



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF MANAGEMENT SCIENCES

DEPARTMENT OF ACCOUNTING, ECONOMICS AND FINANCE

QUALIFICATION: BACHELOR OF ECONOMICS HONOURS	
QUALIFICATION CODE: 08BECH	LEVEL: 8
COURSE CODE: FEO810S	COURSE NAME: FINANCIAL ECONOMICS
SESSION: JULY 2019	PAPER: THEORY AND CALCULATIONS
DURATION: 3 HOURS	MARKS: 100

SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	L. ODADA
MODERATOR:	R. KAMATI

INSTRUCTIONS
<ol style="list-style-type: none">1. Answer ALL the questions in blue or black ink. STRICTLY NO PENCIL2. Start each question on a new page, number the answers correctly and show all your working/assumptions.3. Write clearly and neatly. Round off only final answers to two (2) decimal places4. Questions relating to this examination may be raised in the initial 30 minutes after the start of the paper. Thereafter, candidates must use their initiative to deal with any perceived error or ambiguities and any assumptions made by the candidate should be clearly stated.

PERMISSIBLE MATERIALS

1. Silent, non-programmable calculators

THIS QUESTION PAPER CONSISTS OF _5_ PAGES (Including this front page)

QUESTION 1**[24 MARKS]**

There are so many financial markets, every country is home to at least one, though they vary in size. Some are small while some others are internationally known, such as the New York Stock Exchange (NYSE) that trades trillions of dollars on a daily basis.

REQUIRED	MARKS
a) Distinguish between primary and secondary financial markets	4
b) Discuss any five (5) functions of financial markets.	20

QUESTION 2**[24 MARKS]**

Write concise explanatory notes on the following financial economics terms/concepts:

- a) Firm specific risk (3)
- b) Systematic risk (3)
- c) Financial intermediation (3)
- d) Beta coefficient (3)
- e) Financial market (3)
- f) Moral hazard in credit markets (3)
- g) Adverse selection in insurance markets (3)
- h) Degree of operating leverage (3)

QUESTION 3**[22 MARKS]**

- a) Imagine that you are about to take out a 30-year fixed-rate mortgage. The terms of the loan specify an initial principal balance (the amount borrowed) of N\$200 000 and an effective annual rate (EAR) of 6.75 percent. Payments will be made monthly.

REQUIRED	MARKS
i) What will be the monthly payment?	6
ii) Prepare a loan amortisation table for the first four months of the loan.	6
iii) Identify any two (2) examples of common amortized loans	2

- b) How many years will it take for N\$197 000 to grow to N\$554 000 if it is invested in an account with a quoted annual interest rate of 8% with monthly compounding of interest? (4)
- c) At what annual interest rate must N\$137 000 be invested so that it will grow to N\$475 000 in 14 years? (4)

QUESTION 4**[30 MARKS]**

Hangana Seafood (Pty) Ltd ('Hangana'), a subsidiary of the Ohlthaver & List Group of Companies is a fully Namibian owned company and one of the leading employers in the Namibian Hake fishing industry. The company operates and manages its own fleet of seven wet fish trawlers with lengths varying from 45 to 55 m with a catching capacity of 1 800 Quota tons per year, per vessel. Catches are preserved on ice within the vessel and safely transported to Hangana's land-based factory for further processing. Hangana is committed to responsible and sustainable fishing in Namibian waters. The vessels use the newest technology on its fishing gear and Hangana recently introduced a vessel replacement strategy to acquire newer, more efficient fishing vessels.

Hangana explores foreign markets on an on-going basis and owes its remarkable market/ product growth to pre-planned and focused market research. Advanced technology, effective product branding, and high-quality packaging are major contributing factors to the company's success.

Hangana's land-frozen products are mainly exported to Australia, France, Germany, Italy, the Netherlands, Spain, the United Kingdom, the United States, and the SADC region.

Hangana's brand is internationally associated with quality, innovation, commitment and achievement. Through its consistent quest for excellence, Hangana has earned respect from both consumers and its competitors. High quality products are achieved through full compliance with the Integrated Quality Management System.

Hangana is looking to expand its fishing interests by purchasing a 100% interest in Namsovo Fisheries. The management of Hangana believes that the expected returns from the acquisition of Namsovo Fisheries are dependent on the state of the economy.

The following information is made available:

State of the economy	Probability of Occurrence	Estimated Returns and Values		
		Hangana Seafood	Namsovo Fisheries	The market
Favourable	30%	16%	20%	14%
Neutral	40%	10%	12%	8%
Unfavourable	30%	2%	0%	6%
Book Value in million	-	N\$12	N\$8	-
Market Value in million	-	N\$8	N\$12	-
Standard deviation of returns	-	-	-	3.2%
Covariance with the market	-	0.0024	0.0023	-

Assumptions:

- The risk-free rate is 5% and;
- There is no corporate taxation.

REQUIRED	MARKS
a) Determine the Standard Deviation of Hangana and Namsov Fisheries	8
b) Determine the Covariance of Hangana and Namsov Fisheries	4
c) Determine the Correlation Coefficient of Hangana and Namsov Fisheries	3
d) Using the Capital Asset Pricing Model (CAPM), calculate the expected return of Hangana and Namsov Fisheries	11
e) Explain any TWO limitations in using Capital Asset Pricing Model (CAPM) in the investment appraisal decisions	4
TOTAL MARKS	30

END OF EXAMINATION PAPER

TABLE A

Future value interest factor of \$1 per period at i% for n periods, FVIF(i,n).

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	1.010	1.020	1.030	1.040	1.050	1.060	1.070	1.080	1.090	1.100	1.110	1.120	1.130	1.140	1.150	1.160	1.170	1.180	1.190	1.200
2	1.020	1.040	1.061	1.082	1.103	1.124	1.145	1.166	1.188	1.210	1.232	1.254	1.277	1.300	1.323	1.346	1.369	1.392	1.416	1.440
3	1.030	1.061	1.093	1.125	1.158	1.191	1.225	1.260	1.295	1.331	1.368	1.405	1.443	1.482	1.521	1.561	1.602	1.643	1.685	1.728
4	1.041	1.082	1.126	1.170	1.216	1.262	1.311	1.360	1.412	1.464	1.518	1.574	1.630	1.689	1.749	1.811	1.874	1.939	2.005	2.074
5	1.051	1.104	1.159	1.217	1.276	1.338	1.403	1.469	1.539	1.611	1.685	1.762	1.842	1.925	2.011	2.100	2.192	2.288	2.386	2.488
6	1.062	1.126	1.194	1.265	1.340	1.419	1.501	1.587	1.677	1.772	1.870	1.974	2.082	2.195	2.313	2.436	2.565	2.700	2.840	2.986
7	1.072	1.149	1.230	1.316	1.407	1.504	1.606	1.714	1.828	1.949	2.076	2.211	2.353	2.502	2.660	2.826	3.001	3.185	3.379	3.583
8	1.083	1.172	1.267	1.369	1.477	1.594	1.718	1.851	1.993	2.144	2.305	2.476	2.658	2.853	3.059	3.278	3.511	3.759	4.021	4.300
9	1.094	1.195	1.305	1.423	1.551	1.689	1.838	1.999	2.172	2.358	2.558	2.773	3.004	3.252	3.518	3.803	4.108	4.435	4.785	5.160
10	1.105	1.219	1.344	1.480	1.629	1.791	1.967	2.159	2.367	2.594	2.839	3.106	3.395	3.707	4.046	4.411	4.807	5.234	5.695	6.192
11	1.116	1.243	1.384	1.539	1.710	1.898	2.105	2.332	2.580	2.853	3.152	3.479	3.836	4.226	4.652	5.117	5.624	6.176	6.777	7.430
12	1.127	1.268	1.426	1.601	1.796	2.012	2.252	2.518	2.813	3.138	3.498	3.896	4.335	4.818	5.350	5.936	6.580	7.288	8.064	8.916
13	1.138	1.294	1.469	1.665	1.886	2.133	2.410	2.720	3.066	3.452	3.883	4.363	4.898	5.492	6.153	6.886	7.699	8.599	9.596	10.699
14	1.149	1.319	1.513	1.732	1.980	2.261	2.579	2.937	3.342	3.797	4.310	4.887	5.535	6.261	7.076	7.988	9.007	10.147	11.420	12.839
15	1.161	1.346	1.558	1.801	2.079	2.397	2.759	3.172	3.642	4.177	4.785	5.474	6.254	7.138	8.137	9.266	10.539	11.974	13.590	15.407
16	1.173	1.373	1.605	1.873	2.183	2.540	2.962	3.426	3.970	4.595	5.311	6.130	7.067	8.137	9.358	10.748	12.330	14.129	16.172	18.488
17	1.184	1.400	1.653	1.948	2.292	2.693	3.159	3.700	4.328	5.054	5.895	6.866	7.966	9.276	10.761	12.468	14.426	16.672	19.244	22.186
18	1.196	1.428	1.702	2.026	2.407	2.854	3.380	3.996	4.717	5.560	6.544	7.690	9.024	10.575	12.375	14.463	16.879	19.673	22.901	26.623
19	1.208	1.457	1.754	2.107	2.527	3.026	3.617	4.316	5.142	6.116	7.263	8.613	10.197	12.056	14.232	16.777	19.748	23.214	27.252	31.948
20	1.220	1.486	1.806	2.191	2.653	3.207	3.870	4.661	5.604	6.727	8.062	9.646	11.523	13.743	16.367	19.461	23.106	27.393	32.429	38.338
25	1.282	1.641	2.094	2.666	3.386	4.292	5.427	6.848	8.623	10.835	13.585	17.000	21.231	26.462	32.919	40.874	50.658	62.669	77.388	95.396
30	1.348	1.811	2.427	3.243	4.322	5.743	7.612	10.063	13.268	17.449	22.892	29.960	39.116	50.960	66.212	85.850	111.065	143.371	184.675	237.376
35	1.417	2.000	2.814	3.946	5.516	7.686	10.677	14.785	20.414	28.102	38.575	52.800	72.069	98.100	133.176	180.314	243.503	327.997	440.701	590.668
40	1.489	2.208	3.262	4.801	7.040	10.286	14.974	21.725	31.409	45.259	65.001	93.051	132.782	188.884	267.864	378.721	533.869	750.378	1,051.668	1,469.772
50	1.645	2.692	4.384	7.107	11.467	18.420	29.457	46.902	74.358	117.391	184.565	289.002	450.736	700.233	1,083.657	1,670.704	2,566.215	3,927.357	5,988.914	9,100.438

TABLE B

Present value interest factor of \$1 per period at i% for n periods, PVIF(i,n).

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071	0.062	0.054
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060	0.052	0.045
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051	0.044	0.038
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043	0.037	0.031
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037	0.031	0.026
25	0.780	0.610	0.478	0.375	0.295	0.233	0.184	0.146	0.116	0.092	0.074	0.059	0.047	0.038	0.030	0.024	0.020	0.016	0.013	0.010
30	0.742	0.552	0.412	0.308	0.231	0.174	0.131	0.099	0.075	0.057	0.044	0.033	0.026	0.020	0.015	0.012	0.009	0.007	0.005	0.004
35	0.706	0.500	0.355	0.253	0.181	0.130	0.094	0.068	0.049	0.036	0.026	0.019	0.014	0.010	0.008	0.006	0.004	0.003	0.002	0.002
40	0.672	0.453	0.307	0.208	0.142	0.097	0.067	0.046	0.032	0.022	0.015	0.011	0.008	0.005	0.004	0.003	0.002	0.001	0.001	0.001
50	0.608	0.372	0.228	0.141	0.087	0.054	0.034	0.021	0.013	0.009	0.005	0.003	0.002	0.001	0.001	0.001	0.000	0.000	0.000	0.000