ECONOMIC'S 1

MARKING SCHEMES

1. a) Population projections
    Refers to the estimations/ predictions on the future populations. The estimation of the future population is based on the components of demographic changes such as births, deaths and migration.

    b) Marginal damage
    additional cost/ pollution imposed to the society/ environment by production of an extra unit of output by a polluting firm (externality producing firm)

    c) Labour force participation.
    Is the ratio between economically active population (labor force) and the total population?

    Labour force participation = $\frac{active\ population}{total\ population} \times 100$

    d) Unemployment stock
       is the total number of people who are unemployed at a given period of time. Unemployment stock changes from time to time depending on number of labour leaving unemployment or entering into unemployment.

    e) Natural unemployment
    This is the form of unemployment which occurs when the economy is at full employment. Natural unemployment can take form of frictional unemployment, seasonal unemployment, or disguised unemployment

2. A trade cycle is the fluctuations in the level of economic activities within a given period of time. Economic activities tend to move up and down due to different factors like changes in season, changes in technology, etc.
    i.   Changes in the level of output. An increase/ decrease in the level of output produced indicate occurrence of trade cycle.
    ii.   Change in price level. An increase/decrease in price indicates inflation/ deflation which marks for trade cycles
    iii. Changes in level of incomes. Changes in incomes such as profits, wages interest, etc indicate occurrence trade cycles.
    iv.   Changes in level investment. Changes in the level of investment indicates fluctuation in the economy

v. Change in level of employment.Changes in the level of employment especially for factor labour indicates trade cycles

3. (i) The diagram above represent the possibility production frontier (PPF) of good X and good Y

(ii) The PPF above represents the law of increasing opportunity cost because it is concave in shape where opportunity cost increases as you move along the PPF
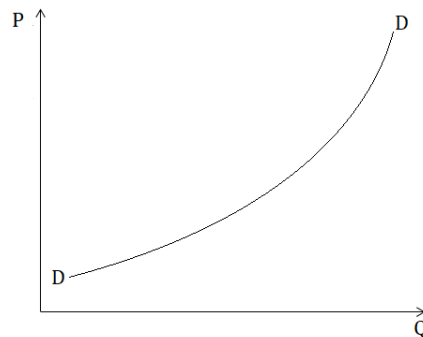
(iii) The form of unemployment which occurs at point D is "Underemployment because at this point resources are employed below their capacity.

(iv) The economic term to describe the movement from A to B is opportunity cost Because on moving from A to B units of good Y are sacrificed to increase the Production of good x.

(v) If an economy wishes to produce at point E, the following should be done.
   i. Increase in stock of capital
   ii. Increase in number of labour
   iii. Improvement in technology
   iv. Training and retraining of workers.

(b) The demand curve slopes upward from left to right when it violets the law of Demand, such that the higher the price the higher the quantity demanded and the lower the price lower the quantity demanded.
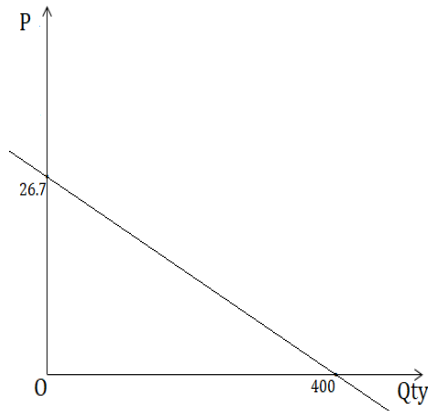

Reasons.
   i. Articles of ostentation (Veblen goods).These are very expensive goods such that consumers prefer to buy more of them when their prices increases.
   ii. Giffen goods.
      These are special form of inferior goods and consumed by low income earners, when price of a giffen good increases consumers buy more and when price falls they buy less
   iii. Ignorance of consumers
      Consumers may be forced to buy goods at high prices due to market ignorance which can be caused by advertisement, labeling or lacking information's on price of the some goods in other markets .
   iv. Expectations about future prices. When consumers has expectations on future increase in prices they may keep buying goods at higher prices because of fear on future prices.

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4. a) The are 10 consumers

DD function for @ consumer Qd = 40 – 1.5p

Market supply Qs=200+5p

   i. market demand =(individual demand) x 10

$$= (40-1.5p) \times 10$$
$$=400-15p$$

Qd=400-15p

Qty	Price
0	26.7
400	0

   ii. Market clearing price

Qd=Qs

400-15p=200=5p

400-200=5p+15p

$$\frac{200}{20}=\frac{20}{20}p$$

$p = 10 \; units \; of \; money$

❖ the market clearing price is 10

   iii. when price is 15

Qd= 400-15p   Qs =200+sp

  =400-15x15   =200+5x15

  =400-225   =200+75

  =175 Units   =   275 Units

❖ Qd< $Qs, there \; will \; be \; a$

Surplus of 275-175= 100units

   iv. Elasticity of demand when price is 20

Qd= 400-15p

  =400-15x20

  =400-300

  =100

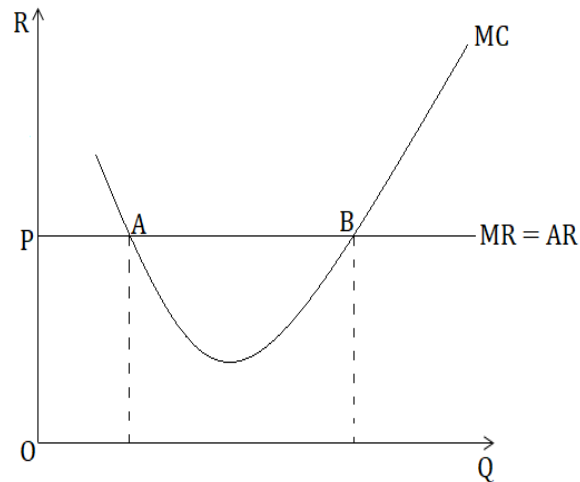Ed = -$\left(\frac{\Delta Q}{\Delta p} \cdot P / Q\right)$

=-$\left(-15 \times \frac{20}{100}\right)$
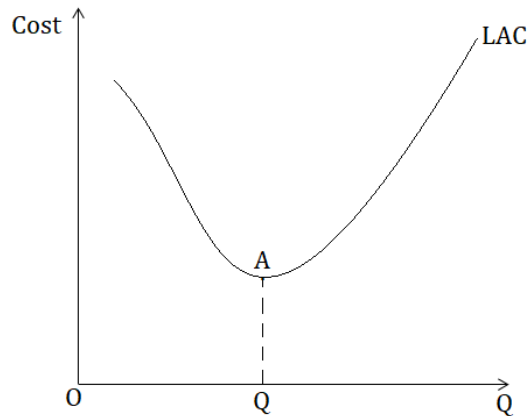
$$=\frac{300}{100}$$

$$=3$$

Ed = 3- it is elastic

(b) A profit maximizing firm is the firm which produces at the point where MC=MR and MC cuts MR from below.

From the diagram at point B,the firm is maximizing profit as MC =MR and MC cuts MR from below.
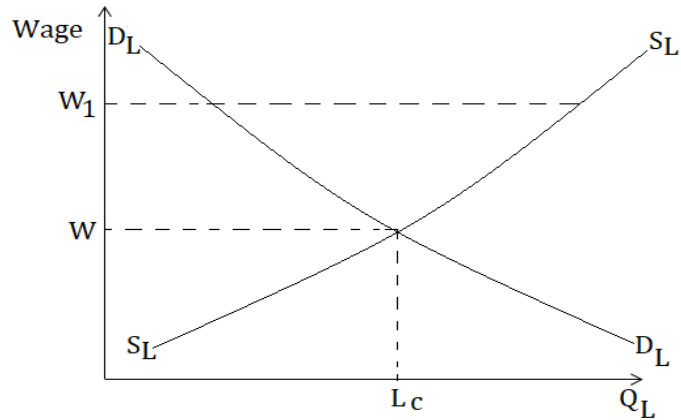
While

An optimum firm is the firm which produces at the lowest point (Minimum) average cost (AC) it is the point where the firm is most efficient in production

At point A the firm is at optimum size

5. a) A minimum wage is a wage set above the equilibrium wage such that employers are not allowed to pay below this wage.

From the diagram above **W₁** represents minimum wage, employers are not allowed to pay workers below **W₁**.

Effects of minimum wage
    i.   Motivates workers to work hard hence to work had hence increases their efficiency
    ii.   Improves standard of living of workers
    iii.   It increases cost of production
    iv.   It may lead to increase in price of goods and services hence inflation

(b)$P_1 = 80 - 2q,$ $\qquad\qquad\qquad\qquad P_2 = 50 - 2q_2$

$$TC = 100 + 4Q. \qquad\qquad MC = 4$$

    i.   output sold in each market

Market 1	market 2
$P_1 = 80 - 2q_1$	$P_2 = 50 - 2q_2$
$= TR_1 = P_1 Q$	$TR_2 = P_2 q$
$= (80 - 2q_1)q$	$= (50 - 2q_2)^2$
$=(80 - 2q_1)^2$	$TR_2 = 509 - 2q_2^2$
$MR_1 = 80 - 4q_1$	$MR_2 = 50 - 4q_1$
$MR_1 = 80 - 4q_1$	$MR_2 = 50 - 4q_1$
$MR_1 = MC$	$MR_2 = MC$
$80 - 4q = 4$	$50 - 4q_2 = 4$
4q=76	$\frac{4q}{4} = 46$
$\boldsymbol{q_1 = 19\ units}$	$\boldsymbol{q_2 = 11.5}$

    ii.

$P_1 = 80 - 2q_1$	$P_2 = 50 - 2q_2$
$= 80 - 2x19$	$=50-2x11.5$
$= 80 - 38$	$=50-23$
$\boldsymbol{P_1 = 42}$ **units of money**	$\boldsymbol{P_{2=}27\ units}$ **of money**

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iii. Profit earned

=TR−TC

$=(TR_1 + TR_2) - TC$

$=\left((42 \times 19) + (27 \times 11.5) - (100 + 4(19 + 11.5))\right)$

$=(798 + 310.5) - (100 + 4 \times 30.5)$

=1108.5−(222).

=886.5

❖ The total profit earned is 886.5 units of money

6. Demographic data, these are data related to human population. They include data about births, deaths, and migration and population distribution. In collecting data demographers use different methods like census, vital registration and sample surveys. There are different factors to consider when choosing a method of data collection, such factors are:
    i. Level of technology .Some methods demands high technology in collecting and recording demographic data eg. Vital registration.
    ii. Nature of labour force. Some methods of demographic data need skilled labour force in collecting informations.
    iii. Size of fund available. Some demographic data are very expensive hence they need large fund eg. Census
    iv. Government policy. The method of collecting data depends on the policy of the government for the particular period of time
    v. Level of social and economic infrastructures which helps to reach different areas for data collection.
    vi. Area to be covered. The choice of demographic data method depends on the area to be covered because some methods covers just small areas while other methods cover large area.

    Conclusion…………………………… Any relevant conclusion

7. Devaluation is a purposefully action of the government to lower the value of its domestic currency over foreign currency. The government aims at making export cheap and expensive import for economic stability. For devaluation policy to achieve economic stability the following conditions should be met.
    i. The price elasticity of demand for export should be elastic so that a small fall in price for export leads to a larger quantity exported.
    ii. The price elasticity of demand for import should be elastic so that small increases in price of import result to a large fall in quantity imported.
    iii. The trading partners should not adopt the same policy of devaluation.
    iv. There should be fixed exchange rate system for easy control and management
    v. There should be high production for export so that after devaluation the country's export increases rapidly
    vi. There should be no trade barriers/ restrictions against exports of the country undertaking devaluation.

    Conclusions. Any relevant conclusion

8. Spill overs (externalities) these are cost imposed to the third part (environment) as a result of production/ consumption by another individual. A good example of spill over is pollution. The government and private individuals may deal with externalities through the following ways:-
    i. Introduction of pollution taxes which helps to reduce the extent of environmental pollution
    ii. Introduction of tradable permits
    iii. Bargaining. The public may reach reasonable agreement with the polluting firm to internalize the external costs
    iv. Through mergers. Different firms may join together to form one from hence reduce spill over
    v. Through direct controls / legislation the government may control spill overs by introducing strictly laws against polluters.
    vi. Through social conversions. The society may be taught on proper behavior of dumping and conservation of the environment.

    Conclusion: Any relevant conclusion