C O U - R & U - Reason-Based Questions

Q.1. The law of diminishing marginal utility is applicable in case of money.

Ans. True. If worth of a rupee is more to the poor than to the rich, the law of diminishing marginal utility should be applicable in case of money.

Q.2. Convexity of IC curve indicates the operation of the law of diminishing marginal utility.

Ans. True. Convexity of IC curve points to the diminishing marginal rate of substitution. The consumer is willing to sacrifice less and less of Good-Y for every additional unit of Good-X. Thus, $\frac{\Delta Y}{\Delta X}$ tends to fall. This is because MU of Good-Y tends to rise as the quantity of Y is reduced, while MU of Good-X tends to fall as the quantity of X is increased with the consumer. This is in accordance with the law of diminishing marginal utility. Thus, it is basically the law of diminishing marginal utility that leads to diminishing marginal rate of substitution or the convexity of IC curve.

Q.3. When X and Y are consumed, MRS (marginal rate of substitution) is equal to the ratio

$\frac{MU_x}{MU_y}$

Ans. True. This is how it is proved:

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We know, $\mathrm{MU_X} = \frac{\Delta \mathrm{TU}}{\Delta \mathrm{X}}$, and $\mathrm{MU_Y} = \frac{\Delta \mathrm{TU}}{\Delta \mathrm{Y}}$

So that,

$$\frac{\mathrm{MU_X}}{\mathrm{MU_Y}} = \frac{\Delta \mathrm{TU}}{\Delta \mathrm{X}} \div \frac{\Delta \mathrm{TU}}{\Delta \mathrm{Y}}$$

$$= \frac{\Delta \mathrm{TU}}{\Delta \mathrm{X}} \times \frac{\Delta \mathrm{Y}}{\Delta \mathrm{TU}} = \frac{\Delta \mathrm{Y}}{\Delta \mathrm{X}} = \mathrm{MRS}$$

Thus, $\mathrm{MRS} = \frac{\mathrm{MU_X}}{\mathrm{MU_Y}}$.