Q 03. If W_1, W_2 and W_3 represent the work done in moving a particle from A to B along three different paths 1,2 and 3 respectively (as shown) in the gravitational field of a point mass m, find the correct relation between W_1, W_2 and W_3

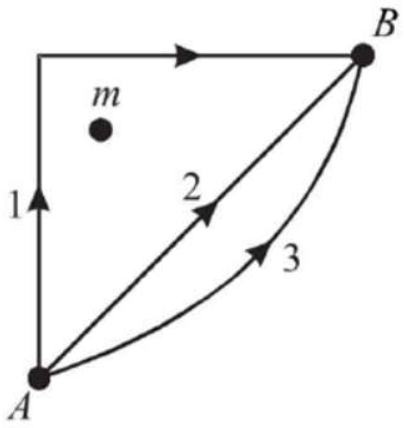
(2003S)

(a) $W_1 > W_2 > W_3$

(b) $W_1 = W_2 = W_3$

(c) $W_1 < W_2 < W_3$

(d) $W_2 > W_1 > W_3$



(b) **Note :** In a conservative field work done does not depend on the path. The gravitational field is a conservative field.

$\therefore \quad W_1 = W_2 = W_3$