1. From the following balance sheet of Mr. Arvind Industries Ltd., as 31st March 2019

Liabilities	Rs.	Assets	Rs.
Equity Share Capital 7% Preference Share Capital Reserves and Surplus 6% Mortgage Debentures Current Liabilities: Creditors Bills payable Outstanding expenses Tax Provision	10,000 2,000 8,000 14,000 1,200 2,000 200 2,600	**Fixed assets** (less depreciation Rs. 10,000) **Current Assets:** Cash Investments (10%) Sundry debtors Stock	26,000 1,000 3,000 4,000 6,000
	40,000		**40,000**

Other information:

1. Net sales Rs. 60,000
2. Cost of goods sold Rs. 51,600
3. Net income before tax Rs. 4,000
4. Net income after tax Rs. 2,000

Calculate appropriate ratios.

Solution:

Short-term solvency ratios

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liability}}$$

$$\frac{14{,}000}{6{,}000} = 2.33:1$$

$$\text{Liquid Ratio} = \frac{\text{Current Asset- (Stock + Prepaid Expenses|)}}{\text{Current Liability}}$$

Liquidity assets = Current Asset- (Stock + Prepaid Expenses|)

$$= \frac{8{,}000}{6{,}000} = 1.33:1$$

Long-term solvency ratios:

$$\text{Proprietary ratio} = \frac{\text{Proprietor s funds}}{\text{Total Assets}}$$

Proprietor’s fund or Shareholder’s fund=Equity share capital Preference share capital Reserve and surplus

= 10,000+2,000+8,000=20,000

Total Assets = Fixed Assets + Current Assets

Total Assets =26,000+14,000

=40,000

= 20,000 / 40,000 = 0.5: 1

Debt-Equity ratio = External equities / Internal equities

External Equities = 20,000, Internal; Equities = 20,000

= 20,000/20,000 =1:1

Interest coverage ratio= EBIT /Fixed interest charges

EBIT= 4,000+ 840

Fixed interest charges= 6% on debentures of Rs.14, 000

= Rs. 840

= 4,000+840/840

= 5.7times

Activity Ratio:

Stock Turnover Ratio = Cost of Sales/ Average Inventory

= 51,600/ 6,000

= 8.6times

Note: As there is no opening stock, closing stock is taken as average stock

Debtors Turnover Ratio = Credit Sales/ Average Debtors

= 60,000/ 4,000

= 15 times

Note: In the absence of credit sales and opening debtors, total sales are considered as credit sales and closing debtors as average debtors.

Creditors turnover ratio = Credit Purchases / Average Creditors

= 43,200/ 1,200

= 36times

Credit Purchases= 51,600-8,400=43,200

Note: In absence of purchases, **cost of goods sold – gross profit treated as credit purchases** and in the absence of opening creditors, closing creditors are treated as average creditors.

Working Capital Turnover Ratio = Sales/ Net Working Capital

Net Working Capital= Current Assets- Current Liabilities

=14,000-6,000= 8,000

= 60,000/ 8,000

= 7.5times

Profitability Ratios:

Gross profit ratio = Gross Profit/ Sales *100

Gross Profit= Net sales- Cost of goods sold

=60,000-51,600 =8,400

= 8,400/ 60,000

= 14%

Net profit ratio = Net Profit/ Sales *100

= 2,000/ 60,000

= 3.33%

In the absence of non-operating income, operating profit ratio is equal to net profit ratio.

Return of Investment = Net Profit after-tax/ Shareholder fund = 2,000/ 20,000*100 = 10%

2. From the following profit and loss Account and balance sheet relating to Ramesh Company presented as on 31 st March, 2003 :

Dr. **Profit and Loss Account** **Cr**

Particulars	*Rs.*	*Particulars* *Rs.*	*Rs.*
To Opening Stock To Purchase To Wages (Direct) To Gross Profit *cld*	3,000 1,20,000 7,000 70,000	By Gross Sales *Less:* Sales Return By Closing Stock	1,95,000 5,000
	2,00,000		2,00,000
To Administrative Expn. To Selling and Distribution expenses To Loss on sale of } Fixed Assets To Net Profit	15,000 20,000 5,000 40,000	By Gross Profit *bId* By Dividend Received	70,000 10,000
	80,000		80,000

Liabilities	Amount	Assets	Amount
Equity Share Capital (5000 Equity Shares of 100 each) General Reserve Profit and Loss *Alc* Sundry Creditors	5,00,000 50,000 70,000 80,000	Land Building Plant & Machinery Stock Debtors Bank Balance	1,50.000 2,00,000 2,00,000 80,000 50,000 20,000
	7,00,000		7,00,000

From the above information you are required to calculate:
(1) Gross Profit Ratio.
(2) Operating Ratio.
(3) Operating Profit Ratio.
(4) Net Profit to Capital Employed Ratio.
(5) Current Ratio.
(6) Liquid Ratio.
(7) Stock Turnover Ratio.
(8) Debtor's Turnover Ratio.
(9) Debt Collection Period Ratio.

Sol:

(1) *Gross Profit Ratio* = $\dfrac{\text{Gross Profit}}{\text{Net Sales}} \times 100$

$= \dfrac{70,000}{1,95,000} \times 100$

$= 35.89\%$

(2) *Operating Ratio* = $\dfrac{\text{Operating Cost}}{\text{Net Sales}} \times 100$

Operating Cost = Cost of goods sold + Administrative Expenses + Selling and distribution Expenses

Cost of Goods Sold = Opening Stock + Purchases + Direct Wages - Closing Stock

= Rs. 3,000 + 1, 20,000 + 7,000 - 5,000

= Rs. 1, 30,000 - 5,000 = Rs .l, 25, OOO

Operating Cost = Rs. 1, 25,000 + 15,000 + 20,000

= Rs. 1, 60,000

Operating Ratio = $\dfrac{1,60,000}{1,95,000} \times 100 = 82.05\%$

(3) Operating Profit Ratio: $\dfrac{\text{Operating Profit}}{\text{Net Sales}} \times 100$

Operating Profit = Net Sales - Total Operating Cost

= Rs. 1, 95,000 - 1, 60,000 =Rs. 35,000

Operating Profit Ratio = $\dfrac{35,000}{1,95,000} \times 100$

,

=17.94%

4) *Net Profit TO -Capital Employed Ratio* : $\dfrac{\text{Net Profit}}{\text{capital Employed}} \times 100$

Capital Employed = Share Capital + General Reserve+ Profit and Loss *Nc*

= Rs. 5, 00,000 + 50,000 + 70,000

= Rs. 6, 20, 000

Net Profit to Capital Employed Ratio = $\frac{40,000}{6,\ 20,000}$ x 100

(5) *Current Ratio* = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$

Current Assets = Stock + Debtors + Bank Balances

= Rs. 80,000 + 50,000 + 20,000

=Rs. 1, 50,000

Current Ratio = $\frac{1,\ 50,000}{80,000}$

=1.88 (or) 1.88:1

Liquid Ratio = $\frac{\text{Liquid Assets}}{\text{Current Liabilities}}$

Liquid Assets = Current Assets - Stock and Prepaid Expenses

Rs. 1, 50,000 - 80,000

Rs.70,000

Liquid Ratio = $\frac{70,000}{80,000}$

= 87.5 (or) 87.5: 1

(7) Stock Turnover Ratio = $\frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$

Average Inventory = $\frac{\text{Opening Stock + Closing Stock}}{2}$

= $\frac{3,000 + 5,000}{2}$

= Rs.4, 000

Stock Turnover Inventory= $\frac{1,25,000}{4,000}$

Alternatively:

Stock Turnover Ratio= Net Sales/Average Inventory

$= \frac{1,95,000}{4,000} = 48.75$ times

(8) Debtor's Turnover Ratio= $\frac{\text{Net Credit Sales}}{\text{Average Receivables}}$

It is to be noted that credit sales, opening and closing receivables are not given in the problem, the ratio may be calculated as :

Debtor's Turnover Ratio= $\frac{\text{Total Sales}}{\text{Accounts Receivable}}$

$= \frac{1,95,000}{50,000}$

$=$ 3.9 times

(9) Debt Collection Period Ratio= $\frac{\text{Month or Days in a year}}{\text{Debtor's Turnover}}$

$= \frac{365 \text{ days}}{3.9} = 93.58$ days

(or)

$= \frac{12 \text{ months}}{3.9}$

$=$ 3.07 months