Answer 1:
(a)

<table>
<thead>
<tr>
<th>Liabilities</th>
<th>Rs.</th>
<th>Assets</th>
<th>Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>5,00,000</td>
<td>Fixed Assets</td>
<td>10,00,000</td>
</tr>
<tr>
<td>Reserve</td>
<td>3,00,000</td>
<td>Current Assets:</td>
<td></td>
</tr>
<tr>
<td>Debts</td>
<td>5,00,000</td>
<td>Stock</td>
<td>2,00,000</td>
</tr>
<tr>
<td>Current Liabilities</td>
<td>4,00,000</td>
<td>Debtors</td>
<td>2,50,000</td>
</tr>
<tr>
<td></td>
<td>17,00,000</td>
<td>Cash</td>
<td>7,00,000</td>
</tr>
</tbody>
</table>

Working Note: (a) Calculation of cost of goods sold:

| Sales                   | 15,00,000 |
| Less: Gross Profit (20%) | 3,00,000  |
| Cost of goods sold       | 12,00,000 |

(b) Closing Stock
Cost of Goods Sold
\[
\text{Stock Turnover Ratio} \times \text{Sales} = \frac{\text{Rs.12,00,000}}{6} = \text{Rs.2,00,000}\{1/2 \text{ M}\}
\]

(c) Debtors
Debt Collection Period × Sales
\[
\frac{2 \times \text{Rs.15,00,000}}{12} = \text{Rs.2,50,000}\{1/2 \text{ M}\}
\]

(d) Fixed Assets
Cost of Goods Sold
\[
\text{Fixed Assets Turnover} = \frac{\text{Rs.12,00,000}}{1.2} = \text{Rs.10,00,000}\{1/2 \text{ M}\}
\]

(e) Current Assets (CA) = 1.75 Current Liabilities (CL)
Liquid Assets (LA) = 1.25 Current Liabilities (CL)
LA + Stock-LA = CA – LA = 0.50 CL
Rs. 2,00,000 = 0.50 CL
Current Liabilities = Rs. 4,00,000 \{1/2 M\}
Current Assets = 1.75 x CL
= 1.75 × Rs. 4,00,000 = Rs. 7,00,000 \{1/2 M\}
Cash = Current Assets – Debtors – Stock
= Rs. 7,00,000 – Rs. 2,50,000 – Rs. 2,00,000
= Rs. 2,50,000 \{1/2 M\}

(f) Net Worth
\[
\text{Net Worth} = \frac{\text{Fixed Assets}}{1.25} = \frac{\text{Rs.10,00,000}}{1.25} = \text{Rs.8,00,000}\{1/2 \text{ M}\}
\]
(g) Capital = 1.0 = Rs. 5,00,000
Reserve = 0.6 = Rs. 3,00,000
Net Worth = 1.6 = Rs. 8,00,000

(h) Debt = Equity Shareholders Funds x Capital Gearing Ratio
= Rs. 8,00,000 x 0.625 = Rs. 5,00,000

Answer:

(b) Price Earning Ratio = \[
\frac{\text{Market Price}}{\text{EPS}}
\]
\[
8 = \frac{\text{Market Price}}{5}
\]
\[
\therefore \text{Market Price} = 8 \times 5 = \text{Rs. 40}
\]
\[
\text{EPS} = \frac{\text{Earnings}}{\text{Number of Outstanding Shares}} = \frac{10,00,000}{2,00,000} = \text{Rs. 5}
\]
\[
\text{DPS} = \frac{\text{Dividend Paid}}{\text{No. of Shares}} = \frac{6,00,000}{2,00,000} = \text{Rs. 3}
\]
\[
\text{Dividend Payout Ratio} = \frac{\text{DPS}}{\text{EPS}} \times 100 = \frac{3}{5} \times 100 = 60\%
\]

\(K_e\) is defined as reciprocal of P/E ratio

Therefore \[
K_e = \frac{1}{8} = .125 \text{ or } 12.5\% \quad \{1 \text{ M}\}
\]

In this firm, the rate of return on investment is 15% and cost of capital is 12.5%

Therefore, in such a case the Retention Ratio should be highest (i.e., 100%) to maximise the value of shares of the firm. In other words, dividend payout ratio should be 0%.

The value of share shall be as below if 100% Retention Ratio is maintained.

\[
P = \frac{D}{K_e} + \frac{(r/K_e)(E-D)}{K_e} = 0 + \frac{(0.15/0.125)(5-0)}{0.125}
\]
\[
\therefore [0]+[6 \div 0.125]= \text{Rs. 48}
\]

Comments: The present value of share is Rs. 40. However if dividend payout ratio is maintained at 0% the value shall be increased to Rs. 48. Therefore the present dividend policy (i.e. 60%) is not good. The company should change its dividend policy to 0%.

Answer:

(c) (i) Statement of Weighted Average Cost of Capital

<table>
<thead>
<tr>
<th>Project cost</th>
<th>Financing</th>
<th>Proportion of capital structure</th>
<th>After tax cost (1 – Tax 50%)</th>
<th>Weighted average cost (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upto Rs. 2 Lakhs</td>
<td>Debt</td>
<td>0.4</td>
<td>10 (1 – 0.5) = 5%</td>
<td>0.4 x 5 = 2.0</td>
</tr>
<tr>
<td></td>
<td>Equity</td>
<td>0.6</td>
<td></td>
<td>0.6 x 12 = 7.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.2%</td>
</tr>
<tr>
<td>Above Rs. 2 lakhs &amp; upto Rs. 5 Lakhs</td>
<td>Debt</td>
<td>0.4</td>
<td>11% (1 – 5 ) = 5.5%</td>
<td>0.4 x 5.5 = 2.2</td>
</tr>
<tr>
<td></td>
<td>Equity</td>
<td>0.6</td>
<td></td>
<td>0.6 x 13 = 7.8</td>
</tr>
</tbody>
</table>

\{4 \text{ M}\}

\{1 \text{ M}\}
Above Rs. 5 lakhs & upto Rs. 10 Lakhs

<table>
<thead>
<tr>
<th></th>
<th>Debt</th>
<th>Equity</th>
<th>Cost of capital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.4</td>
<td>0.6</td>
<td>12% (1 – 0.5) = 6%</td>
</tr>
<tr>
<td></td>
<td>0.4</td>
<td>0.6</td>
<td>14%</td>
</tr>
<tr>
<td>10.0%</td>
<td>0.4 x 6 = 2.4</td>
<td>0.6 x 14 = 8.4</td>
<td></td>
</tr>
</tbody>
</table>

Above Rs. 10 lakhs & upto Rs. 20 Lakhs

<table>
<thead>
<tr>
<th></th>
<th>Debt</th>
<th>Equity</th>
<th>Cost of capital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.4</td>
<td>0.6</td>
<td>13% (1 – 0.5) = 6.5%</td>
</tr>
<tr>
<td></td>
<td>0.4</td>
<td>0.6</td>
<td>14.5%</td>
</tr>
<tr>
<td>10.8%</td>
<td>0.4 x 6.5 = 2.6</td>
<td>0.6 x 14.5 = 8.7</td>
<td></td>
</tr>
</tbody>
</table>

Project Fund requirement Cost of capital

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Rs. 6.5 lakhs</td>
<td>10.8% (from the above table)</td>
</tr>
<tr>
<td>Y</td>
<td>Rs. 14 lakhs</td>
<td>11.3% (from the above table)</td>
</tr>
</tbody>
</table>

(ii) If a Project is expected to give after tax return of 10%, it would be acceptable provided its project cost does not exceed Rs. 5 lakhs or, after tax return should be more than or at least equal to the weighted average cost of capital.

Answer 2:

(A) Current Assets:

<table>
<thead>
<tr>
<th></th>
<th>Stock of Raw Material (16 x Rs. 180 x 30) or 8,64,000 x 30/300</th>
<th>Rs. 86,400</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stock of Packing Material (16 X Rs. 60 X 15) or 2,88,000 x 15/300</td>
<td>Rs. 14,400</td>
</tr>
<tr>
<td>2</td>
<td>Work-in-Progress</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Stock of Finished (200 x Rs. 450) or 21,60,000 x 200/4800</td>
<td>Rs. 90,000</td>
</tr>
<tr>
<td>4</td>
<td>Lag in Payment of Overheads (16 x Rs. 90 x 15) or 4,32,000 x 15/300</td>
<td>Rs. 21,600</td>
</tr>
<tr>
<td></td>
<td>Or (8,64,000 + 4,32,000 x 50% + 1,44,000 x 50% + 4,32,000 x 50%) x 7/300</td>
<td>Rs. 31,920</td>
</tr>
</tbody>
</table>

Total Current Assets (A) 3,95,520

(B) Current Liabilities:

<table>
<thead>
<tr>
<th></th>
<th>Creditors for Raw Material (16 x Rs. 180 x 21) or 8,64,000 x 21/300</th>
<th>Rs. 60,480</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Creditors for Packing Material (16 x Rs. 60 x 21) or 2,88,000 x 21/300</td>
<td>Rs. 20,160</td>
</tr>
<tr>
<td>2</td>
<td>Lag in Payment of Direct Expenses (16 x Rs. 30 x 15) or 1,44,000 x 15/300</td>
<td>Rs. 7,200</td>
</tr>
<tr>
<td>3</td>
<td>Lag in Payment of Overheads (16 x Rs. 90 x 15) or 4,32,000 x 15/300</td>
<td>Rs. 21,600</td>
</tr>
</tbody>
</table>

Total Current Liabilities (B) 1,09,440

(C) Net Working Capital (A – B)

<table>
<thead>
<tr>
<th></th>
<th>Contingency reserve required at 12% of act working capital</th>
<th>Rs. 34,330</th>
</tr>
</thead>
</table>

Total Working Capital Required 3,20,410

Working Notes:

(1) Production per day = \[\frac{400 \times 12}{300} = 16\text{ units}\]

(2) Selling Price and Cost per unit:

<table>
<thead>
<tr>
<th></th>
<th>Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Material (30% of Selling Price Rs. 600)</td>
<td>180</td>
</tr>
<tr>
<td>Packing Material (10% of Selling Price Rs. 600)</td>
<td>60</td>
</tr>
<tr>
<td>Direct Labour (15% of Selling Price Rs. 600)</td>
<td>90</td>
</tr>
<tr>
<td>Direct Expenses (5% of Selling Price Rs. 600)</td>
<td>30</td>
</tr>
<tr>
<td>Fixed Overheads [Rs. 4,32,000 + (400 x 12)]</td>
<td>90</td>
</tr>
<tr>
<td>Total Cost</td>
<td>450</td>
</tr>
<tr>
<td>Profit</td>
<td>150</td>
</tr>
<tr>
<td>Selling Price</td>
<td>600</td>
</tr>
</tbody>
</table>

(3) Work-in-Progress has been valued at 100% of Raw material and 50% of Labour and Overhead.

(4) Debtors has been valued at cost.
**Cost Sheet**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Material 400 x 12 x 180</td>
<td>8,64,000</td>
</tr>
<tr>
<td>Add: Direct Labour 400 x 12 x 90</td>
<td>4,32,000</td>
</tr>
<tr>
<td>Add: Direct Expenses 400 x 12 x 30</td>
<td>1,44,000</td>
</tr>
<tr>
<td><strong>Prime Cost</strong></td>
<td>14,40,000</td>
</tr>
<tr>
<td>Add: Factory Overhead</td>
<td>4,32,000</td>
</tr>
<tr>
<td><strong>Cost of Production</strong></td>
<td>18,72,000</td>
</tr>
<tr>
<td>Add: Packing Material 400 x 12 x 60</td>
<td>2,88,000</td>
</tr>
<tr>
<td><strong>Cost of Good Sold/Total Cost</strong></td>
<td>21,60,000</td>
</tr>
</tbody>
</table>

**Answer 3:**

**Statement showing the details of Present Values of Cash Inflows**

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Income Before Depn. and Tax</th>
<th>Depreciation</th>
<th>Net Income after Depn. and Tax</th>
<th>Tax</th>
<th>Net Income after Depn. and Tax</th>
<th>Cash Inflow</th>
<th>PV Factor 10%</th>
<th>Present Value of Cash Inflow</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>10,000</td>
<td>10,000</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>10,000</td>
<td>0.909</td>
<td>9,090</td>
</tr>
<tr>
<td>2.</td>
<td>11,000</td>
<td>10,000</td>
<td>1,000</td>
<td>500</td>
<td>500</td>
<td>10,500</td>
<td>0.826</td>
<td>8,673</td>
</tr>
<tr>
<td>3.</td>
<td>14,000</td>
<td>10,000</td>
<td>4,000</td>
<td>2,000</td>
<td>2,000</td>
<td>12,000</td>
<td>0.751</td>
<td>9,012</td>
</tr>
<tr>
<td>4.</td>
<td>15,000</td>
<td>10,000</td>
<td>5,000</td>
<td>2,500</td>
<td>2,500</td>
<td>12,500</td>
<td>0.683</td>
<td>8,538</td>
</tr>
<tr>
<td>5.</td>
<td>25,000</td>
<td>10,000</td>
<td>15,000</td>
<td>7,500</td>
<td>7,500</td>
<td>17,500</td>
<td>0.621</td>
<td>10,868</td>
</tr>
</tbody>
</table>

Total Present Value of Cash Inflow = 46,181

Depreciation = \( \frac{Cost \ of \ the \ Machine}{5} = \frac{50,000}{5} = 10,000 \)

Cash Inflow = Net Profit after tax but before depreciation or Net profit after Tax + Depreciation

(1) Pay-back Period:
Recovery of the Original Investment
= 1st year + 2nd year + 3rd year + 4th year
= 10,000 + 10,500 + 12,000 + 12,500 = 45,000 + 5,000/17,500 = 4.29 years\{2 M\}

(2) Average Rate of Return

\[
\text{Average Rate of Return} = \frac{Average \ Annual \ Income(after \ depn.\& \ Tax)}{Average \ Investment}
\]

Average Annual Income = \( \frac{0 + 500 + 2,000 + 2,500 + 7,500}{5} = \frac{12,500}{5} = 2,500 \)

Average Investment = \( \frac{Original \ Investment}{2} = \frac{50,000}{2} = 25,000 \)

Substitute the values of ARR = \( \frac{2,500}{25,000} \times 100 = 10\% \)\{2 M\}

(3) NPV at 10%
Total Present Value of cash inflow
Less: Original Investment
NPV

\( \text{Rs.} \)

\[
NPV = \frac{46,181}{50,000} = (-3,819) \{2 M\}
\]

(4) Profitability Index = \( \frac{PV \ of \ Cash \ Inflows}{Initial \ Cash \ Outlay} = \frac{46,181}{50,000} = 0.92 \)\{2 M\}
Answer 4:

**Alternative I:** Acquiring the asset by taking bank loan:

<table>
<thead>
<tr>
<th>Years</th>
<th>Interest (@15% p.a. on opening balance)</th>
<th>Depreciation (@15% WDV)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>1,50,000</td>
<td>1,50,000</td>
<td>1,50,000</td>
<td>1,20,000</td>
<td>90,000</td>
<td>60,000</td>
<td>30,000</td>
</tr>
<tr>
<td>(b)</td>
<td>Tax shield (@35%)</td>
<td>1,05,000</td>
<td>1,05,000</td>
<td>86,625</td>
<td>69,431</td>
<td>53,242</td>
<td>37,905</td>
</tr>
<tr>
<td></td>
<td>Interest less Tax shield (a)-(b)</td>
<td>45,000</td>
<td>33,375</td>
<td>20,569</td>
<td>6,758</td>
<td>(-7,905)</td>
<td>{1 M}</td>
</tr>
<tr>
<td></td>
<td>Principal Repayment</td>
<td>2,00,000</td>
<td>2,00,000</td>
<td>2,00,000</td>
<td>2,00,000</td>
<td>2,00,000</td>
<td>2,00,000</td>
</tr>
<tr>
<td></td>
<td>Total cash outflow</td>
<td>2,45,000</td>
<td>2,45,000</td>
<td>2,33,375</td>
<td>2,20,569</td>
<td>2,06,758</td>
<td>1,92,095</td>
</tr>
<tr>
<td></td>
<td>Discounting Factor @ 16%</td>
<td>0.862</td>
<td>0.743</td>
<td>0.641</td>
<td>0.552</td>
<td>0.476</td>
<td>{1 M}</td>
</tr>
<tr>
<td></td>
<td>Present Value</td>
<td>2,11,190</td>
<td>1,73,398</td>
<td>1,41,385</td>
<td>1,14,130</td>
<td>91,437</td>
<td>{1 M}</td>
</tr>
</tbody>
</table>

Total P.V of cash outflow =Rs. 7,31,540 \{1/2 M\}

**Alternative II:** Acquire the asset on lease basis

<table>
<thead>
<tr>
<th>Year</th>
<th>Lease Rentals Rs.</th>
<th>Tax Shield @ 35%</th>
<th>Net Cash Outflow</th>
<th>Discount Factor</th>
<th>Present Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3,34,000</td>
<td>1,16,900</td>
<td>2,17,100</td>
<td>0.862</td>
<td>1,87,140</td>
</tr>
<tr>
<td>2</td>
<td>3,34,000</td>
<td>1,16,900</td>
<td>2,17,100</td>
<td>0.743</td>
<td>1,61,305</td>
</tr>
<tr>
<td>3</td>
<td>3,34,000</td>
<td>1,16,900</td>
<td>2,17,100</td>
<td>0.641</td>
<td>1,39,161</td>
</tr>
<tr>
<td>4</td>
<td>3,34,000</td>
<td>1,16,900</td>
<td>2,17,100</td>
<td>0.552</td>
<td>1,19,839</td>
</tr>
<tr>
<td>5</td>
<td>3,34,000</td>
<td>1,16,900</td>
<td>2,17,100</td>
<td>0.476</td>
<td>1,03,340</td>
</tr>
</tbody>
</table>

Present value of Total Cash out flow = 7,10,785 \{3 M\}

1. Advice -By making Analysis of both the alternatives, it is observed that the present value of the cash outflow is lower in alternative II by Rs. 20,755 (i.e. Rs. 731,540 –Rs. 7,10,785) Hence, it is suggested to acquire the asset on lease basis.

**Answer 5:**

**Income Statement**

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Amount (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>75,00,000</td>
</tr>
<tr>
<td>Less: Variable cost (56% of 75,00,000)</td>
<td>42,00,000</td>
</tr>
<tr>
<td>Contribution</td>
<td>33,00,000</td>
</tr>
<tr>
<td>Less: Fixed costs</td>
<td>6,00,000</td>
</tr>
<tr>
<td>Earnings before interest and tax (EBIT)</td>
<td>27,00,000</td>
</tr>
<tr>
<td>Less: Interest on debt (@ 9% on Rs. 45 lakhs)</td>
<td>4,05,000</td>
</tr>
<tr>
<td>Earnings before tax (EBT)</td>
<td>22,95,000</td>
</tr>
</tbody>
</table>

(i) \[
\text{ROI} = \frac{\text{EBIT}}{\text{Capital employed}} \times 100 = \frac{\text{EBIT}}{\text{Equity + Debt}} \times 100
\]

\[
= \frac{Rs. 27,00,000}{Rs. (55,00,000+ 45,00,000)} \times 100 = 27\% \{1 M\}
\]

(ii) \[
\text{ROI} = 27\% \text{ and Interest on debt is 9%, hence, it has a favorable financial leverage.} \{1 M\}
\]
(iii) Capital Turnover = \( \frac{\text{Net Sales}}{\text{Capital}} \)
Or = \( \frac{\text{Rs. 75,00,000}}{\text{Rs. 1,00,00,000}} = 0.75 \)
Which is very low as compared to industry average of 3. \{1 M\}

(iv) Calculation of Operating, Financial and Combined leverages
(a) Operating Leverage = \( \frac{\text{Contribution}}{\text{EBIT}} = \frac{\text{Rs. 33,00,000}}{\text{Rs. 27,00,000}} = 1.22 \text{(approx)} \} \{1 M\}
(b) Financial Leverage = \( \frac{\text{EBIT}}{\text{EBT}} = \frac{\text{Rs. 27,00,000}}{\text{Rs. 22,95,000}} = 1.18 \text{(approx)} \} \{1 M\}
(c) Combined Leverage = \( \frac{\text{Contribution}}{\text{EBT}} = \frac{\text{Rs. 33,00,000}}{\text{Rs. 22,95,000}} = 1.44 \text{(approx)} \} \{1 M\}
Or = \text{Operating Leverage} \times \text{Financial Leverage} = 1.22 \times 1.18 = 1.44 \text{ (approx)}

(v) Operation Leverage is 1.22 So if sales is increased by 10%.
EBIT will be increased by 1.22 \times 10 \text{ i.e. 12.20% (approx)} \} \{1 M\}

(vi) Since the combined Leverage is 1.44 sales have to drop by 100/1.44 i.e. 89.44%
to bring EBT to Zero
Accordingly, New Sales = \( \text{Rs. 75,00,000} \times (1 \times 0.6944) = \text{Rs. 75,00,000} \times 0.3058 = \text{Rs. 22,92,000 (approx)} \} \{2 M\}
Hence at Rs. 22,92,000 sales level EBT of the firm will be equal to Zero.

(vii) Financial leverage is 1.18 So, if EBIT increase by 20% then EBT will increase by 1.18 \times 20 = 23.6\% \text{ (approx)} \} \{1 M\}

Answer 6
(a) Bridge finance refers, normally, to loans taken by the business, usually from commercial banks for a short period, pending disbursement of term loans by financial institutions, normally it takes time for the financial institution to finalize procedures of security, tie-up participation with other institutions etc. even though a positive appraisal of the project has been made. However, once the loans are approved in principle, firms in order not to lose further time in starting their projects arrange for bridge finance. Such temporary loan is normally repaid out of the proceeds of the principal term loans. It is secured by hypothecation of movable assets, personal guarantees and demand promissory notes. Generally rate of interest on bridge finance is higher as compared with that on term loans. \{3 M\}

Answer:
(b) Virtual Banking and its Advantages
Virtual banking refers to the provision of banking and related service through the use of information technology without direct recourse the bank by the customer. The advantage of virtual banking service are as follows:
- Lower cost of handling a transaction.
- The increased speed of response to customer requirement.
- The lower cost of operation branch network staff costs leads to cost efficiency.
Virtual banking allows the possibility of improved and a range of services being made available to the customer rapidly, accurately and at his convenience. \{2 M\}
Answer:
(c) **Concentration Banking:** In concentration banking the company establishes a number of strategic collection centers in different regions instead of a single collection centre at the office. This system reduces the period between the time a customer mails his remittances and the time when it become spendable funds with the company. Payments received by the different collection centers are deposited with their respective local banks which in turn transfer all surplus funds to the concentration bank of head office.

**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**

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

= Value added by firm A + Value added by firm B = 1430+1360 = **Rs. 2790 Crores**

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

NDPFC = 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**

Answer:

(b) **All the goods mentioned in the question 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.

Answer:
(c) Common access resources such as oceans tend to be over-consumed in an unregulated market because they are rivalrous and non-excludable in consumption. ‘Tragedy of the commons’ is a term to describe the problem which occurs when rivalrous but non-excludable goods are overused by individual users acting independently and rationally according to their own self-interest. In doing so, they behave contrary to the common good of all users by depleting a shared common resource to the disadvantage of the entire universe.

Answers 8:
(a) Adverse selection is a situation in which asymmetric information about quality eliminates high-quality goods from a market. It is a form of market failure which occurs when buyers have better information than sellers due to hidden information, and this can distort the usual market process. For example, in the insurance market adverse selection is the tendency for people with higher risk to obtain insurance coverage to a greater extent than persons with lesser risk because compared to insurance buyers, insurers know less about the health conditions of buyers and are therefore unable to differentiate between high-risk and low-risk persons. If the insurance company charges an average price, and only high-risk consumers buy insurance it will make losses. It is therefore possible that there will be higher overall premium as firms insure themselves against high-risk customers buying insurance. Then the low-risk customers may not want to buy insurance because it is quite expensive. Economic agents end up either selecting a sub-standard product or leaving the market altogether leading to a condition of ‘missing market’. If the sellers wish to do business profitably, they may have to incur considerable costs in terms of time and money for identifying the extent of risk for different buyers.

Answer:
(b) Under floating exchange rate regime the equilibrium value of the exchange rate of a country’s currency is market determined i.e. the demand for and supply of currency relative to other currencies determines the exchange rate.

Answer:
(c) Trade is distorted if quantities of commodities produced, bought, and sold and their prices are higher or lower than levels that would usually exist in a competitive market. For example, barriers to imports such as tariffs, domestic subsidies and quantitative restrictions can make agricultural products more costly in a market of a country. The higher prices will result in higher production of crop. Then export subsidies are needed to sell the surplus output in the world markets, where prices are low. Thus, the subsidising countries can be producing and exporting considerably more than what they normally would.

Answer:
(d) Perfect information which implies that both buyers and sellers have complete information about anything that may influence their decision making is an important element of an efficient competitive market. Information failure occurs
when lack of information can result in consumers and producers making decisions that do not maximize welfare. Information failure is widespread in numerous market exchanges due to complex nature of goods and services that are transacted, inaccurate and incomplete data, and non-availability of correct information.

Answer 9:
(a) Reserve Money = Currency in circulation + Bankers’ deposits with the RBI + Other deposits with the RBI  
= 15428.40 + 4596.18 + 183.30  
= 20207.88

Answer:
(b) 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. (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.

Answer:
(c) National defence has all characteristics of a public good. It yields utility to people; its consumption is essentially nonrival, non-excludable and collective in nature and is characterized by indivisibility. National defence is available for all individuals whether they pay taxes or not and it is impossible to exclude anyone within the country from consuming and benefiting from it. No direct payment by the consumer is involved in the case of defence. Once it is provided, the additional resource cost of another person consuming it is zero. Defence also has the unique feature of public good i.e. it does not conform to the settings of market exchange. Though defence is extremely valuable for the wellbeing of the society, left to market, it will not be produced at all or will be under produced.

Answer:
(d) A unit of account is a common unit for measuring how much something is worth. The monetary unit (for e.g. Rupee, Dollar) serves as a numeraire or common measure value in terms of which the value of all goods, services, assets, liabilities, income, expenditure etc are measured and expressed. This helps in measuring and fixing the exchange values in terms of a common unit and avoids the problem of recording and expressing the value of each commodity in terms of quantities of other goods. Use of money as a unit of account thus.

- reduces the number of exchange ratios between goods and services
- makes it possible to keep business accounts
- allows meaningful interpretation of prices, costs, and profits, and
- facilitates a system of trade through orderly pricing, comparison of value and rational economic choices.

Answer 10:
(a) 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). 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.

Answer:
(b) 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. 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).

Answer:
(c) Quasi-public goods or services, also called a near public good (for e.g. education, health services) possess nearly all the qualities of private goods and some of the benefits of public good. These goods are, in some measure excludable for example, it is possible to exclude non paying consumers from the use of a highway by incurring the cost of building and maintaining a toll booth. Similarly beaches, parks and wifi networks become partially rival and partially diminishable at times of peak demand. These are rejectable to some extent. It is possible to keep people away from them by charging a price or fee. However, it is undesirable to keep people away from such goods because the society would be better off if more people consume them. This particular characteristic namely, the combination of virtually infinite benefits and the ability to charge a price results in some quasi-public goods being sold through markets and others being provided by government. As such, people argue that these should not be left to the market alone. Markets for the quasi-public goods are considered to be incomplete markets and their lack of provision by free markets would be considered as inefficiency and market failure.

Answer:
(d) According to Keynes’ theory of liquidity preference, speculative motive for holding cash is related to market interest. The market value of bonds and the market rate of interest are inversely related. A rise in the market rate of interest leads to a decrease in the market value of the bond, and vice versa. Investors have a relatively fixed conception of the ‘normal’ or ‘critical’ interest rate and compare the current rate of interest with such ‘normal’ or ‘critical’ rate of interest. If wealth-holders consider that the current rate of interest is high compared to the ‘normal or critical rate of interest’, they expect a fall in the interest rate (rise in bond prices). At the high current rate of interest, they will convert their cash balances into bonds because:
(i) they can earn high rate of return on bonds
(ii) they expect capital gains resulting from a rise in bond prices consequent upon an expected fall in the market rate of interest in future.
Conversely, if the wealth-holders consider the current interest rate as low, compared to the 'normal or critical rate of interest', i.e., if they expect the rate of interest to rise in future (fall in bond prices), they would have an incentive to hold their wealth in the form of liquid cash rather than bonds because:
(i) the loss suffered by way of interest income forgone is small,
(ii) they can avoid the capital losses that would result from the anticipated increase in interest rates, and
(iii) the return on money balances will be greater than the return on alternative assets.
(iv) If the interest rate does increase in future, the bond prices will fall and the idle cash balances held can be used to buy bonds at lower price and can thereby make a capital-gain.

Summing up, so long as the current rate of interest is higher than the critical rate of interest, a typical wealth-holder would hold in his asset portfolio only government bonds while if the current rate of interest is lower than the critical rate of interest, his asset portfolio would consist wholly of cash. When the current rate of interest is equal to the critical rate of interest, a wealth-holder is indifferent to holding either cash or bonds. The inference from the above is that the speculative demand for money and interest are inversely related.

Answer 11:
(a) The principal objective of the WTO is to facilitate the flow of international trade smoothly, freely, fairly and predictably. To achieve this, the WTO endeavors:
(i) to set and enforce rules for international trade,
(ii) to provide a forum for negotiating and monitoring further trade liberalization
(iii) to resolve trade disputes
(iv) to increase the transparency of decision-making processes
(v) to cooperate with other major international economic institutions involved in global economic management, and
(vi) to help developing countries benefit fully from the global trading system.

When a country enjoys the best trade terms given by its trading partner it is said to enjoy the Most Favored 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.

Answer:
(b) Foreign direct investment is defined as a process whereby the resident of one country (i.e. home country) acquires ownership of an asset in another country (i.e. the host country) and such movement of capital involves ownership, control as well as management of the asset in the host country. Direct investments are real investments in factories, assets, land, inventories etc. and have three components, viz., equity capital, reinvested earnings and other direct capital in the form of intra-company loans. Foreign direct investment also includes all subsequent investment transactions between the investor and the enterprise and among affiliated enterprises, both incorporated and unincorporated. FDI involves long term relationship and reflects a lasting interest and control. According to the IMF and OECD definitions, the acquisition of at least ten percent of the ordinary
shares or voting power in a public or private enterprise by non-resident investors makes it eligible to be categorized as FDI. FDI may be categorized as horizontal, vertical, conglomerate and two-way direct foreign investments which are reciprocal investments.

Benefits of Foreign Direct Investment

Following are the benefits ascribed to foreign investments:

(i) Entry of foreign enterprises usually fosters competition and generates a competitive environment in the host country. The domestic enterprises are compelled to compete with the foreign enterprises operating in the domestic market. This results in positive outcomes in the form of cost-reducing and quality-improving innovations, higher efficiency and increasing variety of better products and services at lower prices ensuring wider choice and welfare for consumers.

(ii) International capital allows countries to finance more investment than can be supported by domestic savings resulting in higher productivity and enhanced output.

From the perspective of emerging and developing countries, FDI can accelerate growth and foster economic development by providing the much needed capital, technological know-how, management skills and marketing methods and critical human capital skills in the form of managers and technicians. The spill-over effects as the new technologies usually spread beyond the foreign corporations. In addition, the new technology can clearly enhance the recipient country’s production possibilities.

Answer:

(c) A recession is said to occur when overall economic activity declines, or in other words, when the economy ‘contracts’. A recession sets in with a period of declining real income, as measured by real GDP, simultaneously with a situation of rising unemployment. If an economy experiences a fall in aggregate demand during a recession, it is said to be in a demand-deficient recession. Economic depression is a condition of the economy resulting from an extended period of negative economic activity as measured by GDP. It is an extremely severe form of recession that leads to extended unemployment, increased credit defaults, extensive decline in output and income and a deflationary economy. Taxation, though less effective compared to public expenditure, is a powerful instrument of fiscal policy in the hands of governments to combat recession and depression. Reduction in corporate and personal income taxation is a useful measure to overcome contractionary tendencies in the economy. A tax cut increases disposable incomes of households. Their inclination to spend a portion of the additional disposable income determined by their marginal propensity to consume and the multiplier effect of spending would set out a chain reaction of spending, increased incomes, and consequent increased output. Reduction in the rates of commodity taxes like excise duties, sales tax and import duty promote consumption and ultimately boost investments. Moreover, tax measures can provide incentives, or reduce disincentives, for firms and households to engage in investment and consumer spending.

Answer:

(d) The money multiplier approach to money supply considers the ratio of deposit to reserve, $e = \frac{ER}{D}$ which represent the behaviour of commercial banks as one of the determinants of money supply. The commercial banks are required to keep only a part or fraction of their total deposits in the form of cash reserves. For the commercial banking system as a whole, the actual reserves ratio may be greater than the required reserve ratio since the banks keep with them a higher than the statutorily required percentage of their deposits in the form of cash reserves. The additional units of high-powered money that goes into ‘excess reserves’ of the
commercial banks do not lead to any additional loans, and therefore, these excess reserves do not lead to creation of money. Therefore, if the central bank injects money into the banking system and these are held as excess reserves by the banking system, there will be no effect on deposits or currency and hence no effect on money multiplier and therefore on money supply.

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