COE Tutorial-2

Ques-1 (b) Scarcity

Ques-2 (c) make choices to cope with scarcity

Ques-3 (b) both the poor and the rich

Ques-4 (a) both money and time

Ques-5 (b) an opportunity cost

Ques-6 (d) opportunity cost

Ques-7 10,000

① Shares → 7%.

② FD → 8%.

③ Loan → 9%. ✓

next best alternative → best return → opportunity cost

(a) the heighest-valued alternatives forgone

Ques-8 (a) the highest valued alternative you give up to get it.

Ques-9 Non-montary example

Ques-10 (a) $750

Ques-11 (b) any decision regarding the use of a resource involves a costly choice

Ques-12 (a) opportunity cost

Ques-13 Total workers = 10

10 → 110 units 1unit → 5

11 → 114 units

next unit value

11 workers Marginal benefit = ₹20

Ko pay

(c) Marginal benefit

Ques-14 (c) that arises from an ↑ in an activity

Ques-15 (c) we are unable to satisfy all our wants

Ques-16 Total revenue = ₹15,00,000
expense = ₹ 5,00,000

(a) accounting profit = 10,00000
(b) opp. cost = 12,00000
EL = -200000

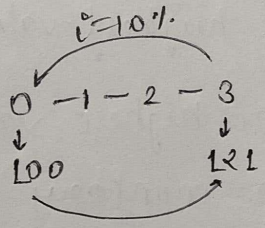
Ques 17 left out
opportunity cost = 60,000
14,00000
1460000

AIP = 1200000 10,00000

Time Value of Money

$FV = PV(1+i)^n$ → Compound

Lumpsum $PV = \frac{FV}{(1+i)^n}$ → Discount



① Lumpsum → Single Amount
② Annuity → Series → Ex - EMI

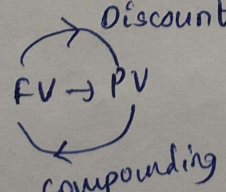
n = no. of duration

- Present Value of Ordinary Annuity → $P = A\left[\frac{1}{i} - \frac{1}{i(1+i)^n}\right]$
- Future Value of Ordinary Annuity → $FV_A = A\left[\frac{(i+i)^n - 1}{i}\right]$

Conditions :-
- I2 (receipt/payment)
- Amount same
- Time difference same

Ex:- Now
0-1-2-3
100 200
i=10%

$= \frac{100}{(1+.10)^2} + \frac{200}{(1+.10)^3}$



Ques-4

$i = 7\%$

0 - 1 - 2 - 3 - 4 - 5

10000 ↓ 15000

$= \frac{10000}{(1+.07)^2} + \frac{15000}{(1+0.07)^5}$

$= \frac{10000}{(1.07)^2} + \frac{15000}{(1.07)^5}$

$= \frac{10000}{1.1449} + \frac{15000}{1.4025}$

$= 8734.387 +$

$= 8741 + 10699 = 19440$

$PV = 19440$

FVA

0 - 1 - 2 - 3

PVA 100 100 100

Ques-5

23460

0 - 1 - 2 - 3 - 4 - 5 - 6 .... 9 - 10 - 11 - 12 - -- 25

NOW 3K -- 3K

$i = 10\%$

$PVA = 3000\left[\frac{1}{0.10} - \frac{1}{0.10(1+0.10)^{16}}\right]$

$PVA = 3000\left[\frac{1}{0.10} - \frac{1}{0.10X}\right]$

$PVA = 3000\left[\frac{1}{0.10} - \frac{1}{0.460}\right]$

$PVA = 3000\,[10 - 2.173]$

$= 3000 \times 7.82$

$PVA = 23460$

Ques-11 (a) Counting the same income twice in different categories

Ques-12 (a) Real GDP per person

Ques-13 (d) Employment National income

Ques-14 (c) Both
- ↑ bank rate
- ↑ CRR

Ques-15 All or any of the above three
- Sell bonds
- Increase CRR
- Hike bank rate

Ques-16 (d)

Ques-17 (c) ↑ in real rate of interest

Ques-18 (b)

Ques-19 (a)

Ques-20 (b)

Demand Functions

- Simple demand functions

$$QD = f(P) \qquad Q_d = a - bP$$

- Complex demand functions

$$QDx = f(P_x, P_r, Y, T, E, P_Y)$$

- Price of Related Goods

$$Q_d = a - bP + cY + dP_3 - eP_c$$

Ques-4

Total - Marginal - Marginal per rupee
Price different

Q	MU of pizza	200 MU/Re	MU of burger	100 MU/Re
1	9000	45	5000	50
2	8000	30	4000	40
3	7000	35	3000	30
4	6000	30	2000	20
5	5000	25	1500	15
6	4000	20	1000	10

Resource → 1100

- Burger + Pizza + Pizza + Burger
  100 200 200 100
- Pizza + Burger + Pizza
  200 100 200

→ 4 unit of pizza
3 unit of Burger

Ques-5 (A) Resource → 300 Race = 50 Rs/unit, Musical = 100/unit

No. of races	TU	MU	MU/Re
1	1000	1000	20
2	1800	800	16
3	2500	700	14
4	3000	500	10
5	3200	200	4

No. of Musical	TU	MU	MU/Re
1	1000	1000	10
2	1800	800	8
3	2500	700	7
4	3000	500	5
5	3200	200	2

1. Race 50
2. Race 50
3. Race 50
4. Musical 100
5. Race 50

8. 300

4 unit of races
1 unit of musical

(B)

Rs 200/unit → Musical

MU/200	
5	Races → 50
4	Races → 50
3.5	Races → 50
2.5	Races → 50
1	~~Mus~~ Total 250

COE Tutorial-03

Ques-1 Legal Practice

Total Revenue = 2,00,000

Total Expenses = 50,000
35000
85,000

Opp. cost Salary = 1,25,000

Accounting profit = 1,15000

Economic loss = -10,000

Ques-2 Fruit stand

Total Revenue = 5,000

Total Expense = 2000 (fruit cost)
800 (Labour)
1000 (Lease)
3800

(a) Accounting profit = $12,00

(b) T-shirt stand TR = 1,000
(opp. cost)

EP = 200

(c) $250

TR = 1000 + 250 = 1250 (Non-montary in nature)

Ques-3 Total Revenue = 10,000

Total Expense = 6,000

Accounting profit = 4000

Opp. cost

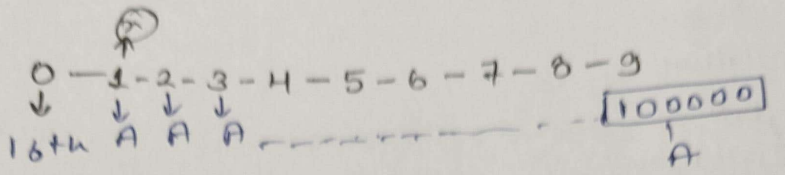
Rent - 1000
Salary = 2500
Interest - 1000
4500

EL = -500

$$= \frac{23460}{(1+0.10)^9}$$

$$= 3953$$

Ques-6



$$FV_A = A\left[\frac{(1+0.08)^9 - 1}{0.08}\right]^A$$

$$100000 = A[12.487]$$

$$A = 8007$$

$$FV = PV(1+i)^n$$

$$100000 = PV(1+0.08)^8$$

$$100000 = PV(1.08)^8$$

$$100000 = PV(1.850)$$

$$PV = \frac{100000}{1.850}$$

$$\boxed{PV = 54540}$$

Inflation :- Rate of inflation $t = \frac{P_t - P_{t-1}}{P_{t-1}} \times 100$

- Sustained ↑

Types of inflation

- Deflation
- Creeping Inflation
- Walking Inflation
- Galloping Inflation
- Hyper Inflation
- Demand pull Inflation
- Cost Push Inflation
- Stagflation

→ Money Supply - Demand Pull theory
- Depreciation in exchange rate.

→ Business Outlays - Cost-Push Theory
- Rising labour costs.
- Higher indirect taxes imposed by govt.

13/08/25

Tutorial-04

Ques-1 (b) A hair dresser doing hair cut designing on payment.

Ques-2 (a) 8%

Ques-3 (b)

Ques-4 (a) Real GDP

Ques-5 Monitary policy → Supply of Money (RBI)

Excess	Defecit
Inflation	Recession

(d) contract the supply of money

Ques-6 (a) increase, increase

Ques-7 (d) a ↓ in the corpate profits tax rates

Ques-8 (c) Both long-run trends & short-term fluctuations in economic activity.

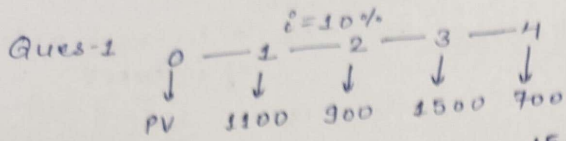
Ques-9 (c) Net foreign income from abroad.

Ques-10 (d) Reduce spending & ↑ taxat

20/8/25

Tutorial-05

Ques-1



$$= \frac{1100}{(1+0.10)^1} + \frac{900}{(1+0.10)^2} + \frac{1500}{(1+0.10)^3} + \frac{700}{(1+0.10)^4}$$

$$= \frac{1100}{1.10} + \frac{900}{1.21} + \frac{1500}{1.331} + \frac{700}{1.4641}$$

$$= 1000 + 743.80 + 1125.56 + 478.34 = 3347.70$$

Ques-2 (A) 0 → EMI 1 → 2-3-4-5---- 25

50,000 $i = 4\%$ p.a.

$$PVA = A\left[\frac{1}{i} - \frac{1}{i(1+i)^n}\right] \Rightarrow 50,000 = A\left[\frac{1}{0.04} - \frac{1}{0.04(1+0.04)^{25}}\right]$$

$$50,000 = A\left[\frac{1}{0.04} - \frac{1}{0.106}\right] \Rightarrow 50,000 = A[25 - 9.433]$$

$$\frac{50,000}{15.567} = A$$

$$\boxed{A = 3211.922}$$

$$\boxed{A \cong 3211}$$

(B) Quarterly

1 year = 4 Quarters $i = i/4$ $n = n \times 4$

Six monthly $i = i/2$ $n = n \times 2$

Monthly $i = i/12$ $n = n \times 12$

$i = 1\%$ $n = 100$

$$50,000 = A\left[\frac{1}{0.01} - \frac{1}{0.01(1+0.01)^{100}}\right]$$

$$50,000 = A\left[\frac{100}{1} - \frac{1}{0.027}\right]$$

$$50,000 = A[100 - 37.037]$$

$$50,000 = A \times 62.963$$

$$A = 793$$

Ques-3 1 month $n = 60$

0-1-2-3-4-5 -- 59, 60

Monthly $i = 8\%$ p.a.

Monthy $= \frac{8}{12} = 0.06$

$$FVA = 5000\left[\frac{(1+0.006)^{60}-1}{0.006}\right]$$

$$= 5000\left[\frac{(1.006)^{60}-1}{0.006}\right]$$

$$= 5000\left(\frac{1.43178-1}{0.006}\right)$$

$$\boxed{FVA \cong 3,673841}$$

COE Tut-6

(1)

Ques-(A) $Q_x = 10 - 5P_x + .001I + 10P_H$

$Q = 50 - 20P$

(B) $Q_x = 10 - 5(2) + 0.001(20,000) + 10(2.50)$

$Q_x = 10 - 10 + 20 + 25$

$Q_x = 45$

(C) $Q_x = 10 - 10 + 0.001(30,000) + 10(2.50)$

$= 30 + 25$

$\boxed{Q_x = 55 \text{ gallons}}$

- sign
- magnitude → 5
- ↳ inversely proportional $Q \propto \frac{1}{P}$

absolute value associate value with P_x

- P_x me change hoga Toh Q_x isme aur jyada hoga
- I = Income $Q \propto I$

{substitute / complementary}

'+' → P_y ↑ Q_x ↑

- Price ke increase hone par demand decrease hota hai
- In case of substitute price ↑ demand ↑

Ques-2 $Q = 50 - 20P$ → Demand eqn

$P =$ → Inverse ⟶ "

(A) $Q = 2.02P + 0.03A - 0.04AC + 0.06PC + 0.001(20,000)$

$Q = 2.02P + 0.03(50) - 0.04(100) + 0.06 \times 5 + 0.001(20,000)$

$Q = 2.02P + 1.5 - 4 + 0.3 + 0.001 \times (20,000)$

$\boxed{Q = 2.02P + 17.8}$ → Demand eqn

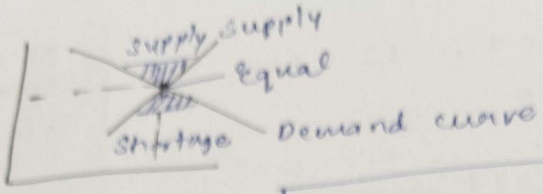
$2.02P = 17.8 - Q$

$\boxed{P = \frac{17.8 - Q}{2.02}}$ → Inverse Demand eqn

(B) $10 = \frac{17.8 - Q}{2.02}$ ⇒ $20.2 = 17.8 - Q$

$2.4 = -Q$

Ques-3



$Q_d = Q_s$

$25 - 3P = 10 + 2P$

$15 = 5P$

$P = 3$

$Q_D = 25 - 3 \times 3$

$= 25 - 9$

$= 16$

Ques-4 (a) $Q_d = 100 - 3P$

$Q_s = 2P - 20$

$100 - 3p = 2p - 20$

$100 + 20 = 2p + 3p$

$120 = 5p$

$\frac{120}{5} = p$

$P = 24$

$Q_d = 2 \times 24 - 20$

$Q_d = 48 - 20 = 28$

$Q_d = 28$

(b) Now $P = 20$

$Q_d = 100 - 3P$

$Q_d = 100 - 3 \times 20$

$Q_d = 100 - 60 = 40$

$Q_d = 40$

$Q_s = 2 \times 20 - 20$

$Q_s = 40 - 20$

$Q_s = 20$

Shortage → 20 units

Ques-5

$Q_D = 500 - 100P + 50I + 20Pr + 30A$

$Q_S = 1350 + 450P$

(A) Substitutes (+ sign)

(B) $500 - 100P + 50I + 20Pr + 30A = 1350 + 450P$

$500 - 100P + 10,000 + 1600 + 3000 = 1350 + 450P$

$15100 - 100P = 1350 + 450P$

$13750 = 450 + 100P$

$13750 = 550P$

$P = 25$

$Q_S = 1350 + 450 \times 25$

$Q_S = 12600$

(c) $Q_d = 500 - 100P + 50 \times (255) + 20(80) + 30(100)$

$Q_d = 17850 - 100P$