

HM321 Engineering Economics

Fall 2024 – Lecture 10

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Bring Calculator Always

- Always bring your calculator with you in lectures
- Without practice you will not be able to do the calculations in your exams



Chapter 3

NOMINAL AND EFFECTIVE INTEREST RATES

Note

- This lecture was delivered online due to smog lockdown
- The following two podcast files were played
 - 3.1 Nominal and effective rates-meaning
 - 3.2 Effective rates-equivalence relations
- One problem involving single payments was done on the white

Effective Annual Interest Rates for Selected Nominal Rates

TABLE 3.3 Effective Annual Interest Rates for Selected Nominal Rates

Nominal Rate $r\%$	Semiannually ($m = 2$)	Quarterly ($m = 4$)	Monthly ($m = 12$)	Weekly ($m = 52$)	Daily ($m = 365$)	Continuously ($m = \infty; e^r - 1$)
1	1.003	1.004	1.005	1.005	1.005	1.005
2	2.010	2.015	2.018	2.020	2.020	2.020
3	3.023	3.034	3.042	3.044	3.045	3.046
4	4.040	4.060	4.074	4.079	4.081	4.081
5	5.063	5.095	5.116	5.124	5.126	5.127
6	6.090	6.136	6.168	6.180	6.180	6.184
7	7.123	7.186	7.229	7.246	7.247	7.251
8	8.160	8.243	8.300	8.322	8.328	8.329
9	9.203	9.308	9.381	9.409	9.417	9.417
10	10.250	10.381	10.471	10.506	10.516	10.517
12	12.360	12.551	12.683	12.734	12.745	12.750
15	15.563	15.865	16.076	16.158	16.177	16.183
18	18.810	19.252	19.562	19.684	19.714	19.722
20	21.000	21.551	21.939	22.093	22.132	22.140

Reference

- Basics of Engineering Economy by Leland Blank and Anthony Tarquin, 2nd edition, McGraw-Hill