# ZCAS University

## MASTER of BUSINESS ADMINISTRATION

## BAC5202 FINANCIAL AND MANAGEMENT ACCOUNTING

### MID-SEMESTER TEST

### TUESDAY 17th OCTOBER 2023

### 16:30 – 19:30 HRS

### TIME ALLOWED: THREE HOURS (plus 5 minutes to read through the paper)

### INSTRUCTIONS:

1. Section A: This question is **compulsory** and must be attempted.

2. Sections B: Answer ANY TWO questions from this section.

3. This examination paper carries a total of **100 marks**.

4. Please **do not turn this page** until the invigilator tells you to do so.

## SECTION A: COMPULSORY QUESTION

### QUESTION ONE

CC investments is evaluating two projects each with an initial cost of K2,500,000 with a life of six (6) years. Both investments are expected to be depreciated on a straight-line basis with each having a zero-scrap value after 6 years. CC Co evaluates its projects either using the net present value (NPV) method or the accounting rate of return (ARR) based on the average investment. The first cost of capital for appraisal purposes is 11% while the target ARR is 18%. Details relating to the net cash inflows per year for each project are as follows:

### Investment X

| Year | 1 | 2 | 3 | 4 | 5 | 6 |
|------|------|------|------|------|------|------|
| | K | K0 | K | K | K | K |
| Cash inflows | 600,000 | 900,000 | 800,000 | 400,000 | 750,000 | 500,000 |

### Investment Z

| Year | 1 | 2 | 3 | 4 | 5 | 6 |
|------|------|------|------|------|------|------|
| | K | K0 | K | K | K | K |
| Cash inflows | 1,200,000 | 700,000 | 600,000 | 400,000 | 400,000 | 400,000 |

### REQUIRED:

a) Calculate the net present values (NPVs) of EACH of the two investments (X & Z) and advise the firm regarding the best project (give reasons if any).                    **[22 marks]**

b) Calculate the accounting rates of return (ARR) for EACH of the above projects based on average investments and comment on the results.                    **[22 marks]**

c) Discuss any THREE (3) advantages of the net present value method (NPV) over the Accounting Rate of Return (ARR).                    **[6 marks]**

                    **[Total 50 marks]**

## SECTION B:

ATTEMPT ANY **TWO** QUESTIONS FROM THIS SECTION

## QUESTION TWO

ERS ltd has the following balance as at the end of September 2023

|  | Motor vehicles | Inventory | Accounts receivables | Cash/Bank | Capital | Bank Loan | Accounts Payables | Profit or loss |
|---|---|---|---|---|---|---|---|---|
|  | K | K | K | K | K | K | K | K |
| Bal | 700,000 | 35,000 | 50,000 | 70,000 | 570,000 | 215,000 | 30,000 | 40,000 |

During the month of October 2023, the following transactions occurred.

1. A sum of K20,000 was received from credit customers.
2. Wages amounting to K15,000 were paid in cash.
3. Stationery valued at K8,000 was bought paid for by debit card.
4. Finished goods valued at K48,000 were bought on credit.
5. Inventory valued at K45,000 were sold for K55,000 paid for by cheque.
6. Accounts payables amounting to K42,000 were paid for by cash in the month.
7. Annual depreciation for the equipment is K72,000. The charge for the month needs to be considered.
8. Vehicle maintenance cost of K5,000 for the month was incurred and paid for by cheque.
9. An additional bank loan of K30,000 was obtained to help support the operations.

**REQUIRED:**

a) Prepare the accounting equation as of 31 October 2023 in a tabular format clearly showing the opening balances, transactions for the month, and the closing balances.       **[18 marks]**

b) Prepare the Income statement for October 2023 only.       **[7 marks]**

**[Total 25 marks]**

## QUESTION THREE

You have been invited to attend this year's Zambia Institute of Marketing (ZIM) conference in Livingstone as one of the speakers. The organisers have specifically requested you to discuss a few areas in accounting to help the delegates to gain extra appreciation of accounting and its significance in business operations.

**REQUIRED:** Briefly discuss the following:

a) The importance of both Management Accounting and financial accounting in running an organization.       **[12 marks]**

b) How to differentiate between a semi-variable cost from a variable cost. [6 marks]

c) The difference between the income statement and the statement of financial position and highlight the main reason for preparing each report. [7 marks]   [Total 25 marks]

## QUESTION FOUR

MBS consultants are reviewing details of the activities relating to two different organisations namely Ace ltd and Spade ltd. The details are as follows:

|  | ACE Co ltd | SPADE Co ltd |
|---|---|---|
| Selling price per unit | K15.00 | K18 |
| Variable cost: | | |
| Material cost per unit | K3.00 | K5.00 |
| Labour cost per unit | K6.00 | K5.00 |
| Fixed cost per month | K180,000 | K210,000 |
| Monthly Budgeted output | 36,000 units | 32,000 units |
| | | |

## REQUIRED:

a) Calculate the break-even point in unit and the revenue to break-even for EACH of the two organisations. [9 marks]

b) Calculate the profits that EACH company would make if production and sales volume were at the budgeted output levels. [6 marks]

c) Draw and label the break-even chart for EACH business clearly showing the following:

   i   The total revenue function,

   ii  The total fixed cost function.

   iii The total cost function and

   iv The break-even point in units [10 marks]

[Total: 25 marks]

# USEFUL FORMULA

1. IRR (YTM) = $A + [\dfrac{a}{a-b} \, x \, (B - A)]$

2. BEP (units) = $\dfrac{\text{Fixed cost}}{\text{Contribution per unit}}$

3. ARR = $\dfrac{\text{Average annual profit}}{\text{Average investment}} \, x \, 100$

# PRESENT VALUE TABLE

Present value of 1, i.e. $(1 + r)^{-n}$    Where    r = discount rate

n = number of periods until payment

| Periods (n) | Discount rate (r) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1% | 2% | 3% | 4% | 5% | 6% | 7% | 8% | 9% | 10% |
| 1 | 0.990 | 0.980 | 0.971 | 0.962 | 0.952 | 0.943 | 0.935 | 0.926 | 0.917 | 0.909 |
| 2 | 0.980 | 0.961 | 0.943 | 0.925 | 0.907 | 0.890 | 0.873 | 0.857 | 0.842 | 0.826 |
| 3 | 0.971 | 0.942 | 0.915 | 0.889 | 0.864 | 0.840 | 0.816 | 0.794 | 0.772 | 0.751 |
| 4 | 0.961 | 0.924 | 0.888 | 0.855 | 0.823 | 0.792 | 0.763 | 0.735 | 0.708 | 0.683 |
| 5 | 0.951 | 0.906 | 0.863 | 0.822 | 0.784 | 0.747 | 0.713 | 0.681 | 0.650 | 0.621 |
| 6 | 0.942 | 0.888 | 0.837 | 0.790 | 0.746 | 0.705 | 0.666 | 0.630 | 0.596 | 0.564 |
| 7 | 0.933 | 0.871 | 0.813 | 0.760 | 0.711 | 0.665 | 0.623 | 0.583 | 0.547 | 0.513 |
| 8 | 0.923 | 0.853 | 0.789 | 0.731 | 0.677 | 0.627 | 0.582 | 0.540 | 0.502 | 0.467 |
| 9 | 0.914 | 0.837 | 0.766 | 0.703 | 0.645 | 0.592 | 0.544 | 0.500 | 0.460 | 0.424 |
| 10 | 0.905 | 0.820 | 0.744 | 0.676 | 0.614 | 0.558 | 0.508 | 0.463 | 0.422 | 0.386 |
| 12 | 0.887 | 0.788 | 0.701 | 0.625 | 0.557 | 0.497 | 0.444 | 0.397 | 0.356 | 0.319 |
| 13 | 0.879 | 0.773 | 0.681 | 0.601 | 0.530 | 0.469 | 0.415 | 0.368 | 0.326 | 0.290 |
| 14 | 0.870 | 0.758 | 0.661 | 0.577 | 0.505 | 0.442 | 0.388 | 0.340 | 0.299 | 0.263 |
| 15 | 0.861 | 0.743 | 0.642 | 0.555 | 0.481 | 0.417 | 0.362 | 0.315 | 0.275 | 0.239 |

| Periods (n) | 11% | 12% | 13% | 14% | 15% | 16% | 17% | 18% | 19% | 20% |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.901 | 0.893 | 0.885 | 0.877 | 0.870 | 0.862 | 0.855 | 0.847 | 0.840 | 0.833 |
| 2 | 0.812 | 0.797 | 0.783 | 0.769 | 0.756 | 0.743 | 0.731 | 0.718 | 0.706 | 0.694 |
| 3 | 0.731 | 0.712 | 0.693 | 0.675 | 0.658 | 0.641 | 0.624 | 0.609 | 0.593 | 0.579 |
| 4 | 0.659 | 0.636 | 0.613 | 0.592 | 0.572 | 0.552 | 0.534 | 0.516 | 0.499 | 0.482 |
| 5 | 0.593 | 0.567 | 0.543 | 0.519 | 0.497 | 0.476 | 0.456 | 0.437 | 0.419 | 0.402 |
| 6 | 0.535 | 0.507 | 0.480 | 0.456 | 0.432 | 0.410 | 0.390 | 0.370 | 0.352 | 0.335 |
| 7 | 0.482 | 0.452 | 0.425 | 0.400 | 0.376 | 0.354 | 0.333 | 0.314 | 0.296 | 0.279 |
| 8 | 0.434 | 0.404 | 0.376 | 0.351 | 0.327 | 0.305 | 0.285 | 0.266 | 0.249 | 0.233 |
| 9 | 0.391 | 0.361 | 0.333 | 0.308 | 0.284 | 0.263 | 0.243 | 0.225 | 0.209 | 0.194 |
| 11 | 0.317 | 0.287 | 0.261 | 0.237 | 0.215 | 0.195 | 0.178 | 0.162 | 0.148 | 0.135 |
| 12 | 0.286 | 0.257 | 0.231 | 0.208 | 0.187 | 0.168 | 0.152 | 0.137 | 0.124 | 0.112 |
| 13 | 0.258 | 0.229 | 0.204 | 0.182 | 0.163 | 0.145 | 0.130 | 0.116 | 0.104 | 0.093 |
| 14 | 0.232 | 0.205 | 0.181 | 0.160 | 0.141 | 0.125 | 0.111 | 0.099 | 0.088 | 0.078 |
| 15 | 0.209 | 0.183 | 0.160 | 0.140 | 0.123 | 0.108 | 0.095 | 0.084 | 0.074 | 0.065 |