A student is to answer 10 out of 13 questions in an examination such that he must choose at least 4 from the first five questions. The number of choices available to him is (2003)

1) 140   2) 196   3) 280   4) 346

Ans.

(2) Number of choices $= {}^5C_4 \times {}^8C_6 + {}^5C_5 \times {}^8C_5$

$$= 140 + 56.$$