pnum \right. \right. \\ \left. \left. \wedge e.cnum = c.cnum \wedge e.term = c.term \wedge e.section = c.section) \right. \right. \\ \left. \left. (p_s(student) \times p_e(enrollment) \times p_c(course)) \right) \right]$$