Part III Equities

PORTFOLIO THEORY

1. Answer is (a)

2. This is given as follows:

$S^2 = (0.5)^2 (28)^2 + (0.5)^2 (35)^2 + 2 (0.5) (0.5) 196 = 600.25$

$S = 24.50\%$

3. For a perfectly negatively correlated security, we can write

$S^2 = (W_1)^2 (S_1)^2 + (W_2)^2 (S_2)^2 - 2 (W_1) (W_2) (S_1)(S_2)$

Setting this = 0 for a risk-free portfolio and recognising that the above equation is a perfect square of $(W_1S_1-W_2S_2)$, we can write

$0 = W_1S_1 – W_2S_2$ or $W_1/W2 = S_2/S_1$

Substituting, $S_1 = 10$ and $S_2 = 20$ gives $W_1: W_2= 2: 1$

Answer is (c)