

Part 1 of 3 - Financial management 20.0 Points

Question 1 of 351.0 Points

In terms of capital budgeting decision-making, which approach will be used by a firm that is rationing capital?

- A. Ranking
- B. Accept reject
- C. Profitability index
- D. Payback period

Answer Key:A

Question 2 of 351.0 Points

The cost of giving up a cash discount under the terms of sale 5/30 net 60 (assuming a 365-day year) is ...

- A. 32%
- B. 64%
- C. 58%
- D. 61%

Answer Key:B

Feedback:

Cost of foregoing cash discount = $CD/(1-CD) \times 365/N$
= 64%

Question 3 of 351.0 Points

The financial manager is evaluating two new projects. The firm has a cost of capital of 8%. The two projects are expected to have the following cash flows:

Year	Project A (R)	Project B (R)
1	-50 000	-80 000
2	20 000	40 000
3	30 000	30 000
4	10 000	30 000

Based on the IRR of each project, which project should the firm invest in?

- A. Only Project A should be accepted.
- B. Only Project B should be accepted.
- C. Both projects should be accepted.
- D. Neither Project A nor B should be accepted.

Answer Key:C

Feedback:

This question tested your ability to calculate the internal rate of return (IRR).

Financial calculator:

Project A:

CF0 (-50 000)

CF1 20 000

CF2 30 000

Project B:

CF0 (-80 000)

CF1 40 000

CF2 30 000

CF3 10 000

I/YR 8

(2nd function) IRR = 10.60%

CF3 30 000

I/YR 8

(2nd function) IRR = 12.75%

Both projects should be accepted due to the fact that both have an IRR which is higher than 8%

Question 4 of 351.0 Points

The before-tax cost of debt for a firm is 14%. If the marginal tax rate the firm is subjected to is 27%, what is the firm's after-tax cost of debt?

- A. 18%
- B. 10%
- C. 13%
- D. 23%

Answer Key:B

Feedback:After-tax cost of debt: $14\% \times (1 - 0.27) = 10.22\%$

Question 5 of 351.0 Points

P Ltd. is evaluating two mutually exclusive investment projects for the next financial year. The firm's cost of capital is determined at 9%. The information pertaining to the two projects is as follows:

Year Project X Project Y

0 (-R80 000) (-R25 000)

1 R5 000 R5 000

2 R10 000 R5 000

3 R20 000 R5 000

4 R40 000 R5 000

5 R50 000 R5 000

The net present value (NPV) of Project Y is ...

- A. R25 000,00
- B. R5 551,74
- C. R0
- D. R-5551,74

Answer Key:D

Feedback:Financial calculator:

CF0 (-25 000)

CF1 5 000

CF2 5 000

CF3 5 000

CF4 5 000

CF5 5 000

I/YR 9

(2nd function) NPV = (-5 551.74)

Question 6 of 351.0 Points

W wants to buy a new car for R200 000 in 4 years' time. He has saved R15 000 up to this point in time. How much money would he have to save each year towards buying a car, assuming a 10% interest per annum?

- A. R38 362
- B. R47 826
- C. R43 094
- D. R46 250

Answer Key:A

Feedback:Financial calculator:

PV (-15 000)

FV 200 000

N 4

I/YR 10

PMT = 38 362

Question 7 of 351.0 Points

With reference to the management of accounts receivable, which of the following factors would NOT be used for decision-making?

- A. Credit standards
- B. Average payment period
- C. Credit limits
- D. Monitoring accounts receivable

Answer Key:B

Question 8 of 351.0 Points

Relevant cash flows for a project are best described as

- A. incidental cash flows
- B. sunk cash flows
- C. incremental cash flows
- D. accounting cash flows

Answer Key:C

Question 9 of 351.0 Points

P Ltd. is evaluating two mutually exclusive investment projects for the next financial year. The firm's cost of capital is determined at 9%. The information pertaining to the two projects is as follows:

Year	Project X	Project Y
0	(-R80 000)	(-R25 000)
1	R5 000	R5 000
2	R10 000	R5 000
3	R20 000	R5 000
4	R40 000	R5 000
5	R50 000	R5 000

The net present value (NPV) of Project X is ...

- A. R10 235,78
- B. R4 640,60
- C. R9 281,20
- D. R50 000,00

Answer Key:C

Feedback:Financial calculator:

CF0 (-80 000)

CF1 5 000

CF2 10 000

CF3 20 000

CF4 40 000

CF5 50 000

I/YR 9

(2nd function) NPV = 9 281.20

Question 10 of 351.0 Points

Chico Ltd wants to buy a new paper clip bending machine for R12 000 that is expected to generate the following cash inflows:

Year 1 R2 000

Year 2 R5 000

Year 3 R4 000

Year 4 R3 000

Assuming a discount rate of 7%, what is the net present value of the machine

- A. R615,55
- B. -R196,05
- C. -R209,77
- D. R2 000,00

Answer Key:C

Feedback:With a financial calculator:

CF0 (-12 000)

CF1 2000

CF2 5000

CF3 4000

CF4 3000

I/YR 7

(2nd function) NPV = -209.77

Question 11 of 351.0 Points

A firm with an operating cycle of 50 days and a cash conversion cycle of 30 days, has an average payment period of ... days.

- A. 20
- B. -20
- C. -80
- D. 80

Answer Key:A

Feedback:CCC = AAI + ACP – APP

$$30 = 50 - x$$

$$X = 20$$

Question 12 of 351.0 Points

P (Pty) Ltd expects sales for the coming year to total R500 000, R200 000 of which will cover variable costs. Fixed cost for the firm amounts to R150 000. The firm expects to sell 25 000 units in the coming year. Calculate the firm's breakeven point in rand.

- A. R250 000
- B. R150 000
- C. R285 714
- D. R214 280

Answer Key:A

Feedback:Step 1: Calculate sales and variable cost per unit.

$$\text{Sales per unit} = 500\,000 \div 25\,000 = R20$$

$$\text{Variable cost per unit} = 200\,000 \div 25\,000 = R8$$

Step 2: Calculate the breakeven point in units.

$$\begin{aligned} \text{BE point (units)} &= \text{total fix cost/marginal income per unit} = 150\,000 / (20 - 8) \\ &= 12\,500 \text{ units} \end{aligned}$$

Step 3: Calculate the breakeven point in rands.

$$\begin{aligned} \text{BE point units} \times \text{selling price per unit} \\ &= 12\,500 \times R20 \\ &= R250\,000 \end{aligned}$$

Question 13 of 351.0 Points

B Ltd. has given you the following information to prepare its cash budget for December 20XX.

Below is a summary of the past and expected future sales (all values in R):

October	November	December
R80 000	R70 000	R100 000

50% of sales are on credit.

40% of credit sales are collected in the month of sale and the remainder in the month thereafter.

Purchases amount to 60% of sales.

All purchases are on credit.

50% of purchases are paid in the first month following the month of purchase and the remainder is settled in the second month after the month of purchase.

What amount of purchases would be paid in December?

- A. R21 000
- B. R45 000
- C. R60 000
- D. R24 000

Answer Key:B

Feedback:

Purchases for December:

October: $(80\,000 \times 60\%) \times 50\% = 24\,000$

November: $(70\,000 \times 60\%) \times 50\% = 21\,000$

45 000

Question 14 of 351.0 Points

Profitability is the firm's ability to generate revenues that will exceed the firm's total ...

- A. liabilities.
- B. assets.
- C. costs.
- D. cash expenses.

Answer Key:C

Question 15 of 351.0 Points

P Ltd. is evaluating two mutually exclusive investment projects for the next financial year. The firm's cost of capital is determined at 9%. The information pertaining to the two projects is as follows:

Year	Project X	Project Y
0	(-R80 000)	(-R25 000)
1	R5 000	R5 000
2	R10 000	R5 000
3	R20 000	R5 000
4	R40 000	R5 000
5	R50 000	R5 000

The internal rate of return (IRR) of Project X is closest to ...

- A. 10%
- B. 9%
- C. 12%
- D. 11%

Answer Key:C

Feedback:Financial calculator:

CF0 (-80 000)

CF1 5 000

CF2 10 000

CF3 20 000

CF4 40 000

CF5 50 000

I/YR 9

(2nd function) IRR = 12.17%

Question 16 of 351.0 Points

A Ltd is a customised pencil manufacturer and is projecting sales of R200 000 for 20XX. The company's supplier charges the company R100 per order of pencils. The selling price per unit for the firm is R10, while the purchase price per unit is R5. The carrying cost of the inventory is 10% of its value.

Calculate the economic order quantity for A Ltd

- A. 8 944 units
- B. 2 828 units
- C. 2 000 units
- D. 6 325 units

Answer Key:B

Question 17 of 351.0 Points

The before-tax cost of debt of a firm that has a 35% marginal tax rate is 15%. The after-tax cost of debt is ...

- A. 6.73%
- B. 10.00%
- C. 9.75%
- D. 12.75%

Answer Key:C

Feedback: $15\% \times (1-0.35) = 9.75\%$

Question 18 of 351.0 Points

An increase in assets will lead to ...

- A. an increase in liabilities.
- B. an increase in owner's equity and/or liabilities.
- C. a decrease in liabilities.
- D. an increase in owner's equity.

Answer Key:B

Question 19 of 351.0 Points

The financial manager is evaluating two new projects. The firm has a cost of capital of 8%. The two projects are expected to have the following cash flows:

Year	Project A (R)	Project B (R)
1	-50 000	-80 000
2	20 000	40 000
3	30 000	30 000
4	10 000	30 000

What is the profitability index for Project A

- A. 1,20
- B. 0,04
- C. 1,04
- D. 1,13

Answer Key:C

Feedback:

Step1: Calculate the present value of net cash flows.

Financial calculator:

CF0 0

CF1 20 000

CF2 30 000

CF3 10 000

I/YR 8

NPV = 52 177

Step 2: Calculate the PI.

PI = Present value of net cash flows/Initial investment

PI = 52 177/50 000

= 1.04

Question 20 of 351.0 Points

The financial manager is evaluating two new projects. The firm has a cost of capital of 8%.

The two projects are expected to have the following cash flows:

Year	Project A (R)	Project B (R)
1	-50 000	-80 000
2	20 000	40 000
3	30 000	30 000

4

10 000

30 000

Calculate the payback period for both projects and choose the correct option indicating the payback periods and which project should be selected based on the payback period.

A. A: 2 years, B: 2,3 years, accept project B

B. A: 3 years, B: 3 years, accept neither of the projects

C. A: 2 years, B: 2,3 years, accept project A

D. A: 3 years, B: 3 years, accept both projects

Answer Key:C

Feedback:Payback period project A:

Year Amount (R)

0 -50 000

1 +20 000

2 +30 000

Thus the payback period for project A = 2 years.

Payback period project B:

Year Amount(R)

0 -80 000

1 +40 000

2 +30 000

-10 000

3 +30 000

20 000

Thus the payback period for project B = 2.3 years.

Project A should be accepted, because it's payback period is the shortest.

Part 2 of 3 - Descriptive statistics 5.0 Points
The questions are based on the study guide
DSC2602 Rational Decision Making

Question 21 of 351.0 Points

Thirty companies took part in a survey to investigate their annual expenditure in marketing their products. The data (in R'000s) are given below.

27	33	35	40	48	53	57	61	63	68
65	57	35	56	32	51	49	51	40	44
53	43	48	45	46	57	40	26	69	50

Determine the mean.

- A. 15,5
- B. 48.5
- C. 48
- D. 49

Answer Key:C

Feedback:Refer to pages 14 - 24 of the DSC2602 guide

Question 22 of 351.0 Points

Thirty companies took part in a survey to investigate their annual expenditure in marketing their products. The data (in R'000s) are given below.

27	33	35	40	48	53	57	61	63	68
65	57	35	56	32	51	49	51	40	44
53	43	48	45	46	57	40	26	69	50

Determine the median

- A. 49
- B. 15,5
- C. 48,5
- D. 48

Answer Key:C

Feedback:Refer to pages 14 - 24 of the DSC2602 guide

Question 23 of 351.0 Points

Thirty companies took part in a survey to investigate their annual expenditure in marketing their products. The data (in R'000s) are given below.

27	33	35	40	48	53	57	61	63	68
65	57	35	56	32	51	49	51	40	44
53	43	48	45	46	57	40	26	69	50

Calculate the standard deviation

- A. 134,33
- B. 11,59
- C. 23,18
- D. 48,1

Answer Key:B

Feedback:Refer to pages 14 - 24 of the DSC2602 guide

Question 24 of 351.0 Points

Thirty companies took part in a survey to investigate their annual expenditure in marketing their products. The data (in R'000s) are given below.

27	33	35	40	48	53	57	61	63	68
65	57	35	56	32	51	49	51	40	44
53	43	48	45	46	57	40	26	69	50

Determine the coefficient of variation.

- A. 24,1%
- B. 48,1%
- C. 48,5%
- D. 11,59%

Answer Key:A

Feedback:Refer to pages 14 - 24 of the DSC2602 guide

Question 25 of 351.0 Points

Thirty companies took part in a survey to investigate their annual expenditure in marketing their products. The data (in R'000s) are given below.

27	33	35	40	48	53	57	61	63	68
65	57	35	56	32	51	49	51	40	44
53	43	48	45	46	57	40	26	69	50

What is the mode?

- A. 48
- B. 48,5
- C. 40 and 57
- D. 49

Answer Key:C

Feedback:Refer to pages 14 - 24 of the DSC2602 guide

Part 3 of 3 - Probability 10.0 PointsThe questions are based on the guide: DSC2602
Rational Decision Making

Question 26 of 351.0 Points

A grinding mill in the Free State Province breaks down on average 5 times a month.

What is the probability that the mill will not break down in a month?

- A. 0,0500
- B. 0,0067
- C. 0,400
- D. 0,0670

Answer Key:B

Feedback:Refer to Chapters 2 - 4

Question 27 of 351.0 Points

This question is based on the attached pdf document.

A graphical presentation of three events A, B and C that are mutually exclusive, is

- A. 2
- B. 1
- C. 3
- D. 4

Answer Key:A

Feedback:Refer to Chapters 2 - 4

Question 28 of 351.0 Points

Thirty chief executive officers in a certain industry are classified by age and their previous functional positions as shown below.

Previous functional

position

Under 55 years

55 years

and older

Total

Finance	5	13	18
Marketing	2	4	6
Other	2	4	6
Total	9	21	30

Suppose an executive is selected at random from this group.

What is the probability that the executive is under 55 years?

A. 7/10

B. 4/30

C. 0.3

D. 1/9

Answer Key:C

Feedback:Refer to Chapters 2 - 4

Question 29 of 351.0 Points

Thirty chief executive officers in a certain industry are classified by age and their previous functional positions as shown below.

Previous functional

position

Under 55 years

55 years

and older

Total

Finance	5	13	18
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Marketing	2	4	6
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Other	2	4	6
-------	---	---	---

Total	9	21	30
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Suppose an executive is selected at random from this group.

What is the probability that the executive is older than 55 years and the previous position was in marketing?

- A. 4/6
- B. 6/30
- C. 2/6
- D. 4/30

Answer Key:D

Feedback:Refer to Chapters 2 - 4

Question 30 of 351.0 Points

The annual salaries (in thousands of rands) of people randomly sampled at Cape Town hotels are as follows: 234 204 267 198 179 210 260 290 198 199

A 95% confidence interval for the population mean μ has to be determined.

From the given information, we can deduce that the data given are from a sample of size 10. The population standard deviation is not given; hence, we say that the standard deviation is unknown. We must use the data given to calculate a 95% confidence interval for the population mean, μ .

Suppose a 99% confidence interval is to be determined. What is going to happen to the interval?

- A. It becomes narrower.
- B. It remains the same.
- C. It becomes an interval for proportions.
- D. It becomes wider.

Answer Key:D

Feedback:Refer to Chapters 2 - 4

Question 31 of 351.0 Points

Thirty chief executive officers in a certain industry are classified by age and their previous functional positions as shown below.

Previous functional

position

Under 55 years

55 years

and older

Total

Finance	5	13	18
---------	---	----	----

Marketing	2	4	6
-----------	---	---	---

Other	2	4	6
-------	---	---	---

Total	9	21	30
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Suppose an executive is selected at random from this group.

What is the probability that the executive is under 55 years?

A. 7/10

- B. $\frac{4}{30}$
- C. 0.3
- D. $\frac{1}{9}$

Answer Key:C

Feedback:Refer to Chapters 2 - 4

Question 32 of 351.0 Points

A grinding mill in the Free State Province breaks down on average 5 times a month.

What is the probability that the mill will break down three or more times in a given month?

- A. 0,84200
- B. 0,12463
- C. 0,06740
- D. 0,87535

Answer Key:D

Feedback:Refer to Chapters 2 - 4

Question 33 of 351.0 Points

Thirty chief executive officers in a certain industry are classified by age and their previous functional positions as shown below.

Previous functional

position

Under 55 years

55 years

and older

Total

Finance	5	13	18
Marketing	2	4	6
Other	2	4	6
Total	9	21	30

Suppose an executive is selected at random from this group.

What is the probability that the executive is under 55 years and the previous position was in finance?

- A. $5/18$
- B. $18/30$
- C. $5/30$
- D. $6/10$

Answer Key:C

Feedback:Refer to Chapters 2 - 4

Question 34 of 351.0 Points

The time taken to do minor check-ups on small cars is found to be normally distributed with a mean time of 30 minutes and a standard deviation of 5 minutes. What is the time limit for checking a car if no more than 10% of checks exceed this limit?

- A. 36,40 minutes
- B. 3,00 minutes
- C. 1,28 minutes
- D. 6,00 minutes

Answer Key:A

Feedback:Refer to Chapters 2 - 4

Question 35 of 351.0 Points

The annual salaries (in thousands of rands) of people randomly sampled at Cape Town hotels are as follows: 234 204 267 198 179 210 260 290 198 199

A 95% confidence interval for the population mean μ has to be determined.

From the given information, we can deduce that the data given are from a sample of size 10. The population standard deviation is not given; hence, we say that the standard deviation is unknown. We must use the data given to calculate a 95% confidence interval for the population mean, μ .

What is the confidence interval?

- A. $222\ 950 \leq \mu \leq 224\ 850$
- B. $197\ 563 \leq \mu \leq 250\ 237$
- C. $201\ 081 \leq \mu \leq 246\ 719$

Answer Key:B

Feedback:Refer to Chapters 2 - 4