MANAGERIAL FINANCE 320 (MFN710S)

DATE: 17 August 2019
DURATION: 2 Hours
MARKS: 50

TEST 1 MARKING GUIDE

INSTRUCTIONS
Accept alternative methods used and appropriate answers provided

REQUIREMENTS: None

EXAMINERS: E. Mushonga and L. Odada
MODERATOR: H. Namwandi

This marking guide consists of 5 pages including this cover page
QUESTION 1  [10 MARKS]

For questions 1.1 – 1.10, just write the answer only (the correct letter chosen) in your answer sheet/answer book and not on question paper. Do not copy the question and the answers again.

1.1 ________ is concerned with the acquisition, financing, and management of assets with some overall goal in mind.
   a)  Financial management
   b)  Profit maximization
   c)  Agency theory
   d)  Social responsibility

1.2 Jensen and Meckling showed that ________ can assure themselves that the ________ will make optimal decisions only if appropriate incentives are given and only if the ________ are monitored.
   a)  principals; agents; agents
   b)  agents; principals; principals
   c)  principals; agents; principals
   d)  agents; principals; agents

1.3 ________ is concerned with the maximization of a firm's earnings after taxes.
   a)  Shareholder wealth maximization
   b)  Profit maximization
   c)  Stakeholder maximization
   d)  EPS maximization

1.4 What is the most appropriate goal of the firm?
   a)  Shareholder wealth maximization.
   b)  Profit maximization.
   c)  Stakeholder maximization.
   d)  EPS maximization.

1.5 Which of the following statements is correct regarding profit maximization as the primary goal of the firm?
   a)  Profit maximization considers the firm's risk level.
   b)  Profit maximization will not lead to increasing short-term profits at the expense of lowering expected future profits.
   c)  Profit maximization does consider the impact on individual shareholder's EPS.
   d)  Profit maximization is concerned more with maximizing net income than the stock price.
1.6 A concept that implies that the firm should consider issues such as protecting the consumer, paying fair wages, maintaining fair hiring practices, supporting education, and considering environmental issues.
   
a) Financial management
b) Profit maximization
c) Agency theory
d) Corporate social responsibility

1.7 The ______ decision involves a determination of the total amount of assets needed, the composition of the assets, and whether any assets need to be reduced, eliminated, or replaced.
   
a) asset management
b) financing
c) investment
d) accounting

1.8 According to the text's authors, what is the most important of the three financial management decisions?
   
a) Asset management decision.
b) Financing decision.
c) Investment decision.
d) Accounting decision.

1.9 The ______ decision involves efficiently managing the assets on the balance sheet on a day-to-day basis, especially current assets.
   
a) asset management
b) financing
c) investment
d) accounting

1.10 ______ is concerned with the maximization of a firm's stock price.
   
a) Shareholder wealth maximization
b) Profit maximization
c) Stakeholder welfare maximization
d) EPS maximization
QUESTION 2

[20 MARKS]

a) Standard deviation of both service providers and interpret which share carries the most total risk?

<table>
<thead>
<tr>
<th>Year</th>
<th>Return</th>
<th>Deviation</th>
<th>Deviation²</th>
<th>Year</th>
<th>Return</th>
<th>Deviation</th>
<th>Deviation²</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>19.80</td>
<td>-1.40</td>
<td>1.96</td>
<td>2019</td>
<td>46.10</td>
<td>-0.20</td>
<td>0.04</td>
</tr>
<tr>
<td>2018</td>
<td>22.30</td>
<td>1.10</td>
<td>1.21</td>
<td>2018</td>
<td>48.20</td>
<td>1.90</td>
<td>3.61</td>
</tr>
<tr>
<td>2017</td>
<td>21.50</td>
<td>0.30</td>
<td>0.09</td>
<td>2017</td>
<td>44.60</td>
<td>-1.70</td>
<td>2.89</td>
</tr>
<tr>
<td>Total</td>
<td>63.60</td>
<td></td>
<td>3.26</td>
<td>Total</td>
<td>138.90</td>
<td></td>
<td>6.54</td>
</tr>
<tr>
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<td>3.00</td>
<td></td>
<td>3.00</td>
<td>N</td>
<td>3.00</td>
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<td>3.00</td>
</tr>
<tr>
<td>E(R)</td>
<td>21.2✓</td>
<td>Variance</td>
<td>1.09✓</td>
<td>E(R)</td>
<td>46.3✓</td>
<td>Variance</td>
<td>2.18✓</td>
</tr>
<tr>
<td>SD</td>
<td>1.04✓</td>
<td></td>
<td></td>
<td>SD</td>
<td>1.48✓</td>
<td></td>
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</tr>
</tbody>
</table>

MTC is riskier✓ than TELECOM because it has a higher standard deviation✓

b) Compute CV✓

<table>
<thead>
<tr>
<th></th>
<th>TELECOM</th>
<th>MTC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD</td>
<td>1.04</td>
<td>1.48</td>
</tr>
<tr>
<td>E(R)</td>
<td>21.2✓</td>
<td>46.3</td>
</tr>
<tr>
<td>CV</td>
<td>0.05✓</td>
<td>0.03✓</td>
</tr>
</tbody>
</table>

- Telecom exposes Mr Lutombi to 0.05 units of risk✓ while MTC exposes him to 0.03 units of risk✓
- Mr. Lutombi should invest in MTC✓ because it exposes him to lesser units of risk compared to TELECOM✓

c) Can Mr. Lutombi eliminate his unsystematic risk diversifying his portfolio? Explain.

- No, you cannot ✓.
- This is because these two investments are in the same industry therefore are affected by the same industry risks✓.
- To be most effective in eliminating unsystematic risk, a portfolio should be made up of shares in two different industries or geographical spread that are not affected by the same market conditions✓.
QUESTION 3

a) Funds accumulated at retirement (FV)

\[ FVA = N\$18\,500 \times 442.59 = N\$8\,187\,915 \]

b) Period of waiting (n)

\[ 370\,580/98\,000 = 3.781 \]

\[ \ln3.781/\ln1.1 = 13.59 \text{ years} \]

c) \[ r = (FV/PV)^{1/n} - 1 \]

\[ r = (135\,000/55\,000)^{1/8} - 1 \]

\[ r = 11.88\% \]

d) Establish her target:

On the day he retires, he will begin withdrawing N\$83,751 \[40,000 \times (1.03)^{25} = N\$83,751\]

The PV of the withdrawals = N\$1,072,547. This is Richard’s target (the amount he should save by the time he reaches 60).

Calculations below:

<table>
<thead>
<tr>
<th>Age</th>
<th>Time</th>
<th>Amount Withdrawn</th>
<th>Discount Factor</th>
<th>PV @ age 61</th>
</tr>
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<td>83,751</td>
<td>1.0000</td>
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<td>62</td>
<td>1</td>
<td>86,264</td>
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<td>88,851</td>
<td>0.8264</td>
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<td>3</td>
<td>91,517</td>
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<td>64,381</td>
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<td>5</td>
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<tr>
<td>69</td>
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<td>106,093</td>
<td>0.4665</td>
<td>49,493</td>
</tr>
<tr>
<td>70</td>
<td>9</td>
<td>109,276</td>
<td>0.4241</td>
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<tr>
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<td>0.3855</td>
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<td>72</td>
<td>11</td>
<td>115,931</td>
<td>0.3505</td>
<td>40,634</td>
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<tr>
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<tr>
<td>75</td>
<td>14</td>
<td>126,681</td>
<td>0.2633</td>
<td>33,355</td>
</tr>
<tr>
<td>76</td>
<td>15</td>
<td>130,481</td>
<td>0.2394</td>
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<td>77</td>
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<tr>
<td>79</td>
<td>18</td>
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<tr>
<td>80</td>
<td>19</td>
<td>146,858</td>
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<td>81</td>
<td>20</td>
<td>151,264</td>
<td>0.1486</td>
<td>22,478</td>
</tr>
</tbody>
</table>
We determine whether he will be able to reach this target with her current plan:

\[ FV = N55\,000 \times FVIF_{10\%;25yrs} \]

\[ FV = N55\,000 \times 10.835 = \boxed{N595\,000} \]

\[ FVA = N2\,000 \times FVFA_{10\%;25yrs} \]

\[ FVA = N2\,000 \times 98.347 \]

\[ FVA = \boxed{N196\,694} \]

At the age of 60 he will have accumulated N791 694

Shortfall = 1 107 254 – 791 694 = \boxed{N315\,560}

Therefore, Richard will not be able to accomplish her goal.

e) Loss of monthly income of N28 600 for five years

\[ PVA_{10\%;60} = 28\,600 \times 1 - \frac{1}{1+r^n} \]

\[ PVA_{10\%;60} = 28\,600 \times 1 - \frac{1}{1+1.1^{60}} \]

\[ PVA = 28\,600 \times 9.967 = N285\,056 \]

End of marking guide