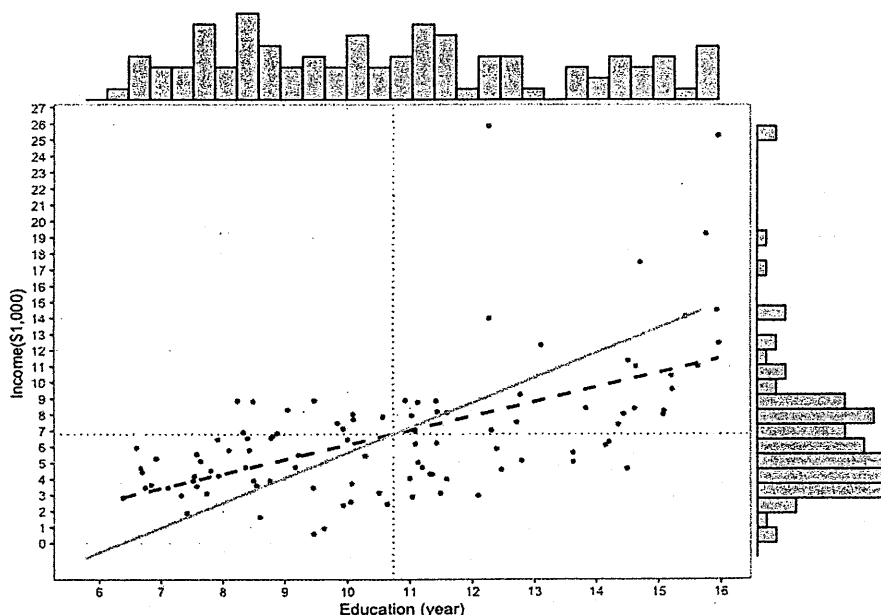


※ 考生請注意：本試題不可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

一、選擇題(50%，每題 10 分)

The scatter diagram (with histograms on the sides) below is based on a data set containing average number of years in education and average annual income (in Canadian dollars) of incumbents for 106 occupations in 1971. Each dot shows one occupation's average number of years in education and average annual income in the data set. In round numbers, the standard deviation for education is about 2.7 number of years and that for annual income is 4,200 dollars.

1. Two lines pass through the cloud of dots on the scatter diagram. Which is the regression line?  
(a) Solid-Gray (b) Dashed-Black
2. The correlation coefficient between education and income is about  
(a) -0.2 (b) -0.5 (c) 0.2 (d) 0.6 (e) 0.9.
3. The average annual income (to the nearest thousands of dollars) of incumbents for occupations having an average number of years of education one standard deviation below average is about  
(a) 2,000 (b) 4,000 (c) 6,000 (d) 8,000 (e) 10,000.
4. From the regression line, the average annual income (to the nearest thousands of dollars) of incumbents for occupations having an average number of education of 16 years is about  
(a) 8,000 (b) 9,000 (c) 11,000 (d) 13,000 (e) 15000.
5. For items 3 and 4 above, which one of the two estimates is likely to be more accurate?  
(a) item 3 (b) item 4.



二、問答題 (50%)

1. 請就認識論(epistemology)及方法論(methodology)來說明量化與質化研究的差異。(20%)
2. 請說明在實驗設計中，「隨機選取」(random selection) 與「隨機分派」(random assignment) 的作法，又各自影響了內在或外在效度 (external validity)? (20%)
3. 請就因果關係來說明「自變項」(independent variable)、「依變項」(dependent variable) 與「中介變項」(intervening variable)。(10%)