**Test Series: August, 2018**

**MOCK TEST PAPER – 1**

**INTERMEDIATE (NEW): GROUP – II**

**PAPER – 8: FINANCIAL MANAGEMENT& ECONOMICS FOR FINANCE**

**PAPER 8A : FINANICAL MANAGEMENT**

**SUGGESTED ANSWERS/HINTS**

**1. (a) Working notes:**

**(i) Current assets and Current liabilities computation:**

$$\frac{\text{Current assets}}{\text{Current liabilities}} = \frac{2.5}{1}$$

Or, $\dfrac{\text{Current Assets}}{2.5} = \dfrac{\text{Current Liabilities}}{1} = k$ (say)

Or, Current Assets = 2.5 k and Current Liabilities = k

Or, Working capital = (Current Assets − Current Liabilities)

Or, Rs.2,40,000 = k (2.5 − 1) = 1.5 k

Or, k = Rs.1,60,000

∴ Current Liabilities = Rs. 1,60,000

Current Assets = Rs.1,60,000 × 2.5 = Rs.4,00,000

**(ii) Computation of stock**

Liquid ratio $= \dfrac{\text{Liquid assets}}{\text{Current liabilities}}$

Or,1.5 $= \dfrac{\text{Current Assets - Stock}}{\text{Rs.1,60,000}}$

Or, 1.5 × Rs.1,60,000 = Rs.4,00,000 − Stock

Or, Stock = Rs.1,60,000

**(iii) Computation of Proprietary fund; Fixed assets; Capital and Sundry payables (creditors)**

Proprietary ratio $= \dfrac{\text{Fixed assets}}{\text{Proprietary fund}} = 0.75$

∴ Fixed assets = 0.75 Proprietary fund

and Net working capital = 0.25 Proprietary fund

Or, Rs.2,40,000/0.25 = Proprietary fund

Or, Proprietary fund = Rs.9,60,000

and Fixed assets = 0.75 proprietary fund

= 0.75 × Rs.9,60,000

= Rs.7,20,000

Equity Capital = Proprietary fund − Reserves & Surplus

= Rs.9,60,000 − Rs.1,60,000

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| | = | Rs.8,00,000 |
| Sundry payables (creditors) | = | (Current liabilities − Bank overdraft) |
| | = | (Rs.1,60,000 − Rs.40,000) = Rs.1,20,000 |

**Balance Sheet**

| Liabilities | (Rs.) | Assets | (Rs.) |
|---|---|---|---|
| Equity Capital | 8,00,000 | Fixed assets | 7,20,000 |
| Reserves & Surplus | 1,60,000 | Stock | 1,60,000 |
| Bank overdraft | 40,000 | Current assets | 2,40,000 |
| Sundry payables | 1,20,000 | | |
| | 11,20,000 | | 11,20,000 |

**(b)** The Present Value of the Cash Flows for all the years by discounting the cash flow at 7% is calculated as below:

| Year | Cash flows Rs. in lakhs | Discounting factor @ 7% | Present value of cash flows Rs. in lakhs |
|---|---|---|---|
| 1 | 25,00,000 | 0.935 | 23,37,500 |
| 2 | 60,00,000 | 0.873 | 52,38,000 |
| 3 | 75,00,000 | 0.816 | 61,20,000 |
| 4 | 80,00,000 | 0.763 | 61,04,000 |
| 5 | 65,00,000 | 0.713 | 46,34,500 |
| Total of present value of Cash flow | | | 2,44,34,000 |
| Less: Initial investment | | | 1,00,00,000 |
| Net Present Value (NPV) | | | 1,44,34,000 |

When the risk-free rate is 7% and the risk premium expected by the management is 7 %. So the risk adjusted discount rate is 7% + 7% =14%.

Discounting the above cash flows using the Risk Adjusted Discount Rate would be as below:

| Year | Cash flows Rs. in lakhs | Discounting factor @14% | Present Value of cash flows Rs. in lakhs |
|---|---|---|---|
| 1 | 25,00,000 | 0.877 | 21,92,500 |
| 2 | 60,00,000 | 0.769 | 46,14,000 |
| 3 | 75,00,000 | 0.675 | 50,62,500 |
| 4 | 80,00,000 | 0.592 | 47,36,000 |
| 5 | 65,00,000 | 0.519 | 33,73,500 |
| Total of present value of Cash flow | | | 1,99,78,500 |
| Initial investment | | | 1,00,00,000 |
| Net present value (NPV) | | | 99,78,500 |

**(c)**

**A When dividend is paid**

(a) Price per share at the end of year 1

**2**

$$100 = \frac{1}{1.10}(Rs. 5 + P_1)$$

$$110 = Rs.\ 5 + P_1$$

$$P_1 = 105$$

    (b)  Amount required to be raised from issue of new shares

        Rs.5,00,000 – (Rs.2,50,000 – Rs.1,25,000)

        Rs.5,00,000 – Rs.1,25,000 = Rs.3,75,000

    (c)  Number of additional shares to be issued

$$\frac{3,75,000}{105} = \frac{75,000}{21} \text{ shares or say 3,572 shares}$$

    (d)  Value of M Ltd.

        (Number of shares × Expected Price per share)

        i.e., (25,000 + 3,572) × Rs.105 = Rs.30,00,060

**B**  **When dividend is not paid**

    (a)  Price per share at the end of year 1

$$100 = \frac{P_1}{1.10}$$

$$P_1 = 110$$

    (b)  Amount required to be raised from issue of new shares

        Rs.5,00,000 – 2,50,000 = 2,50,000

    (c)  Number of additional shares to be issued

$$\frac{2,50,000}{110} = \frac{25,000}{11} \text{ shares or say 2,273 shares.}$$

    (d)  Value of M Ltd.,

        (25,000 + 2273) × Rs.110

        = Rs.30,00,030

        Whether dividend is paid or not, the value remains the same.

**(d)**  **Workings:**

    (i)   Cost of Equity $(K_e) = \dfrac{D_1}{P_0} + g = \dfrac{₹\,3}{₹\,30} + 0.07 = 0.1 + 0.07 = 0.17 = 17\%$

    (ii)  Cost of Debentures $(K_d) = I\,(1 - t) = 0.09\,(1 - 0.4) = 0.054$ or 5.4%

### Computation of Weighted Average Cost of Capital (WACC using market value weights)

| Source of capital | Market Value of capital (Rs.) | Weight | Cost of capital (%) | WACC (%) |
|---|---|---|---|---|
| 9% Debentures | 30,00,000 | 0.30 | 5.40 | 1.62 |
| 12% Preference Shares | 10,00,000 | 0.10 | 12.00 | 1.20 |
| Equity Share Capital (Rs.30 × 2,00,000 shares) | 60,00,000 | 0.60 | 17.00 | 10.20 |
| Total | 1,00,00,000 | 1.00 | | 13.02 |

2. **(i) Estimate of the Requirement of Working Capital**

|   |   | (Rs.) | (Rs.) |
|---|---|---|---|
| **A.** | **Current Assets:** | | |
| | Raw material stock | 6,64,615 | |
| | (Refer to Working note 3) | | |
| | Work in progress stock | 5,00,000 | |
| | (Refer to Working note 2) | | |
| | Finished goods stock | 13,60,000 | |
| | (Refer to Working note 4) | | |
| | Debtors/ Receivables | 29,53,846 | |
| | (Refer to Working note 5) | | |
| | Cash and Bank balance | <u>25,000</u> | 55,03,461 |
| **B.** | **Current Liabilities**: | | |
| | Creditors for raw materials | 7,15,740 | |
| | (Refer to Working note 6) | | |
| | Creditors for wages | <u>91,731</u> | (8,07,471) |
| | (Refer to Working note 7) | | |
| | Net Working Capital (A-B) | | <u>46,95,990</u> |

**(ii) The maximum permissible bank finance as per Tandon Committee Norms**

First Method*:*

75% of the net working capital financed by bank i.e. 75% of Rs.46,95,990

(Refer to (i) above)

= Rs. 35,21,993

Second Method:

(75% of Current Assets) - Current liabilities

= 75% of Rs. 55,03,461 - Rs. 8,07,471

(Refer to (i) above)

= Rs. 41,27,596 – Rs. 8,07,471

= Rs. 33,20,125

**Working Notes:**

1. **Annual cost of production**

|   | Rs. |
|---|---|
| Raw material requirements (1,04,000 units $\times$ Rs. 80) | 83,20,000 |
| Direct wages (1,04,000 units $\times$ Rs. 30) | 31,20,000 |
| Overheads (exclusive of depreciation) (1,04,000 $\times$ Rs. 60) | <u>62,40,000</u> |
| | <u>1,76,80,000</u> |

2. **Work in progress stock**

|   | Rs. |
|---|---|
| Raw material requirements (4,000 units $\times$ Rs. 80) | 3,20,000 |

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| Direct wages (50% × 4,000 units × Rs. 30) | 60,000 |
|---|---|
| Overheads (50% × 4,000 units × Rs.60) | 1,20,000 |
| | 5,00,000 |

3. **Raw material stock**

It is given that raw material in stock is average 4 weeks consumption. Since, the company is newly formed, the raw material requirement for production and work in progress will be issued and consumed during the year.

Hence, the raw material consumption for the year (52 weeks) is as follows:

| | Rs. |
|---|---|
| For Finished goods | 83,20,000 |
| For Work in progress | 3,20,000 |
| | 86,40,000 |

Raw material stock $\dfrac{Rs.\,86,40,000}{52\ weeks} \times 4\ weeks$ i.e. Rs. 6,64,615

4. **Finished goods stock**

8,000 units @ Rs. 170 per unit = Rs. 13,60,000

5. **Debtors for sale**

| Credit allowed to debtors | Average 8 weeks |
|---|---|
| Credit sales for year (52 weeks) i.e. (1,04,000 units-8,000 units) | 96,000 units |
| Selling price per unit | Rs.200 |
| Credit sales for the year (96,000 units ×Rs. 200) | Rs. 1,92,00,000 |
| Debtors | $\dfrac{Rs.\,1,92,00,000}{52\ weeks} \times 8$ weeks i.e. Rs. 29,53,846 |

*(Debtor can also be calculated based on Cost of goods sold)*

6. **Creditors for raw material:**

| Credit allowed by suppliers | Average 4 weeks |
|---|---|
| Purchases during the year (52 weeks) i.e. (Rs. 83,20,000 + Rs. 3,20,000 + Rs. 6,64,615) (Refer to Working notes 1,2 and 3 above) | Rs. 93,04,615 |
| Creditors | $\dfrac{Rs.\,93,04,615}{52\ weeks} \times 4$ weeks i.e. Rs. 7,15,740 |

7. **Creditors for wages**

| Lag in payment of wages | Average $1\frac{1}{2}$ weeks |
|---|---|
| Direct wages for the year (52 weeks) i.e. (Rs. 31,20,000 + Rs. 60,000) (Refer to Working notes 1 and 2 above) | Rs. 31,80,000 |
| Creditors | $\dfrac{Rs.\,31,80,000}{52\ weeks} \times 1\frac{1}{2}$ weeks i.e. Rs. 91,731 |

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**3. (1) Computation of Net Present Values of Projects** (Amount in Rs. '000)

| Year | Cash flows | | Discount factor @ 16 % | Discounted Cash flow | |
|---|---|---|---|---|---|
| | Project A (Rs.) | Project B (Rs.) | | Project A (Rs.) | Project B (Rs.) |
| | (1) | (2) | (3) | (3) × (1) | (3) × (2) |
| 0 | (13,500) | (24,000) | 1.000 | (13,500) | (24,000) |
| 1 | -- | 6,000 | 0.862 | -- | 5,172 |
| 2 | 3,000 | 8,400 | 0.743 | 2,229 | 6,241.2 |
| 3 | 13,200 | 9,600 | 0.641 | 8,461.2 | 6,153.6 |
| 4 | 8,400 | 10,200 | 0.552 | 4,636.8 | 5,630.4 |
| 5 | 8,400 | 9,000 | 0.476 | 3,998.4 | 4,284 |
| Net present value | | | | 5,825.4 | 3,481.2 |

**(2) Computation of Cumulative Present Values of Projects Cash inflows**

(Amount in Rs. '000)

| Year | Project A | | Project B | |
|---|---|---|---|---|
| | PV of cash inflows (Rs.) | Cumulative PV (Rs.) | PV of cash inflows (Rs.) | Cumulative PV (Rs.) |
| 1 | -- | -- | 5,172 | 51,72 |
| 2 | 2,229 | 22,29 | 6,241.2 | 11,413.2 |
| 3 | 8,461.2 | 10,690.2 | 6,153.6 | 17,566.8 |
| 4 | 4,636.8 | 15,327 | 5,630.4 | 23,197.2 |
| 5 | 3,998.4 | 19,325.4 | 4,284 | 27,481.2 |

**(i) Discounted payback period**: *(Refer to Working note 2)*

Cost of Project A = Rs.1,35,00,000

Cost of Project B = Rs.2,40,00,000

Cumulative PV of cash inflows of Project A after 4 years = Rs.1,53,27,000

Cumulative PV of cash inflows of Project B after 5 years = Rs.2,74,81,200

A comparison of projects cost with their cumulative PV clearly shows that the project A's cost will be recovered in less than 4 years and that of project B in less than 5 years. The exact duration of discounted payback period can be computed as follows:

| | Project A | Project B |
|---|---|---|
| Excess PV of cash inflows over the project cost (Rs.) | 18,27,000 (Rs.1,53,27,000 – Rs.1,35,00,000) | 34,81,200 (Rs. 2,74,81,200 – Rs.2,40,00,000) |
| Computation of period required to recover excess amount of cumulative PV over project cost (Refer to Working note 2) | 0.39 year (Rs. 18,27,000 ÷ Rs.46,36,800) | 0.81 years (Rs.34,81,200 ÷ Rs. 42,84,000) |
| Discounted payback period | 3.61 year (4 – 0.39) years | 4.19 years (5 – 0.81) years |

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**(ii)** **Profitability Index:** $= \dfrac{\text{Sum of discounted cash inflows}}{\text{Initian cash outlay}}$

Profitability Index (for Project A) $= \dfrac{\text{Rs.1,93,25,400}}{\text{Rs.1,35,00,000}} = 1.43$

Profitability Index (for Project B) $= \dfrac{\text{Rs.2,74,81,200}}{\text{Rs.2,40,00,000}} = 1.15$

**(iii)** **Net present value** *(for Project A)* = Rs.58,25,400 *(Refer to Working note 1)*

**Net present value** *(for Project B)* = Rs.34,81,200

**4.** **Calculation of Earnings per share for three alternatives to finance the project**

| Particulars | Alternatives | | |
|---|---|---|---|
| | I To raise debt of Rs. 2,50,000 and equity of Rs. 22,50,000 | II To raise debt of Rs.10,00,000 and equity of Rs.15,00,000 | III To raise debt of Rs.15,00,000 and equity of Rs. 10,00,000 |
| | (Rs.) | (Rs.) | (Rs.) |
| Earnings before interest and tax | 5,00,000 | 5,00,000 | 5,00,000 |
| Less: Interest on debt at the rate of | 25,000 (10% on Rs.2,50,000) | 1,37,500 (10% on Rs.2,50,000) (15% on Rs. 7,50,000) | 2,37,500 (10% on Rs. 2,50,000) (15% on Rs.7,50,000) (20% on Rs.5,00,000) |
| Earnings before tax | 4,75,000 | 3,62,500 | 2,62,500 |
| Less: Tax @ 50% | 2,37,500 | 1,81,250 | 1,31,250 |
| Earnings after tax: (A) | 2,37,500 | 1,81,250 | 1,31,250 |
| Number of shares: (B) (Equity/ Market price of Share) | 15,000 (Rs.22,50,000/Rs.150) | 10,000 (Rs.15,00,000/Rs.150) | 8,000 (Rs.10,00,000/Rs.125) |
| Earnings per share: [(A)/(B)] | 15.833 | 18.125 | 16.406 |

The company should raise Rs.10,00,000 from debt and Rs.15,00,000 by issuing equity shares, as it gives highest EPS.

**5.** **Working Notes:**

**Company A**

Financial leverage $= \dfrac{\text{EBIT}}{\text{EBT}} = \dfrac{3}{1}$ = Or, EBIT = 3× EBT          (1)

Again EBIT – Interest          =          EBT

Or, EBIT- 20,000          =          EBT          (2)

Taking (1) and (2) we get

3 EBT- 20,000          =          EBT

Or, 2 EBT = 20,000 or EBT          =          Rs.10,000

Hence EBIT = 3EBT          =          Rs.30,000

Again, we have operating leverage $= \dfrac{\text{Contribution}}{\text{EBIT}} = \dfrac{4}{1}$

EBIT      =      Rs. 30,000, hence we get

Contribution      =      4 × EBIT = Rs.1,20,000

Now variable cost      =      $66\frac{2}{3}\%$ on sales

Contribution      =      $100 - 66\frac{2}{3}\%$ i.e. $33\frac{1}{3}\%$ on sales

Hence, sales      $= \dfrac{1,20,000}{33\frac{1}{3}\%} = $ Rs. 3,60,000

Same way EBIT, EBT, contribution and sales for company B can be worked out.

**Company B**

Financial leverage $= \dfrac{\text{EBIT}}{\text{EBT}} = \dfrac{4}{1}$ or EBIT = 4 EBT             (3)

Again EBIT – Interest = EBT or EBIT – 30,000 = EBT             (4)

Taking (3) and (4) we get, 4EBT- 30,000 = EBT

Or, 3EBT = 30,000    Or,       EBT=10,000

Hence, EBIT = 4 × EBT= 40,000

Again, we have operating leverage = $\dfrac{\text{Contribution}}{\text{EBIT}} = \dfrac{5}{1}$

EBIT= 40,000; Hence we get contribution = 5 × EBIT = 2,00,000

Now variable cost =75% on sales

Contribution = 100- 75% i.e. 25% on sales

Hence Sales = $\dfrac{2,00,000}{25\%}$ = Rs. 8,00,000

**Income Statement**

|  | A (Rs.) | B (Rs.) |
|---|---|---|
| Sales | 3,60,000 | 8,00,000 |
| Less: Variable Cost | 2,40,000 | 6,00,000 |
| Contribution | 1,20,000 | 2,00,000 |
| Less: Fixed Cost (bal. Fig) | 90,000 | 1,60,000 |
| EBIT | 30,000 | 40,000 |
| Less: Interest | 20,000 | 30,000 |
| EBT | 10,000 | 10,000 |
| Less: Tax 45% | 4,500 | 4,500 |
| EAT | 5,500 | 5,500 |

6. **(a)** **Agency Cost:** In a sole proprietorship firm, partnership etc., owners participate in management but in corporate, owners are not active in management so, there is a separation between owner/ shareholders and managers. In theory managers should act in the best interest of shareholders however in reality, managers may try to maximise their individual goal like salary, perks etc., so there is a principal-agent relationship between managers and owners, which is known as Agency

Problem. In a nutshell, Agency Problem is the chances that managers may place personal goals ahead of the goal of owners. Agency Problem leads to Agency Cost. Agency cost is the additional cost borne by the shareholders to monitor the manager and control their behaviour so as to maximise shareholders wealth. Generally, Agency Costs are of four types (i) monitoring (ii) bonding (iii) opportunity (iv) structuring

However, following efforts can be made to address Agency Cost:

Managerial compensation to be linked to profit of the company to some extent with the long term objectives of the company.

Employees' Stock option plan (ESOP) is also designed to address the issue with the underlying assumption that maximisation of the stock price is the objective of the investors.

Effective monitoring through corporate governance can be done.

**(b)** Trade credit and accruals as source of short-term finance like working capital refers to credit facility given by suppliers of goods during the normal course of trade. It is a short term source of finance. Micro small and medium enterprises (MSMEs) in particular are heavily dependent on this source for financing their working capital needs. The major advantages of trade credit are − easy availability, flexibility and informality.

There can be an argument that trade credit is a cost free source of finance. But it is not. It involves implicit cost. The supplier extending trade credit incurs cost in the form of opportunity cost of funds invested in trade receivables. Generally, the supplier passes on these costs to the buyer by increasing the price of the goods or alternatively by not extending cash discount facility.

**(c)** Advantages of Walter Model

1. The formula is simple to understand and easy to compute.

2. It can envisage different possible market prices in different situations and considers internal rate of return, market capitalisation rate and dividend payout ratio in the determination of market value of shares.

**PAPER – 8B: ECONOMICS FOR FINANCE**

**SUGGESTED ANSWERS/ HINTS**

7. **(a)** k. $\Delta I = \Delta Y$; k = 1/0.4

       = (1250 -1000) .0.4

       = 100 billion

**(b)** The Marginal Standing Facility (MSF) is the last resort for banks to obtain funds once they exhaust all borrowing options including the liquidity adjustment facility on which the rates are lower compared to the MSF. Under this facility, the scheduled commercial banks can borrow additional amount of overnight money from the central bank over and above what is available to them through the LAF window by dipping into their Statutory Liquidity Ratio (SLR) portfolio up to a limit ( a fixed per cent of their net demand and time liabilities deposits (NDTL) liable to change ) at a penal rate of interest. The scheme has been introduced by RBI with the main aim of reducing volatility in the overnight lending rates in the inter-bank market and to enable smooth monetary transmission in the financial system. This provides a safety valve against unexpected liquidity shocks to the banking system.

**(c)** All the goods mentioned above can be classified as impure public good. There are many hybrid goods that possess some features of both public and private goods. These goods are called impure public goods and are partially rivalrous or congestible. Because of the possibility of congestion, the benefit that an individual gets from an impure public good depends on the number of users. Consumption of these goods by another person reduces, but does not eliminate, the benefits that other people receive from their consumption of the same good. Impure public goods also differ from pure public goods in that they are often excludable.

Since free riding can be eliminated, the impure public good may be provided either by the market or by the government at a price or fee. If the consumption of a good can be excluded, then the market would provide a price mechanism for it. The provider of an impure public good may be able to control the degree of congestion either by regulating the number of people who may use it, or the frequency with which it may be used or both.

**(d)** The 'real exchange rate' incorporates changes in prices and describes 'how many' of a good or service in one country can be traded for 'one' of that good or service in a foreign country.

$$\text{Real exchange rate} = \text{Nominal exchange rate} \times \frac{\text{Domestic price Index}}{\text{Foreign price Index}}$$

8. **(a)** **(i)** In the early 1900s, Cambridge Economists Alfred Marshall, A.C. Pigou, D.H. Robertson and John Maynard Keynes (then associated with Cambridge) put forward a fundamentally different approach to quantity theory, known neoclassical theory or cash balance approach. The Cambridge version holds that money increases utility in the following two ways:

    1.   enabling the possibility of split-up of sale and purchase to two different points of time rather than being simultaneous, and

    2.   being a hedge against uncertainty.

While the first above represents transaction motive, just as Fisher envisaged, the second points to money's role as a temporary store of wealth. Since sale and purchase of commodities by individuals do not take place simultaneously, they need a 'temporary abode' of purchasing power as a hedge against uncertainty. As such, demand for money also involves a precautionary motive in Cambridge approach. Since money gives utility in its store of wealth and precautionary modes, one can say that money is demanded for itself.

Now, the question is how much money will be demanded? The answer is: it depends partly on income and partly on other factors of which important ones are wealth and interest rates. The former determinant of demand i.e. income, points to transactions demand such that

higher the income, the greater the quantity of purchases and as a consequence greater will be the need for money as a temporary abode of value to overcome transactions costs. The Cambridge equation is stated as:

$M_d$ = k PY, Where $M_d$ = is the demand for money

Y = real national income

P = average price level of currently produced goods and services

PY = nominal income

k = proportion of nominal income (PY) that people want to hold as cash balances

The term 'k' in the above equation is called 'Cambridge k'. The equation above explains that the demand for money (M) equals k proportion of the total money income.

Thus we see that the neoclassical theory changed the focus of the quantity theory of money to money demand and hypothesized that demand for money is a function of money income. Both these versions are chiefly concerned with money as a means of transactions or exchange, and therefore, they present models of the transaction demand for money.

**(ii)** A distinction is made between the two concepts of public spending during depression, namely, the concept of 'pump priming' and the concept of 'compensatory spending'. Pump priming involves a one-shot injection of government expenditure into a depressed economy with the aim of boosting business confidence and encouraging larger private investment. It is a temporary fiscal stimulus in order to set off the multiplier process. The argument is that with a temporary injection of purchasing power into the economy through a rise in government spending financed by borrowing rather than taxes, it is possible for government to bring about permanent recovery from a slump. Pump priming was widely used by governments in the post-war era in order to maintain full employment; however, it became discredited later when it failed to halt rising unemployment and was held responsible for inflation. Compensatory spending is said to be resorted to when the government spending is deliberately carried out with the obvious intention to compensate for the deficiency in private investment.

**(b) (i)** The marginal propensity to consume (MPC) is the determinant of the value of the multiplier and that there exists a direct relationship between MPC and the value of multiplier. Higher the MPC, more will be the value of the multiplier and vice-versa. A flat aggregate expenditure function implies lower MPC and higher MPS for all levels of income. Therefore, the value of multiplier will be small.

**(ii)** Private cost is the cost faced by the producer or consumer directly involved in a transaction. If we take the case of a producer, his private cost includes direct cost of labour, materials, energy and other indirect overheads. These are usually added up to determine market price. The actions of consumers or producers result in costs or benefits to others and the relevant costs and benefits are not reflected as part of market prices. In other words, market prices do not incorporate externalities. Social costs refer to the total costs to the society on account of a production or consumption activity. Social costs are private costs borne by individuals directly involved in a transaction together with the external costs borne by third parties not directly involved in the transaction. Social costs represent the true burdens carried by society in monetary and non-monetary terms.

**9. (a) (i)** The Liquidity Adjustment Facility(LAF) is a facility extended by the Reserve Bank of India to the scheduled commercial banks (excluding RRBs) and primary dealers to avail of liquidity in case of requirement (or park excess funds with the RBI in case of excess liquidity) on an overnight basis against the collateral of government securities including state government securities. The objective is to provide liquidity to commercial banks to adjust their day to day mismatches in liquidity. Under this facility, financial accommodation is provided through repos/reverse repos.

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**(ii)** Moral hazard is associated with information failure and refers to a situation that increases the probability of occurrence of a loss or a larger than normal loss, because of a change in the unobservable or hard to observe behaviour of one of the parties in the transaction after the transaction has been made. Moral hazard is opportunism characterized by an informed person's taking advantage of a less-informed person through an unobserved action. It arises from lack of information about someone's future behavior. Moral hazard occurs due to asymmetric information i.e., an individual knows more about his or her own actions than other people do. This leads to a distortion of incentives to take care or to exert effort when someone else bears the costs of the lack of care or effort. For example, in the insurance market, the expected loss from an adverse event increases as insurance coverage increases.

**(b)** **(i)** $Y = C + I + G + (X-M)$

$Y = 0.75 \times \{(1-0.30)*Y\} + 250 + 800 + 600 - 0.15 \times Y$

$Y = 0.375Y + 1650$

$0.625Y = 1650$

$Y = \dfrac{1650}{0.625}$

Hence Y = Rs.2640 Crores

**(ii)** Exports (X) = Rs.600 Crores

Imports = 0.15(2640) = Rs.396 Cores

Hence current account is in surplus of Rs. 204 Crores

**(iii)** Tax revenue = 0.3 (2640) = Rs.792 Crores

Government expenditure = Rs.800 Crores

Hence budget is in deficit of Rs. 8 crores i.e. –8

**10. (a) (i)** The monetary policy instruments are the various direct and indirect instruments or tools that a central bank can use to influence money market and credit conditions and pursue its monetary policy objectives. In general, the direct instruments comprise of:

(a) the required cash reserve ratios and liquidity reserve ratios prescribed from time to time.

(b) directed credit which takes the form of prescribed targets for allocation of credit to preferred sectors (for e.g. Credit to priority sectors), and

(c) administered interest rates wherein the deposit and lending rates are prescribed by the central bank.

The indirect instruments mainly consist of:

(a) Repos

(b) Open market operations

(c) Standing facilities, and

(d) Market-based discount window.

**(ii)** **National Income (NNP$_{FC}$)**

**Expenditure Method:**

= Private Final Consumption Expenditure + Govt. Final Consumption Expenditure + Net domestic capital Formation + Net Exports = 210+50+40+(-5) = 295

NNP (FC) = NDP $_{MP}$ + Factor Income from abroad – Net Indirect Tax (Indirect Tax – Subsidy)

= 295 + 3 - (30-5)

12

= 295 + 3 - 25 = 273

= 298 - 25 = 273

NNP $_{FC}$ = 273 Crores

**Income Method:** Wages and Salaries+ Employers Contribution+ Profit + Interest + Rent + Royalty

= 170 + 10 + 45 + 20 + 10 + 15 = 270 (NDP$_{FC}$)

NNP$_{FC}$ = NDP$_{FC}$ + FIFA

270+3 = 273 Crores

(b) (i) When a country enjoys the best trade terms given by its trading partner it is said to enjoy the Most Favoured Nation (MFN) status. Originally formulated as Article 1 of GATT, this principle of non-discrimination states that any advantage, favour, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be extended immediately and unconditionally to the like product originating or destined for the territories of all other contracting parties. Under the WTO agreements, countries cannot normally discriminate between their trading partners. If a country improves the benefits that it gives to one trading partner, (such as a lower a trade barrier, or opens up a market), it has to give the same best treatment to all the other WTO members too in respect of the same goods or services so that they all remain 'most-favoured'. As per the WTO agreements, each member treats all the other members equally as "most-favoured" trading partners.

(ii) Free trade policy is based on the principle of non-interference by government in foreign trade. The distinction between domestic trade and international trade disappears and goods and services are freely imported from and exported to the rest of the world. Buyers and sellers from separate economies voluntarily trade without the domestic government helping or hindering movements of goods and services between countries by applying tariffs, quotas, subsidies or prohibitions on their goods and services. The theoretical case for free trade is based on Adam Smith's argument that the division of labour among countries leads to specialization, greater efficiency, and higher aggregate production.

11. (a) (i) The foreign-based multinational companies invest abroad to gain access to resources, that are either unobtainable or available only at a much higher cost in the home country. The firm may find it cheaper to produce in a foreign facility due to the availability of superior or less costly access to the inputs of production than at home. The resources generally sought for are:

(i) physical resources such as oil, minerals, raw materials, or agricultural products.

(ii) human resources such as skilled labor and low-cost unskilled labour, organizational skills, management, consultancy or marketing expertise,

(iii) technological resources such as innovative, and other created assets (e.g., brand names)

(iv) physical infrastructure

(v) financial infrastructure such as safe efficient and integrated financial market, set of market institutions, networks and financial intermediaries

(ii) A safeguard measures is an action taken to protect a specific domestic industry from an unexpected build-up of imports. Safeguard measures are initiated by countries to restrict imports of a product temporarily if its domestic industry is injured or threatened with serious injury caused by a surge in imports.

**(b) (i)** The nature of the economic system determines the size and scope of the economic functions of the government. In a centrally planned socialistic economy, the state owns all productive resources and makes all important economic decisions. On the contrary, in a market economy, all important economic decisions are made by individuals and firms who want to maximise self-interest and there is only limited role for the government. In a mixed economic system, both markets and government contribute towards resource allocation decisions.

**(ii)** Arbitrage refers to the practice of making risk-less profits by intelligently exploiting price differences of an asset at different dealing places. On account of arbitrage, regardless of physical location, at any given moment, all markets tend to have the same exchange rate for a given currency

**or**

(ii) $\text{Money Multiplier}(m) = \dfrac{\text{Money Supply}}{\text{Monetary Base}}$

Money multiplier *m* is defined as a ratio that relates the change in the money supply to a given change in the monetary base. It denotes by how much the money supply will change for a given change in high-powered money. The multiplier indicates what multiple of the monetary base is transformed into money supply.