

I. Answer the following:

5x5=25

1. a) Why does a solid expand on heating? Explain
b) Explain the types of expansion
2. Show that the co-efficient of area expansion. $(\Delta A/A) / \Delta T$, of a rectangular sheet of the solid is twice its linear expansivity α_1 .
3. Explain Ideal-Gas equation and Absolute temperature with the graph.
4. State and Explain specific heat capacity of a substance.
5. a) Differentiate between heat and temperature
b) Explain the different scales in temperature.

I. Answer the following:

1. From the following balances extracted from the books of Raga Ltd. Prepare a trading and profit and loss account for the year ended March 31, 2017 and a balance sheet as on that date. (10)

Account Title	Amount Rs. (Debit)	Account Title	Amount Rs. (Credit)
Drawings		Sales	
Land and Buildings	20,000	Capital	2,20,000
Plant and Machinery	12,000	Discount	1,01,110
Carriage inwards	40,000	Apprentice premium	1,260
Wages	100	Bills payable	5,230
Salary	500	Purchases return	10,000
Sales return	2,000		
Bank charges	200		
Coal, Gas and Water	200		
Purchases	1,50,000		
Trade Expenses	3,800		
Stock (Opening)	76,800		
Cash at bank	50,000		
Rates and Taxes	870		
Bills receivable	24,500		
Sundry debtors	54,300		
Cash in hand	30,000		
	4,66,470		4,66,470

The additional information is as under:

- Closing stock was valued at the end of the year Rs. 20,000
- Depreciation on plant and machinery charged at 5% and land and building at 10%.
- Discount on debtors at 3%.
- Make a provision at 5% on debtors for doubtful debts.
- Salary outstanding was Rs.100 and Wages prepaid was Rs.40.
- The manager is entitled a commission of 5% on net profit after charging such commission.

2. Prepare the trading and profit and loss account and balance sheet of M/s control Device India on March 31, 2017 from the following balance as on that date. (10)

Account Title	Debit Amount Rs.	Credit Amount Rs.
Drawings and Capital	19,530	67,500
Purchase and Sales	45,000	1,12,500
Salary and Commission	25,470	1,575
Carriage	2,700	
Plant and Machinery	27,000	
Furniture	6,750	
Opening stock	42,300	
Insurance Premium	2,700	
Interest		7,425
Bank overdraft		24,660
Rent and Taxes	2,160	
Wages	11,215	
Returns	2,385	1,440
Carriage outwards	1,485	
Debtors and Creditors	36,000	58,500
General expenses	6,975	
Octroi	530	
Investment	41,400	
	2,73,600	2,73,600

Closing stock was valued Rs.20,000.

- Interest on capital @ 10%.
- Interest on drawings @ 5%.
- Wages outstanding Rs.50.
- Outstanding salary Rs.20.
- Provide a depreciation @ 5% on plant and machinery.
- Make a 5% provision on debtors.

3. The following balances appeared in the trial balance of M/s Kapil Traders as on March 31, 2017 (5)

	Rs.
Sundry debtors	30,500
Bad debts	500
Provision for doubtful debts	2,000

The partners of the firm agreed to records the following adjustments in the books of the Firm. Further bad debts Rs.300. Maintain provision for bad debts 10%. Show the following adjustments in the bad debts account. Provision account, debtors account, Profit and Loss account and balance sheet.

