(GI–7 & GI–8, VDI–3 & FMT)

DATE: 16.04.2023	**MAXIMUM MARKS : 100**	**TIMING: 3¼ Hours**

PAPER: FM + ECO

SECTION - A
Q. No. 1 is compulsory.
Candidates are also required to answer any four questions
from the remaining five questions.
In case, any candidate answers extra question(s)/sub-question(s) over and
above the required number, then only the requisite number of questions top
answered in the answer book shall be valued and subsequent extra question(s)
answered shall be ignored.
Working Notes should form part of the respective answer.

Answer 1:

(a)   Option I: Purchase Machinery and Service Part at the end of Year 1.
Net Present value of cash flow @ 10% per annum discount rate.

$$NPV = -50{,}000 + \frac{18{,}000}{(1.1)} + \frac{18{,}000}{(1.1)^2} + \frac{18{,}000}{(1.1)^3} - \frac{10{,}000}{(1.1)} + \frac{12{,}500}{(1.1)^3}$$

= − 50,000 + 18,000 (0.9091 + 0.8264 + 0.7513) − (10,000 × 0.9091) + (12,500 × 0.7513)   **{2 M}**
= − 50,000 + (18,000 × 2.4868) − 9,091 + 9,391
= − 50,000 + 44,762 − 9,091 + 9,391
NPV   = − 4,938

Since, Net Present Value is negative; therefore, this option is not to be considered.   **{1/2 M}**

If Supplier gives a discount of Rs. 5,000 then,
NPV = +5,000 − 4,938 = + 62
In this case, Net Present Value is positive but very small; therefore, this option may not be advisable.   **{1 M}**

Option II : Purchase Machinery and Replace Part at the end of Year 2.

$$NPV = -50{,}000 + \frac{18{,}000}{(1.1)} + \frac{18{,}000}{(1.1)^2} + \frac{18{,}000}{(1.1)^3} - \frac{15{,}400}{(1.1)^2} + \frac{27{,}000}{(1.1)^4}$$

= − 50,000+ 18,000 (0.9091 + 0.8264 + 0.7513) − (15,400 × 0.8264) + (27,000 × 0.6830)   **{2 M}**
= − 50,000 + 18,000 (2.4868) − (15,400 × 0.8264) + (27,000 × 0.6830)
= − 50,000 + 44,762 − (15,400 × 0.8264) + (27,000 × 0.6830)
= − 50,000 + 44,762 − 12,727+ 18,441
= − 62,727 + 63,203 = +476

Net Present Value is positive, but very low as compared to the investment. **{1/2 M}**

If the Supplier gives a discount of Rs. 5,000, then
NPV = 5,000 + 476 = 5,476
Decision: Option II is worth investing as the net present value is positive and higher as compared to Option I.   **{1 M}**

Answer:

(b)   Calculation of Net Present Value (NPV) of Project X

Year end	Cash Flow (Rs.) (a)	C.E. (b)	Adjusted Cash flow (Rs.) (c) = (a) × (b)	Present value factor at 5.5% (d)	Total Present value (Rs.) (e) = (c) × (d)
1	16,50,000	0.8	13,20,000	0.947	12,50,040
2	15,00,000	0.7	10,50,000	0.898	9,42,900
3	15,00,000	0.5	7,50,000	0.851	6,38,250
4	20,00,000	0.4	8,00,000	0.807	6,45,600

{3 M}

5	21,00,000	0.6	12,60,000	0.765	9,63,900
PV of total cash inflows					44,40,690
Less: Initial Investment					(42,50,000)
Net Present Value					**1,90,690**

Calculation of Net Present Value (NPV) of Project Y

Year end	Cash Flow (Rs.) (a)	C.E. (b)	Adjusted Cash flow (Rs.) (c) = (a) × (b)	Present value factor at 5.5% (d)	Total Present value (Rs.) (e) = (c) × (d)	
1	16,50,000	0.9	14,85,000	0.947	14,06,295	
2	16,50,000	0.8	13,20,000	0.898	11,85,360	
3	15,00,000	0.7	10,50,000	0.851	8,93,550	{3 M}
4	10,00,000	0.8	8,00,000	0.807	6,45,600	
5	8,00,000	0.9	7,20,000	0.765	5,50,800	
PV of total cash inflows					46,81,605	
Less: Initial Investment					(41,25,000)	
Net Present Value					**5,56,605**	

Project Y has NPV of Rs. 5,56,605/- which is higher than the NPV of Project X. Thus, A&R Ltd. should accept Project Y.   {1 M}

Answer:

(c)   **Balance Sheet**

Liabilities	(Rs.)	Assets	(Rs.)	
Current debt	30,000	Cash (balancing figure)	1,20,000	
Long term debt	70,000	Inventory	60,000	
Total Debt	1,00,000	Total Current Assets	1,80,000	{2 M}
Owner's Equity	2,00,000	Fixed Assets	1,20,000	
Total liabilities	3,00,000	Total Assets	3,00,000	

Workings:
1. Total debt = 0.50 x Owner's Equity = 0.50 x Rs. 2,00,000 = Rs. 1,00,000
    Further, Current debt to Total debt = 0.30
    So, Current debt = 0.30 × Rs. 1,00,000 = **Rs. 30,000**   }{1/2 M}
    Long term debt = Rs. 1,00,000 - Rs. 30,000 = **Rs. 70,000** }{1/2 M}
2. Fixed assets = 0.60 × Owner's Equity = 0.60 × Rs. 2,00,000 = **Rs. 1,20,000** }{1 M}
3. Total Liabilities = Total Debt + Owner's Equity
              = Rs. 1,00,000 + Rs. 2,00,000 = **Rs. 3,00,000** }{1 M}
    Total Assets = Total Liabilities = Rs. 3,00,000
    Total assets to turnover = 2 Times; Inventory turnover = 10
    Times Hence, Inventory /Total assets = 2/10=1/5,
    Therefore Inventory = Rs. 3,00,000/5 = **Rs. 60,000** }{1 M}

Answer 2:
Calculation of Working Capital Requirement
(A)   Current Assets

(i)	Stock of material for 4 weeks (96,000 × 40 × 4/52)		2,95,385	}{1 M}
(ii)	Work in progress for ½ month or 2 weeks			
	Material (96,000 × 40 × 2/52) .50	73,846		
	Labour (96,000 × 15 × 2/52) .50	27,692		
	Overhead (96,000 × 30 × 2/52) .50	55,385	1,56,923	}{1 M}
(iii)	Finished stock (96,000 × 85 × 4/52)		6,27,692	}{1 M}
(iv)	Debtors for 2 months (96,000 × 85 × 8/52)		12,55,385	}{1 M}
	Cash in hand or at bank		50,000	}{1 M}
	Investment in Current Assets		23,85,385	

(B)   Current Liabilities

(i)	Creditors for one month (96,000 × 40 × 4/52)		2,95,385	}{1 M}
(ii)	Average lag in payment of expenses			
	Overheads (96,000 × 30 × 4/52)	2,21,538 }{1 M}		
	Labour (96,000 × 15 × 3/104) {1 M}{	41,538	2,63,076	
	Current Liabilities		5,58,461	
	Net working capital (A – B)		18,26,924	}{2 M}

Answer 3:

Ascertainment of probable price of shares of Akash Limited

Particulars	Plan-I	Plan-II
	If Rs. 4,00,000 is raised as debt (Rs.)	If Rs. 4,00,000 is raised by issuing equity shares (Rs.)
Earning Before Interest and Tax (EBIT) {20% of new capital i.e. 20% of (Rs. 14,00,000 + Rs. 4,00,000)} (Refer Working Note 1)	3,60,000	3,60,000
Less: Interest on old debentures (10% of Rs. 4,00,000) {3 M}	(40,000)	(40,000)
Less: Interest on new debt (12% of Rs. 4,00,000)	(48,000)	--
Earning Before Tax (EBT)	2,72,000	3,20,000
Less: Tax @ 50%	(1,36,000)	(1,60,000)
Earnings for equity shareholders (EAT)	1,36,000	1,60,000
No. of Equity Shares (Refer Working Note 2)	30,000	40,000
Earnings Per Share (EPS)	Rs. 4.53	Rs. 4.00
Price/Earnings (P/E) Ratio (Refer Working Note 3)	8	10
Probable Price Per Share (PE Ratio x EPS)	Rs. 36.24	Rs. 40

{3 M}

Working Notes:

1.   Calculation of existing Return of Capital Employed (ROCE)   :

	(Rs.)
Equity Share Capital (30,000 shares x Rs. 10)	3,00,000
10% Debentures $\left(Rs.\,40,000 \times \dfrac{100}{10} \right)$	4,00,000
Reserves and Surplus	7,00,000
Total Capital Employed	14,00,000
Earnings before interest and tax (EBIT) (given)	2,80,000
ROCE = $\dfrac{Rs.\,2,80,000}{Rs.\,14,00,000} \times 100$	20%

{2 M}

2.   Number of Equity Shares to be issued in Plan - II:

$$= \frac{Rs.\,4,00,000}{Rs.\,40} = 10,000 \; shares$$

{1 M}

Thus, after the issue total number of shares = 30,000 + 10,000 = 40,000 shares

3.   **Debt/Equity Ratio if Rs. 4,00,000 is raised as debt:**

$$= \frac{Rs.\, 8,00,000}{Rs.\, 18,00,000} \times 100 = 44.44\%$$ **{1 M}**

As the debt equity ratio is more than 40% the P/E ratio will be brought down to 8 in Plan-I

Answer 4:
Working Notes:
Determination of Cost of capital:

(i)   Cost of Debentures (K_d)

$$K_d = \frac{I(1-t) + \dfrac{RV - NP}{n}}{\dfrac{RV + NP}{2}}$$

Where,

I   = Annual Interest Payment

NP = Net proceeds of debentures net of flotation costs RV

       = Redemption value of debentures

t   = Income tax rate

n   = Life of debentures

$$K_d = \frac{Rs.\, 8(1-0.5) + \dfrac{Rs.\, 100 - Rs.\, 96*}{20 \ years}}{\dfrac{Rs.\, 100 + Rs.\, 96*}{2}} = \frac{Rs.\, 4.20}{Rs.\, 98} = 0.0429 \ or \ 4.29\%$$ **{1$^{1/2}$ M}**

   *Net Proceeds   = Par value per shares - 4% Floatation cost per share

                         = Rs. 100 - 4% of Rs. 100 = Rs. 96

(ii)   Cost of Preference Shares (K_p)

$$K_p = \frac{pn + \dfrac{RV - NP}{n}}{\dfrac{RV + NP}{2}}$$

Where,

    PD = Preference Dividend per share

    NP = Net proceeds of share net of flotation costs RV

    = Redemption value of shares

    n   = Life of preference shares

$$K_p = \frac{Rs.\, 10 + \dfrac{Rs.\, 100 - Rs.\, 95*}{15 \ years}}{\dfrac{Rs.\, 100 + Rs.\, 95*}{2}} = \frac{Rs.\, 10.33}{Rs.\, 97.5} = 0.106 \ or \ 10.60\%$$ **{1$^{1/2}$ M}**

    *Net Proceeds = Par value per shares - 5% Flotation cost per share

                      = Rs. 100 - 5% of Rs. 100 = Rs. 95

(iii) Cost of Equity (K_e)

$$K_e = \frac{Expected \ Dividend\,(D_1)}{Current \ Market \ Price\,(P_0)} + Growth\,rate\,(g) = \frac{Rs.\, 2}{Rs.\, 22 - Rs.\, 2} + 0.05 = 0.15 \ or \ 15\%$$ **{1 M}**

(i)   Computation of Weighted Average Cost of Capital based on Book Value Weights

Source of Capital	Book Value (Rs.)	Weights to Total Capital	After tax Cost of capital (%)	WACC (%)
Debentures	8,00,000	0.40	4.29	1.716
Preference Shares	2,00,000	0.10	10.60	1.060
Equity Shares	10,00,000	0.50	15.00	7.500
	20,00,000	1.00		10.276

{3 M}

(ii)   Computation of Weighted Average Cost of Capital based on Market Value Weights

Source of Capital	Market Value (Rs.)	Weights to Total Capital	After tax Cost of capital (%)	WACC (%)
Debentures (8,000 units × Rs. 110)	8,80,000	0.2651	4.29	1.137
Pref. Shares (2,000 shares × Rs. 120)	2,40,000	0.0723	10.60	0.766
Equity Shares (1,00,000 shares × Rs. 22)	22,00,000	0.6626	15.00	9.939
	33,20,000	1.00		11.842

{3 M}

Answer 5:

(i)   **Financial leverage**

Combined Leverage= Operating Leverage (OL) X Financial Leverage (FL) 2.8   = 1.4 X FL   Or,   FL = 2

Financial Leverage   = 2

{2 M}

(ii)   **P/V Ratio and EPS**

Operating leverage $= \dfrac{\text{Contribution (C)}}{\text{C - Fixed Cost (FC)}} \times 100$

$1.4 = \dfrac{C}{C - 2,04,000}$ Or, 1.4 (C − 2,04,000) = C

Or, 1.4 C − 2,85,600 = C   Or, $C = \dfrac{₹\,2,85,600}{0.4} =$ C = 7,14,000

{2 M}

Now, P/V ratio $= \dfrac{\text{Contribution (C)}}{\text{Sales (S)}} \times 100 = \dfrac{₹\,7,14,000}{₹\,30,00,000} \times 100 = 23.8\%$ {1 M}

Therefore, P/V Ratio = 23.8%

EPS $= \dfrac{\text{Profit after tax}}{\text{No. of equity shares}}$

EBT   = Sales − V − FC − Interest

        = ₹ 30,00,000 − ₹ 22,86,000 − ₹ 2,04,000 − ₹ 2,55,000   {1/2 M}

        = ₹ 2,55,000

PAT   = EBT − Tax

        = ₹ 2,55,000 − ₹ 76,500 = ₹ 1,78,500   {1/2 M}

EPS $= \dfrac{₹\,1,78,500}{₹\,1,70,000} = 1.05$ {1 M}

(iii)   **Assets turnover**

Assets turnover $= \dfrac{\text{Sales}}{\text{Total Assets}} = \dfrac{₹\,30,00,000}{₹\,38,25,000} = 0.784$ {1/2 M}

0.784 < 1.5 means lower than industry turnover.   {1/2 M}

(iv)   EBT zero means 100% reduction in EBT. Since combined leverage is 2.8, sales have to be dropped by 100/2.8 = 35.71%. Hence new sales will be
Rs. 30,00,000 x (100 – 35.71) = Rs. 19,28,700.
Therefore, at Rs. 19,28,700 level of sales, the Earnings before Tax of the company will be equal to zero.   {2 M}

Answer 6:
(a)   Functions of Finance Manager
The Finance Manager's main objective is to manage funds in such a way so as to ensure their optimum utilisation and their procurement in a manner that the risk, cost and control considerations are properly balanced in a given situation. To achieve these objectives the Finance Manager performs the following functions:

(i)   Estimating the requirement of Funds: Both for long-term purposes i.e. investment in fixed assets and for short-term i.e. for working capital. Forecasting the requirements of funds involves the use of techniques of budgetary control and long-range planning.

(ii)   Decision regarding Capital Structure: Once the requirement of funds has been estimated, a decision regarding various sources from which these funds would be raised has to be taken. A proper balance has to be made between the loan funds and own funds. He has to ensure that he raises sufficient long term funds to finance fixed assets and other long term investments and to provide for the needs of working capital.

(iii) Investment Decision: The investment of funds, in a project has to be made after careful assessment of various projects through capital budgeting. Assets management policies are to be laid down regarding various items of current assets. For e.g. receivable in coordination with sales manager, inventory in coordination with production manager.

(iv)   Dividend decision: The finance manager is concerned with the decision as to how much to retain and what portion to pay as dividend depending on the company's policy. Trend of earnings, trend of share market prices, requirement of funds for future growth, cash flow situation etc., are to be considered.   {1/2 M Each}

(v)   Evaluating financial performance: A finance manager has to constantly review the financial performance of the various units of organisation generally in terms of ROI Such a review helps the management in seeing how the funds have been utilised in various divisions and what can be done to improve it.

(vi)   Financial negotiation: The finance manager plays a very important role in carrying out negotiations with the financial institutions, banks and public depositors for raising of funds on favourable terms.

(vii) Cash management: The finance manager lays down the cash management and cash disbursement policies with a view to supply adequate funds to all units of organisation and to ensure that there is no excessive cash.

(viii) Keeping touch with stock exchange: Finance manager is required to analyse major trends in stock market and their impact on the price of the company share.

Answer:
(b)   Inter-relationship between Investment, Financing and Dividend Decisions
The finance functions are divided into three major decisions, viz, investment, financing and dividend decisions. It is correct to say that these decisions are interrelated because the underlying objective of these three decisions is the same, i.e. maximisation of shareholders' wealth. Since investment, financing and dividend decisions are all interrelated, one has to consider the joint impact of these decisions on the market price of the company's shares and these decisions should also be solved jointly. The decision to invest in a new project needs the finance for the investment The financing decision, in turn, is influenced by and   {3 M}

influences dividend decision because retained earnings used in internal financing deprive shareholders of their dividends. An efficient financial management can ensure optimal joint decisions. This is possible by evaluating each decision in relation to its effect on the shareholders' wealth.

The above three decisions are briefly examined below in the light of their inter-relationship and to see how they can help in maximising the shareholders' wealth i.e. market price of the company's shares.

Investment decision: The investment of long term funds is made after a careful assessment of the various projects through capital budgeting and uncertainty analysis. However, only that investment proposal is to be accepted which is expected to yield at least so much return as is adequate to meet its cost of financing. This have an influence on the profitability of the company and ultimately on its wealth.

Financing decision: Funds can be raised from various sources. Each source of funds involves different issues. The finance manager has to maintain a proper balance between long-term and short-term funds. With the total volume of long-term funds, he has to ensure a proper mix of loan funds and owner's funds. The optimum financing mix will increase return to equity shareholders and thus maximise their wealth.

Dividend decision: The finance manager is also concerned with the decision to pay or declare dividend. He assists the top management in deciding as to what portion of the profit should be paid to the shareholders by way of dividends and what portion should be retained in the business. An optimal dividend pay-out ratio maximises shareholders' wealth.

Answer:

(c)   Debt Securitisation: It is a method of recycling of funds. It is especially beneficial to financial intermediaries to support the lending volumes. Assets generating steady cash flows are packaged together and against this asset pool, market securities can be issued, e.g. housing finance, auto loans, and credit card receivables.   **{3 M}**

SECTION - B
Q. No. 7 is compulsory.
Answer any three from the rest.
In case, any candidate answers extra question(s)/sub-question(s) over and above the required number, then only the requisite number of questions top answered in the answer book shall be valued and subsequent extra question(s) answered shall be ignored.
Working Notes should form part of the respective answer.

Answer 7:

(a)   (i)   **Value added by Firm A and Firm B**

Gross Value Added (GVAMP) of Firm A = Gross value of output (GVOMP) of Firm A

       - Intermediate consumption of firm A

       = (Sales by firm A + Change in stock of firm A) – (Purchases by firm A)

       = [(ii) + (iv)] – (vii) = (1500 + 200) - 270

       = **1430 Crores**

Gross Value Added (GVAMP) of Firm B = Gross value of output (GVOMP) of firm B

       -Intermediate consumption of firm B

       = [Sales by firm B to general government + Sales by firm B to households + (Closing stock of firm B - Opening stock of firm B)] – Purchases by firm B

       = [(300 + 1350) + (140 - 130)] - 300

       = 1650 + 10 - 300 = Rs. **1360 Crores**   {2 M}

   (ii)   **Gross Domestic product at Market Price:**

= Value added by firm A + Value added by firm B = 1430 + 1360 = Rs. **2790 Crores**   {1¹ᐟ² M}

   (iii)   **Net Domestic Price at Factor Cost:**

NDP_{FC} = Gross Domestic product at market price - Consumption of fixed capital – Indirect taxes paid by both the firms

= 2790 - (ix) - (viii) = 2790 - 720 – (375 -0) = Rs. **1695 Crores**   {1¹ᐟ² M}

Answer:

(b) Changes in exchange rates portray depreciation or appreciation of one currency against another. The terms, `currency appreciation' and 'currency depreciation' describe the movements of the exchange rate. Currency appreciates when its value increases with respect to the value of another currency or a basket of other currencies. On the contrary, currency depreciates when its value falls with respect to the value of another currency or a basket of other currencies. If the Rupee dollar exchange rate changes from $1 = Rs., 65 to $1 = Rs. 68, the value of the Indian Rupee has diminished or Indian Rupee has depreciated and the US dollar has appreciated. On the contrary, home-currency appreciation or foreign-currency depreciation takes place when there is a decrease in the home currency price of foreign currency (or alternatively, an increase in the foreign currency price of home currency). The home currency thus becomes relatively more valuable. Under a floating rate system, if for any reason, the demand curve for foreign currency shifts to the right representing increased demand for foreign currency, and supply curve remains unchanged, then the exchange value of foreign currency rises and the domestic currency depreciates in value.   {1 M}

Following are the impact of exchange rate changes on the real economy:

The developments in the foreign exchange markets affect the domestic economy

both directly and indirectly. All else equal, an appreciation(depreciation) of a country's currency raises (decreases) the relative price of its exports and lowers (increases) the relative price of its imports leading to changes in import and export volumes and consequently on import spending and export revenue. Depreciation adversely affects importers as they have to pay more domestic currency on the same quantity of imports and benefits exporters as forex earnings will fetch more in terms of domestic currency.

For an economy where exports are significantly high, a depreciated currency would mean a lot of gain. Depreciation of domestic currency primarily decreases the relative price of domestically produced goods and diverts spending from foreign goods to domestic goods. Increased demand, both for domestic import-competing goods and for exports encourages economic activity and creates output expansion. Overall, the outcome of exchange rate depreciation is an expansionary impact on the economy at an aggregate level.

As a result of depreciation or devaluation, the terms of trade of the nation can rise, fall or remain unchanged, depending on whether price of exports rises by more than, less than or same percentages as price of imports. Depreciation also can have a positive impact on country's trade deficit as it makes imports more expensive for domestic consumers and exports cheaper for foreigners. However, the fiscal health of a country whose currency depreciates is likely to be affected with rising import payments and consequent rising current account deficit (CAD) and diminished growth prospects of overall economy. **{1 M}**

Depreciation is also likely to fuel consumer price inflation, directly through its effect on prices of imported consumer goods and also due to increased demand for domestic goods. The impact will be greater if the composition of domestic consumption baskets consists more of imported goods. Indirectly, cost push inflation may result through possible escalation in the cost of imported components and intermediaries used in production.

When a country's currency depreciates, production of export goods and import substitutes becomes more profitable. Therefore, factors of production will be induced to move into the tradable goods sectors and out of the non-tradable goods sectors. By lowering export prices, currency depreciation helps increase the international competitiveness of domestic industries, increases the volume of exports, augments windfall profits in export oriented sectors and import-competing industries and promotes trade balance. If exports originate from labour-intensive industries, increased export prices will have spiraling effects on wages, employment and income. If inputs and components for manufacturing are mostly imported and cannot be domestically produced, increased import prices will increase firms' cost of production, push domestic prices up and decrease real output.

Foreign capital inflows are characteristically vulnerable to exchange rate fluctuations. Depreciating currency hits investor sentiments and has radical impact on patterns of international capital flows. Foreign investors are likely to be indecisive or highly cautious before investing in a country which has high exchange rate volatility. Foreign direct investment flows are likely to shrink and foreign portfolio investments are likely to flow into debt and equity. This may shoot up capital account deficits affecting the country's fiscal health. Reduced foreign investments also widen the gap between investments required for growth and actual investments. Over a period of time, unemployment is likely to mount in the economy. **{1 M}**

If investor sentiments are such that they anticipate further depreciation, there may be large scale withdrawal of portfolio investments and huge redemptions through global exchange traded funds leading to further depreciation of domestic currency. This may result in a highly volatile domestic equity market affecting the confidence of domestic investors.

Companies that have borrowed in foreign exchange through external commercial

borrowings (ECBs) but have not sufficiently hedged against foreign exchange risks would also be negatively impacted as they would require more domestic currency to repay their loans. A depreciated domestic currency would also increase their debt burden and lower their profits and impact their balance sheets adversely. Exchange rate fluctuations make financial forecasting more difficult for firms and larger amounts will have to be earmarked for insuring against exchange rate risks through hedging.

Investors who have purchased a foreign asset, or the corporation which floats a foreign debt, will find themselves facing foreign exchange risk. However, remittances to homeland by non-residents and businesses abroad fetch more in terms of domestic currency.

In case of foreign currency denominated government debts, currency depreciation will increase the interest burden and cause strain to the exchequer for repaying and servicing foreign debt.

Depreciation would enhance government revenues from import related taxes, especially if the country imports more of essential goods. Depreciation would also result in higher amount of local currency for a given amount of foreign currency borrowings of government.

Answer:

(c) Common access resources or common pool resources are a special class of impure public goods which are non-excludable as people cannot be excluded from using them. These are rival in nature and their consumption lessens the benefits available for others. This rival nature of common resources is what distinguishes them from pure public goods, which exhibit both non-excludability and non-rivalry in consumption. They are generally available free of charge. Some important natural resources fall into this category. **{1 M}**

Since price mechanism does not apply to common resources, producers and consumers do not pay for these resources and therefore, they overuse them and cause their depletion and degradation. This creates threat to the sustainability of these resources and, therefore, the availability of common access resources for future generations. **{1 M}**

Economists use the term 'tragedy of the commons' to describe the problem which occurs when rivalrous but non excludable goods are overused, to the disadvantage of the entire world.

Answer 8:

(a) Since FDI involves setting up of production base (in terms of factories, power plants, etc.) it generates direct employment in the recipient country. Subsequent FDI as well as domestic investments propelled in the downstream and upstream projects that come up in multitude of other services generate multiplier effects on employment and income. FDI not only creates direct employment opportunities but also, through backward and forward linkages, it is able to generate indirect employment opportunities as well. It is also argued that more indirect employment will be generated to persons in the lower-end services sector occupations thereby catering to an extent even to the less educated and unskilled engaged in those units. This impact is particularly important if the recipient country is a developing country with an excess supply of labour caused by population pressure. **{2 M}**

Foreign direct investments also promote relatively higher wages for skilled jobs. However, jobs that require expertise and entrepreneurial skills for creative decision making may generally be retained in the home country and therefore the host country is left with routine management jobs that demand only lower levels of skills and ability. This may result in 'crowding in' of people in jobs requiring low skills, perpetuation of low labour standards and differential treatment. **{1 M}**

FDIs are likely use labor-saving technology and capital-intensive methods in a labour - abundant country and cause labour displacement. Such technology is

inappropriate for a labour-abundant country as it does not support generation of jobs which is a crucial requirement to address poverty and unemployment which are the two fundamental areas of concern for the less developed countries. Not only that foreign entities fail to support employment generation, but they may also drive out domestic firms from the industry resulting in serious problems of displacement of labour.

Answer:

(b) Consumption function is the functional relationship between aggregate consumption expenditure and aggregate disposable income, expressed as C = f (Y); shows the level of consumption (C) corresponding to each level of disposable income (Y) **{1 M}**

Aggregate expenditures in excess of output lead to a higher price level once the economy reaches full employment. Nominal output will increase, but it merely reflects higher prices, rather than additional real output. **{1 M}**

Answer:

(c) The Central Government has notified 4 per cent Consumer Price Index (CPI) inflation as the target for the period from August 5, 2016 to March 31, 2021 with the upper tolerance limit of 6 per cent and the lower tolerance limit of 2 per cent. The RBI is mandated to publish a Monetary Policy Report every six months, explaining the sources of inflation and the forecasts of inflation for the coming period of six to eighteen months. **{1 M}**

The following factors are notified by the central government as constituting a failure to achieve the inflation target:

(a)   the average inflation is more than the upper tolerance level of the inflation target for any three consecutive quarters; or **{1/2 M}**

(b)   the average inflation is less than the lower tolerance level for any three consecutive quarters. **{1/2 M}**

The choice of CPI was made because it closely reflects cost of living and has larger influence on inflation expectations compared to other anchors. With this step, India is following countries such as the New Zealand, the USA, the UK, European Union, and Brazil. Although in recent times many of the countries are moving away from this approach and the targeting nominal GDP growth. **{1 M}**

Answer:

(d) There are two alternate theories in respect of determination of money supply. According to the first view, money supply is determined exogenously by the central bank. The second view holds that the money supply is determined endogenously by changes in the economic activities which affect people's desire to hold currency relative to deposits, rate of interest, etc. The current practice is to explain the determinants of money supply based on 'money multiplier approach' which focuses
on the relation between the money stock and money supply in terms of the monetary base or high-powered money. This approach holds that total supply of nominal money in the economy is determined by the joint behaviour of the central bank, the commercial banks and the public. **{1 M}**

The money supply is defined as

$$M = m \times MB$$

Where M is the money supply, *m* is money multiplier and MB is the monetary base or high powered money.

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

{1 M}

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.

If some portion of the increase in high-powered money finds its way into currency, this portion does not undergo multiple deposit expansion. In other words, as a rule, an increase in the monetary base that goes into currency is not multiplied, whereas an increase in monetary base that goes into supporting deposits is multiplied.

Answer 9:

(a) Many developed and developing economies are facing the challenge of rising inequality in incomes and opportunities. Redistribution of income to ensure distributive justice is essentially a fiscal function. Fiscal policy is a chief instrument available for governments to influence income distribution and plays a significant role in reducing inequality and achieving equity and social justice. The distribution of income in the society is influenced by fiscal policy both directly and indirectly. While current disposable incomes of individuals and corporates are dependent on direct taxes, the potential for future earnings is indirectly influenced by the nation's fiscal policy choices. **{1 M}**

Government revenues and expenditure have traditionally been regarded as important instruments for carrying out desired redistribution of income. Each of these can be manipulated to achieve desired distributional effects.

- A progressive direct tax system appropriately designed to protect incentives ensures that those who have greater ability to pay contribute more towards defraying the expenses of government and that the tax burden is distributed fairly among the population.

- Indirect taxes can be differential: for example, the commodities which are primarily consumed by the richer income group, such as luxuries, are taxed heavily and the commodities the expenditure on which form a larger proportion of the income of the lower income group, such as necessities, are taxed light. Property taxes act both as a source of revenue and as an efficient redistributive instrument. **{2 M}**

- A carefully planned policy of public expenditure helps in redistributing income from the rich to the poorer sections of the society. This is done through spending programmes targeted on welfare measures for the disadvantaged, such as:
    (i) poverty alleviation programmes
    (ii) free or subsidized medical care, education, housing, essential commodities etc. to improve the quality of living of poor
    (iii) infrastructure provision on a selective basis
    (iv) various social security schemes and more efficient social transfers under which people are entitled to noncontributory, means-tested social pensions, conditional cash transfer programs, unemployment relief, sickness allowance etc. **{2 M}**
    (v) subsidized production of products of mass consumption
    (vi) public production and/ or grant of subsidies to ensure sufficient supply of essential goods, and
    (vii) strengthening of human capital for enhancing employability etc.

The design of redistribution policies should justify both redistributive and efficiency objectives. Choice of a progressive tax system with high marginal taxes may act as a strong deterrent to work, save and invest. Therefore, the tax structure has to be carefully framed to mitigate possible adverse impacts on production and efficiency. Additionally, the redistributive fiscal policy and the extent of spending on redistribution should be consistent with the macroeconomic policy objectives, especially macroeconomic stability of the nation.

Answer:

(b) Cash Reserve Ratio (CRR) refers to the fraction of the total net demand and time liabilities (NDTL) of a scheduled commercial bank in India which it should maintain as cash deposit with the Reserve Bank. The RBI may set the ratio in keeping with the broad objective of maintaining monetary stability in the economy. The credit creation capacity of commercial banks is inversely related the cash reserve ratio. Higher the CRR, lower will be the credit creation and vice versa. **{2 M}**

CRR has, in recent years, assumed significance as one of the important quantitative tools aiding in liquidity management. Higher the CRR with the RBI, lower will be the liquidity in the system and vice versa. During deflation, the RBI reduces the CRR in order to enable the banks to expand credit and increase the supply of money available in the economy. In order to contain credit expansion during periods of inflation, the RBI increases the CRR. **{1 M}**

Answer:

(c) Dumping occurs when manufacturers sell goods in a foreign country below the sales prices in their domestic market or below their full average cost of the product. Dumping may be persistent, seasonal, or cyclical. Dumping may also be resorted to as a predatory pricing practice to drive out established domestic producers from the market and to establish monopoly position. Dumping is international price discrimination favouring buyers of exports, but in fact, the exporters deliberately forego money in order to harm the domestic producers of the importing country and to gain market share. This is an unfair trade practice and constitutes a threat to domestic producers. **{1 M}**

Anti-dumping measures consist of imposition of additional import duties to offset the effects of dumping. These measures are initiated as safeguards to offset the foreign firm's unfair price advantage. This is justified only if the domestic industry is seriously injured by import competition, and protection is in the national interest (that is, the associated costs to consumers would be less than the benefits that would accrue to producers). **{1 M}**

Answer 10:

(a) Market Stabilization Scheme for monetary management was introduced in 2004 following a MoU between the Reserve Bank of India (RBI) and the Government of India (GoI) with the primary aim of aiding the sterilization operations of the RBI. **{1 M}**

(Sterilization is the process by which the monetary authority sterilizes the effects of significant foreign capital inflows on domestic liquidity by off-loading parts of the stock of government securities held by it). Under this scheme, the Government of India borrows from the RBI (such borrowing being additional to its normal borrowing requirements) and issues treasury-bills/dated securities for absorbing excess liquidity from the market arising from large capital inflows. **{2 M}**

Answer:

(b) Local content requirements (LCRs) are conditions imposed by a host country government that require investing firms to purchase and use domestically manufactured goods or domestically supplied services in order to operate in an economy. The fraction of a final good to be procured locally may be specified either in value terms (e.g. 25% of the value of a product must be locally produced), by requiring that some minimum share of the value of a good represent home value added, or in physical units (eg. 50% of component parts for a product must be locally produced). **{2 M}**

From the viewpoint of domestic producers of inputs, local content requirement provides greater demand which is not necessarily associated to their competitiveness and for components/ parts manufacturers gives protection in the same way that an import quota would. Local content requirement benefits producers and not consumers because such requirements may raise the prices. **{1 M}**

Answer:

(c) The GATT lost its relevance by 1980s because-

(i) It was obsolete to the fast evolving contemporary complex world trade scenario characterized by emerging globalization.

(ii) International investments had expanded substantially.

(iii) Intellectual property rights and trade in services were not covered by GATT.

(iv) World merchandise trade increased by leaps and bounds and was beyond its scope.

(v) The ambiguities in the multilateral system could be heavily exploited.

(vi) Efforts at liberalizing agricultural trade were not successful.

(vii) There were inadequacies in institutional structure and dispute settlement system.

(viii) It was not a treaty and therefore terms of GATT were binding only insofar as they are not incoherent with a nation's domestic rules.

{Any 4 Points each 1/2 Mark}

Answer:

(d) GDP measures what is produced or created over the current time period and excludes all non-production transactions. Only incomes earned by owners of primary factors of production for services rendered in production are included in national income. **{1 M}**

Transfer payments, both private and government, are made without goods or services being received in return. These payments do not correspond to return for contribution to production because they do not directly absorb resources or create output. Therefore, transfer incomes such as pensions and other social security payments are excluded from national income. **{1 M}**

Answer 11:

(a) The major issues are:

(i) The progress of multilateral negotiations on trade liberalization is very slow and the requirement of consensus among all members acts as a constraint and creates rigidity in the system. As a result, countries find regionalism a plausible alternative.

(ii) The complex network of regional agreements introduces uncertainties and murkiness in the global trade system.

(iii) While multilateral efforts have effectively reduced tariffs on industrial goods, the achievement in liberalizing trade in agriculture, textiles, and apparel, and in many other areas of international commerce has been negligible.

(iv) The latest negotiations, such as the Doha Development Round, have run into problems, and their definitive success is doubtful.

(v) Most countries, particularly developing countries are dissatisfied with the WTO because, in practice, most of the promises of the Uruguay Round agreement to expand global trade has not materialized.

(vi) The developing countries have raised a number of concerns and a few are presented here:

- The real expansion of trade in the three key areas of agriculture, textiles and services has been dismal.
- Protectionism and lack of willingness among developed countries to provide market access on a multilateral basis has driven many developing countries to seek regional alternatives.
- The developing countries have raised a number of issues in the Doha Agenda in respect of the difficulties that they face in implementing the present agreements.
- The North-South divide apparent in the WTO ministerial meets has fuelled the apprehension of developing countries about the prospect of trade expansion under the WTO regime.

{ Any 6 Points each 1/2 Mark}

- Developing countries complain that they face exceptionally high tariffs on selected products in many markets and this obstructs their vital exports.
- Another major issue concerns 'tariff escalation' where an importing country protects its processing or manufacturing industry by setting lower duties on imports of raw materials and components, and higher duties on finished products.
- There is also possible erosion of preferences i.e. the special tariff concessions granted by developed countries on imports from certain developing countries have become less meaningful because of the narrowing of differences between the normal and preferential rates.
- The least-developed countries find themselves disproportionately disadvantaged and vulnerable with regard to adjustments due to lack of human as well as physical capital, poor infrastructure, inadequate institutions, political instabilities etc.

Answer:

(b)   Yes, there is still scope for mutually beneficial trade. **{1 M}**

The first step is that nation should specialize in the production and export of the commodity in which its absolute disadvantage is smaller and import the commodity in which its absolute disadvantage is greater. This can be explained with the help of an example (Theory of Comparative Advantage). **{2 M}**

Answer:

(c)   The market outcomes of different situations are given below;

(i)   Negative consumption externality; social cost not accounted for; market failure; overproduction **{1 M}**

(ii)   Negative consumption externality; environmental externality; wear and tear of roads; increased fuel consumption; added insecurity imposed on others; social cost not accounted for; overproduction. **{1 M}**

Answer:

(d)   Mercantilism, which was the policy of Europe's great powers, was based on the premise that national wealth and power are best served by increasing exports and collecting precious metals in return. Mercantilists also believed that the more gold and silver a country accumulates, the richer it becomes. Mercantilism advocated maximizing exports in order to bring in more "specie" (precious metals) and minimizing imports through the state imposing very high tariffs on foreign goods. This view argues that trade is a 'zero-sum game', with winners **{1 M}** who win does so only at the expense of losers and one country's gain is equal to another country's loss, so that the net change in wealth or benefits among the participants is zero. The arguments put forth by mercantilists were later proved to have many shortcomings by later economists. Although it is still very important theory which explains policies followed by many big and fast growing economies in Asia. **{1 M}**

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