Roll No. ....

Total No. of Questions – 7

Total No. of Printed Pages – 11

Time Allowed – 3 Hours

Maximum Marks – 100

RKW2

Answers to questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate who has not opted for Hindi Medium, his/her answers in Hindi will not be valued.

Question No. 1 is compulsory.

Answer any **five** questions from the remaining **six** questions.

Working notes should form part of the answers.

Marks

1. Answer the following: **4×5 =20**

(a) Omega Ltd manufactures a product, currently utilising 75% capacity with a turnover of ₹ 99,00,000 at ₹ 275 per unit. The cost data is as under :

	Amount (₹)
Direct Material per unit	96
Direct wages per unit	42
Variable overhead per unit	18
Semi-variable overheads	7,32,000
P/V ratio	40%

Fixed overhead cost is ₹ 28,81,000 upto 80% level of activity, beyond this level, an additional ₹ 2,38,500 will be incurred.

Required :

(i) Break-even point in units and activity level at Break-even point.

(ii) Number of units to be sold to earn profit of ₹ 25 per unit.

(b) A manufacturing company has added a new machine to its fleet of eleven existing machines. New machine is purchased for ₹ 12,70,000 with installation cost of ₹ 40,000. The machine has an estimated life of 10 years and is expected to realise ₹ 90,000 as scrap at the end of its useful life. Other relevant data are as follows :

(i) Budgeted annual working hours are 2,400 based on 8 hours per day for 300 days. This includes 180 hours for plant maintenance and 120 hours of productive set-up time.

(ii) Electricity used by the new machine is 12 units per hour at a cost of ₹ 6.50 per unit. No current is drawn during maintenance and setup.

(iii) Three operators control the operations of all the twelve machines and average rate of wages per operator per day is ₹ 600 and production bonus is 10% of wages.

(iv) Annual insurance premium for the new machine is ₹ 12,600.

(v) Annual maintenance cost of new machine including consumable stores is ₹ 32,500.

(vi) Rent of the factory is ₹ 24,000 per month. Area occupied by new machine 200 sq ft. and area occupied by other machines is 2800 sq ft.

Required : Compute the comprehensive machine hour rate.

(c) The capital structure of Bright Ltd. as on 31.03.2019 is as follows :

	₹ in lakhs
Equity share capital : 7,50,000 equity shares of ₹ 100 each	750
Retained Earnings	250
13.5% Preference share capital	240
12.5% Debentures	360

The current market price per equity share is ₹ 350. The prevailing default risk free interest rate is 6% and rate of return on market portfolio is 15%. The Beta of the company is 1.289.

The corporate tax rate is 30%. The average tax rate of shareholders is 25% and brokerage cost is 2% that they have to pay while investing dividends in alternative securities.

Required : Calculate the weighted average cost of capital on the basis of book value weights.

Marks

(d) HT Ltd. has sales of ₹ 960 lakhs. Selling price per unit is ₹ 80 and variable operating cost is 75% of selling price and average cost per unit is ₹ 70. The cost of funds is 12%. Average collection period is 75 days, bad debt losses are 4% of sales and collection expenses are ₹ 15.60 lakhs. Company is considering whether collection policies should be made strict. Due to rigorous collection procedures, sales are expected to decline to ₹ 920 lakhs. Average collection period will reduce to 60 days and bad debts will reduce to 2.5% of sales. Annual collection expenses will increase to ₹ 22.50 lakhs.

Required : Should the company carry out the proposal ?

(Assume 360 days in a year and investment in debtors are calculated on total cost)

2. (a) ACE Ltd. produces a product EMM using a material 'REX'. To produce one unit of EMM 0.80 kg of 'REX' is required. As per the sales forecast conducted by the company it will able to sell 45600 units of product EMM in the coming year. There is an opening stock of 3150 units of product EMM and company desires to maintain closing stock equal to one month's forecasted sale. Following is the information regarding material 'REX' : **8**

(i)	Purchase price per kg	₹ 25
(ii)	Cost of placing order	₹ 240 per order
(iii)	Storage cost	2% per annum
(iv)	Interest rate	10% per annum
(v)	Average lead time	8 days
(vi)	Difference between minimum and maximum lead time	6 days
(vii)	Maximum usage	150 kg
(viii)	Minimum usage	90 kg

Opening stock of material 'REX' is 2100 kg and closing stock will be 10% more than opening stock.

Marks

Required :

(i) Compute the EOQ and total cost as per EOQ.

(ii) Compute the reorder level and maximum level.

(iii) If the company places an order of 7500 kg of REX at a time, it gets 2% discount, should the offer be accepted ?

(b) Aar Cee Manufacturing Co. is considering a proposal to replace one of its existing machine by the CNC machine. In this connection the following information is available : 8

The existing machine was bought 3 years ago for ₹ 15,40,000. It was depreciated on straight line basis and has a remaining useful life of 7 years. It's annual maintenance cost is expected to increase by ₹ 40,000 from the sixth year of its installation. It's present realisable value is ₹ 6,50,000.

The purchase price of CNC machine is ₹ 27,00,000 and installation expenses of ₹ 95,000 will be incurred. Subsidy equal to 15% of the purchase price will be received at the end of first year of its installation. It is subject to same rate of depreciation. It's realisable value after 7 years is ₹ 5,70,000. With the CNC machine, annual cash operating costs are expected to decrease by ₹ 2,16,000. In addition, CNC machine would increase productivity on account of which net cash revenue would increase by ₹ 2,76,000 per annum.

The tax rate applicable to firm is 30% and cost of capital is 11%.

Required :

Advise the firm whether to replace the existing machine with CNC machine on the basis of net present value.

The present value factor at 11% are as follows :

Year	1	2	3	4	5	6	7
PV @ 11%	0.901	0.812	0.731	0.659	0.593	0.535	0.482

Marks

3\. (a) Following information relates to labour of KAY PEE Ltd : **8**

	Skilled	Semi-skilled	Unskilled	Total
Number of workers in standard gang	12	8	5	25
Standard rate per hour (₹)	75	50	40	–
Number of workers in actual gang				25
Actual rate per hour (₹)	80	48	42	

The standard output of gang was 12 units per hour of the product M. The gang was engaged for 200 hours during the month of March 2019 out of which 20 hours were lost due to machine breakdown and 2295 units of product M were produced. The actual number of skilled workers was 2 times the semi-skilled workers. Total labour mix variance was ₹ 10800 (A).

You are required to calculate the following:

(i) Actual number of workers in each category.

(ii) Labour rate variance.

(iii) Labour yield variance.

(iv) Labour efficiency variance

Marks

(b) Using the information given below, complete the Balance Sheet of PQR Private Limited : **8**

(i)	Current ratio	1.6 : 1
(ii)	Cash and Bank balance	15% of total current assets
(iii)	Debtors turnover ratio	12 times
(iv)	Stock turnover (cost of goods sold) ratio	16 times
(v)	Creditors turnover (cost of goods sold) ratio	10 times
(vi)	Gross profit ratio	20%
(vii)	Capital gearing ratio	0.6
(viii)	Depreciation rate	15% on W.D.V.
(ix)	Net fixed Assets	20% of total assets

(Assume all purchase and sales are on credit)

Balance Sheet of PQR Private Limited As at 31.03.2019

Liabilities	₹	Assets	₹
Share Capital	25,00,000	**Fixed assets**	
Reserve & surplus 0.6 !	?	Opening wdv ?	
12% Long term debt 0.6	?	Less: Depreciation ?	?
Current liabilities			
Creditors ?		Current Assets	
Provisions & outstanding expenses ?	68,50,000	Stock ?	
		Debtors ?	
		Cash and bank balance ?	?
Total	?	**Total**	?

Marks

4\. (a) Following are the information given by owner of M/s. Moonlight Co. running a hotel at Manali. You are requested to advise him regarding the rent to be charged from his customer per day so that he is able to earn 20% profit on cost other than interest. **8**

(i) Staff salaries ₹ 4,00,000.

(ii) The Room Attendant's salary is ₹ 10 per day. The salary is paid on daily basis and the services of room attendant are needed only when the room is occupied. There is one room attendant for one room.

(iii) Lighting, Heating and Power :

(a) The normal lighting expenses for a room if it is occupied for the whole month is ₹ 250.

(b) Power is used only in winter and normal charge per month if occupied for a room is ₹ 100.

(iv) Repairs to Building ₹ 50,000 per annum.

(v) Linen etc. ₹ 24,000 per annum.

(vi) Sundries ₹ 70,770 per annum.

(vii) Interior decoration and furnishing ₹ 50,000 per annum.

(viii) Cost of Building ₹ 20,00,000, rate of depreciation 5%.

(ix) Other Equipments ₹ 5,00,000, rate of depreciation 10%.

(x) Interest @ 5% may be charged on its investment of ₹ 25,00,000 in the building and equipment.

(xi) There are 200 rooms in the hotel and 90% of the rooms are normally occupied in summer and 40% of the rooms are occupied in winter. You may assume that period of summer and winter is six months each. Normal days in a month may be assumed to be 30.

Marks

(b) Vikalp Ltd. provides you the following information for the year ending 31.03.2019 : 8

	Amount (₹)
Earnings before interest and tax	28,80,000
Less : Interest on long-term loans @ 12%	2,70,000
Interest on Debentures @ 10%	3,60,000
(Debentures issued on 01.08.2018)	
Earnings before tax	22,50,000
Less: Tax @ 30%	6,75,000
Earnings after tax	15,75,000
6,30,000 equity shares (of ₹ 10 each)	
Ruling market price per share	24
Undistributed reserves and surplus	60,50,000

The company needs to raise ₹ 30,00,000 for modernisation of its plants and has the following options of raising the funds :

(i) Raise the entire funds by 13% long-term loan or

(ii) Raise partly by issue of 75,000 equity shares @ ₹ 20 per share and the balance by 11 % debentures.

The company expects the rate of return on funds employed to be improved by 3% because of modernisation and that if Debt Equity ratio (Debt /Debt + Equity) exceeds 45%, then price earnings ratio is to go down by 15%.

Required : If the company is to follow policy of maximising the market value of equity share, which option should it choose ?

Marks

5. (a) Distinguish between cost control and cost reduction. 4×4 =16
   (b) Differentiate between job costing and batch costing. Name three such industries where these are used.
   (c) Explain the functions of a Chief Financial Officer.
   (d) Write any four differences between Cash Flow Statement and Funds Flow statement.

6. (a) The net loss of Waywell Ltd. appeared at ₹ 1,18,500 as per cost records for the year ending 31.03.2019. The following information was revealed as a result of scrutiny of the figures of financial and cost records : 8

		Amount (₹)
Factory overheads over absorbed in cost accounts		32,500
Administrative overheads under absorbed in cost accounts		38,250
Depreciation charged in financial accounts		4,55,800
Depreciation recovered in cost accounts		4,99,700
Loss due to obsolescence charged in financial accounts		11,400
Income tax provision made in financial accounts		32,650
Interest on investments not included in cost accounts		96,000
Store adjustment (Credit) in financial accounts		12,800
Value of opening stock in	Cost accounts	18,85,600
	Financial accounts	19,62,500
Value of closing stock in	Cost accounts	21,15,800
	Financial accounts	21,98,900
Imputed rent charged in cost accounts		1,80,000
Selling and distribution expenses not charged in cost accounts		72,450
Donation to Prime Minister Relief Fund		11,000
Loss on sale of furniture		7,250
Bad debts written off		18,300

Required : Prepare a reconciliation statement and arrive at the profit or loss as per financial accounts.

Marks

(b) Calculate the amount of working capital required for XYZ Ltd. from the following information : **8**

Elements of Cost	Per unit (₹)
Raw Material	80.00
Direct Labour	30.00
Overheads	60.00
Total Cost	170.00
Profit	30.00
Sales	200.00

Raw materials are held in stock on an average for one month. Work-in progress (completion stage 50 per cent), on an average half a month. Finished goods are in stock on an average for one month. Credit allowed by suppliers is one month and credit allowed to debtors is two months. Time lag in payment of wages is 1½ weeks. Time lag in payment of overheads is one month. One fourth of the sales are made on cash basis.

Cash in hand and at bank is expected to be ₹ 50,000.

You are required to prepare statement showing the working capital needed to finance a level of activity of 52,000 units of production. Assume that production is carried on evenly throughout the year and wages and overhead accrue similarly. For the calculation purpose 4 weeks may be taken as equivalent to a month and 52 weeks in a year.

Marks

7. Answer any **four** of the following : 4×4 =16

(a) Describe the remedial steps to be taken to minimize the labour turnover.

(b) Distinguish between Financial Lease and Operating Lease.

(c) "Operating risk is associated with cost structure, whereas financial risk is associated with capital structure of a business concern." Critically examine this statement.

(d) Explain the following terms :

(i) Debt Securitisation

(ii) Uniform costing

(e) What are the cases where flexible budget is found suitable ?