Financial Management & Economics		
Time Allowed: 1 hour 30 Mint.	Test-1	Total Marks = 50 Marks

Answer to Question No.1: Sensitivity Analysis

1. Sensitivity Analysis shows the measure of sensitivity of a decision due to change in values of one or more parameters. In Capital Budgeting, the Sensitivity Analysis seeks to identify the impact of change in one variable (e.g., Initial Investment, Project Life, Discount Rate etc.) on NPV or IRR or any other factor.
2. **STEPS**:-
   a) Select Base Case Analysis and ascertain its NPV /IRR/PI
   b) Identify the variables (e.g. Initial Investment, Project Life, Discount Rate, etc.)
   c) Determine the extent of change in NPV or IRR or PI. It is known as extent of sensitivity.
   d) Establish the final conclusion.
3. **Merits**:-
   a) Various critical factors are evaluated in detail as compared to other factors.
   b) This analysis is simple to understand and implements.
4. **Demerits**:-
   a) In this analysis, different values are selected on **ad-hoc** basis which is not scientific.
   b) This analysis does not analyse the probability of changes in the variables.

Answer to Question No.2: Virtual Banking

1. Virtual Banking is very popular now-a- days. It is also known as cyber – banking or e-banking or on-line banking. It is not only the quickest but also the cheapest method of operating the banking activities.
2. Various customers of the bank prefer to carry on their banking related transactions in a simpler and cheaper way at all times irrespective of the geographical locations. This is where the virtual Banking comes into picture and proves to be beneficial to the clients of the bank.
3. "Virtual Basis" means operating the banking activities on virtual basis. "Virtual Basis" means banking based on telecommunication and internet. It can be operated from any place and there is no need for personal visit to the bank.
4. **Example:**
   (a)Online bill Payment service (b) Phone banking (c)ATM facility (d)Debit Card (e)Credit Card.

Answer to Question No.3:

Valuation of the decision regarding change in Credit Period from 45 Days to 60Days.

Particulars		Amount
Increase in sales (10% of ₹ 256,48,750		25,64,875
Less: Increase in Variable Cost (72% of 2564875)		(18,46,710)
Less: Increase in Bad Debts		
$\frac{2}{100}$[2564875+2564875]-$\frac{1.5}{100}$(25648750)		(179541)
	Increase in PBT	**5,38,624**
Less: Tax @35%		(188518)
	Increase in PAT	**3,50,106**
Less: Finance cost of Additional Investment in Debtors (1077247 × 15%)		(161587)
	Net Profit	**188519**

If we calculate or deduct the amount after tax then we are given message that we are giving Dividend.
If the information is given like rate of return is after tax, then, we are talking in Context of shareholders but we are deducting the amount before tax we are taking in context of interest.

Investment in Debtors

Existing Situation :	Proposed Situation:
Credit period = 45 Days	Credit period = 60 Days
Investment in the Debtors =45 Days Variable Cost	Investment in the Debtors = 60 Days Variable Cost
(256,48,750 × 72%) × $\frac{45}{360}$ = 23,08,388	[(25648750+2564875)] × $\frac{60}{360}$ = 33,85,635
	Additional Investment in Debtors = 10,77,247

The proposal may be accepted in the proposed situation.

Answer to Question No.: 4

Initial Cash Outflow	Amount (₹)
Cost of the project	60,00,000
Working Capital requirement	15,00,000
	75,00,000

Computation of Annual Cash Inflow

Year	PAT	Depreciation	Total Cash Inflow
1	7,50,000	10,50,000	18,00,000
2	12,00,000	10,50,000	22,50,000
3	15,00,000	10,50,000	25,50,000
4	9,00,000	10,50,000	19,50,000
5	7,50,000	10,50,000	18,00,000

Total Cash Inflow in 5th year

	Amount (₹)
Cash Inflow as computed above	1,00,000
Salvage Value	7,50,000
Working capital released	15,00,000
	40,50,000

Computation of NPV

Year	Cash Inflow	PV @ 12% ₹ 1	Total
1	18,00,000	0.8929	16,07,220
2	22,50,000	0.7972	17,93,700
3	25,50,000	0.7118	18,15,090
4	19,50,000	0.6355	12,39,225
5	40,50,000	0.5674	22,97,970
Total PV of Cash Inflows			87,53,205
(-) Initial Cash Outflow			(75,00,000)
NPV			**12,53,205**

Conclusion: -

Since NPV is a positive amount, the investment in the project is financially viable.

Important Notes: -

1. Total cost of project including initial expenditure is ₹ 60,00,000 and working capital required is ₹15,00,000. Therefore, total initial cash outflow will be ₹ 75,00,000.
2. Since salvage value is ₹ 7,50,000 and machine having economic life of 5 year hence per year depreciation will ₹ 10,50,000 [(60,00,00 – 7,50,000)/5 years].
3. In the given case, PAT is given so we have to add the amount of depreciation to find out the annual cash inflow.

Salvage value of ₹ 7,50,000 and working capital taken back of ₹ 15,00,000 should be added in inflow of 5th year.

Answer to Question No.: 5

Machine MX

Year	Profit before Depreciation	Depreciation	PBT	Tax @ 30%	PAT	Cash Inflow	PVF @ 10%	Total PV
1	2,50,000	1,30,000	1,20,000	36,000	84,000	2,14,000	0.909	1,94,526
2	2,30,000	1,30,000	1,00,000	30,000	70,000	2,00,000	0.826	1,65,200
3	1,80,000	1,30,000	50,000	15,000	35,000	1,65,000	0.751	1,23,915
4	2,00,000	1,30,000	70,000	21,000	49,000	1,79,000	0.683	1,22,257
5	1,80,000	1,30,000	50,000	15,000	35,000	1,65,000	0.621	1,02,465
6	1,60,000	1,30,000	30,000	9,000	21,000	1,71,000	0.564	96,444
PV of Cash Inflows								8,04,807
(-) Initial Cash Outflow								(8,00,000)
NPV								**4,807**

Note 1: Depreciation each year = [(₹ 8,00,000 - ₹ 20,000)/6 years] = ₹ 1,30,000

Note 2: Cash Inflow in the 6th year includes salvage value of ₹ 20,000.

Machine MY

Year	Profit before Depreciation	Depreciation	PBT	Tax @ 30%	PAT	Cash Inflow	PVF @ 10%	Total PV
1	2,70,000	1,65,000	1,05,000	31,500	73,500	2,38,500	0.909	2,16,796
2	3,60,000	1,65,000	1,95,000	58,500	1,36,500	3,01,500	0.826	2,49,039
3	3,80,000	1,65,000	2,15,000	64,500	1,50,500	3,15,500	0.751	2,36,940
4	2,80,000	1,65,000	1,15,000	34,500	80,500	2,45,500	0.683	1,67,670
5	2,60,000	1,65,000	95,000	28,500	66,500	2,31,500	0.621	1,43,961
6	1,85,000	1,65,000	20,000	6,000	14,000	2,09,000	0.564	1,17,876
PV of Cash Inflows								11,32,092
(-) Initial Cash Outflow								(10,20,000)
NPV								**1,12,092**

Note 1 : Depreciation each year = [(₹ 10,20,000 - ₹ 30,000)/6 years] = ₹ 1,65,000
Note 2 : Cash Inflow in the 6th year includes salvage value of ₹ 30,000
Conclusion: Machine MY is recommended to be purchased as its NPV is more.
Important Notes: -
1. Since machine have economic life of 6 years and depreciation is to be charged on SLM basis, the amount of depreciation will be: -
   Machine MX = (8,00,000 – 20,000)/6 years = ₹ 1,30,000.
   Machine MX = (10,20,000 – 30,000)/6 years = ₹ 1,65,000.
Salvage value of both machines should be added in cash inflow of 6th year.

Answer to Question No.: 6

(A) Discount
   At Present = ₹ 12,00,000 × 50% × 1% = ₹ 6,000
   At Proposed = ₹ 16,00,000 × 80% × 2% = ₹ 25,600
   Increase = ₹ 25,600 - ₹ 6,000 = ₹ 19,600

(B) Bad debts
   At Present = ₹ 12,00,000 × 1.5% = ₹ 18,000
   At Proposed = ₹ 12,00,000 plus 1/3rd = 16,00,000 × 2% = ₹ 32,000
   Increase = ₹ 32,000 - ₹ 18,000 = ₹ 14,000

(C) Increase in operating profit
   Increase in sales = (₹ 12,00,000 × 1/3rd) = ₹ 4,00,000
   (-) Increase in variable cost (78%) = (₹ 3,12,000)
   Increase in operating profit = ₹ 88,000

   > Contribution = 22% of sales
   > So, Variable cost = 78% of sales

(D) Reduce investment in debtors
   Existing, collection period = 30 days
   Investment in debtors = 30 days cost of sales
   $$= \left(₹\,12,00,000 \times 78\% = ₹\,9,36,000\right) \times 30 / 360 = ₹\,78,000$$

   Proposed, collection period = 20 days
   Investment in debtors = 20 days cost of sales
   $$= \left(₹\,9,36,000 + ₹\,3,12,000\right) \times 20 / 360 = ₹\,69,333$$

   Reduced Investment in debtors = ₹ (78,000 - 69,333) = ₹ 8,667
   Financial benefits on reduced investment = ₹ 8,667 × 15% = ₹ 1,300

(E) Net impact on profit (C) + (D) - (A) - (B) = 88,000 + 1,300 - 19,600 - 14,000 = ₹ 55,700
   The change in discount policy should be implemented because it will increase the profit extent of ₹55,700.

Answer to Question No: 7   Benefits of Foreign Direct Investment (FDI)

1) Capital inflows create higher output and jobs.
2) Capital inflows can help finance a current account deficit.
3) Long-term capital inflows are more sustainable than short-term portfolio inflows. e.g. in a credit crunch, banks can easily withdraw portfolio investment, but capital investment is less prone to sudden withdrawals.
4) Recipient country can benefit from improved knowledge and expertise of foreign multinational.
5) Investment from abroad could lead to higher wages and improved working conditions, especially if the MNCs are conscious of their public image of working conditions in developing economies.

Answer to Question No: 8   Foreign Exchange Market

1) Foreign exchange market is the market in which foreign currencies are bought and sold. The buyer and sellers include individuals, firms, banks, etc.

2) Foreign exchange market is a system, not a place.

Functions of Foreign Market:

1) **Transfer Function:** It transfers purchasing power between the countries involved in the transaction.

2) **Credit Function:** It provides credit for foreign trade. Bill of exchange, with maturity period of three months, are generally used for international payments credit is required for this period in order to enable the importer to take possession of goods, sell then to obtain money to pay off the bill.

3) **Hedging Function:** When exporter and importer enter into a agreement to sell and buy goods on some future date at the current price and exchange rate it is called hedging. The purpose of hedging is to avoid losses that might be caused due to exchange rate variation in future.

#Kinds of Foreign Exchange Market:

1) **Spot Market:** Spot market refers to the market in which the receipts and payments are made immediately. The Rate of exchange which prevails in the spot market, is termed as spot exchange rate or current rate of exchange.

2) **Forward Market:** Forward market refers to the market in which sale and purchase of foreign currency is settled on a specific future date at a rate agreed upon today. The exchange rate quoted in forward transaction is known as forward exchange rate.

Answer to Question No: 9 Constraints of WTO

1) While the tariff on industrial goods have been reduced, but there has been no significant development in liberalizing trade in agriculture, textiles and apparel etc. because of lack of proper agreement on these items.

2) Many developed countries practically adopt a "Protectionist Agenda" and deny effective market access to less developed countries. As a result less developed countries seeks regional alternatives instead & continuing with WTO.

3) High tariffs scheme leads only to cripple in the market the vital export opportunity of LDCs.

4) Escalated tariff scheme leads only to a scenario where LDCs are forced to export raw materials without making value additions.

Less developed countries are hugely disadvantaged and vulnerable due to lack of factor inputs lack of capital, lack of infrastructure etc. their economies are more exposed to risk associated with external stocks.

Answer to Question No: 10 [New Trade Theory (NTT)]

1) This theory gives answer to a basic question i.e., why a country produces as well as imports the same category of products?

2) Take the example of mobile phones and cars. They are manufactured in India and also imported from foreign countries.

3) According to NTT, there are two reasons because of which the countries allow import of goods to compete with the products which are domestically produced. These reasons are:-

   a. Economies of scale

   b. Network effects.

4) **Economies of Scale: -** As the firm produces more quantity of a particular product, the amount of cost per unit keeps going down. So, if the firm serves domestic as well as foreign market, it can get the benefit of large scale of production thereby reducing the cost per unit.

5) **Network effects:-** The value of the product or service is enhanced as the number of consumers using it increases. This is also called 'bandwagon effect'.