UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 5 Examination in Engineering: March 2022

Module Number: IS 5302 **Module Name: Financial Management**

[Three Hours]

[Answer **all** questions]

Q1.

a) What are the sources of accounting information?

[02 Marks]

b) Briefly explain the difference between financial accounting and management accounting?

[02 Marks]

c) Excela Ltd was formed in 2012. The following balances as at 28 February 2020 have been extracted from the books of account after the trading account has been compiled:

	Dr Rs.000	Cr Rs.000
Administration expenses	6500	
Cash at bank and in hand	1000	
Distribution costs	1500	
Dividend paid (on preference shares)	600	
Furniture and equipment:		
At cost	6000	
Accumulated depreciation at 01.03.19		3600
Gross profit for the year		15000

Ordinary share capital (shares of Rs.1 each)		10000
Preference shares (cumulative 15% of Rs.1 shares)		4000
Profit and loss account (at 01.03.19)		5000
Share premium account		2000
Stocks (at 28.02.20)	13000	
Trade creditors		2500
Trade debtors	13500	
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	42100	42100

Additional information:

1. Corporation tax owing at 28 February 2020 is estimated to be Rs 2,400,000.

2. Furniture and equipment is depreciated at an annual rate of 10 % of cost and it is all charged against administrative expenses.

3. A dividend of 20% per ordinary share is proposed.

4. All the authorized share capital has been issued and is fully paid.

Required:

i. Prepare Excela Ltd.'s Trading and Profit and Loss account (Income Statement) for the year to 28 February 2020.

[10 Marks]

ii. Prepare a Balance Sheet (Statement of Financial position) as at that date.

[10 Marks]

Q2.

a) Briefly explain the importance of Cost-Volume-Profit (CVP) analysis?

[02 Marks]

b) Chocolate Candies Inc. makes chocolate candies targeting children. The company makes 2,000,000 packets of Candy a year. Chocolate Candies' annual sales are Rs. 6,000,000. The following information was obtained from its internal financial statements for the past year.

Manufacturing costs	**Rs**
Fixed	400,000
Variable	500,000
Other costs	
Fixed	350,000
Variable	150,000

Table: 01

i. Calculate the Contribution margin per each packet of candy?

[02 Marks]

ii. Calculate the Contribution margin ratio?

[02 Marks]

iii. What is the break-even sales volume?

[02 Marks]

iv. Calculate the break-even sales in units?

[02 Marks]

v. How many packets of candy will Chocolate Candies sell in a year to make an income of Rs. 3,000,000?

[02 Marks]

Q3.

a) Electroexperts Inc. has received a special marketing choice from one of the world's electronic suppliers. The suppliers want to sell to Electroexperts Inc. a certain electronic component for Rs.18 per unit. Currently Electroexperts Inc. makes the part and its management is seriously considering the buying choice.

Units manufactured	5,000
Direct materials cost	Rs.30,000
Direct labor cost	Rs.40,000
Fixed costs	Rs.20,000
Variable costs	Rs.10,000

Table: 02

If Electroexperts Inc. buys the part, its fixed costs will reduce by 60% and the variable costs will reduce by 95%. Perform incremental analysis and determine whether Electroexperts Inc. should buy the part or continue making the part?

[04 Marks]

b) Central Limited is a manufacturing company that makes three kinds of products. The company is undergoing financial difficulties and the management have decided to scrap one of its product lines. The monthly manufacturing costs of 1,000 units for each of the product lines is given below. Central's selling prices for each of its products are: Product X= Rs.97; Product Y= Rs.91; Product Z= Rs.87.50.

	Product X (Rs.)	Product Y (Rs.)	Product Z (Rs.)
Direct materials cost	50,000	40,000	35,000
Direct labor cost	20,000	25,000	30,000
Variable overhead	15,000	10,000	8,000
Fixed overhead	5,000	6,000	3,500

i. What is the unit cost for each of the product lines?

[02 Marks]

ii. What is the profit per unit for each product line?

[02 Marks]

iii. What is the contribution margin per unit of each of the three product lines?

[02 Marks]

iv. Discuss what product line should be scrapped from Central's manufacturing lines?

[02 Marks]

Q4.

a) Briefly explain the term "investment appraisal" with examples.

[03 Marks]

c) A company is considering whether to purchase a new machine. Machines A and B are available for Rs. 80,000 each. Earnings after taxation are as follows:

Year	Machine A	Machine B
	Rs.	Rs.
1	24,000	8,000
2	32,000	24,000
3	40,000	32,000
4	24,000	48,000
5	16,000	32,000

Table: 04

Required: Evaluate the two alternatives using the following:

i. Payback period method [03 Marks]

ii. Average annual rate of return method [03 Marks]

iii. Net present value method. You should use a discount rate of 10%. [03 Marks]

Present value and Future value tables

Table 3 - Present value interest factors for single cash flows. PV = 1/(1 + k)^n)

Period (n) / per cent (k)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	20%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621	0.8333
2	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	0.8734	0.8573	0.8417	0.8264	0.8116	0.7972	0.7831	0.7695	0.7561	0.7432	0.6944
3	0.9706	0.9423	0.9151	0.8890	0.8638	0.8396	0.8163	0.7938	0.7722	0.7513	0.7312	0.7118	0.6931	0.6750	0.6575	0.6407	0.5787
4	0.9610	0.9238	0.8885	0.8548	0.8227	0.7921	0.7629	0.7350	0.7084	0.6830	0.6587	0.6355	0.6133	0.5921	0.5718	0.5523	0.4823
5	0.9515	0.9057	0.8626	0.8219	0.7835	0.7473	0.7130	0.6806	0.6499	0.6209	0.5935	0.5674	0.5428	0.5194	0.4972	0.4761	0.4019
6	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	0.6663	0.6302	0.5963	0.5645	0.5346	0.5066	0.4803	0.4556	0.4323	0.4104	0.3349
7	0.9327	0.8706	0.8131	0.7599	0.7107	0.6651	0.6227	0.5835	0.5470	0.5132	0.4817	0.4523	0.4251	0.3996	0.3759	0.3538	0.2791
8	0.9235	0.8535	0.7894	0.7307	0.6768	0.6274	0.5820	0.5403	0.5019	0.4665	0.4339	0.4039	0.3762	0.3506	0.3269	0.3050	0.2326
9	0.9143	0.8368	0.7664	0.7026	0.6446	0.5919	0.5439	0.5002	0.4604	0.4241	0.3909	0.3606	0.3329	0.3075	0.2843	0.2630	0.1938
10	0.9053	0.8203	0.7441	0.6756	0.6139	0.5584	0.5083	0.4632	0.4224	0.3855	0.3522	0.3220	0.2946	0.2697	0.2472	0.2267	0.1615
11	0.8963	0.8043	0.7224	0.6496	0.5847	0.5268	0.4751	0.4289	0.3875	0.3505	0.3173	0.2875	0.2607	0.2366	0.2149	0.1954	0.1346
12	0.8874	0.7885	0.7014	0.6246	0.5568	0.4970	0.4440	0.3971	0.3555	0.3186	0.2858	0.2567	0.2307	0.2076	0.1869	0.1685	0.1122
13	0.8787	0.7730	0.6810	0.6006	0.5303	0.4688	0.4150	0.3677	0.3262	0.2897	0.2575	0.2292	0.2042	0.1821	0.1625	0.1452	0.0935
14	0.8700	0.7579	0.6611	0.5775	0.5051	0.4423	0.3878	0.3405	0.2992	0.2633	0.2320	0.2046	0.1807	0.1597	0.1413	0.1252	0.0779
15	0.8613	0.7430	0.6419	0.5553	0.4810	0.4173	0.3624	0.3152	0.2745	0.2394	0.2090	0.1827	0.1599	0.1401	0.1229	0.1079	0.0649
16	0.8528	0.7284	0.6232	0.5339	0.4581	0.3936	0.3387	0.2919	0.2519	0.2176	0.1883	0.1631	0.1415	0.1229	0.1069	0.0930	0.0541
17	0.8444	0.7142	0.6050	0.5134	0.4363	0.3714	0.3166	0.2703	0.2311	0.1978	0.1696	0.1456	0.1252	0.1078	0.0929	0.0802	0.0451
18	0.8360	0.7002	0.5874	0.4936	0.4155	0.3503	0.2959	0.2502	0.2120	0.1799	0.1528	0.1300	0.1108	0.0946	0.0808	0.0691	0.0376
19	0.8277	0.6864	0.5703	0.4746	0.3957	0.3305	0.2765	0.2317	0.1945	0.1635	0.1377	0.1161	0.0981	0.0829	0.0703	0.0596	0.0313
20	0.8195	0.6730	0.5537	0.4564	0.3769	0.3118	0.2584	0.2145	0.1784	0.1486	0.1240	0.1037	0.0868	0.0728	0.0611	0.0514	0.0261
21	0.8114	0.6598	0.5375	0.4388	0.3589	0.2942	0.2415	0.1987	0.1637	0.1351	0.1117	0.0926	0.0768	0.0638	0.0531	0.0443	0.0217
22	0.8034	0.6468	0.5219	0.4220	0.3418	0.2775	0.2257	0.1839	0.1502	0.1228	0.1007	0.0826	0.0680	0.0560	0.0462	0.0382	0.0181
23	0.7954	0.6342	0.5067	0.4057	0.3256	0.2618	0.2109	0.1703	0.1378	0.1117	0.0907	0.0738	0.0601	0.0491	0.0402	0.0329	0.0151
24	0.7876	0.6217	0.4919	0.3901	0.3101	0.2470	0.1971	0.1577	0.1264	0.1015	0.0817	0.0659	0.0532	0.0431	0.0349	0.0284	0.0126
25	0.7798	0.6095	0.4776	0.3751	0.2953	0.2330	0.1842	0.1460	0.1160	0.0923	0.0736	0.0588	0.0471	0.0378	0.0304	0.0245	0.0105

Annexure : C1