Course Name: BUSINESS ECONOMICS

Max. Marks: 100 Duration: 3 Hours

PART A (Any three)

1. a) Figure showing total utility and marginal utility curves (2 marks)

When MU is positive, TU increases.
When MU reaches zero, TU is maximum.
When MU becomes negative, TU starts to decline. (3 marks)

b) Explanation of any two marginal concepts(MU, MP, MC, MR etc.) (4 marks)

Any one example of its application (Law of diminishing marginal utility, MC=AC, AC is the minimum or when MC=MRa firm is in equilibrium etc.)(1 mark)

2. a) Wants are unlimited - resources are limited - limited resources have alternative uses. Therefore the problem of choice arises- Since resources are scarce it has to be utilized in the most efficient and productive manner. (5 marks)

b) Meaning or definition of PPC (1 mark)

Drawing a PPC and clearly marking a point inside the PPC and labelling it as underutilization. (2 marks)

Explanation of trade off - to increase the production of one commodity we have to decrease the production of the other commodity (2 marks)

3. a) Maximum output, $Q = 10(144)^{1/2} X (169)^{1/2} = 1560$ (2 marks)

AP of Labour = Q/L = 1560/144 = 10.83 (1 mark)

MP of Labour = $dQ/dL = 10(1/2)\,144^{-1/2}\,169^{1/2} = 5.41$ (2 marks)
(Or $MP_L = AP_L * a = 10.83 * 1/2 = 5.41$)

b) $e_C = \frac{Py}{Qx} \cdot \frac{\Delta Qx}{\Delta Py}$ (1 mark)

$= \frac{35}{40000} \bullet \frac{5000}{5}$ (3 marks)

$= 0.875$ (1 mark)

4. a) Statement of the law (2 marks)
Explanation (2 marks)

b) ep $= \frac{p}{q} \bullet \frac{\Delta q}{\Delta p}$ (1 mark)

Office ep $= \frac{55000}{3300} \bullet \frac{-100}{5000}$ (1.5 marks)

$= -0.33$ (sign can be ignored) (1 mark)

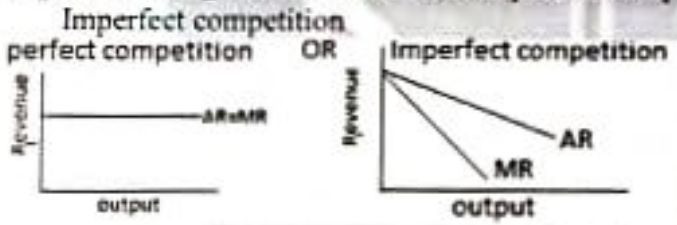
Homes ep $= \frac{55000}{2100} \bullet \frac{-500}{5000}$ (1.5marks)

$= -2.619$ (1 mark)

PART B (Any three)

5. a) Meaning(or definition) of average and marginal revenue (3 marks)
AR-Revenue per unit of output sold(TR/Q), MR - Addition to total revenue when one more unit of output is sold or revenue from the last unit(dTR/dQ)

Diagram showing AR and MR curves in perfect competition **OR** (3 marks)



b)Any two distinguishing features (Large number of sellers - single seller,

Freedom of entry and exit - Barriers, Perfectly elastic demand curve - downward Sloping etc.) (4 marks)

6. a) Diagram showing AFC, AVC and TC with proper labelling of x & y axis (4 marks)

b)

(i) P/V ratio $= \frac{S-V}{S}$ $= (20000 - 12000)/20000 = 0.4$ (1 mark)

(ii) Breakeven sales = TFC / P.V ratio = 6000/0.4 = 15000 (2 marks)

(iii)Margin of Safety = Actual sales - Breakeven sales = 20000-15000 = 5000(1 mark)

(iv)No. of bags at breakeven point= 15000/5 = 3000 bags (1 mark)

(v) Value of sales to earn a desired profit $= \frac{TFC + Desired\ Profit}{P.V\ ratio}$

= (6000+4000)/0.4 = 25000 (1 mark)

(Students can use different formulas or methods to find the answers)

7. a)Phases 1. Boom 2. Recession 3.Depression 4. Recovery (4 marks)
With brief explanation
Diagram (1 mark)

b) Definitions or equations to find GNP, NNP, NI, PI and DPI - one mark each (5 marks)
(exampleGNP = GDP + NFIA, NNP = GNP -Depreciation etc.)

8. a) Functions of the Reserve Bank of India - One mark for each function (5 marks)
OR
***If a student write anything about RBI* OR**monetary policy measures OR
Repo, Reverse Repo etc. full marks can be awarded.
OR
If a student attended 8 b) and not attending 8 a) its marks can be distributed to marks of 8 b.proportionately 8 b) i 1+1 8 b) ii 1+2 8 b) iii 2+2

b) (i)GDP = 100000 (1 mark)
(ii)NDP = GDP – Depreciation = 90000 (1 mark)
(iii)NI = NDP – Indirect taxes = 84000 (NFIA can be considered as 0) (2 marks)
(iv)PI=NI-undistributed profits = 40000 (1 mark)
(Data error - part v. is cancelled)

if the formulas of ii), iii) and iv) are correct $\frac{1}{2}+\frac{1}{2}$ +1mark can be given

PART C (Any four)

9. a) Meaning of Capital budgeting with brief explanation (4 marks)

b) Annual cash flow of A = 170000 – 60000 – 15000 – 30000 = 65000
Annual cash flow of B = 170000 – 60000 – 60000 – 20000 = 30000

Payback Period = $\frac{Initial\ Investment}{Annual\ Earnings}$

Payback of A = 260000/65000 = 4 years (2.5 marks)
Payback of B = 90000/30000 = 3 years (2.5 marks)
Machine B will be selected (1 mark)

OR

For any serious attempt 4 marks can be awarded

10. a) Payback period- meaning (2 marks)
Average Rate of Return - meaning (2 marks)

b) Any three sources with brief explanation (Internal savings, shares, bonds, debentures, Loans, foreign sources etc. 2 * 3 = 6) (6 marks)

11. a) Cost benefit analysis- meaning (3 marks)

Difficulties or limitations (Any two) (1 mark)

b) NPV = $NPV = \sum_{t=1}^{n} \frac{Ct}{(1+r)^t}$ - Initial investment (or a suitable formula) (1 mark)

$= \frac{200000}{(1+0.1)^1} + \frac{200000}{(1+0.1)^2} + \frac{300000}{(1+0.1)^3} + \frac{200000}{(1+0.1)^4} + \frac{350000}{(1+0.1)^5} - 1000000$ (2 marks)

= 181818.18 +165289.25+225394.44+136602.69+217322.46 - 1000000

= 926427.02-1000000 = -73572.98 (small variations can be ignored) (2 marks)

Since NPV is negative the project will be rejected (1 mark)

12.a) Meaning of Balance Sheet (2 marks)

Meaning of Assets and Liabilities (3 marks)

b) Explanation of money market (4 marks)

Money market instruments - any two(Treasury bills, bills of exchange,

Collateral loans, Promissory notes etc.) (1 mark)

13. a) Any four cannons (principles) - simplicity, convenience, certainty,

Equality, economy etc.- with brief explanation (4 marks)

b)

Year	X	Y	X^2	XY
2013	-2	200	4	-400
2014	-1	220	1	-220
2015	0	210	0	0
2016	1	230	1	230
2017	2	210	4	420
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	0	1070	10	30

$\Sigma Y = na + b\Sigma X$ $1070 = 5a + 0$ Therefore $a = 1070/5 = 214$

$\Sigma XY = a\Sigma X + b\Sigma X^2$ $30 = a*0 + b10$ Therefore $b = 30/10 = 3$

The trend equation is $Y = a + bX$ That is $Y = 214 + 3X$

Year 2018 Demand = 214+3*3 = 223 Year 2019 Demand = 214+3*4 = 226

Year 2020 Demand = 214+3*5 = 229

(Formation of columns 2 marks, calculation of 'a' and 'b' 2.5 marks, forecasting demand for 2018,2019and 2020 1.5 marks) (6marks)

(Students can use any method. If they take X values as 1,2,3,4,5 then $\Sigma X = 15$, $\Sigma Y = 1070$ $\Sigma X^2 = 55$ and $\Sigma XY = 3240$. Solving the normal equations we get the trend equation as $Y = 205+3X$. Here the values of X must be substituted as 6,7and 8. Similarly, if the X values

ertaken as 3,4,5,6,7 then $\Sigma X = 25$, $\Sigma Y = 1070$ $\Sigma X^2 = 135$ and $\Sigma XY = 5380$. The trend 5
quation will be $Y = 199 + 3X$. The X values must be substituted as 8,9 and 10)

4. a) Any 3 forecasting techniques with brief explanation or an overview (6 marks)

b) FII meaning- 3marks. Any two disadvantages 1mark (4 marks)