ECONOMICS

A.   STATISTICS AT A GLANCE

Total number of students taking the examination	30,531
Highest marks obtained	100
Lowest marks obtained	1
Mean marks obtained	51.75

Percentage of candidates according to marks obtained

	Mark Range				
	0-20	*21-40*	*41-60*	*61-80*	*81-100*
Number of candidates	1793	6936	12045	5694	4063
Percentage of candidates	5.87	22.72	39.45	18.65	13.31
Cumulative Number	1793	8729	20774	26468	30531
Cumulative Percentage	5.87	28.59	68.04	86.69	100
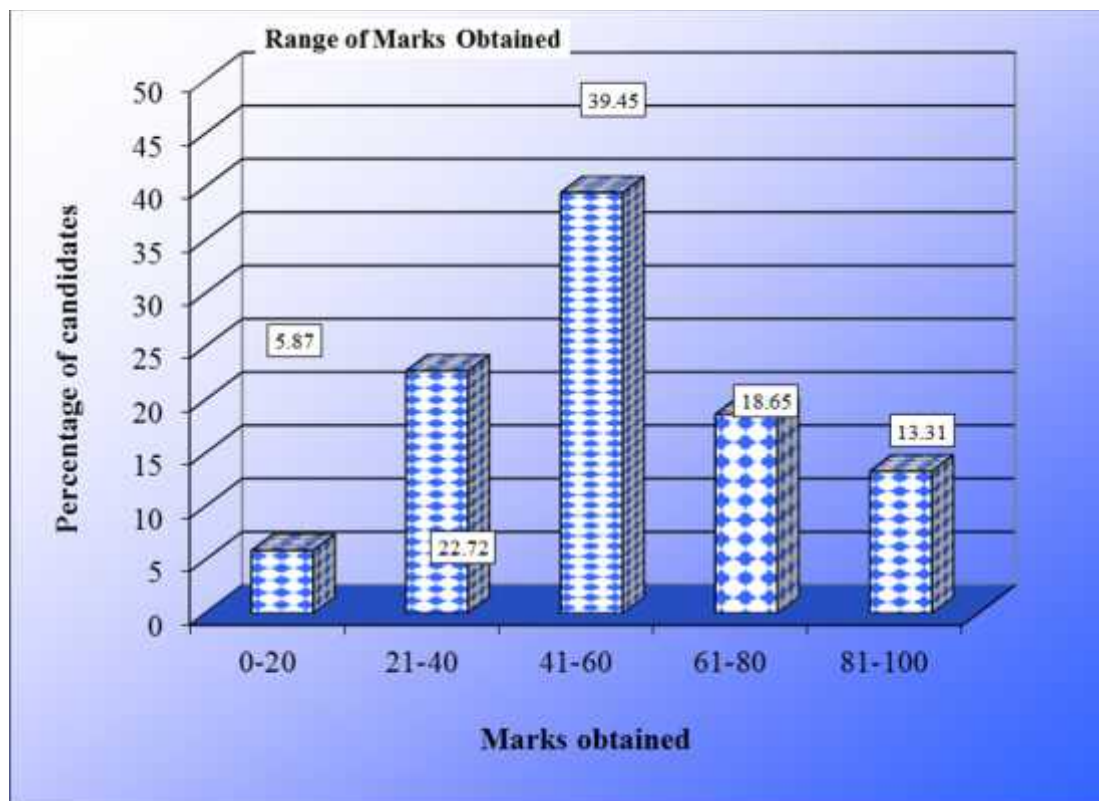
B. ANALYSIS OF PERFORMANCE

PART I (20 Marks)

*Answer **all** questions.*

Question 1

Answer briefly *each* of the following questions **(i)** to **(x)**:   **[10×2]**

(i)   State the components of compensation of employees.

(ii)   Explain the shape of *Average Cost Curve*.

(iii)   Explain the demand curve for a necessity commodity.

(iv)   Explain *any two* causes of disequilibrium in the balance of payment in an economy.

(v)   What is meant by *high powered money?*

(vi)   The demand for a commodity at ₹ 4 per unit is 100 units. The price of the commodity rises and as a result, its demand falls to 75 units. Find the new price if the price elasticity of demand of that commodity is 1.

(vii)   Justify the following as *price-takers / price-makers*:

   (a)   an oligopoly market

   (b)   a perfectly competitive market

(viii) If the value of the multiplier is 4, what will be the value of MPC and MPS?

(ix)   Distinguish between *intended supply* and *actual supply*.

(x)   What is meant by *deficit financing*?

Comments of Examiners

(i)   Instead of three components, most of the candidates wrote only two.
(ii) Candidates either drew the curve or just wrote 'U-shaped curve'. They failed to explain the reasons for the shape of the curve.
(iii) Several candidates did not explain why the demand curve is perfectly inelastic for a necessity commodity. In many cases, candidates drew the demand curve relating it with income, which was not a proper answer of the question.

> *Suggestions for teachers*
> – The shape of the average cost curve should be explained with the law of variable proportions i.e. as output increases AC falls initially, reaches maximum and then increases as output increases.
> – Explain the logic behind the typical shape of demand curves for different types of price elasticity of demand.

(iv) Many candidates only wrote the captions for causes of disequilibrium in BOP but did not explained these. At times they mentioned contradictory points, example, one reason for adverse BOP and another for favourable BOP.

(v) The meaning of *high powered money* was not known to many candidates. Some wrote the different components of high powered money but failed to define.

(vi) A number of candidates calculated $\triangle$ P but did not calculate the new price. Errors in calculation was also observed.

(vii) Errors were observed in justification of the markets as 'price takers' or 'price makers'. Candidates were confused and they wrote one type of market for the other.

(viii) A large number of candidates were not aware of the formula for Multiplier. They wrote K = 1/1 – MP instead of writing K = 1/1 – MPC.

(ix) A number of candidates did not understand the concept of intended supply as stock and actual supply as simple supply.

(x) Candidates defined 'deficit financing' as deficit budget. Borrowing from central bank or issue of new money or creating new money was not mentioned by several candidates.

− Students should be told to write proper captions and to also explain them correctly.
− Make students aware of the significance and meaning of the phrase 'Monetary Base'.
− Ask students to read the question paper carefully.
− Students should be taught the definition and characteristics of different market conditions. The 'intense competition' is the basic feature of Oligopoly market but not responsible for making it price maker.
− Give more practice in solving different numerical problems based on multiplier concept.
− Candidates should be explained 'intended supply' as what producer or seller intends to supply or wants to supply at given price and time and 'actual supply' as what they actually sell at a given price and time.
− Students should be told the importance of creation of new money in deficit financing. This is the key point of the answer.


MARKING SCHEME

Question 1.

(i) Compensation of employees – Components:

1. Wages and salaries in cash

2. Wages and salaries in kind

3. Employer's contribution to social security/supplementary labour income.

(ii) Average cost curve

It is U shaped due to law of variable proportions. As output increases, average cost falls, reaches minimum and then increases as output increases.

(iii)

Demand curve is perfectly inelastic
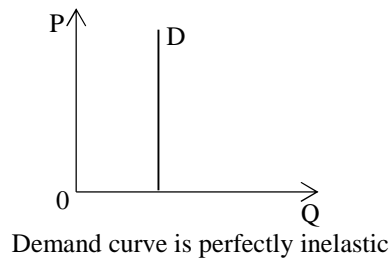
The demand for necessity will remain the same even if prices increase.

Diagram or explanation

(iv) Causes of disequilibrium in BOP :

1. Fall in export demand

2. Rise in imports – technological development

3. Inflation in the domestic economy. *(any two)*

(v) The Central Bank money is sometimes called high-powered money or the monetary base. It consists of currency (notes and coins held by the public and the banks) and the deposits held by the banks as reserves with the central bank. The term high-powered reflects the fact that an increase in the central bank money leads to more than one-for-one increase in the overall money supply.

(vi) $P_1 = ₹ 4$, $Q_1 = 100$, $P_2 = ?$, $Q_2 = 75$, $E_d = 1$

$$Ed = \frac{Q}{P} * \frac{P}{Q} \qquad \Bigg| \qquad 1 = \frac{25}{x} * \frac{4}{100} \qquad \Bigg| \qquad \begin{array}{l} x = 1 \\ \textit{Answer: } P_2 = ₹ 5 \end{array}$$

vii (a) An oligopoly market: Price maker + few sellers (or oligopoly)

(b) A perfectly competitive market: Price taker + one of many sellers and homogeneous product (or perfect competition)

(viii) $k = 4$, $4 = \dfrac{1}{1 - MPC}$ MPC = 0.75. MPC + MPS = 1

$1 - MPC = 0.25 = MPS$

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| (ix)	Intended supply	Actual supply
	1. Volume of good which can be brought into the market (stock)	1. The amount of goods actually brought to the market
	2. No time dimension	2. Has a time dimension
	3. For perishables, stock and supply would be the same	3. In case of durables, supply consists only a part of total stocks
	4. Stock depends on production, procurement price of good	4. Supply depends mainly on market price

(Any two)

(x)   Deficit financing – when the government expenditure exceeds its revenue, there is a deficit and a deficit can be financed by borrowing and creating new money.

PART II (60 Marks)
*Answer **any five** questions.*

Question 2

(a)   Study the diagram given below and answer the questions that follow: **[3]**
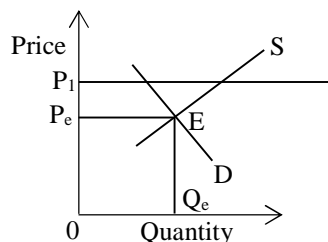
   (i) P_e is the equilibrium price. What would prompt the government to fix the price at P_1?

   (ii)   What would be the effect of fixing the price at P_1?

(b)   Discuss the effect of elasticity of demand on: **[3]**

   (i)   a commodity which has many substitutes.

   (ii)   a small part of individual's income spent on a commodity.

(c)   (i)   Study the schedule given below and identify how much of commodity A and commodity B will a utility-maximizing consumer buy: **[6]**

Units of A	M.U. of A	Units of B	M.U. of B
1	10	1	30
2	8	2	24
3	6	3	20
4	4	4	16
5	2	5	14
6	1	6	8

Note: Price A = ₹ 2, price B = ₹ 4, income = ₹ 20

   (ii)   Explain the Law of Equi Marginal Utility, using the above schedule.

Comments of Examiners

(a) (i) A large number of candidates could not answer this question. They failed to mention that P1 price is fixed to safeguard the interest of the producer or farmer will get proper price.

(ii) Instead of explaining the generation of excess supply which is used by the government, candidates explained the operation of price mechanism which brings the price back at the equilibrium level. They should have mentioned the impact of price fixed at P1.

(b) Most of the candidates were able to attempt this part correctly.

(c) The quality of answers given by most candidates was poor. Candidates failed to mention that 'MU of the last unit of money or last rupee spent on each commodity is equal' in the statement of the law.

Suggestions for teachers
- The difference between price ceiling and price floor should be explained clearly to candidates. The purpose of these two should also be taught.
- Students should be taught the different situations of determination of price by free operation of demand and supply forces and situation of fixing the price by the government as price policy.
- Explain to students that the consumer shifts to its substitute when price increases and elasticity of demand is elastic. If a consumer spends a small part of income on a commodity then demand is inelastic.
- The 'law of equi-marginal utility should be explained clearly to students and the use of $MUx/Px = MUy/Py$ explained.

MARKING SCHEME

Question 2.

(a) (i) The farmers and workers will get a proper price.

(ii) The excess can be stored and taken out at the time of scarcity.

+ an example (in case of minimum support price; less supplied to market and more to the government) or (In case of minimum wages; there could be downsizing)

(b) (i) Commodity has many substitutes; it will have elastic demand when price increases, then consumers can shift to its substitutes.

(ii) If small part of income spent demand will be inelastic, change will not affect demand.

(c)   (i)   2 of A and 4 of B.

Here, $\dfrac{MU}{Px} = \dfrac{MUy}{Py}$ Rs. 20 is the income which he spends on A and B.

       (ii)   The utility-maximising consumer will allocate his income among various commodities in such a way that the MU of the last rupee spent on each commodity is equal. $MU_x/P_x = MU_y/P_y$

[condition]

Statement, condition and why consumer buys 2 units of A and 4 units of B.

Question 3

(a)   Discuss how supply of labour is an exception to the law of supply.   **[3]**

(b)   According to the Law of Variable Proportions, in which stage would a producer like to operate? Explain why.   **[3]**

(c)   Explain how a producer can attain equilibrium using TR and TC approach.   **[6]**

Comments of Examiners

(a) A number of candidates ignored the role of leisure in making the supply curve of labour, backward bending. The answer was inadequate without the role of leisure.

(b) Some candidates only identified stage II in which producer would like to operate under law of variable proportions. After identification they simply explained the law of variable proportion. The reasons for elimination of stage I and stage III were not explained.

(c) The concavity and the convexity of the TC curve could not be drawn properly by several candidates. Some drew the TR and TC curves from the origin. The maximum profit, indicated by the difference between TR and TC curves was neither shown properly in the diagram nor explained.

Suggestions for teachers
- Explain the relationship between quantity of labour and variation in the wages with the help of a well labelled diagram and the reason for this being an exception to law of supply.
- Each and every part of the law of variable proportions and related topics of this law are to be explained to the candidates. Studentsshould be taught the reason for producing in the IInd stage of the Law or this can also be explained by elimination of the 1st and 3rd stages.
- Students should be taught the proper shapes of the TR and TC curves. Emphasise that TC starts from y-axis and not from the origin. The tangents to the TC curve should also be drawn to show maximum distance between TR & TC.

MARKING SCHEME

Question 3.

(a)   Backward bending supply curve for labour (explanation + diagram)
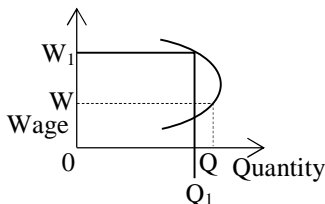
(b)   Stage two (Stage of Diminishing Returns) +

TP goes on increasing, AP and MP both are positive.

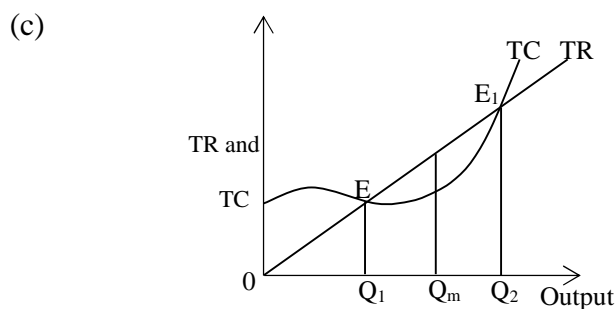Stage I gives increasing returns, Stage III gives negative returns.

(c)

Diagram to be explained.

Question 4

(a)   Explain the relationship between AC and MC with the help of a diagram.   **[3]**

(b)   Highlight *any three* differences between *monopolistic competition* and *oligopoly*.   **[3]**

(c)   *A perfectly competitive firm can continue producing even if it is incurring losses in short run equilibrium.* Justify the given statement with the help of a diagram.   **[6]**

Comments of Examiners

(a) Many candidate could not draw the MC curve cutting the AC curve at its minimum point. Some did not explain the relationship between AC and MC correctly.
(b) Several candidates were confused between 'monopoly' and 'monopolistic competition'. Some wrote the features of these two markets separately, without the points corresponding with each other. They wrote 'closed entry' instead of 'restricted entry' in Oligopoly market against 'free entry and exit' for monopolistic competition, which was incorrect.

Suggestions for teachers
−   Explain the relationship between AC and MC. It should also be explained that MC falls, reaches its minimum and then starts rising in the entire range of falling AC. Students should be given practice in drawing diagrams.
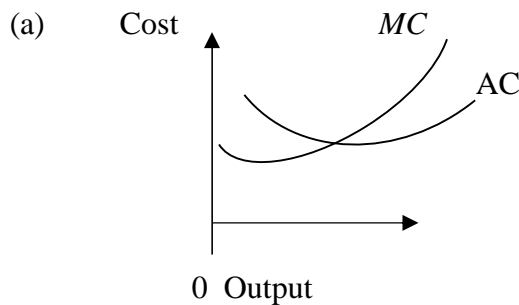
(c) Candidates failed to indicate the proper equilibrium point which is the point of intersection of MC curve and MR/AR or price line which lies below AC curve but above AVC curve.

MARKING SCHEME

Question 4.

(a)

→ When AC curve slopes downward, MC will be below the AC curve.

→ MC will intersect AC at its minimum point.

→ When AC curve rises, MC curve will lie above AC curve.

(b)

	Monopolistic	Oligopoly
1.	Many sellers	Few sellers
2.	Free entry and exit	Restricted entry
3.	Monopoly in brand and competition from others (as close substitutes)	Intense competition leads to price cutting.

(c)   This situation occurs when the price is so low that it does not cover fully the AFC. The market price is less than AC of production and the firm incurs losses. This situation is graphically illustrated.
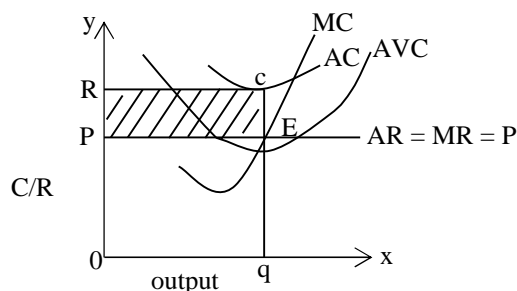
At price OP determined by the intersection of market dd and ss comes equilibrium is at point E. At point E. At pt. E, MC = MR and MC curve cuts MR from below. Losses are incurred.

Losses are calculated:

> AR = MR = P
>
> TR < TC
>
> TR = PEQO
>
> TC = RCQO
>
> LOSS = RCEP
>
> AR = P covers AVC.

The firm is not able to completely cover the AFC. The firm still continues to produce even though there are losses because at lease the AVC is being covered by the price.

Question 5

(a) Differentiate with the help of diagrams, *contraction in supply* and *decrease in supply*. **[3]**

(b) Identify the market where a firm is not required to reduce the price to sell more. Explain the behaviour of TR and MR. **[3]**

(c) Explain how a consumer attains equilibrium using the indifference curve analysis. **[6]**

Comments of Examiners

(a) Definitions of 'contraction' and 'decrease' in supply were stated without diagrams in many cases. Supply curves were drawn as demand curve in some cases. In many cases, arrows were not used to indicate contraction or decrease in diagrams nor was it stated in the explanation of the diagram.

(b) Some of the candidates could not identify the market. The diagrams and the behaviour of TR and MR were also not properly explained.

(c) Instead of the indifference map, a single indifference curve was drawn by some candidates. Some did not draw the budget line tangent to the indifference curve. The points lying within and outside budget line were not explained.

> *Suggestions for teachers*
> – Advise students to draw well labelled diagrams to show contraction and decrease in supply. The reasons for the same should also be mentioned.
> – Explain the basic characteristics and shapes of TR and MR curves under Perfect Competition.
> – Students should be told to draw indifference map and budget line in a proper manner. Budget line should be tangent to IC curve. Various points on different IC should also be explained.

MARKING SCHEME

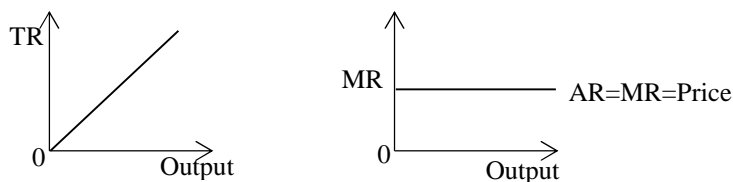**Question 5.**

(a)

Contraction

and
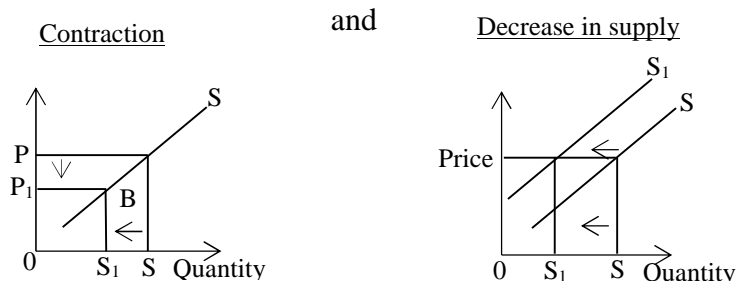
Decrease in supply

Contraction is due to fall in the price of the commodity. Supply falls as price falls.

Decrease is due to other factors affecting supply. E.g. cost of production increases goals change, etc.
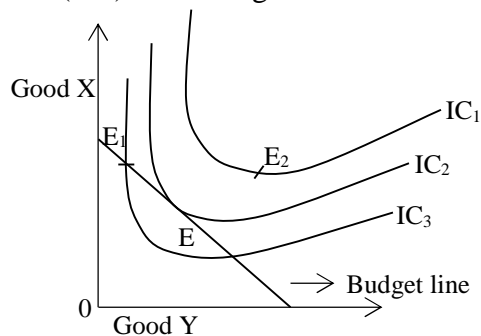
(b)   Perfect Competition: TR is a straight line curve from the origin. MR coincides with AR and is parallel to X axis.

(c)   Indifference curve – meaning

Indifference map is set of indifference curve IC_1, IC_2, IC_3)

Budget line (AB) – meaning.

Consumer's equilibrium:

Equilibrium at E where budget line is tangent to highest indifference curve IC_2.

E_1 and E_2 are not equilibrium *(to be explained why)*

Condition MRS^{xy} = Price ratio of x and y.

Question 6

(a) Discuss two contingent functions of money. **[3]**

(b) Explain the role of the Reserve Bank of India with respect to: **[3]**

    (i) custodian of foreign exchange.

    (ii) promotional and developmental functions.

(c) Discuss how exchange rate is determined under flexible exchange rate system. **[6]**

<u>Comments of Examiners</u>

(a) A large number of candidates answered this part well.

(b) 'Custodian of foreign exchange' with respect to RBI was not clear to several candidates.
Many candidates also found it difficult to answer 'promotional and developmental functions of RBI' – a few wrote about how RBI develops infrastructural facilities, which was incorrect.

(c) Many candidates did not explain determination of exchange rate with the help of demand side and supply side. The fluctuation of foreign exchange rate, i.e. if foreign exchange rate is more or less than the equilibrium rate, its effect was not explained. In a number of cases, the diagram was not properly labelled.

> *Suggestions for teachers*
> – The Primary, Secondary and Contingent functions of money should be explained clearly.
> – The role of RBI in dealing with foreign exchange e.g. transactions, stability and exchange control must be explained to students.

MARKING SCHEME

Question 6.

(a) Contingent functions:

    1. Paying of income in the form of wages, rent, and dividend.

    2. Utility can be maximised while $MU_x = $ Price x

    3. Producer maximises profit.

(b) (i) *RBI role as custodian of forex*: <u>*(any one point)*</u>

       • All forex transactions are routed through central bank

       • Maintains stability of exchange rates

       • Enforces exchange control regulations

    (ii) *Promotional and developmental functions: (one promotional, one developmental)*

       • Promote strong banking system

       • Provides cheap rediscounting facilities

       • Helps in development of financial institutions

       • Pursues appropriate monetary policy

(c) The flexible exchange rate is determined at a point where the demand for and supply of foreign exchanges are equal. Figure illustrates determination of equilibrium exchange rate.
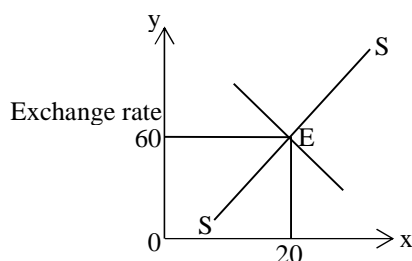
Demand and supply of foreign exchange (in million dollars)

In the figure DD is the demand curve for foreign exchange. The dd curve is downward sloping showing inverse relationship between price of foreign exchange implies lower demand for foreign exchange. The reason for this relationship lies in the fact that rise in the price of foreign exchange will raise the rupee cost of foreign goals. This will make the rupee cost of foreign goods more expensive. Consequently, imports will reduce and demand for foreign exchange will fall. SS is the supply curve of foreign exchange between exchange rate and supply of foreign exchange i.e. if exchange increase, the supply of foreign exchange also increases. This will make domestic country's goods cheaper to foreigners. The demand for our exports will rise. It implies more supply of foreign exchange. Point E is the point of equilibrium where demand and supply curves of foreign exchange intersect each other. It gives equilibrium exchange rate in the foreign exchange rate in the foreign exchange market for US dollar.

Question 7

(a) Explain how public expenditure can be used as a tool to attain economic stability. **[3]**

(b) Differentiate between *degressive taxation* and *regressive* taxation. **[3]**

(c) Explain the various components of the budget. **[6]**

Comments of Examiners

(a) A number of candidates wrote on the importance of public expenditure or why public expenditure is rising, instead of writing on 'public expenditure as a tool to attain economic stability'.

(b) A large number of candidates failed to define 'degressive tax'. Some drew the diagram which was not required. A few tried to relate 'regressive tax' as proportional tax, which was incorrect.

Suggestions for teachers
− Try to develop logical sense in students and encourage them to explain the solutions of different problems. They should be told that during recession, the public expenditure should be increased and during inflation public expenditure should be reduced. Compensatory fiscal policy may be explained.

(c) Many candidates did not explain the components of budget with respect to revenue and capital accounts. Some wrote on current account and capital account of balance of payment and some even mentioned different types of budget. Several candidates were confused with the terms liability and asset.

> − Students should be told that revenue and capital accounts are components of the budget. These can be further divided.

MARKING SCHEME

Question 7.

(a)   Public expenditure and economic stability:

- To revive economy experiencing recession, increase public expenditure

- To control inflation, reduce public expenditure

- Can be used as a 'compensatory expenditure device' to maintain stability of income, output and employment.   *(Any two)*

(b)   A degressive tax is a combination of progressive and proportional taxation

Regressive – when income increases, rate of taxation falls.

(c)   Budget is divided into Revenue and Capital account.

Revenue receipts and revenue expenditure.

Capital account is divided into Capital receipts and capital expenditure.

(Points to be explained)

Question 8

(a)   Discuss the mechanism of investment multiplier with the help of a numerical example.   **[3]**

(b)   Distinguish between *marginal propensity to consume* and *marginal propensity to save*. What is the relationship between the two?   **[3]**

(c)   Explain the determination of equilibrium level of output with the help of saving and investment curves. If savings exceed planned investment, what changes will bring about equality between them.   **[6]**

Comments of Examiners

(a) A number of candidates were not aware of the term 'investment multiplier'. A large number did not draw the schedule or explain investment multiplier with the help of the formula

(b) Many candidates were aware of the definitions of MPC and MPS but some had difficulty in establishing the relationship between them.

(c) The determination of equilibrium with savings and investment curves was not explained properly by a number of candidates. They did not draw proper diagram. The second part of the question, that is, what happens when savings exceed planned investment, was also not explained clearly.

> *Suggestions for teachers*
> − Students should be explained the multiplier in following ways: as mechanism using numerical example, derivation of multiplier formula and using diagram; the process of multiplier should be explained and the increase in income in percentage terms.
> − The concepts of MPC & MPS should be explained to students. The relationship between these two can be explained with the help of examples.

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MARKING SCHEME

Question 8.

(a) The whole process of multiplier can be summarised in the table as follows:

Round of spending	Increase in investment spending	Increase in consumption	Increase in income
1	100	--	100
2		·8×100 = 80	80
3		·8×80 = 80	64
4		·8×64 = 51·2	51·2
--	--	--	--
--	--	--	--
		Total increase in consumption = ₹ 400 crores	Total increase in income = ₹ 500 crores

Investment increased by 100 and income increases by 5 times. *(Schedule or explanation)*
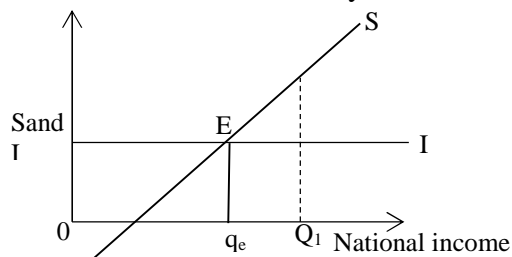
(b) $MPC = \Delta C/\Delta Y$

$MPS = \Delta S/\Delta Y$

Relationship between MPC and MPS:

$MPC + MPS = 1$

(c) Saving and Investment:

Diagram: S and I curves, axes clearly labelled

Explanation: Show equilibrium where $S = I$.

The equilibrium level of income may not necessarily be the full employment level.

E is equilibrium $(S = I)$

When S > I: It means people are consuming and spending less. (Q_1)

Aggregate demand < Aggregate supply

There will be accumulation of inventories,

Production will be reduced

Output and employment will be reduced

till equilibrium is reached.

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Question 9

(a) How can personal disposable income be derived from private income? **[3]**

(b) Explain *any three* precautions which should be taken while estimating national income by income method. **[3]**

(c) Calculate national income and operating surplus from the following data: **[6]**

		₹ in crores
(i)	Government final consumption expenditure	800
(ii)	Net factor income from abroad	(-) 110
(iii)	Private final consumption expenditure	900
(iv)	Net domestic capital formation	200
(v)	Profits	220
(vi)	Rent	90
(vii)	Net exports	(-) 25
(viii)	Interest	100
(ix)	Net indirect taxes	165

Comments of Examiners

(a) Several candidates missed out a component or components of personal disposable income.

(b) A few candidates confused the precautions to be taken while estimating national income by 'income method' with the precautions for other methods of calculation of National income.

(c) Several candidates missed out the components which were to be added or subtracted to calculate National income, or added /subtracted irrelevant variables. Calculation of operating surplus was done properly by a large number of candidates.

Suggestions for teachers
− Practice should be given to students in writing answers, especially for this kind of question.
− The basic concepts of National income must be taught in theoretical and mathematical form for better understanding.
− Candidates should be told various precautions while estimating National income with proper examples of different methods.
− The sums on National income, from different sources should be practiced with candidates. The equations for all three methods must be made clear for solving questions on National income.

MARKING SCHEME

Question 9.

(a)   Personal Income = Private income – Undistributed profits – Corporate profit tax – Retained earnings of foreign companies.

Personal Income – direct tax – Miscellaneous receipts of government = personal disposable income.

(b)   1. Include articles of self-consumption.

2. include imputed-value of owner-occupied houses

3. Transfer income excluded

4. Income from second hand goods excluded

5. Income from sale of financial assets excluded.

(explain any three)

(c)   *Expenditure method:*

Government expenditure + Private consumption expenditure +

Net domestic capital formation + Net exports − Net indirect taxes + NFIA

$(I) + (III) + (IV) + (VII) – (IX) + (II)$

$800 + 900 + 200 + (>25) > 165 + (−) 110 = ₹ 1600$ crores

Operating surplus = Profit + Rent + Interest.

$220 + 90 + 100 = ₹ 410$ Cr.

GENERAL COMMENTS:

(a) Topics found difficult by candidates in the Question Paper:

− Money – high powered money. 1 (v)

− Supply – intended and actual supply. 1 (ix)

− Perfectly competitive market – continuation of production by the firm incurring loss in the short run. 4(c)

− Consumer's equilibrium using indifference curve analysis. 5 (c)

− Mechanism of investment multiplier. 8 (a)

− Equilibrium level by saving and investment approach. 8 (c)

− Numerical on National income.9(c

− Determination of exchange rate under flexible exchange rate system.6 (c)

(b) Concepts in which candidates got confused:

- Components of compensation of employees. 1 (i)
- Intended supply and actual supply. 1 (ix)
- Stage of operation under law of Variable proportions. 3 (b)
- Shut down point and loss before shut down point. 4 (c)
- Components of budget. 7 (c)
- Determination of equilibrium using saving investment approach and aggregate demand supply approach. 8(c)
- Calculation of National income. 9(c)
- Relation between MPC & MPS. 8(b)

(c) Suggestions for candidates:

- Pay attention to each and every term used by teacher while teaching a particular topic. Ask questions in class and make sure you understand the logic.
- Practice writing answers.
- Study the entire syllabus.
- The meaning and significance of each terminology should be clear.
- Write the answer related to a topic along with neat and well labeled diagrams.
- Labeling of axis, curves, equilibrium point is a must.
- Read the question paper carefully during the allotted time.
- Be sure to revise the answer script after completion of the paper.