**Q1** (i) The size of the scheme: the past experience of the scheme is not statistically reliable if the size of the scheme is large enough.

If the period of the recent mortality experience is too short, say a month, it may not be appropriate for setting assumptions.

Consistency between the recent experience and industry experience should also be checked to detect any specific trends in relation to the scheme itself.

(ii) In general, the assumptions will be set in accordance to the purpose of the valuation. Despite that, the assumptions are generally derived based on the past experience of the scheme together with the one of other similar schemes or industry experience.

The discount rate is often defined by the accounting standard while in general it should be in line with the investment return of the underlying assets, which may vary across different funds. Long term expectations for investment market could also be referred to.

The pension will also increase along with the recent CPI published by the government to reflect inflation adjustment.

The salary increases are available from the employers.

Mortality experience may be based on recent experience of the scheme or the population mortality tables.

Withdraw rate should be mainly based on past experience of the scheme or other similar scheme.

As the scheme is closed to new entrants, the likely impact should be carefully examined and reflected when setting assumptions.

All the assumptions should be regularly reviewed to ensure they remain reasonable.

**Q3** (i)

* Mortality rate for horses
* The incidence rate that horses is certified as injured
* The rate that horses are retired at younger ages for breeding
* Average breeding fees
* Average age that horses start racing

(ii)

For (a), the longevity risk lies in the fund as the benefit will be paid to horses as long as they are alive. While for (b), horses are exposed to longevity risk if they live too long after retirement and run out of the fund.

For (a), given the benefit will be increased each year, the investment risk lies in the fund while for (b), the benefit will be determined by the market experience and the horses bear the investment risk.

For (a), horses have incentive to prolong their racing career as long as possible since the benefit will be mainly based on the year of racing. For (b), late start of racing and early certified retirement is attractive to horses and they may be unwilling to recover from injuries.

For (a), inflation is considered while this is not the case for (b).

(iii) There may not be enough rooms in the approved farm for all the retired horses in the fund.

The cost of housing may increase higher than the inflation rate and results in a deficit in the fund.

The owner may choose a cheaper place for retired horses and make money out of the benefit. In this case, the fund provides benefit against their intention of taking care of the horses.