Section A

Q1. Define marginal cost?
Ans. It is the net addition to total cost when one more unit of the good is produced.

Q2. When is the demand for a good said to be perfectly inelastic?
Ans. When there is no change in quantity demanded of a good due to any change in the price of that good.

Q3. Under which market a firm is having homogenous product?
Ans. Under Perfect Competition firms are having homogenous product.

Q4. What happens to total revenue of a firm when it is able to sell more at constant price?
Ans. Total revenue will increase at constant rate.
Q 5. What is Opportunity Cost?
Ans 5.
It refers to Value of a factor of production in its next-best, foregone alternative.

Q 6. Explain the Central problem of 'for whom to produce'?
Ans

For whom to produce is one of the Central problem of economy related with distribution of goods and distribution of income generated due to production. This problem arises because the output produced is limited. So the problem arises who gets more and who gets less. It depends on purchasing power. This problem is also related with distribution of income among four factors of production in the form of Rent, Interest, Profits and Wages.

Q 7. Differentiate between Collusive and non-collusive Oligopoly.

Collusive Oligopoly - When the firms desire to cooperate with each other while fixing price and output. The firms do not compete with each other.
Non-collusive Oligopoly - When Oligopoly firms independently determine the price and output of their products. The firms compete with each other and non-cooperatively.

or

0.7
Explain the implications of 'Product differentiation' in monopolistic competition?
In monopolistic competition products are similar but differentiated. The products may differ in size, shape, quality, packing etc. As a result there is Brand name. In order to sell more the producer incurs selling cost. There is persuasive advertisement. As a result a producer gets slight control over price.

0.8
What is a budget line. Why is it downward sloping?
Budget line represents all the bundles (combination of two goods) on which the expenditure of a consumer is exactly equal to his income.
The equation of Budget line is: \( P_1 x_1 + P_2 x_2 = M \)
Where $P_1$ and $P_2$ are price of two goods, $x_1$ and $x_2$ represents quantity of two goods respectively and $M$ is the income of buyer. Budget line is downward sloping because the income of consumer is fixed. In order to increase purchase of one good he has to reduce the purchase of other good.

Ans 9.

\begin{align*}
\Delta q &= 22.5 \\
p_1 &= 26 \\
p &= 28 \\
\Delta p &= 2 \\
\epsilon_d &= -1.5
\end{align*}

\[ \epsilon_d = -\frac{\Delta q \times p}{\Delta p \times q} \]

\[ -1.5 = -\frac{22.5 \times 8}{2 \times 60} \]

\[ 1.5 \times 15 = \Delta q \]

\[ \Delta q = 22.5 \]

New qty. $= 60 + 22.5 = 82.5$

As price falls qty. demanded rises.

\[ \Rightarrow \text{Change in quantity} \]
How is the supply of a good affected by the rise in price of inputs used in production of that good? When the price of inputs used in production of a good increases, the cost of production also increases. Price of the product remains constant the production becomes less profitable so the supply decreases.

Cost of production increases due to price in price of inputs. Supply decreases and supply curve shifts to left. $s$, is new supply curve.
Q. 11. Why is Average Revenue equal to Marginal Revenue under perfect competition?

Ans. A firm is a price taker in perfect competition. Industry decides the price. Price remains constant in perfect competition. The firms are selling homogeneous products. At a given price the demand is infinite.

When price remains constant, net addition made by selling additional unit is equal to price. Price is AR and net addition is MR. So AR = MR in perfect competition.

Q. 12. Differentiate between 'Decrease in demand' and 'Decrease in quantity demanded'.

Ans. Decrease in demand
Decrease in demand is the result of change in factors other than price such as fall in price of substitute goods, tastes, preferences, etc.

Decrease in quantity demanded
9t is result of rise in own price of the good.
and preference.

(iii) There is leftward shift of demand curve.

This is decrease in demand.

There is upward movement along the demand curve.

This is also known as contraction of demand.

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2. 13.

Explain the law of diminishing marginal product with the help of a schedule.

**Law of diminishing marginal product:** This law states when more and more units of variable factors are employed MP first increases then falls and even becomes negative.
0  MP
1  20  Up to 3rd unit, Marginal Product increases. Then it starts falling down.
2  30  When 7th unit is employed it becomes negative.
3  40
4  20
5  10
6  0
7  -10

Q 13. Why is MC curve 'U' shaped in the Short run?

Ans. MC is 'U' shaped due to Law of Diminishing Marginal Product or Operation of Law of Variable Proportion. This law states initially MP rises and a stage comes when MP starts falling down and even becomes negative. So when MP rises, Cost of Production falls and when MP falls, Cost of Production rises. Hence MC initially falls and then rises. So MC curve is 'U' shaped.
3.14

Explain producers equilibrium with the help of MC and MR schedule in perfect competition.

Producer is said to be in equilibrium when he is maximising his profits.
The producer produces a level of output where his profits are maximum. This level of output is denoted where

(i) Marginal cost becomes equal to Marginal revenue.
(ii) Marginal cost increases after equaling MR.

<table>
<thead>
<tr>
<th>Units</th>
<th>MC</th>
<th>MR</th>
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<tr>
<td>1</td>
<td>4</td>
<td>3</td>
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<td>5</td>
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</tbody>
</table>

The producer is in equilibrium when he is producing 4 units. At 4th unit MC = MR and MC does not increase after 4th unit. He is not in equilibrium at 5th unit as MC > MR but...
MC falls after 2nd unit. So producer is maximising his profits at 4th unit as both the conditions are fulfilled.

Q. 15. Equilibrium price may change or may remain same with the decrease in both demand and supply. Explain with the help of diagrams.

Ans. When both demand and supply decrease there may be three situations.

1. Decrease in demand is more proportional than decrease in supply
2. Decrease in demand is less proportional than decrease in supply
3. Both demand and supply decrease in same proportion.

(i) Decrease in demand is more proportional than decrease in supply. When demand decreases more proportionately than supply, equilibrium price will fall and...
(ii) Decrease in demand is less proportionate than decrease in supply. When demand decreases less proportionately than supply, equilibrium price rises and equilibrium quantity falls. New price is $p_1$ and new quantity is $Q_1$.

(iii) Both demand and supply decrease in same proportion. When both demand and supply decrease in same proportion, equilibrium price remains same and equilibrium quantity will fall. Old price remains same but new equilibrium quantity is $Q_1$. 
At a given price there is excess demand for a good in the market. How is equilibrium price determined? Use diagram.

Ans: Excess demand is a situation when quantity demanded of a good is more than quantity supplied at a given price.

As a result completion among buyers take place. The price start rising. The price will rise as long as there is excess demand for the good in the market. The price will stop rising when the situation of zero excess demand sets in.

When price rises OF demanded falls due to law of demand and quantity supplied rises due to law of supply.

At OF, price there is excess demand equal to AB amount.

Due to competition among buyers price rises so quantity demanded falls and quantity supplied rises. New equilibrium quantity OE is determined.
Explain the conditions of consumer equilibrium under indifference curve approach.

Consumer is in equilibrium when he is maximising his satisfaction. According to indifference curve approach he attains equilibrium when following conditions are fulfilled.

1. \[ MRS_{xy} = \frac{p_x}{p_y} \]

The marginal rate of substitution between two goods should be equal to price ratios of those two goods. It means amount of one good consumer is willing to give up for one more unit of other good is equal to amount of one good the consumer has to give up for one more unit of other good. It means the slopes of indifference curve and budget line becomes equal.
If \( \text{MRS}_{xy} < \frac{P_y}{P_x} \) it means consumer is willing to give up \( \frac{P_y}{P_x} \) den amount of one good for one more unit of other good than what actually he has to give up. Market rate of exchange between goods (\( \frac{P_y}{P_x} \)) is more than Marginal rate of Substitution. So the consumer will be in loss.

If \( \text{MRS}_{xy} > \frac{P_y}{P_x} \) it means a consumer is willing to give up more amount than what actually he has to give up, so he in gains he will increase his consumption.

(2.) \( \text{MRS}_{xy} \) must be diminishing.

It implies indifference curve is convex to origin.

If \( \text{MRS}_{xy} \) is rising it will be Concave and if \( \text{MRS}_{xy} \) in Constant it will be straight line. In both the condition equilibrium can not be determined.
Section B (Macroeconomics)

0. 17. Can the value of APS be negative. If yes when?
Yes the value of APS can be negative. When saving are negative or consumption is more than income.

0. 18. Give one example of 'externality' which reduces welfare of people.
Pollution created by power houses.

0. 19. What is managed floating exchange rate?
In this system Central bank intervenes in the flexible exchange rate regime to restrict the fluctuation in the exchange rate within certain limits.

0. 20. What are demand deposits?
Demand deposits are those deposits held by Commercial banks which can be withdrawable on demand by Public.
Q. 21. What do you mean by involuntary unemployment?
Ans. When all the able bodied people who are willing to work at prevailing wage rates do find but find gainful employment.

Q. 22. Explain the effect of appreciation of domestic currency on imports?
Ans. Appreciation of domestic currency means less rupees than earlier are needed to buy one unit of foreign exchange (dollar). It means foreign exchange rate has fallen. The foreign goods will become cheaper. The demand for cheaper goods will increase so imports will rise.

Q. 23. Determine intermediate cost from the following data:
Ans. Value of output = Price x output
   $ = 30 \times 300 = £ 9000$
   $\text{AVA}_{mp} = \text{Value of output} - \text{Intermediate Cost}$
Supplementary Copy

CVA_{mp} = NVA_{pc} + Depreciation + NIT

\[ CVA_{mp} = 1000 + 30 + (50 - 40) \]
\[ CVA_{mp} = 700 \]

New \( CVA_{mp} \): Value of output - 9c

700 = 9000 - 9c
9c = 9000 - 7040
9c = £1960

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Differentiate between factor income and transfer income.

**Factor Income**
1. It is earned by factors of production in the form of rent, interest, profits, and wages.
2. This is bilateral in nature

**Transfer Income**
1. It is received in the form of gifts, donations, financial help, etc.
2. This is unilateral in nature
3. This is the result of production process.

9. It is not the result of production process.

4. It is included in national income.

9. It is not included in national income.

0.25 Distinguish between autonomous and accommodating trancations of Bop account.

0.24 Differentiate between stock and flow with example.

Ans

1. The Variables which can be measured at a point of time.

The Variables which can be measured in a period of time.

2. It is a Static concept as it has no time dimension.

It is dynamic concept as it has time dimension.

Examples - Wealth, Savings

Examples - Income, Investment, Capital formation

3. Money supply
<table>
<thead>
<tr>
<th>Q. 25</th>
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<tbody>
<tr>
<td></td>
<td><strong>Autonomous transactions</strong></td>
<td><strong>Accommodating transactions</strong></td>
</tr>
<tr>
<td>i.</td>
<td>These are the international economic transactions that occur due to some economic motive such as profit maximisation.</td>
<td>These are -the transaction which arises due to some other motive such as Financing of deficit.</td>
</tr>
<tr>
<td>ii.</td>
<td>These are independent of the state of BOP.</td>
<td>These transactions are meant to bring balance to BOP.</td>
</tr>
<tr>
<td>iii.</td>
<td>These transactions are also known as 'above the line items'.</td>
<td>These transactions are also known as 'below the line items'.</td>
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Briefly explain problem of double counting?

**Ans.**

Problem of double counting take place when we measure national income by Value added method. Double counting means taking the value of good or services more than once in the estimation of national
This problem may arise when we consider output of firms as final output without considering the fact that output of one firm may be input for other firms. This problem may be avoided by:

(i) Taking value addition at each step of production
(ii) Taking the value of these goods and services which are not for resale as final goods.

Ans 27.

\[ C = 300 + 0.75Y \]
\[ I = 3700 \]
\[ Y_c = ? \]

At equilibrium level \( S = I \)

\[ Y = C + S \]
\[ Y_c = C + I \]
\[ Y = 300 + 0.75Y + 3700 \]
\[ 4000 = 0.75Y \]
\[ Y - 0.75Y = 4000 \]
\[ 0.25Y = 4000 \]
\[ Y = 16000 \]
How can budgetary policy be used to reduce inequalities of income?

To reduce inequalities of income distribution is one of the major objectives of budget to promote inclusive growth.

Through taxes on the income of rich people, their purchasing power is reduced and through expenditure on subsidies, purchasing power of poor people can be increased. As a result, the gap between rich and poor is minimised.
0.28 Explain the price stability in the economy as an objective of Budget? Are there often situations of excess demand or deficient demand in the economy? To achieve economic stability or price stability in one of the major objectives of budget.

During inflation or excess demand taxes are increased, borrowings are increased while expenditure is reduced to reduce purchasing power of people. During deficient demand taxes and borrowing are reduced while government expenditure is increased to increase purchasing power.

0.29 Classify the following into revenue and capital expenditure.

Give reason?

(i) Revenue expenditure - Expenditure on subsidies is a revenue expenditure as it does not create asset and does not reduce liabilities.

(ii) Capital expenditure - Payment of past loans result in reduction in liabilities.
Interest paid on borrowed amount is a Revenue expenditure as it does not create asset or does not reduce liability.

Purchase of share by government is Capital expenditure as it increase assets with government.

0.30

Explain the process of Credit creation by commercial banks?

Ans.

Credit Creation is a process of creating new deposits from initial deposits. This process depends on amount of initial deposits and legal reserve ratio. LRR is that part of deposits which are legally required to be kept by banks as cash reserve.

If LRR is 20%, then 80% of deposits can be given on loan.

Money multiplier determines the times initial deposits get converted into new deposits. It is the reciprocal of LRR.

If LRR is 20%, Money multiplier will be 5.

$$M.M = \frac{1}{LRR}$$
It is assumed that all the transactions in the economy take place by using cheques and all the banks are interlinked. Suppose initial deposits are £1,000 and LRR is 20%. Then banks can give £800 or more as loans; they will issue cheques for making payments. Those who will receive these cheques will deposit these cheques in their accounts. The deposit will increase by £800 or with banks. Now the banks can give loan of £640 or after keeping 20% as legal reserve.

This process comes to halt when amount under legal reserve becomes equal to initial deposits.

\[
\text{M.M. = } \frac{1}{20\%} = 5
\]

Initial deposits = £1,000
New deposits = 5 x 1,000

So the banks will create deposits of £5,000 or from initial deposits of £1,000.
Why must aggregate demand be equal to aggregate supply at equilibrium level of income and output? Explain with the help of diagrams.

In an economy equilibrium level of income, output, and employment is determined where Aggregate demand (AD) is equal to Aggregate supply (AS).

In the sector economy, $AD = C + I$ where $C$ is consumption expenditure of households and $I$ is investment expenditure of firms. AS curve is represented by $45^\circ$ line since both the axis are equidistant from $45^\circ$ line.

At on level of output economy is in equilibrium. At this level of output $AS = AD$.

If $AS > AD$, at on level of output AS is more than AD, it means
People and business firms and households are consuming less than what economy is producing. As a result there is an unwanted unsold stock of goods with firms. The firms will respond to this situation by reducing output by reducing employment till AS becomes equal to AD.

\[ AS < AD \] : At OL level of output AS curve lie below AD curve. It means firms and households are consuming more than what economy is producing. As a result there will be a reduction in stock with the firms. The firms will respond to this situation by increasing output by increasing employment till \[ AS = AD \].

So the equilibrium level of income, output and employment is determined where Aggregate demand and Aggregate supply are equal.

OR

What happens when Planned savings are not equal to Planned investment in the economy. How equilibrium level of output is determined? Use diagram.
Economy is in equilibrium when $AS = AD$

$AS = AD$

$C + S = C + I$

$S = I$

So economy must also be in equilibrium when Planned Savings in the economy are equal to Planned investment, as

When $S > I$ - At one level of output, Planned Savings are greater than Planned investment. It means people are saving more and consuming less. As a result, AD will be less than AS.

This will result in unwanted unsold stock of goods with firms. The real investment of firms will increase.

The firms will respond to this situation by reducing output by reducing employment. The level of
Income will fall hence saving will fall. The economy attains equilibrium at an level of output where $S = I$

When $S < I$: At all level of output, planned savings are less than planned investment. It means people are saving less and consuming more. This will lead to reduction in stocks with firms. The real investment with firms will fall. The firms will respond to this situation by increasing output. The level of income will rise hence savings will increase. The economy attains equilibrium when $S = I$.

\[
\text{GDP}_{mp} = \text{Private final cons. expenditure} + \text{Govt. final cons. expenditure} + \text{GNDI} + (X-M)
\]

\[
\begin{align*}
4000 + 2000 + 3700 + 150 \\
\text{GDP}_{mp} &= 9850 \text{ cr} \\
\end{align*}
\]

\[
\begin{align*}
\text{GDP}_{mp} &= 9850 \text{ cr} \\
\text{NNP}_{mp} &= \text{GDP}_{mp} - \text{Dep} + \text{NPIFA} + \text{NCT} \\
\text{NNP}_{mp} &= 9850 - 200 + 50 - 100 \\
\text{NNP}_{pc} &= 9700 - 300 = 9400 \text{ cr} \\
\end{align*}
\]

\[
\begin{align*}
\text{Dep} &= \text{GDCF} - \text{NDCF} \\
\text{GNDI} &= \text{GNP}_{mp} + \text{Net current transfer from row} \\
&= (\text{GDP}_{mp} + \text{NPIFA}) + \text{NCT from row} \\
&= (9850 + 50) + 250 \\
\text{GNDE} &= 10,150 \text{ cr}
\end{align*}
\]