14. Which one of the following is reduced with zinc and hydrochloric acid to give the corresponding hydrocarbon?

- (1) Ethyl acetate
- (2) Acetic acid
- (3) Acetamide
- (4) Butan-2-one

Solution:

Butan-2-one will get reduced into butane when treated with zinc and hydrochloric acid following Clemmensen reaction whereas Zn/HCl do not reduce ester, acid and amide.

Hence option (4) is the answer.