

# *NAMIBIA UNIVERSITY*

OF SCIENCE AND TECHNOLOGY

# **FACULTY OF COMMERCE, HUMAN SCIENCES AND EDUCATION**

# **ECONOMICS, ACCOUNTING AND FINANCE**

QUALIFICATION CODE: 07BHOM & 07BOTM	LEVEL: 6
COURSE CODE: CAH610S	COURSE NAME: COST & MANAGEMENT ACCOUNTING FOR HOSPITALITY & TOURISM
DATE: NOVEMBER 2022	MODE: FT
DURATION: 3 HOURS	MARKS: 100

	FIRST OPPORTUNITY EXAMINATION PAPER
EXAMINER(S)	Sheehama, K.G.H.
MODERATOR:	Odada, L.

	INSTRUCTIONS	
1.	Answer ALL the questions.	
2.	Write clearly and neatly.	
3.	Number the answers clearly.	

# NON - PROGRAMMABLE CALCUTOR

- 1. Examination paper
- 2. Examination script

THIS QUESTION PAPER CONSISTS OF 7 PAGES (INCLUDING THIS FRONT PAGE)

#### **QUESTION 1**

(26 MARKS)

Each of the following questions (1. - 10) has only ONE correct answer. Please answer this question ON the answer sheet provided. E.g. 1. D

# Use the following information to answer 1-3:

An organisation has the following total costs at two activity levels:

Activity level (units)

15 000

24 000

Total costs

N\$380 000

N\$452 000

Variable cost per unit is constant in this range.

- 1. Variable cost per unit in this activity range is:
  - A N\$23.33
  - B N\$18.83
  - C N\$9.00
  - D N\$8.00
- 2. The amount of total fixed costs in this range is:
  - A N\$380 000
  - B N\$452 000
  - C N\$260 000
  - D N\$360 000
- 3. What are the total costs at an activity level of 18 000 units?
  - A N\$380 000
  - B N\$452 000
  - C N\$440 000
  - D N\$404 000

## Use the following information to answer 4 and 5:

Kandongo Wood Joinery, a friend of yours, has recently set up a small business making chairs. He has supplied you with the following figures, and has asked for your advice on a few issues:

# Costs per month

N\$

Wood

40 000

Carpenter

54 000

Manufacturing overheads

20 000

The above total production costs are based on producing 600 chairs per month.

- 4. The cost per chair is:
  - A N\$118
  - B N\$190
  - C N\$138
  - D N\$130
- 5. What would be the selling price per curtain, if Kandongo Wood Joinery wanted a mark-up of 20%?
  - A N\$240
  - B N\$210
  - C N\$228
  - D N\$230

## Use the following information to answer 6 - 9:

Namwandi company Ltd makes concrete bricks made up of cement and sand. Additional information is as follows:

	N\$
Building materials (bricks, cements, zincs, etc.)	100 000
Indirect labour cost	50 000
Wages of builders, electricians, and plumbers	200 000
Indirect material used	20 000
Depreciation of office equipment	100 000
Other factory overhead costs	50 000

- 6. The amount of prime cost for the period is:
  - A N\$300 000
  - B N\$350 000
  - C N\$400 000
  - D N\$450 000
- 7. The amount of manufacturing overheads cost for the period is:
  - A N\$230 000
  - B N\$220 000
  - C N\$110 000
  - D N\$120 000
- 8. Costs that are unaffected by a choice between alternatives and have been included in the past is:
  - A sunk cost
  - B period cost
  - C product cost
  - D direct cost
- 9. In the code of ethics followed by management accountants, confidentiality is:
  - A being honest, standing for what is right
  - B being courteous and decent
  - C not revealing or disclosing privileged or private information
  - D accepting the consequences of actions and decisions
- 10. In the code of ethics followed by management accountants, accountability is:
  - A being just and unbiased
  - B being courteous and decent
  - C not revealing or disclosing privileged or private information
  - D accepting the consequences of actions and decisions
- 11. The type or branch of accounting that generates reports for the use of external parties such as creditors, investors and government agencies is known as:
  - A Financial accounting
  - B Managerial accounting
  - C Tax accounting
  - D Forensic accounting
- 12. The branch of accounting that generates reports and information for the use of internal management is known as:
  - A Tax accounting
  - B Management accounting
  - C Auditing
  - D International accounting

- 13. Wellington Ltd used a predetermined overhead rate during 2022 of N\$3 per direct labour hour, based on an estimate of 24 000 direct labour hours to be worked during the year. Actual costs and activity during 2022 were: Actual manufacturing overhead cost incurred, N\$84 000; Actual direct labour hours worked, 27 000. The under- or over-applied overhead for 2022 would be:
  - A N\$3 000 under-applied
  - B N\$3 000 over-applied
  - C N\$120 000
  - D N\$9 000

# QUESTION 2 (20 MARKS)

Lolo Wood Store management uses Weighted Average inventory valuation method and is in dispute on which method of inventory valuation should be used. The records currently show that on 28 February 2022 the store had a closing balance of 600 metres worth N\$6 000 in total. The following information regarding the movement of fruits was provided to you by the store manager during the month of March 2022. The value of metres issued to the production has been obtained by using Weighted Average method methods of pricing material issues:

## Receipts (purchases) from suppliers were as follows:

- 1 March: Received 240 meters at N\$156.25 per meters.
- 2 March: Received 100 meters at a total cost of N\$16 440.
- 4 March: Received 130 meters at N\$168 per meters .

#### The issue made to customers were as follow:

- 3 March: Dispatched 200 meters.
- 5 March: Dispatched 150 meters .

REQUIRED	MARKS
Record the above movement of the inventory in the store ledger card of Lolo Wood	20
Store and determine the number of units and the total value in N\$ as of 10 March	
2022	

QUESTION 3 (20 MARKS)

Chick McFarm has developed a new recipe to cook chicken pieces and decides to open a takeway restaurant in Katutura. Chick McFarm asks NUST for help with the market research.

The University finds that Chick McFarm should sell 700 pieces, on average, per month.

## The following total costs are available:

Chicken pieces

N\$31 500

### Other ingredients:

Salt

N\$50

Onion powder

N\$385

Garlic powder

N\$455

Olive oil

N\$840

Chick McFarm provides you with total fixed costs to be occurred in take-way restaurant for the month as follows:

Chef salary

N\$25 500

Supervisor salary

N\$50 000

• Depreciation of cooking equipment

N\$15 000

Cleaner salary

N\$5 000

## You are required to calculate the following total costs per month:

a) Indirect materials cost

(4)

b) Prime cost

(4)

c) Manufacturing overhead cost

(4)

d) Conversion cost

(4)

e) Indirect labour cost

(4)

# QUESTION 4

(22 MARKS)

KGH Ltd makes and sells one product, the following information is provided:

Actual figures:

N\$

Direct material

28 000

Direct labour

30,000

Variable manufacturing overheads

14 000

Variable selling and administrative expenses

4 000

Fixed manufacturing overheads

23 500

Fixed selling and administrative expenses

10 500

Production	900 units
Units sold	800 units
Selling price	N\$200

KGH Ltd use machine hours to allocate fixed manufacturing overheads.

The absorption rate is N\$16 per machine hour. It normally takes 1.5 machine hours to produce one product.

# REQUIRED:

Prepare the statements of profit or loss for the period for management using:

a) Direct costing

(8)

b) Absorption costing

(12)

QUESTION 5 (12 MARKS)

The management of Penguin CC presently considers investing in a new machine which it believes will increase productivity in its factory. The initial cash outlay will be N\$334 000 and a return of at least 12% per annum is required on all new capital projects. It is estimated that the following cash flows will be derived from operations with this new machine:

Year	Cash flow
1	N\$155 000
2	N\$144 000
3	N\$75 000
4	N\$ 61 000
5	N\$12 161

#### Additional information:

The factory supervisor is of the opinion that this machine will have an economic useful life of 5 years after which it will most probably have no resale value.

# **REQUIRED:**

Make a recommendation to the management of the corporation as to the viability of investing in this machine. Make use of the net present value method. (12)

# **END OF EXAMINATION PAPER**

APPENDIX TABLE 1

# Present Value Tables

lumber								Rate pe							
f Years -	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%
1	.990	.980	.971	.962	.952	.943	.935	.926	.917	.909	.901	.893	.885	.877	.870
2	.980	.961	.943	.925	.907	.890	.873	.857	.842	.826	.812	.797	.783	.769	.756
3	.971	.942	.915	.889	.864	.840	.816	.794	.772	.751	.731	.712			
4													.693	.675	.658
	.961	.924	.888	.855	.823	.792	.763	.735	.708	.683	.659	.636	.613	.592	.572
5	.951	.906	.863	.822	.784	.747	.713	.681	.650	.621	.593	.567	.543	.519	.497
6	.942	.888	.837	.790	.746	.705	.666	.630	.596	.564	.535	.507	.480	.456	.432
7	.933	.871	.813	.760	.711	.665	.623	.583	.547	.513	.482	.452	.425	.400	.376
8	.923	.853	.789	.731	.677	.627	.582	.540	.502	.467	.434	.404	.376	.351	.327
9	.914	.837	.766	.703	.645	.592	.544	.500	.460	.424	.391	.361	.333	.308	.284
10	.905	.820	.744	.676	.614	.558	.508	.463	.422	.386	.352	.322	.295	.270	.247
3.5															
11	.896	.804	.722	.650	.585	.527	.475	.429	.388	.350	.317	.287	.261	.237	.215
12	.887	.788	.701	.625	.557	.497	.444	.397	.356	.319	.286	.257	.231	.208	.187
13	.879	.773	.681	.601	.530	.469	.415	.368	.326	.290	.258	.229	.204	.182	.163
14	.870	.758	.661	.577	.505	.442	.388	.340	.299	.263	.232	.205	.181	.160	.141
15	.861	.743	.642	.555	.481	.417	.362	.315	.275	.239	.209	.183	.160	.140	.123
16	050	700	con	E0.4	450	204	220	200	050	040	400	400	444	400	40-
	.853	.728	.623	.534	.458	.394	.339	.292	.252	.218	.188	.163	.141	.123	.107
17	.844	.714	.605	.513	.436	.371	.317	.270	.231	.198	.170	.146	.125	.108	.093
18	.836	.700	.587	.494	.416	.350	.296	.250	.212	.180	.153	.130	.111	.095	.08
			E70	475	206	.331	.277	.232	.194	.164	.138	.116	.098	.083	.070
19	.828	.686	.570	.475	.396	.551	.211								
20 Discount	.820	.673	.554	.456	.377	.312	.258	.215 r) <sup>t</sup> .	.178	.149	.124	.104	.087	.073	.061
	.820	.673	.554	.456	.377	.312	.258	.215	.178	.149	.124				30%
20 Discount to Number of Years	.820 factors: F	.673 Present va	.554 alue of \$1 18%	.456 to be rec	.377 seived afte	.312 er t years 21%	.258 = 1/(1 + Interes 22%	.215 r) <sup>t</sup> . st Rate p	.178 er Year 24%	25%	26%	.104	.087	.073	30%
Discount Number of Years	.820 factors: F	.673 Present va	.554 alue of \$1 18% .847	.456 to be rec	.377 seived after 20% .833	.312 er t years 21% .826	.258 = 1/(1 + Interes 22% .820	.215 r) <sup>t</sup> . et Rate p 23%	.178 er Year 24% .806	25%	26%	.104 27% .787	.087 28% .781	.073 29% .775	30%
Discount Number of Years	.820 factors: F 16% .862 .743	.673 Present va 17% .855 .731	.554 alue of \$1  18%  .847 .718	.456 to be rec 19% .840 .706	.377 seived after 20% .833 .694	.312 er t years 21% .826 .683	.258 = 1/(1 + Interes 22% .820 .672	.215 r) <sup>t</sup> . et Rate p 23% .813 .661	.178 er Year 24% .806 .650	25% .800 .640	26% .794 .630	.104 27% .787 .620	.087 28% .781 .610	.073 29% .775 .601	30% .769 .592
Discount Number of Years	.820 factors: F 16% .862 .743 .641	.673 Present va	.554 alue of \$1  18%  .847 .718 .609	.456 to be rec 19% .840 .706 .593	.377 seived after 20% .833 .694 .579	.312 er t years 21% .826 .683 .564	.258 = 1/(1 + Interes 22%  .820 .672 .551	.215 r) <sup>t</sup> . et Rate p 23% .813 .661 .537	.178 er Year 24% .806 .650 .524	25% .800 .640 .512	26% .794 .630 .500	.104 27% .787 .620 .488	.087 28% .781 .610 .477	.073 29% .775 .601 .466	.769 .592
Discount of Number of Years	.820 factors: F 16% .862 .743 .641 .552	.673 Present va	.554 alue of \$1  18%  .847 .718 .609 .516	.456 to be rec 19% .840 .706 .593 .499	.377 elived after 20% .833 .694 .579 .482	.312 er t years 21% .826 .683 .564 .467	.258 = 1/(1 + Interes 22% .820 .672 .551 .451	.215 r) <sup>t</sup> . st Rate p 23% .813 .661 .537 .437	.178 er Year 24% .806 .650 .524 .423	.800 .640 .512 .410	26% .794 .630 .500 .397	.104 27% .787 .620 .488 .384	.087 28% .781 .610 .477 .373	.073 29% .775 .601 .466 .361	.769 .592 .455
Discount for Number of Years	.820 factors: F 16% .862 .743 .641	.673 Present va	.554 alue of \$1  18%  .847 .718 .609	.456 to be rec 19% .840 .706 .593	.377 seived after 20% .833 .694 .579	.312 er t years 21% .826 .683 .564	.258 = 1/(1 + Interes 22%  .820 .672 .551	.215 r) <sup>t</sup> . et Rate p 23% .813 .661 .537	.178 er Year 24% .806 .650 .524	25% .800 .640 .512	26% .794 .630 .500	.104 27% .787 .620 .488	.087 28% .781 .610 .477	.073 29% .775 .601 .466	.769 .592 .455
Discount Number of Years	.820 factors: F 16% .862 .743 .641 .552 .476	.673 Present va 17% .855 .731 .624 .534 .456	.554  18%  .847 .718 .609 .516 .437	.456 to be rec 19% .840 .706 .593 .499 .419	.377 seived after 20% .833 .694 .579 .482 .402	.312 er t years 21% .826 .683 .564 .467 .386	.258 = 1/(1 + Interes 22% .820 .672 .551 .451 .370	.215 r) <sup>t</sup> . et Rate p 23% .813 .661 .537 .437 .355	.178 er Year 24% .806 .650 .524 .423 .341	.800 .640 .512 .410 .328	.794 .630 .500 .397 .315	.104 27% .787 .620 .488 .384 .303	.087 28% .781 .610 .477 .373 .291	.073 29% .775 .601 .466 .361 .280	.769 .592 .455 .350
Discount Number of Years	.820 factors: F 16% .862 .743 .641 .552 .476	.673 Present va 17% .855 .731 .624 .534 .456	.554  18%  .847 .718 .609 .516 .437	.456 to be rec 19% .840 .706 .593 .499 .419	.377 eived afte 20% .833 .694 .579 .482 .402	.312 er t years 21% .826 .683 .564 .467 .386	.258 = 1/(1 + Interes 22% .820 .672 .551 .451 .370	.215 n) <sup>t</sup> . et Rate p 23% .813 .661 .537 .437 .355	.178 er Year 24% .806 .650 .524 .423 .341	25% .800 .640 .512 .410 .328	26% .794 .630 .500 .397 .315	.104 27% .787 .620 .488 .384 .303	.087 28% .781 .610 .477 .373 .291	.073 29% .775 .601 .466 .361 .280	30% .769 .592 .455 .350 .269
Discount Number of Years	.820 factors: F 16% .862 .743 .641 .552 .476 .410 .354	.673 Present va 17% .855 .731 .624 .534 .456 .390 .333	.554  18%  .847 .718 .609 .516 .437 .370 .314	.456 to be rec 19% .840 .706 .593 .499 .419 .352 .296	.377 eived after 20% .833 .694 .579 .482 .402 .335 .279	.312 er t years 21% .826 .683 .564 .467 .386 .319 .263	.258 = 1/(1 + Interes 22% .820 .672 .551 .451 .370 .303 .249	.215  r) <sup>t</sup> .  tt Rate p 23%  .813 .661 .537 .437 .355  .289 .235	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222	25% .800 .640 .512 .410 .328 .262 .210	26% .794 .630 .500 .397 .315	.104 27% .787 .620 .488 .384 .303 .238 .188	.087 28% .781 .610 .477 .373 .291 .227 .178	.073 29% .775 .601 .466 .361 .280 .217	.769 .592 .455 .350 .269
Discount Number of Years	.820 factors: F 16% .862 .743 .641 .552 .476 .410 .354 .305	.673 Present va 17% .855 .731 .624 .534 .456 .390 .333 .285	.554 18% .847 .718 .609 .516 .437 .370 .314 .266	.456 to be reconstructed to be reconstructed t	.377 elived after 20% .833 .694 .579 .482 .402 .335 .279 .233	.312 21% .826 .683 .564 .467 .386 .319 .263 .218	.258 = 1/(1 + Interes) 22% .820 .672 .551 .451 .370 .303 .249 .204	.215  r) <sup>t</sup> .  tt Rate p 23%  .813 .661 .537 .437 .355  .289 .235 .191	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222 .179	25% .800 .640 .512 .410 .328 .262 .210 .168	26% .794 .630 .500 .397 .315 .250 .198 .157	.104 27% .787 .620 .488 .384 .303 .238 .188 .148	.087 28% .781 .610 .477 .373 .291 .227 .178 .139	.073 29% .775 .601 .466 .361 .280 .217 .168 .130	.769 .592 .455 .350 .269
Discount (Number of Years of Years of February 1) 2 3 4 5 5 6 7 8 9	.820 factors: F 16% .862 .743 .641 .552 .476 .410 .354 .305 .263	.673 Present va 17% .855 .731 .624 .534 .456 .390 .333 .285 .243	.554  18%  .847 .718 .609 .516 .437  .370 .314 .266 .225	.456 to be reconstructed to be reconstructed t	.377 eived after 20% .833 .694 .579 .482 .402 .335 .279 .233 .194	.312 21% .826 .683 .564 .467 .386 .319 .263 .218 .180	.258 = 1/(1 + Interes) 22% .820 .672 .551 .451 .370 .303 .249 .204 .167	.215 r) <sup>4</sup> . st Rate p 23% .813 .661 .537 .437 .355 .289 .235 .191 .155	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222 .179 .144	25% .800 .640 .512 .410 .328 .262 .210 .168 .134	26% .794 .630 .500 .397 .315 .250 .198 .157 .125	.104 27% .787 .620 .488 .384 .303 .238 .188 .148 .116	.087 28% .781 .610 .477 .373 .291 .227 .178 .139 .108	.073 29% .775 .601 .466 .361 .280 .217 .168 .130 .101	.769 .592 .455 .350 .269 .207 .159 .123
Discount Number of Years	.820 factors: F 16% .862 .743 .641 .552 .476 .410 .354 .305	.673 Present va 17% .855 .731 .624 .534 .456 .390 .333 .285	.554 18% .847 .718 .609 .516 .437 .370 .314 .266	.456 to be reconstructed to be reconstructed t	.377 elived after 20% .833 .694 .579 .482 .402 .335 .279 .233	.312 21% .826 .683 .564 .467 .386 .319 .263 .218	.258 = 1/(1 + Interes) 22% .820 .672 .551 .451 .370 .303 .249 .204	.215  r) <sup>t</sup> .  tt Rate p 23%  .813 .661 .537 .437 .355  .289 .235 .191	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222 .179	25% .800 .640 .512 .410 .328 .262 .210 .168	26% .794 .630 .500 .397 .315 .250 .198 .157	.104 27% .787 .620 .488 .384 .303 .238 .188 .148	.087 28% .781 .610 .477 .373 .291 .227 .178 .139	.073 29% .775 .601 .466 .361 .280 .217 .168 .130	.769 .592 .455 .350 .269 .207 .159
Discount (Number of Years of Years of February 1 2 3 4 5 5 6 7 8 9	.820 factors: F 16% .862 .743 .641 .552 .476 .410 .354 .305 .263	.673 Present va 17% .855 .731 .624 .534 .456 .390 .333 .285 .243	.554  18%  .847 .718 .609 .516 .437  .370 .314 .266 .225	.456 to be reconstructed to be reconstructed t	.377 eived after 20% .833 .694 .579 .482 .402 .335 .279 .233 .194	.312 21% .826 .683 .564 .467 .386 .319 .263 .218 .180	.258 = 1/(1 + Interes) 22% .820 .672 .551 .451 .370 .303 .249 .204 .167	.215 r) <sup>4</sup> . st Rate p 23% .813 .661 .537 .437 .355 .289 .235 .191 .155	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222 .179 .144	25% .800 .640 .512 .410 .328 .262 .210 .168 .134	26% .794 .630 .500 .397 .315 .250 .198 .157 .125	.104 27% .787 .620 .488 .384 .303 .238 .188 .148 .116	.087 28% .781 .610 .477 .373 .291 .227 .178 .139 .108	.073 29% .775 .601 .466 .361 .280 .217 .168 .130 .101	30% .769 .592 .455 .350 .269 .207 .159 .073
20 Discount (Number of Years	.820 factors: F  16% .862 .743 .641 .552 .476 .410 .354 .305 .263 .227	.673 Present va 17% .855 .731 .624 .534 .456 .390 .333 .285 .243 .208	.554  18%  .847 .718 .609 .516 .437  .370 .314 .266 .225 .191 .162	.456 to be reconstructed t	.377 eived after 20% .833 .694 .579 .482 .402 .335 .279 .233 .194 .162 .135	.312 21% .826 .683 .564 .467 .386 .319 .263 .218 .180 .149	.258 = 1/(1 + Interes) 22% .820 .672 .551 .451 .370 .303 .249 .204 .167 .137	.215 r)'. st Rate p 23% .813 .661 .537 .437 .355 .289 .235 .191 .155 .126	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222 .179 .144 .116	25% .800 .640 .512 .410 .328 .262 .210 .168 .134 .107	26% .794 .630 .500 .397 .315 .250 .198 .157 .125 .099	.104 27% .787 .620 .488 .384 .303 .238 .148 .116 .092 .072	.087 28% .781 .610 .477 .373 .291 .227 .178 .139 .108 .085	.073 29% .775 .601 .466 .361 .280 .217 .168 .130 .101 .078	30% .7699 .5922 .4555 .350 .269 .207 .158 .094 .073
20 Discount (Number of Years	.820 factors: F 16% .862 .743 .641 .552 .476 .410 .354 .305 .263 .227 .195 .168	.673 Present va.  17% .855 .731 .624 .534 .456 .390 .333 .285 .243 .208 .178 .152	.554  18%  .847 .718 .609 .516 .437 .370 .314 .266 .225 .191 .162 .137	.456 to be reconstruction 19% .840 .706 .593 .499 .419 .352 .296 .249 .209 .176	.377 eived after 20% .833 .694 .579 .482 .402 .335 .279 .233 .194 .162 .135 .112	.312 21% .826 .683 .564 .467 .386 .319 .263 .218 .180 .149	.258 = 1/(1 + Interes) 22% .820 .672 .551 .451 .370 .303 .249 .204 .167 .137 .112	.215  r) <sup>4</sup> .  It Rate p  23%  .813 .661 .537 .437 .355  .289 .235 .191 .155 .126  .103 .083	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222 .179 .144 .116 .094 .076	25% .800 .640 .512 .410 .328 .262 .210 .168 .134 .107 .086 .069	26% .794 .630 .500 .397 .315 .250 .198 .157 .125 .099 .079 .062	.104 .787 .620 .488 .384 .303 .238 .188 .148 .116 .092 .072 .057	.087 28% .781 .610 .477 .373 .291 .227 .178 .139 .085 .086 .052	.073 29% .775 .601 .466 .361 .280 .217 .168 .130 .101 .078	30% .769 .455 .350 .269 .207 .159 .094 .073
20 Discount to Number of Years  1 2 3 4 5 5 6 7 8 9 10 11 12 13	.820 factors: F  16% .862 .743 .641 .552 .476 .410 .354 .305 .263 .227 .195 .168 .145	.673 Present va 17% .855 .731 .624 .534 .456 .390 .333 .285 .243 .208 .178 .152 .130	.554  18%  .847 .718 .609 .516 .437 .370 .314 .266 .225 .191 .162 .137 .116	.456 to be reconstruction to be reconstructed	.377 elived after 20% .833 .694 .579 .482 .402 .335 .279 .233 .194 .162 .135 .112 .093	.312 21% .826 .683 .564 .467 .386 .319 .263 .218 .180 .149 .123 .102 .084	.258 = 1/(1 + Interes) 22% .820 .672 .551 .451 .370 .303 .249 .204 .167 .137 .112 .092 .075	.215 r) <sup>t</sup> . st Rate p 23% .813 .661 .537 .437 .355 .289 .235 .191 .155 .126 .103 .083 .068	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222 .179 .144 .116 .094 .076	25% .800 .640 .512 .410 .328 .262 .210 .168 .134 .107 .086 .069 .055	26% .794 .630 .500 .397 .315 .250 .198 .157 .125 .099 .079 .062 .050	.104 .787 .620 .488 .384 .303 .238 .188 .148 .116 .092 .072 .057 .045	.087 28% .781 .610 .477 .373 .291 .227 .178 .139 .085 .085	.073 29% .775 .601 .466 .361 .280 .217 .168 .130 .101 .078	30% .769 .592 .455 .350 .269 .207 .159 .094 .073
20 Discount (Number of Years	.820 factors: F 16% .862 .743 .641 .552 .476 .410 .354 .305 .263 .227 .195 .168	.673 Present va.  17% .855 .731 .624 .534 .456 .390 .333 .285 .243 .208 .178 .152	.554  18%  .847 .718 .609 .516 .437 .370 .314 .266 .225 .191 .162 .137	.456 to be reconstruction 19% .840 .706 .593 .499 .419 .352 .296 .249 .209 .176	.377 eived after 20% .833 .694 .579 .482 .402 .335 .279 .233 .194 .162 .135 .112	.312 21% .826 .683 .564 .467 .386 .319 .263 .218 .180 .149	.258 = 1/(1 + Interes) 22% .820 .672 .551 .451 .370 .303 .249 .204 .167 .137 .112	.215  r) <sup>4</sup> .  It Rate p  23%  .813 .661 .537 .437 .355  .289 .235 .191 .155 .126  .103 .083	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222 .179 .144 .116 .094 .076	25% .800 .640 .512 .410 .328 .262 .210 .168 .134 .107 .086 .069	26% .794 .630 .500 .397 .315 .250 .198 .157 .125 .099 .079 .062	.104 .787 .620 .488 .384 .303 .238 .188 .148 .116 .092 .072 .057	.087 28% .781 .610 .477 .373 .291 .227 .178 .139 .085 .086 .052	.073 29% .775 .601 .466 .361 .280 .217 .168 .130 .101 .078	30% .769 .592 .455 .350 .266 .120 .094 .073
20 Discount to Number of Years	.820 factors: F  16% .862 .743 .641 .552 .476 .410 .354 .305 .263 .227 .195 .168 .145 .125	.673 Present va  17% .855 .731 .624 .534 .456 .390 .333 .285 .243 .208 .178 .152 .130 .111	.554  18%  .847 .718 .609 .516 .437 .370 .314 .266 .225 .191 .162 .137 .116 .099	.456 to be rec  19% .840 .706 .593 .499 .419 .352 .296 .249 .209 .176 .148 .124 .104 .088	.377 eived after 20% .833 .694 .579 .482 .402 .335 .279 .233 .194 .162 .135 .112 .093 .078	.312 21% .826 .683 .564 .467 .386 .319 .263 .218 .180 .149 .123 .102 .084 .069	.258 = 1/(1 + Interes) 22% .820 .672 .551 .451 .370 .303 .249 .204 .167 .137 .112 .092 .075 .062	.215 r) <sup>t</sup> . at Rate p 23% .813 .661 .537 .437 .355 .289 .235 .191 .155 .126 .103 .083 .068 .055	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222 .179 .144 .116 .094 .076 .061 .049	25% .800 .640 .512 .410 .328 .262 .210 .168 .134 .107 .086 .069 .055 .044 .035	26% .794 .630 .500 .397 .315 .250 .198 .157 .125 .099 .079 .062 .050 .039	.104 .787 .620 .488 .384 .303 .238 .148 .116 .092 .072 .057 .045 .035 .028	.087 28% .781 .610 .477 .373 .291 .227 .178 .139 .108 .085 .066 .052 .040 .032 .025	.073 29% .775 .601 .466 .361 .280 .217 .168 .130 .101 .078 .061 .047 .037 .028	309 .592 .455 .350 .268 .207 .158 .123 .099 .073
20 Discount Number of Years of Years of Years of 1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16	.820 factors: F  16% .862 .743 .641 .552 .476 .410 .354 .305 .263 .227 .195 .168 .145 .125 .108	.673 Present va  17% .855 .731 .624 .534 .456 .390 .333 .285 .243 .208 .178 .152 .130 .111 .095	.554  18%  .847 .718 .609 .516 .437 .370 .314 .266 .225 .191 .162 .137 .116 .099 .084	.456 to be reconstructed t	.377 elived after 20% .833 .694 .579 .482 .402 .335 .279 .233 .194 .162 .135 .112 .093 .078 .065	.312 21% .826 .683 .564 .467 .386 .319 .263 .218 .180 .149 .123 .102 .084 .069 .057	.258 = 1/(1 + Interes) 22% .820 .672 .551 .451 .370 .303 .249 .204 .167 .137 .112 .092 .075 .062 .051	.215 r) <sup>4</sup> . st Rate p 23% .813 .661 .537 .437 .355 .289 .235 .191 .155 .126 .103 .083 .068 .055 .045	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222 .179 .144 .116 .094 .076 .061 .049 .040	25% .800 .640 .512 .410 .328 .262 .210 .168 .134 .107 .086 .069 .055 .044 .035	26% .794 .630 .500 .397 .315 .250 .198 .157 .125 .099 .079 .062 .050 .039 .031	.104 .787 .620 .488 .384 .303 .238 .148 .116 .092 .072 .057 .045 .035 .028	.087 28% .781 .610 .477 .373 .291 .227 .178 .139 .108 .085 .066 .052 .040 .032 .025	.073  29% .775 .601 .466 .361 .280 .217 .168 .130 .101 .078 .061 .047 .037 .028 .022	309 .768 .592 .455 .350 .268 .207 .158 .123 .094 .033 .021
20 Discount Number of Years of	.820 factors: F  16% .862 .743 .641 .552 .476 .410 .354 .305 .263 .227 .195 .168 .145 .125 .108	.673 Present va  17% .855 .731 .624 .534 .456 .390 .333 .285 .243 .208 .178 .152 .130 .111 .095 .081	.554  18%  .847 .718 .609 .516 .437  .370 .314 .266 .225 .191  .162 .137 .116 .099 .084  .071	.456 to be reconstructed t	.377 elived after 20% .833 .694 .579 .482 .402 .335 .279 .233 .194 .162 .135 .112 .093 .078 .065 .054	.312 21% .826 .683 .564 .467 .386 .319 .263 .218 .180 .149 .123 .102 .084 .069 .057	.258 = 1/(1 + Interes) 22% .820 .672 .551 .451 .370 .303 .249 .204 .167 .137 .112 .092 .075 .062 .051	.215 r) <sup>4</sup> . st Rate p 23% .813 .661 .537 .437 .355 .289 .235 .191 .155 .126 .103 .083 .068 .055 .045 .036	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222 .179 .144 .116 .094 .076 .061 .049 .040 .032 .026	25% .800 .640 .512 .410 .328 .262 .210 .168 .134 .107 .086 .069 .055 .044 .035 .028 .028	26% .794 .630 .500 .397 .315 .250 .198 .157 .125 .099 .079 .062 .050 .039 .031 .025 .020	.104 .787 .620 .488 .384 .303 .238 .188 .148 .116 .092 .072 .057 .045 .035 .028 .022	.087 28% .781 .610 .477 .373 .291 .227 .178 .139 .108 .085 .066 .052 .040 .032 .025 .019 .015	.073 29% .775 .601 .466 .361 .280 .217 .168 .130 .101 .078 .061 .047 .037 .028 .022 .017 .013	309 .769 .592 .455 .350 .269 .015 .094 .033 .026 .026 .026 .026
20 Discount Number of Years of Years of Years of 1 2 3 4 5 5 6 7 8 9 10 11 12 13 14 15 16	.820 factors: F  16% .862 .743 .641 .552 .476 .410 .354 .305 .263 .227 .195 .168 .145 .125 .108	.673 Present va  17% .855 .731 .624 .534 .456 .390 .333 .285 .243 .208 .178 .152 .130 .111 .095	.554  18%  .847 .718 .609 .516 .437 .370 .314 .266 .225 .191 .162 .137 .116 .099 .084	.456 to be reconstructed t	.377 elived after 20% .833 .694 .579 .482 .402 .335 .279 .233 .194 .162 .135 .112 .093 .078 .065	.312 21% .826 .683 .564 .467 .386 .319 .263 .218 .180 .149 .123 .102 .084 .069 .057	.258 = 1/(1 + Interes) 22% .820 .672 .551 .451 .370 .303 .249 .204 .167 .137 .112 .092 .075 .062 .051	.215 r) <sup>4</sup> . st Rate p 23% .813 .661 .537 .437 .355 .289 .235 .191 .155 .126 .103 .083 .068 .055 .045	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222 .179 .144 .116 .094 .076 .061 .049 .040	25% .800 .640 .512 .410 .328 .262 .210 .168 .134 .107 .086 .069 .055 .044 .035	26% .794 .630 .500 .397 .315 .250 .198 .157 .125 .099 .079 .062 .050 .039 .031	.104 .787 .620 .488 .384 .303 .238 .148 .116 .092 .072 .057 .045 .035 .028	.087 28% .781 .610 .477 .373 .291 .227 .178 .139 .108 .085 .066 .052 .040 .032 .025	.073  29% .775 .601 .466 .361 .280 .217 .168 .130 .101 .078 .061 .047 .037 .028 .022	309 .769 .592 .455 .350 .269 .015 .094 .033 .026 .026 .026 .026
20 Discount Number of Years of	.820 factors: F  16% .862 .743 .641 .552 .476 .410 .354 .305 .263 .227 .195 .168 .145 .125 .108	.673 Present va  17% .855 .731 .624 .534 .456 .390 .333 .285 .243 .208 .178 .152 .130 .111 .095 .081	.554  18%  .847 .718 .609 .516 .437  .370 .314 .266 .225 .191  .162 .137 .116 .099 .084  .071	.456 to be reconstructed t	.377 elived after 20% .833 .694 .579 .482 .402 .335 .279 .233 .194 .162 .135 .112 .093 .078 .065 .054	.312 21% .826 .683 .564 .467 .386 .319 .263 .218 .180 .149 .123 .102 .084 .069 .057	.258 = 1/(1 + Interes) 22% .820 .672 .551 .451 .370 .303 .249 .204 .167 .137 .112 .092 .075 .062 .051	.215 r) <sup>4</sup> . st Rate p 23% .813 .661 .537 .437 .355 .289 .235 .191 .155 .126 .103 .083 .068 .055 .045 .036	.178 er Year 24% .806 .650 .524 .423 .341 .275 .222 .179 .144 .116 .094 .076 .061 .049 .040 .032 .026	25% .800 .640 .512 .410 .328 .262 .210 .168 .134 .107 .086 .069 .055 .044 .035 .028 .028	26% .794 .630 .500 .397 .315 .250 .198 .157 .125 .099 .079 .062 .050 .039 .031 .025 .020	.104 .787 .620 .488 .384 .303 .238 .188 .148 .116 .092 .072 .057 .045 .035 .028 .022	.087 28% .781 .610 .477 .373 .291 .227 .178 .139 .108 .085 .066 .052 .040 .032 .025 .019 .015	.073 29% .775 .601 .466 .361 .280 .217 .168 .130 .101 .078 .061 .047 .037 .028 .022 .017 .013	30% .769 .592 .455 .350 .269 .207 .159 .094 .073

Note: For example, if the interest rate is 10% per year, the present value of \$1 received at year 5 is \$.621.