LEASES (IFRS 16)

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1. Overview of IFRS 16

Objective: IFRS 16 sets out principles for recognition, measurement, presentation and disclosure of leases so that users of financial statements can assess the effect of leases on financial position, performance and cash flows.

Big picture change vs IAS 17:

- **Lessee:** Almost all leases go on statement of financial position as:
  - **Right-of-use (ROU) asset**, and
  - **Lease liability**
- **Lessor:** Still uses **finance vs operating lease** classification, similar to IAS 17.

2. Key definitions and scope

2.1 Definition of a lease

A **lease** is a contract that conveys the **right to control the use of an identified asset** for a period of time in exchange for consideration.

You have a lease if, throughout the period of use:

- **Identified asset:**
  - Explicitly or implicitly specified; and
  - Supplier does not have substantive substitution rights.
- **Right to obtain substantially all economic benefits** from use of the asset.
- **Right to direct the use** of the asset (decide how and for what purpose it is used).

2.2 Scope and exemptions

IFRS 16 applies to most leases, but **lessees** may elect not to recognise:

- **Short-term leases:** Lease term of **12 months or less** with no purchase option.
- **Leases of low-value assets:** e.g. small office equipment, tablets, etc. (professional judgement required).

For these, the lessee recognises lease payments as an **expense on a straight-line basis** or another systematic basis, similar to an operating lease.

3. Identifying a lease – practical steps

When you see a contract, ask:

1. **Is there an identified asset?**
    - **Yes** if:
        - The asset is specified (e.g. "Vehicle with registration CA 123-456" or "Unit 4, Building X"); and
        - The supplier cannot substitute it easily and benefit economically from substitution.
2. **Does the customer obtain substantially all economic benefits from use?**
    - E.g. all output, all capacity, or exclusive use.
3. **Does the customer direct how and for what purpose the asset is used?**
    - Who decides when, where, how much, and for what purpose the asset is used?

If all three are "yes", the contract **contains a lease**.

4. Lessee accounting – core model

4.1 Initial recognition

At the **commencement date**, the lessee recognises:

- **Lease liability** at the **present value (PV)** of lease payments not yet paid.
- **ROU asset** at cost, comprising:
    - Initial lease liability
    - Plus: lease payments made at or before commencement (less incentives received)
    - Plus: initial direct costs
    - Plus: estimated restoration/dismantling costs (provision under IAS 37)
    - Less: any lease incentives received.

4.1.1 Lease payments included in the lease liability

Include:

- **Fixed payments** (including in-substance fixed payments), less incentives receivable.
- **Variable lease payments** that depend on an index or rate (using the index/rate at commencement).
- **Amounts expected to be payable under residual value guarantees.**
- **Exercise price of a purchase option** if reasonably certain to be exercised.
- **Penalties for terminating** if the lease term reflects exercising that option.

Discount using:

- **Interest rate implicit in the lease**, if readily determinable; otherwise
- **Lessee's incremental borrowing rate**.

Mathematically, if lease payments are L per period, discount rate is i, and there are n payments, the PV is:

$$PV = \sum_{t=1}^{n} \frac{L_t}{(1+i)^t}$$

Fortunately, financial calculators have the formula built in, so it is quite simple to calculate the PV using such a calculator. Excel can also be used.

4.2 Subsequent measurement

- **Lease liability:**
  - Increase by **interest expense**.
  - Decrease by **lease payments made**.
  - Remeasure when certain estimates or indices change (e.g. lease term, variable payments based on index).
- **ROU asset:**
  - Depreciate over the **shorter of**:
    - Lease term, and
    - Useful life of the underlying asset (if ownership transfers or purchase option is reasonably certain to be exercised—then use useful life irrespective).
  - Adjust for remeasurements of the lease liability.

4.3 Presentation

- **Statement of financial position:**
  - ROU assets presented either separately or within the same line item as underlying assets (e.g. "Property, plant and equipment – right-of-use assets").
  - Lease liabilities presented separately or within "Borrowings" or similar.
- **Statement of profit or loss:**
  - **Depreciation** of ROU asset (operating expense).
  - **Interest expense** on lease liability (finance cost).
- **Statement of cash flows:**
  - Principal portion of lease payments → **financing activities**.
  - Interest portion → **operating or financing**, depending on policy.
  - Short-term and low-value lease payments → **operating activities**.

5. Core numerical example – basic property lease

5.1 Fact pattern

- Lessee: Company A (reporting in Rand).
- Underlying asset: Office building (leased, not owned).
- Lease term: 5 years, **no extension options**.
- Annual lease payments: **R120 000**, payable **in arrears** (end of each year).
- No initial direct costs, no incentives, no restoration obligations.
- Lessee's incremental borrowing rate: **8% per annum**.
- Lease commences: 1 January 20X1.

Required: Calculate:

- Initial lease liability and ROU asset.
- Amortisation schedule for the lease liability.
- Depreciation of ROU asset.
- Journal entries.

5.2 Step 1 – Present value of lease payments

Lease payments: R120 000 at the end of each year for 5 years. Discount rate: 8%.

We calculate:

$$PV = 120\,000 \times \left(\frac{1}{1.08} + \frac{1}{1.08^2} + \frac{1}{1.08^3} + \frac{1}{1.08^4} + \frac{1}{1.08^5}\right)$$

Compute each factor (rounded):

- Year 1: $\frac{1}{1.08} \approx 0.9259$
- Year 2: $\frac{1}{1.08^2} \approx 0.8573$
- Year 3: $\frac{1}{1.08^3} \approx 0.7938$
- Year 4: $\frac{1}{1.08^4} \approx 0.7350$
- Year 5: $\frac{1}{1.08^5} \approx 0.6806$

Sum of factors:

$$0.9259 + 0.8573 + 0.7938 + 0.7350 + 0.6806 \approx 3.9926$$

Therefore:

$$PV \approx 120\,000 \times 3.9926 \approx R479\,112$$

(You can round to R479 000 or R479 100 depending on policy; we'll use **R479 112**.)

5.3 Step 2 – Initial recognition (1 January 20X1)

- **Lease liability:** R479 112
- **ROU asset:** R479 112 (no other adjustments in this simple case)

Journal entry – at commencement:

- Dr Right-of-use asset – Building: Cost R479 112
- Cr Lease liability – Building R479 112

5.4 Step 3 – Lease liability amortisation schedule

This can very easily be programmed in Excel.

- Opening balance (Year 1): R479 112
- Interest each year = Opening balance × 8%
- Payment each year = R120 000
- Closing balance = Opening + Interest − Payment

Year 1 (20X1)

- Opening balance: R479 112
- Interest (8%): $479\,112 \times 0.08 = R38\,329$(rounded)
- Payment: R120 000
- Closing balance: $479\,112 + 38\,329 - 120\,000 = R397\,441$

Year 2 (20X2)

- Opening balance: R397 441
- Interest (8%): $397\,441 \times 0.08 \approx R31\,795$
- Payment: R120 000
- Closing balance: $397\,441 + 31\,795 - 120\,000 = R309\,236$

Year 3 (20X3)

- Opening balance: R309 236
- Interest (8%): $309\,236 \times 0.08 \approx R24\,739$
- Payment: R120 000
- Closing balance: $309\,236 + 24\,739 - 120\,000 = R213\,975$

Year 4 (20X4)

- Opening balance: R213 975
- Interest (8%): $213\,975 \times 0.08 \approx R17\,118$
- Payment: R120 000
- Closing balance: $213\,975 + 17\,118 - 120\,000 = R111\,093$

Year 5 (20X5)

- Opening balance: R111 093
- Interest (8%): $111\ 093 \times 0.08 \approx R8\ 888$
- Payment: R120 000
- Closing balance: $111\ 093 + 8\ 888 - 120\ 000 \approx R - 19$ (rounding difference)

We'd adjust rounding so that the final closing balance is **R0** (e.g. tweak the year's interest expense by R19).

You can calculate this in Excel as follows:

Year	Opening balance (R)	Interest 8% (R)	Payment (R)	Closing balance (R)
1	479 112	38 329	(120 000)	397 441
2	397 441	31 795	(120 000)	309 236
3	309 236	24 739	(120 000)	213 975
4	213 975	17 118	(120 000)	111 093
5	111 093	8 888	(120 000)	≈ 0

5.5 Step 4 – Depreciation of ROU asset

Assume:

- Lease term = 5 years.
- No transfer of ownership, no purchase option.

Depreciation is **straight-line** over 5 years:

$$\text{Annual depreciation} = \frac{479\ 112}{5} \approx R95\ 822$$

5.6 Step 5 – Journal entries over the lease term

5.6.1 End of Year 1 (31 December 20X1)

1. **Interest on lease liability**

- Dr Finance cost – Interest on lease liability R38 329
- Cr Lease liability – Building R38 329

2. **Lease payment**

- Dr Lease liability – Building R120 000
- Cr Bank R120 000

3. **Depreciation of ROU asset**

- Dr Depreciation expense – ROU asset R95 822
- Cr ROU asset – Building: Accumulated depreciation.... R95 822

5.6.2 End of Year 2 (similar pattern)

1. **Interest**

- Dr Finance cost – Interest on lease liability R31 795
- Cr Lease liability – Building R31 795

2. **Payment**

- Dr Lease liability – Building R120 000
- Cr Bank R120 000

3. **Depreciation**

- Dr Depreciation expense – ROU asset R95 822
- Cr ROU asset – Building: Accumulated depreciation R95 822

…and so on for Years 3–5.

6. Extended topics and variations

Now let's layer in the real-world complications you'll see in exam questions and practice.

6.1 Initial direct costs

Initial direct costs are incremental costs that would not have been incurred if the lease had not been obtained (e.g. commission, legal fees directly attributable to negotiating the lease). These are **added to the ROU asset**, not the lease liability.

Example – adding initial direct costs

Take the previous example and add:

- Initial direct costs: **R10 000**, paid at commencement.

At commencement (1 January 20X1):

- Lease liability: still R479 112 (PV of lease payments).
- ROU asset: R479 112 + R10 000 = **R489 112**.

Journal entry:

- Dr Right-of-use asset – Building: Cost R489 112
- Cr Lease liability – Building R479 112
- Cr Bank (initial direct costs) R10 000

Depreciation now uses R489 112 over 5 years:

$$\text{Annual depreciation} = \frac{489\,112}{5} \approx R97\,822$$

6.2 Lease incentives

If the lessor provides **lease incentives** (e.g. rent-free period, cash payment to lessee), these **reduce the cost of the ROU asset** and the lease liability (depending on timing).

Example – rent-free first year

- Lease term: 5 years.
- Annual payments: R120 000 in years 2–5 only (year 1 is rent-free).
- Discount rate: 8%.

You would:

1. Compute PV of payments in years 2–5.
2. Recognise that PV as lease liability.
3. ROU asset equals lease liability (assuming no other adjustments).
4. Depreciate ROU asset over 5 years (including the rent-free year).

The effect: **Total lease consideration is spread over the full lease term**, not just the paying years.

6.3 Restoration / dismantling obligations

If the lessee is required to **restore the asset** or **dismantle** it at the end of the lease, estimate the **present value of the future cost** and:

- Recognise a **provision** under IAS 37.
- Add that amount to the **ROU asset** at commencement.

Example – restoration cost

- At the end of 5-year lease, lessee must restore premises.
- Estimated cost in 5 years: **R100 000**.
- Discount rate: 8%.

Present value:

$$PV = \frac{100\,000}{(1.08)^5} \approx \frac{100\,000}{1.4693} \approx R68\,050$$

At commencement:

- Dr Right-of-use asset – Building: Cost R68 050
- Cr Provision for restoration R68 050

The ROU asset now includes this R68 050 and it is depreciated over the lease term. The provision unwinds with interest (finance cost) over time.

6.4 Variable lease payments

There are two main types:

1. **Linked to an index or rate** (e.g. CPI, prime rate):
    - Initially measured using the index/rate at commencement.
    - Lease liability is **remeasured** when the index/rate changes.
2. **Linked to performance or usage** (e.g. % of sales, units produced):
    - **Not included** in the lease liability initially.
    - Recognised in profit or loss when the event occurs (e.g. when sales happen).

Example – CPI-linked rent

- Base rent: R100 000 per year, payable in arrears.
- Rent increases annually with CPI.
- At commencement, CPI = 4% and you assume 4% for initial measurement.

You initially treat payments as if they are fixed at R100 000 (or R100 000 × 1.04, depending on contract wording) and discount them. When CPI does change, you **remeasure** the lease liability and adjust the ROU asset.

6.5 Lease modifications (high-level)

A **lease modification** is a change in scope or consideration that was not part of the original terms (e.g. adding floorspace, extending lease term).

- If the modification **adds the right to use one or more underlying assets** and the consideration increases by an amount commensurate with the stand-alone price, treat it as a **separate lease**.
- Otherwise, **remeasure the existing lease**:
    - Recalculate lease liability using a revised discount rate.
    - Adjust the ROU asset accordingly.

7. Short-term and low-value leases (lessee)

If the lessee elects the **recognition exemption**:

- **No ROU asset or lease liability** on statement of financial position.
- Recognise lease payments as **expense** on a straight-line basis or another systematic basis (similar to an operating lease).

Example – short-term lease

- 9-month lease of a photocopier.
- Monthly payment: R5 000.
- No purchase option.

Each month:

- Dr Lease expense – Short-term lease R5 000
- Cr Bank R5 000

No lease liability or ROU asset is recognised.

8. Lessor accounting – brief overview

While your main focus is usually lessee accounting under IFRS 16, lessor accounting still matters.

8.1 Classification

Lessors classify leases as:

- **Finance lease** – substantially all risks and rewards of ownership transfer.
- **Operating lease** – otherwise.

Indicators of a **finance lease** include:

- Transfer of ownership at end of lease.
- Bargain purchase option.
- Lease term for major part of economic life.
- PV of lease payments ≈ fair value of asset.
- Specialised asset with no alternative use to lessor.

8.2 Finance lease – lessor

At commencement:

- Derecognise the underlying asset.
- Recognise a **lease receivable** equal to the **net investment in the lease** (PV of lease payments plus unguaranteed residual value).

Income recognition:

- Recognise **finance income** over the lease term based on a pattern reflecting a constant periodic rate of return on the net investment.

8.3 Operating lease – lessor

- Keep the underlying asset on the balance sheet.
- Depreciate it as usual.
- Recognise lease income on a **straight-line basis** (or another systematic basis) over the lease term.

9. Putting it together – compact worked example with multiple elements

Let's combine several elements into one exam-style scenario.

9.1 Scenario

- Lessee: Company B.
- Underlying asset: Warehouse.
- Lease term: 4 years, no extension options.
- Annual lease payments: R150 000, payable in arrears.
- Initial direct costs: R8 000 (legal fees).
- Restoration obligation at end of lease: expected cost R60 000 (in 4 years).
- Discount rate: 9%.
- Lease commences: 1 January 20X1.

9.2 Step 1 – PV of lease payments

Payments: R150 000 at end of each of 4 years. Discount rate: 9%.

$$PV = 150\,000 \times \left(\frac{1}{1.09} + \frac{1}{1.09^2} + \frac{1}{1.09^3} + \frac{1}{1.09^4}\right)$$

Approximate factors:

- Year 1: 0.9174
- Year 2: 0.8417
- Year 3: 0.7722
- Year 4: 0.7084

Sum ≈ 3.2397

$$PV \approx 150\,000 \times 3.2397 \approx R485\,955$$

Lease liability at commencement: **R485 955**.

9.3 Step 2 – PV of restoration obligation

Future cost: R60 000 in 4 years. Discount rate: 9%.

$$PV = \frac{60\,000}{(1.09)^4} \approx \frac{60\,000}{1.4116} \approx R42\,520$$

9.4 Step 3 – Initial measurement of ROU asset

ROU asset cost:

- Lease liability: R485 955
- Plus: initial direct costs: R8 000
- Plus: restoration PV: R42 520

Total ROU asset:

$$R485\,955 + R8\,000 + R42\,520 = R536\,475$$

9.5 Step 4 – Initial journal entries (1 January 20X1)

Recognise lease liability and ROU asset

- Dr Right-of-use asset – Warehouse: Cost R536 475
- Cr Lease liability – Warehouse R485 955
- Cr Provision for restoration R42 520
- Cr Bank R8 000

9.6 Step 5 – Depreciation of ROU asset

Lease term: 4 years. Assume no transfer of ownership, no purchase option and the straight-line method of amortisation.

$$\text{Annual depreciation} = \frac{536\,475}{4} \approx R134\,119$$

9.7 Step 6 – Lease liability amortisation (first year)

We'll do Year 1 in detail; the rest follow the same pattern.

- Opening balance (Year 1): R485 955
- Interest (9%): $485\,955 \times 0.09 \approx R43\,736$
- Payment: R150 000
- Closing balance: $485\,955 + 43\,736 - 150\,000 = R379\,691$

9.8 Step 7 – Year 1 journal entries (31 December 20X1)

1. **Interest on lease liability**

- Dr Finance cost – Interest on lease liability R43 736
- Cr Lease liability – Warehouse R43 736

2. **Lease payment**

- Dr Lease liability – Warehouse R150 000
- Cr Bank R150 000

3. **Depreciation of ROU asset**

- Dr Depreciation expense – ROU asset R134 119
- Cr ROU asset – Warehouse: Accumulated depreciation.... R134 119

4. **Unwinding of restoration provision** (accretion of interest)

- Opening provision: R42 520
- Interest (9%): $42\,520 \times 0.09 \approx R3\,827$
- Dr Finance cost – Unwinding of discount R3 827
- Cr Provision for restoration R3 827

The provision will grow to approximately R60 000 by the end of Year 4.

10. High-level disclosure points (lessee)

In practice and in exams, remember that IFRS 16 requires **extensive disclosures** for lessees, including:

- Carrying amount of ROU assets by class of underlying asset.
- Additions to ROU assets.
- Depreciation charge by class of ROU asset.
- Interest expense on lease liabilities.
- Expense relating to short-term leases and low-value leases.
- Total cash outflow for leases.
- Maturity analysis of lease liabilities.

11. Quick conceptual summary

- **Step 1:** Decide if the contract **contains a lease** (identified asset and control).
- **Step 2:** Measure **lease liability** at PV of lease payments.
- **Step 3:** Measure **ROU asset** at cost (lease liability + direct costs + restoration − incentives).
- **Step 4:** Subsequently:
    - Lease liability → **interest + payments**.
    - ROU asset → **depreciation + adjustments**.
- **Step 5:** Watch for **modifications, variable payments, options, and restoration** obligations.

ADDENDUM A:
IFRS 16 – Formula Sheet and Summary

1. Present Value (PV) of Lease Payments

General formula: PV of lease payments =

$$\sum_{t=1}^{n} \frac{L_t}{(1+i)^t}$$

Where:

- L_t= lease payment in period t
- i= discount rate (incremental borrowing rate or implicit rate)
- n= number of payments

If payments are fixed and equal:

$$PV = L \times \left(\frac{1-(1+i)^{-n}}{i}\right)$$

2. Initial Measurement – Lease Liability

$$\text{Lease Liability} = PV(\text{Lease Payments})$$

Lease payments include:

- Fixed payments (including in-substance fixed)
- Variable payments linked to an index/rate (using index at commencement)
- Residual value guarantees
- Purchase option price (if reasonably certain)
- Termination penalties (if lease term reflects exercising the option)

3. Initial Measurement – Right-of-Use (ROU) Asset

$$\text{ROU Asset} = \text{Lease Liability} + \text{Initial Direct Costs} + \text{Restoration Provision} + \text{Prepaid Lease Payments} - \text{Lease Incentives Received}$$

4. Subsequent Measurement – Lease Liability

Interest expense:

$$\text{Interest} = \text{Opening Lease Liability} \times i$$

Closing balance:

$$\text{Closing Liability} = \text{Opening Liability} + \text{Interest} - \text{Lease Payment}$$

5. Subsequent Measurement – ROU Asset

Straight-line depreciation:

$$\text{Depreciation} = \frac{\text{Cost of ROU Asset}}{\text{Lease Term}}$$

If ownership transfers or purchase option is reasonably certain:

$$\text{Depreciation} = \frac{\text{Cost of ROU Asset}}{\text{Useful Life}}$$

6. Restoration / Dismantling Provision (IAS 37)

Initial recognition (PV of future cost):

$$PV = \frac{\text{Future Restoration Cost}}{(1+i)^n}$$

Subsequent unwinding:

$$\text{Unwinding of Discount} = \text{Opening Provision} \times i$$

7. Variable Lease Payments

Linked to index or rate (e.g., CPI):

Initial measurement uses index at commencement. When index changes:

$$\text{Revised Lease Liability} = PV(\text{Revised Lease Payments})$$

Adjustment goes to the **ROU asset**.

Linked to usage or performance (e.g., % of sales):

Not included in lease liability. Recognised in profit or loss when incurred.

8. Lease Modifications

If modification creates a separate lease:

No formula — treat as new lease.

If not a separate lease:

Revised lease liability:

$$\text{Revised Liability} = PV(\text{Remaining Payments Using Revised Discount Rate})$$

Adjustment:

- Increase/decrease ROU asset by the **difference** between revised and carrying amount of liability.

9. Short-Term & Low-Value Leases

No ROU asset or liability. Expense recognised straight-line:

$$\text{Lease Expense} = \frac{\text{Total Payments}}{\text{Lease Term}}$$

10. Quick Reference – What Goes Where

Lease Liability includes:

- Fixed payments
- In-substance fixed payments
- Index-linked payments (initially at base index)
- Residual value guarantees
- Purchase options (if reasonably certain)
- Termination penalties (if applicable)

ROU Asset includes:

- Lease liability
- Initial direct costs
- Restoration provision (PV)
- Prepayments
- Less: incentives received

11. Journal Entry Templates

At commencement:

Dr ROU Asset Cr Lease Liability Cr Bank (if initial direct costs paid) Cr Provision (if restoration obligation)

Each period:

Interest: Dr Finance Cost Cr Lease Liability

Payment: Dr Lease Liability Cr Bank

Depreciation: Dr Depreciation Expense Cr Accumulated Depreciation

Unwinding of restoration provision: Dr Finance Cost Cr Provision

12. Discounting Factors (Quick)

$$\text{Discount Factor} = \frac{1}{(1+i)^t}$$

Useful for manual PV calculations.

ADDENDUM B:
IFRS 16 – Exam-Style Questions and Solutions

QUESTION 1 – Basic Lease Liability & ROU Asset

Fact pattern:

- Lease term: 5 years
- Annual payments: R120 000, payable in arrears
- Discount rate: 8%
- No initial direct costs, no incentives, no restoration
- Commencement date: 1 Jan 20X1

Required:

1. Calculate the initial lease liability.
2. Calculate the initial ROU asset.
3. Provide the commencement journal entry.

Solution 1

1. Present value of lease payments

Payments: R120 000 at end of each year for 5 years. Discount rate: 8%.

Discount factors (rounded): Year 1: 0.9259 Year 2: 0.8573 Year 3: 0.7938 Year 4: 0.7350 Year 5: 0.6806

Sum = 3.9926

Lease liability: R120 000 × 3.9926 = **R479 112**

2. ROU asset

No adjustments → ROU asset = **R479 112**

3. Journal entry (1 Jan 20X1)

- Dr Right-of-use asset – Building: Cost R479 112
- Cr Lease liability – Building R479 112

QUESTION 2 – Depreciation & First-Year Entries

Using the lease parameters from Question 1:

Required:

1. Calculate annual depreciation (straight-line).
2. Prepare all year-end journal entries for 31 Dec 20X1.

Solution 2

1. Depreciation

ROU asset = R479 112; Lease term = 5 years

Annual depreciation = 479 112 ÷ 5 = **R95 822**

2. Year-end entries

Interest: Opening liability = R479 112 Interest = 479 112 × 8% = **R38 329**

- Dr Finance cost – Interest R38 329
- Cr Lease liability R38 329

Payment:

- Dr Lease liability R120 000
- Cr Bank R120 000

Depreciation:

- Dr Depreciation expense – ROU R95 822
- Cr ROU Asset: Accumulated depreciation R95 822

QUESTION 3 – Initial Direct Costs & Restoration Provision

Fact pattern:

- Annual payments: R150 000 (arrears)
- Lease term: 4 years
- Discount rate: 9%
- Initial direct costs: R8 000
- Restoration cost in 4 years: R60 000
- Commencement: 1 Jan 20X1

Required:

1. Calculate the initial lease liability.
2. Calculate the PV of restoration.
3. Calculate the ROU asset.
4. Provide the commencement journal entries.

Solution 3

1. Lease liability

Discount factors at 9%:

- Year 1: 0.9174
- Year 2: 0.8417
- Year 3: 0.7722
- Year 4: 0.7084

Sum = 3.2397

Lease liability = 150 000 × 3.2397 = **R485 955**

2. PV of restoration

Future cost = R60 000

PV = 60 000 ÷ (1.09^4) = 60 000 ÷ 1.4116 = **R42 520**

3. ROU asset

= Lease liability + Initial direct costs + Restoration PV

= 485 955 + 8 000 + 42 520 = **R536 475**

4. Journal entries

- Dr ROU asset – Warehouse: Cost R536 475
- Cr Lease liability R485 955
- Cr Provision for restoration R42 520
- Dr ROU asset – Warehouse: Cost R8 000
- Cr Bank R8 000

QUESTION 4 – CPI-Linked Variable Payments

Fact pattern:

- Base rent: R100 000 per year (arrears)
- Rent increases annually by CPI
- CPI at commencement: 4%
- Discount rate: 7%
- Lease term: 5 years

Required:

1. Explain how initial measurement is done.
2. Explain how subsequent measurement works when CPI changes.

Solution 4

1. Initial measurement

IFRS 16 requires using the **index at commencement**.

Thus, initial payments are treated as **fixed at R100 000** (not forecasted CPI increases).

Lease liability = PV of R100 000 for 5 years at 7%.

2. Subsequent measurement

When CPI actually changes (e.g., increases to 6%):

- Recalculate lease payments using the **new CPI**.
- Remeasure lease liability using a **revised discount rate**.
- Adjust the **ROU asset** for the difference.

QUESTION 5 – Lease Incentive (Rent-Free Period)

Fact pattern:

- 5-year lease
- Year 1 rent-free
- Years 2–5: R200 000 per year
- Discount rate: 10%

Required:

1. Calculate the initial lease liability.
2. Explain how the rent-free period affects the ROU asset.

Solution 5

1. Lease liability

Payments occur in years 2–5 only.

Discount factors at 10%:

- Year 2: 0.8264
- Year 3: 0.7513
- Year 4: 0.6830
- Year 5: 0.6209

PV = 200 000 × (0.8264 + 0.7513 + 0.6830 + 0.6209) = 200 000 × 2.8816 = **R576 320**

2. Effect on ROU asset

The rent-free period **does not reduce the ROU asset**. The ROU asset equals the lease liability (unless other adjustments exist). Depreciation is over **all 5 years**, including the free year.

QUESTION 6 – Lease Modification (Not a Separate Lease)

Fact pattern:

- Original lease: 6 years
- Annual payments: R180 000
- Discount rate: 9%
- After 2 years, lessee extends lease by 3 more years
- New discount rate: 10%

Required: Explain how the modification is accounted for.

Solution 6

- The extension **does not add a new underlying asset**, so **not a separate lease**.
- Recalculate lease liability using:
    - Remaining original payments
    - Additional 3 years of payments
    - New discount rate (10%)
- Adjust the **ROU asset** by the difference between:
    - Revised lease liability
    - Carrying amount of old lease liability

No gain/loss is recognised unless ROU asset becomes zero.

QUESTION 7 – Short-Term Lease Exemption

Fact pattern:

- 10-month lease of office equipment
- Monthly payment: R6 000

Required: Provide the monthly journal entry.

Solution 7

Short-term exemption applies (≤12 months, no purchase option).

- Dr Lease expense – Short-term lease R6 000
- Cr Bank R6 000

No ROU asset or lease liability.

QUESTION 8 – Lessor Classification

Fact pattern: A lessor leases equipment for 90% of its useful life. PV of lease payments equals 95% of fair value.

Required: Classify the lease and explain why.

Solution 8

This is a **finance lease** because:

- Lease term covers **major part** of economic life (90%).
- PV of payments ≈ fair value (95%).
- Risks and rewards transfer → finance lease.

QUESTION 9 – Integrated Scenario (High-Level Exam Style)

Fact pattern:

- Lease term: 5 years
- Annual payments: R250 000 (arrears)
- Discount rate: 8%
- Initial direct costs: R12 000
- Restoration cost in 5 years: R80 000
- CPI-linked increase after Year 2: CPI rises from 4% to 7%

Required:

1. Calculate initial lease liability.
2. Calculate PV of restoration.
3. Calculate ROU asset.
4. Provide Year 1 journal entries.
5. Explain how CPI change affects the lease in Year 3.

Solution 9

1. Lease liability

Discount factors at 8% (5 years): 0.9259 + 0.8573 + 0.7938 + 0.7350 + 0.6806 = 3.9926

Lease liability = 250 000 × 3.9926 = **R998 150**

2. PV of restoration

Future cost = R80 000 PV = 80 000 ÷ (1.08^5) = 80 000 ÷ 1.4693 = **R54 450**

3. ROU asset

= 998 150 + 12 000 + 54 450 = **R1 064 600**

4. Year 1 entries

Interest: 998 150 × 8% = **R79 852**

- Dr Finance cost – Interest R79 852
- Cr Lease liability R79 852

Payment:

- Dr Lease liability R250 000
- Cr Bank R250 000

Depreciation: 1 064 600 ÷ 5 = **R212 920**

- Dr Depreciation expense – ROU R212 920
- Cr ROU: Accumulated depreciation R212 920

Unwinding of restoration: 54 450 × 8% = **R4 356**

- Dr Finance cost – Unwinding R4 356
- Cr Provision for restoration R4 356

5. CPI change in Year 3

- Recalculate payments using new CPI (7%).
- Remeasure lease liability using a **revised discount rate**.
- Adjust the **ROU asset** for the difference.

ADDENDUM C:

IFRS 16 – FULL MOCK EXAM (50 MARKS)

QUESTION 1 – Core Lessee Accounting (18 marks)

Background: On 1 January 20X1, Alpha Ltd enters into a 5-year lease for office space.

Lease terms:

- Annual lease payments: **R220 000**, payable **in arrears**
- Lease term: **5 years**
- Incremental borrowing rate: **9%**
- Initial direct costs: **R12 000**
- Restoration obligation: Alpha must restore the premises at the end of Year 5.
    - Estimated cost in 5 years: **R100 000**
    - Discount rate for restoration: **9%**
- No lease incentives
- No purchase option
- No transfer of ownership

Required:

1.1 Calculate the **initial lease liability**. *(6 marks)*

1.2 Calculate the **present value of the restoration obligation**. *(3 marks)*

1.3 Calculate the **initial ROU asset**. *(3 marks)*

1.4 Prepare **all commencement journal entries** on 1 January 20X1. *(3 marks)*

1.5 Calculate the **depreciation expense** for Year 1. *(3 marks)*

SOLUTION 1

1.1 Initial lease liability (6 marks)

Discount rate: 9% Payments: R220 000 for 5 years (arrears)

Discount factors:

Year 1: 0.9174

Year 2: 0.8417

Year 3: 0.7722

Year 4: 0.7084

Year 5: 0.6499

Sum = 3.8896

Lease liability = 220 000 × 3.8896 = **R855 712**

1.2 PV of restoration obligation (3 marks)

Future cost = R100 000 PV = 100 000 ÷ (1.09^5) = 100 000 ÷ 1.5386 = **R65 020**

1.3 Initial ROU asset (3 marks)

ROU asset = Lease liability + Initial direct costs + Restoration PV

= 855 712 + 12 000 + 65 020 = **R932 732**

1.4 Commencement journal entries (3 marks)

- Dr Right-of-use asset – Building: Cost R932 732
- Cr Lease liability R855 712
- Cr Provision for restoration R65 020
- Cr Bank (initial direct costs) R12 000

1.5 Depreciation (3 marks)

Lease term = 5 years Depreciation = 932 732 ÷ 5 = **R186 546**

<u>QUESTION 2</u> – CPI-Linked Lease (10 marks)

Background: Beta Ltd leases equipment for 4 years.

Terms:

- Base rent: **R140 000 per year**, payable in arrears
- Rent increases annually by **CPI**
- CPI at commencement: **4%**
- Discount rate: **8%**
- No other adjustments

At the end of Year 2, CPI increases to **7%**.

Required:

2.1 Explain how the **initial lease liability** is measured. *(3 marks)*

2.2 Explain how the lease liability is **remeasured** when CPI increases to 7%. *(4 marks)*

2.3 State the **journal entry** for the remeasurement. *(3 marks)*

SOLUTION 2

2.1 Initial measurement (3 marks)

IFRS 16 requires using the **index at commencement**. Thus, initial payments are treated as **fixed at R140 000**, ignoring future CPI estimates. Lease liability = PV of R140 000 for 4 years at 8%.

2.2 Remeasurement when CPI increases (4 marks)

At end of Year 2:

- Recalculate remaining payments using **new CPI (7%)**.
- Discount using a **revised discount rate** (the rate at remeasurement date).
- Adjust the **lease liability** to the new PV.
- Corresponding adjustment goes to the **ROU asset**.

2.3 Journal entry (3 marks)

If liability **increases**:

- Dr Right-of-use asset: Cost
- Cr Lease liability

If liability **decreases**:

- Dr Lease liability
- Cr Right-of-use asset: Cost

(Amounts depend on recalculated PV.)

QUESTION 3 – Lease Incentive & Prepayments (8 marks)

Background: Gamma Ltd signs a 6-year lease for machinery.

Terms:

- Annual payments: **R180 000**, payable **in advance**
- Lessor provides a **R50 000 cash incentive** at commencement
- Discount rate: **10%**
- No other adjustments

Required:

3.1 Calculate the **initial lease liability**. *(4 marks)*

3.2 Calculate the **initial ROU asset**. *(2 marks)*

3.3 Provide the **commencement journal entry**. *(2 marks)*

SOLUTION 3

3.1 Lease liability (4 marks)

Payments in advance → first payment is **not discounted**.

Payment schedule:

- Year 0: 180 000
- Years 1–5: 180 000 discounted at 10%

Discount factors:

- Year 1: 0.9091
- Year 2: 0.8264
- Year 3: 0.7513
- Year 4: 0.6830
- Year 5: 0.6209

PV of years 1–5 = 180 000 × (0.9091 + 0.8264 + 0.7513 + 0.6830 + 0.6209) = 180 000 × 3.7907 = 682 326

Lease liability = PV of future payments (excluding Year 0 instalment, which is paid at commencement of the lease) = **R682 326**

3.2 ROU asset (2 marks)

ROU asset = Lease liability + Prepaid payment (Year 0) − Incentive received

= 682 326 + 180 000 − 50 000 = **R812 326**

3.3 Journal entry (2 marks)

- Dr ROU asset – Machinery: Cost R812 326
- Cr Lease liability R682 326
- Cr Lease incentive income R50 000
- Cr Bank (Year 0 payment) R180 000

QUESTION 4 – Lease Modification (14 marks)

Background: Delta Ltd entered into a 5-year lease on 1 Jan 20X1.

Terms:

- Annual payments: **R300 000**, arrears
- Discount rate: **8%**
- After 2 years (1 Jan 20X3), the lease is **extended by 2 more years**
- New discount rate: **9%**
- Carrying amount of lease liability on 1 Jan 20X3: **R680 000**
- Carrying amount of ROU asset on 1 Jan 20X3: **R540 000**

Required:

4.1 Explain whether the modification is a **separate lease**. *(2 marks)*

4.2 Calculate the **revised lease liability** on 1 Jan 20X3. *(6 marks)*

4.3 Provide the **journal entry** for the modification. *(6 marks)*

SOLUTION 4

4.1 Separate lease? (2 marks)

No. The modification **does not add a new underlying asset,** and payments are not commensurate with a stand-alone price → **not a separate lease**.

4.2 Revised lease liability (6 marks)

Remaining payments:

- Years 3–5: 300 000 × 3 years
- Extension years 6–7: 300 000 × 2 years

Discount rate: 9%

Discount factors:

- Year 1: 0.9174
- Year 2: 0.8417
- Year 3: 0.7722
- Year 4: 0.7084
- Year 5: 0.6499

Revised liability = 300 000 × (sum of 5 factors) = 300 000 × 3.8896 = **R1 166 880**

4.3 Journal entry (6 marks)

Increase in liability: 1 166 880 − 680 000 = **R486 880**

- Dr Right-of-use asset: Cost R486 880
- Cr Lease liability R486 880

TOTAL MARKS: 50

IFRS 16 – Multiple-Choice Test (20 Questions)

(All amounts in Rand unless stated otherwise)

QUESTION 1

A contract contains a lease when the customer:

A. Receives legal title to the asset
B. Controls the use of an identified asset
C. Pays fixed consideration only
D. Has a cancellable service agreement

QUESTION 2

Which of the following is **included** in lease payments when measuring the lease liability?

A. Variable payments based on sales
B. Variable payments based on CPI
C. Penalties for early termination (not expected to be exercised)
D. Optional payments the lessee is not reasonably certain to exercise

QUESTION 3

The discount rate used to measure the lease liability is:

A. Always the lessee's incremental borrowing rate
B. Always the interest rate implicit in the lease
C. The implicit rate if known; otherwise, the incremental borrowing rate
D. Any rate chosen by management

QUESTION 4

A 10-month lease with no purchase option is classified as:

A. A finance lease
B. An operating lease
C. A short-term lease
D. A low-value lease

QUESTION 5

Initial direct costs are:

A. Added to the ROU asset
B. Added to the lease liability
C. Expensed immediately
D. Deducted from the ROU asset

QUESTION 6

A rent-free period in Year 1 of a 5-year lease:
A. Reduces the lease liability
B. Reduces the cost of the ROU asset
C. Has no effect on initial measurement
D. Eliminates depreciation in Year 1

QUESTION 7

Depreciation of the ROU asset is normally over:

A. The useful life of the underlying asset
B. The lease term
C. The shorter of the lease term and useful life
D. The period until the asset is fully paid

QUESTION 8

Which of the following is **not** a component of the ROU asset?

A. Lease liability
B. Initial direct costs
C. Restoration provision
D. Future variable payments based on sales

QUESTION 9

Variable payments based on usage (e.g., R10 per unit produced):

A. Are included in the lease liability
B. Are excluded from the lease liability
C. Are discounted at inception
D. Are treated as lease incentives

QUESTION 10

When CPI increases, the lease liability is:

A. Never remeasured
B. Remeasured using the original discount rate
C. Remeasured using a revised discount rate
D. Adjusted through profit or loss only

QUESTION 11

A modification that adds the right to use additional assets at a stand-alone price is:

A. A separate lease
B. Not a separate lease
C. A finance lease
D. A short-term lease

QUESTION 12

If a modification is **not** a separate lease, the lessee must:

A. Derecognise the ROU asset
B. Remeasure the lease liability and adjust the ROU asset
C. Recognise a gain or loss immediately
D. Recalculate depreciation only

QUESTION 13

The unwinding of a restoration provision is recognised as:

A. Depreciation
B. A reduction in the ROU asset
C. Finance cost
D. Lease incentive income

QUESTION 14

Which of the following is a **low-value asset** example?

A. A delivery truck
B. A photocopier
C. A laptop
D. A building

QUESTION 15

For leases with payments in advance, the first payment:

A. Is discounted
B. Is not discounted
C. Is added to the lease liability
D. Reduces the ROU asset

QUESTION 16

The lease liability is presented in the statement of financial position as:

A. Part of equity
B. Part of revenue
C. A financial liability
D. A non-financial liability

QUESTION 17

In the statement of cash flows, the **principal portion** of lease payments is classified as:

A. Operating activities
B. Investing activities
C. Financing activities
D. Non-cash activities

QUESTION 18

A **lessor** classifies a lease as a finance lease when:

A. The lease term is short
B. The PV of payments is insignificant
C. Risks and rewards transfer to the lessee
D. The asset is low-value

QUESTION 19

The ROU asset is tested for impairment under:

A. IFRS 9
B. IAS 36
C. IAS 37
D. IFRS 13

QUESTION 20

A lease liability decreases when:

A. Interest is added
B. Payments are made
C. CPI increases
D. The discount rate increases

ANSWER KEY

1. B
2. B
3. C
4. C
5. A
6. C
7. C
8. D
9. B
10. C
11. A
12. B
13. C
14. C
15. B
16. C
17. C
18. C
19. B
20. B