



AMREF INTERNATIONAL UNIVERSITY
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF HEALTH SYSTEMS MANAGEMENT AND DEVELOPMENT
MASTER OF SCIENCE IN HEALTH SYSTEMS MANAGEMENT
END OF SEMESTER EXAMINATION MAY - AUGUST 2024

HSM 719: HEALTHCARE FINANCIAL MANAGEMENT

DATE: August 2024

TIME: Three Hours **Start:** **Finish:**

INSTRUCTIONS

1. This exam is marked out of 100 marks
2. This Examination comprises TWO Sections
3. Section A: Compulsory Question (25 marks)
4. Section B: Long Answer Questions (75 marks)
5. All questions in Section A are compulsory and Answer any THREE questions in Section B
6. This online exam shall take 3 Hours
7. Late submission of the answers will not be accepted
8. Ensure your web-camera is on at all times during the examination period
9. No movement is allowed during the examination
10. Idling of your machine for 5 min or more will lead to lock out from the exam
11. The Learning Management System (LMS) has inbuilt integrity checks to detect cheating
12. Any aspect of cheating detected during and or after the exam administration will lead to nullification of your exam
13. In case you have any questions call the invigilator for this exam on Tel. +254722774221 and Head of Department on Tel +254725984499 and michel.mutabazi@mcampus.amref.ac.ke
14. For adverse incidences please write an email to: amiu.examinations@amref.ac.ke

SECTION A: Answer all questions (25 marks)

1. Outline the difference between profit maximization and utility maximization in healthcare organizations. (4 marks)
2. Briefly explain four main functions of a financial manager in a healthcare institution. (4 marks)
3. Outline any four principles of financial management in healthcare organizations (4 marks)
4. State how you can use the following accounting concepts in your work as a finance manager
 - a) Realization concept
 - b) Business entity concept
 - c) Periodicity concept
 - d) Historical cost concept(4 marks)
5. Outline three basic principles to health financing mechanisms. (3 marks)
6. Distinguish between revenue collection and risk pooling. (2 marks)
7. Consider a project which has the following cash flow stream

| Year | Cash flow in KES |
|------|------------------|
| 0 | (1,000,000) |
| 1 | 200,000 |
| 2 | 200,000 |
| 3 | 300,000 |
| 4 | 300,000 |
| 5 | 350,000 |

The cost of capital, r , for the firm is 10%. Calculate the net present value of the proposal and interpret your result. (4 marks)

SECTION B: ANSWER ANY THREE (3) QUESTIONS

8. a) Discuss three advantages and two disadvantages of performance-based health financing in a developing country of your choice (10 marks)
 - b) Explain three basic functions of a health financing system giving relevant examples in Kenya (15 marks)
9. Consider the following financial statements of XYZ community hospital.

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XYZ Community Hospital

Balance Sheet December 31, 2021 and 2020 (In thousands \$)

| | <u>2021</u> | <u>2020</u> |
|---|----------------------|----------------------|
| Current Assets | | |
| Cash and cash equivalent | 700 | 1,000 |
| Net patient receivables | 4,000 | 3,500 |
| Inventory | <u>950</u> | <u>750</u> |
| Total current Asset | 5,650 | 5,250 |
| Noncurrent Assets | | |
| Plant. Property and equipment | | |
| Gross plant, Property, and equivalent | 26,500 | 24,000 |
| (Less accumulated depreciation) | <u>-18,000</u> | <u>-17,000</u> |
| Net plant, property, and equipment | 8,500 | 7,000 |
| Board-Designated Funds | <u>18,000</u> | <u>9,000</u> |
| Total assets | <u>32,150</u> | <u>21,250</u> |
| Current liabilities | | |
| Accounts payable | 2,500 | 2,000 |
| Accrued expenses | <u>900</u> | <u>750</u> |
| Total current liabilities | 3,400 | 2,750 |
| Long-term liabilities | | |
| Bonds Payable | <u>6,500</u> | <u>8,000</u> |
| Total long-term liabilities | 6,500 | 8,000 |
| Net Assets | <u>22,250</u> | <u>10,500</u> |
| Total liabilities and net assets | <u>32,150</u> | <u>21,250</u> |

XYZ Community Hospital
Statement of Operations for the Years Ended December 31
2021 and 2020 (In thousand)

| | <u>2021</u> | <u>2020</u> |
|--------------------------------------|----------------|----------------|
| Revenues | | |
| Net patient service revenue | \$23,000 | \$19,000 |
| Net assets releases from restriction | <u>1,000</u> | <u>800</u> |
| Total operating revenues | 24,000 | 19,800 |
| Expenses | | |
| Salaries and Benefits | 13,000 | 9,000 |
| Suppliers and other expenses | 7,000 | 6,000 |
| Depreciation | 2,500 | 2,000 |
| General services | <u>200</u> | <u>100</u> |
| Total operating expenses | <u>22,700</u> | <u>17,100</u> |
| Operating income | <u>1,300</u> | <u>2,700</u> |
| Nonoperating Income | <u>4,000</u> | <u>2,500</u> |
| Excess of revenue over expenses | 5,300 | 5,200 |
| Increase (Decrease) in Assets | <u>\$5,300</u> | <u>\$5,200</u> |

a) Using the financial statements above, compute the following financial ratios for both years and compare them (12 marks)

- i. Current ratio
- ii. Working capital
- iii. Operating margin
- iv. Return on net assets
- v. Total asset turnover ratio
- vi. Debts to equity ratio

b) Citing at least one ratio per category below, comment on XYZ Community Hospital's

- i. Liquidity (3 marks)
- ii. Efficient use of assets (3 marks)
- iii. Revenues and expenses (3 marks)
- iv. Profitability (3 marks)

v. Capital structure (4 marks)

10. Explain the steps and key deliverables of the following financial processes in a healthcare organization:

a) Financial reporting (9 marks)

b) Financial audit (8 marks)

c) After reviewing your budget, you have determined that you can afford to pay KSH 120,000 per months for 3 years toward a new ambulance. You call a finance company and learn that the going rate of interest on a car finance is 1.5 percent per month for 36 months. How much can you borrow? (8 marks)

11. a) Discuss any three types of budgets (9 marks)

b) Explain three roles of the Board of Directors in financial performance of a healthcare institution (9 marks)

c) Suppose you have decided to deposit KSH 30,000 per year in your public provident fund account for 30 years. What will be the accumulated amount in your public provident fund account at the end of 30 years if the interest rate is 8%? (7 marks)

12. a) Highlight three tools that can be used in strategic financial management (9 marks)

b) You want to borrow KSH 1,080,000 to build an office in hospital. You approach a housing finance company which charges 12.5 percent interest. You can pay KSH 180,000 per year towards loan amortization. What should be the maturity period of the loan? (9 marks)

c) Assume that hospital A has a project requiring an initial cash outlay of \$3,000,000. The project is expected to return \$1,000,000 each period for the next five periods, and the appropriate discount rate is 4%. Calculate the discounted payback period (8 marks).