K. K. Wagh Institute of Engineering Education and Research, Nashik
(An Autonomous Institute from A. Y. 2022-23)

Model Answer

End-Sem Examination-I, Winter 2025

Academic Year: 2025-2026	Semester: I
Class: FY	Program: MBA
Branch Code: 10	Pattern: 2024
Name of Course: Business Economics	Course Code: 2410505

Q. No.	Details	Max. Marks	CO No.	BT Level
Q.1	Explain the central economic problems faced by an economy. • **What to produce?** Choice of goods/services given limited resources. • **How to produce?** Decision on techniques (labour-intensive vs. capital-intensive). • **For whom to produce?** Distribution among different sections of society. • **How much to produce?** Balancing demand and supply to avoid shortages/surpluses. • **How to achieve growth?** Allocating resources for present vs. future needs. These problems arise due to **scarcity of resources** and require efficient allocation.	[6]	CO1	L3
Q.2	Explain the use of Break Even point concept. Also find out Break-even quantity and demand for below functions. D = 500-40Q S = 400 + 10Q Where, D = Demand S = Supply Q = Quantity At Break even point, D = S So, 500 – 40Q = 400 + 10Q So, Q = 2 And Demand = Supply = 420	[6]	CO2	L4
Q.3	a) Illustrate production function and explain the law of diminishing of returns with the help of an example. **Production function and law of diminishing returns [8 marks]** • **Production function:** Technical relation mapping inputs (labour L, capital K, etc.) to output Q: $Q = f(L, K)$. It	[16]	CO3	L3

can exhibit returns to scale and varying marginal products.

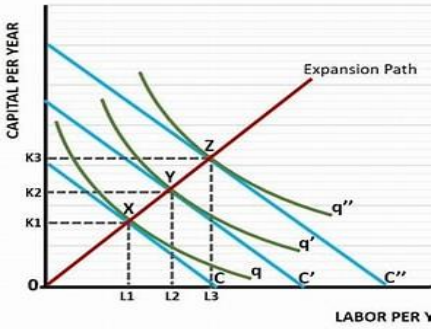
- **Law of diminishing marginal returns:** With one variable input (e.g., labour) and other inputs fixed, as more units of the variable input are added, the marginal product eventually decreases after a point due to crowding, fixed capacity, or coordination limits.
- **Illustrative example:** A factory with one machine (fixed K) hires workers:
  - **Worker 1–3:** Output rises, and each extra worker adds more due to specialization.
  - **Worker 4–6:** Output still rises, but each adds less than the previous due to congestion.
  - **Outcome:** Marginal product curve eventually declines; optimal hiring occurs where $MRP_L = MRC_L$.

As per the law of diminishing of returns, after increase in one of the inputs by keeping other constant, we see that our production level started decreasing. This is called Law of diminishing of returns.

OR

b) Apply the concept of the expansion path to explain how firms adjust inputs for optimum output.

Expansion path gives me the line joining intersection point of Iso Quant and Iso Cost.



c) Calculate the blanks with proper explanation.

Units of Labor	Work Done	Cost	MP_L	MRP_L	MRC_L
10	10	100			
20	30	150			
30	50	250			
40	80	400			
50	120	500			

CO3 L5

If MR = 100

Units of Labor	Work Done	Cost	MP_L	MRP_L	MRC_L
10	10	100	-	-	-
20	30	150	2	200	5
30	50	250	2	200	10
40	80	400	3	300	15
50	120	500	4	400	10

MPL = ΔWD / ΔL
MRPL = MPL * MR
MRCL = ΔC / ΔL

OR

d) Calculate the blanks with proper explanation.

Units of Labor	Units of Capital	Work Done	MP_L	AP_L	MRTS
5	10	200			
10	20	400			
15	30	600			
20	40	800			
30	60	900			

Units of Labor	Units of Capital	Work Done	MP_L	AP_L	MRTS
5	10	200	-	40	-
10	20	400	40	40	1
15	30	600	40	40	1
20	40	800	40	40	1
30	60	900	10	30	1/3

MPL = ΔWD / ΔL
APL = WD / L
MRTS = MPL / APL

Q.4 a) Analyse how price and output are determined under perfect competition market. [16] CO4 L4

- **Market level: Price set by intersection of industry demand and supply; firms are price takers.**
- **Firm level (short run): Profit maximization where $MR = MC$ with price $P = MR = AR$. If $P > AVC$, firm produces; if $P < AVC$, shutdown.**

- **Short-run outcomes: Supernormal profits if $P > ATC$, losses if $P < ATC$.**
- **Long run: Free entry/exit drives price to minimum long-run ATC; firms earn normal profit; output at productive efficiency, $P = MC = \min ATC$.**

Efficiency: allocative ($P = MC$) and productive (min ATC); zero economic profits in long run.

b) Analyse the role of cartels and collusions in Oligopoly market. Also write down difference between Cartels and Collusion.

 Role: Coordinate pricing/output to raise joint profits, reduce uncertainty, and limit competition; can create monopoly-like outcomes (higher prices, lower output), harming consumer welfare.

 Cartels vs. collusion:

- **Cartels:** Formal, explicit agreements on price/quantity/market sharing (often illegal); require monitoring and enforcement.
- **Collusion:** Informal or tacit coordination without explicit agreements (e.g., price leadership); harder to prosecute but similar effects.

 Stability issues: Incentive to cheat, detection risk, legal penalties; sustained more easily with fewer firms, homogeneous products, and high entry barriers.

c) Analyse the table and fill in the blanks with proper explanation.

Output	Fixed Cost	Variable Cost	Total Cost	AFC	AVC	Marginal Cost
5	10		50			
10	10		80			
15	10	100				
20	10	150				
30	10	200				

Output	Fixed Cost	Variable Cost	Total Cost	AFC	AVC	Marginal Cost
5	10	40	50	2	8	-
10	10	70	80	1	7	6
15	10	100	110	2/3	6.66	6
20	10	150	160	1/2	7.5	10
30	10	200	210	1/3	6.66	5

CO4 L4

FC + VC = TC
AFC = FC / Output
AVC = VC / Output
MC = ΔTC / ΔOutput

OR

d) Analyse the table and fill in the blanks with proper explanation.

Output	Fixed Cost	Variable Cost	Total Cost	AFC	AVC	Marginal Cost
50	100		200			
100	100		180			
150	100	100				
200	100	150				
250	100		500			

Output	Fixed Cost	Variable Cost	Total Cost	AFC	AVC	Marginal Cost
50	100	100	200	2	2	-
100	100	80	180	1	0.8	-2/5
150	100	100	200	2/3	2/3	2/5
200	100	150	250	½	¾	1
250	100	400	500	2/5	8/5	1

FC + VC = TC
AFC = FC / Output
AVC = VC / Output
MC = ΔTC / ΔOutput

Q.5

a) Evaluate the role of monetary policy in controlling inflation.

Role of monetary policy in controlling inflation [8 marks]

- **Objectives:** Price stability while supporting growth and financial stability.
- **Tools:** Policy rate (repo) to influence borrowing costs; reserve requirements (CRR/SLR) to adjust liquidity; open market operations to manage money supply; communication/forward guidance to shape expectations.
- **Mechanism:** Tightening (higher rates, reduced liquidity) lowers credit and aggregate demand, moderates wage-price dynamics, strengthens currency, and anchors inflation expectations; transmission via banks to households/firms.
- **Considerations:** Lags in transmission, supply-side

[16] CO5 L5

	shocks (food/fuel) limit effectiveness; coordination with fiscal policy improves outcomes; risk of output slowdown if over-tightened. **OR** b) Evaluate the effectiveness of fiscal policy in stabilizing economic fluctuations. **Countercyclical stance:** During recessions, expansionary fiscal policy (higher public spending, tax cuts) boosts demand and employment; during booms, consolidation curbs overheating. **Automatic stabilizers:** Progressive taxes and welfare spending cushion shocks without new legislation. **Multipliers:** Larger for infrastructure and targeted transfers; crowding-out risk if financing raises rates; effectiveness depends on timing, leakages, and debt sustainability. **Challenges:** Implementation lags, political constraints, and external balance pressures; synergy with monetary policy enhances stability.			
	c) Critically evaluate the challenges in measuring national income in developing economies. **Informal sector size:** Large unregistered activity leads to underestimation and data gaps. **Non-monetized output:** Home production, barter, and subsistence agriculture difficult to value. **Data quality:** Fragmented records, limited surveys, and weak compliance hinder accuracy. **Price adjustments:** Rapid structural change complicates deflators and real vs. nominal comparisons. **Externalities and quality:** Environmental depletion, produc quality shifts not fully captured. **Boundary issues:** Illegal activities, imputed rents, and digital services measurement complexities. **OR** d) Evaluate the significance of key economic indicators in assessing India's economic performance. **GDP growth:** Signals overall economic momentum and sectoral contributions. **Inflation (CPI/WPI):** Tracks price stability and purchasing power; guides monetary stance. **Unemployment/labour force metrics:** Reflect labour		CO5	L5

	market health and inclusivity.
	  Fiscal metrics (deficit, debt): Indicate sustainability and policy space.
	  External sector (current account, forex reserves, exchange rate): Assess resilience to global shocks and competitiveness.
	  IIP/PMI/credit growth: Provide high-frequency gauges of industrial activity and sentiment.
	  Social indicators (poverty, literacy, healthcare): Complement macro data for inclusive development evaluation.			