

**KINGDOM OF BAHRAIN**  
**MINISTRY OF EDUCATION**  
**DIRECTORATE OF EXAMINATION / EXAMINATION SECTION**

**COMMERCIAL EDUCATION EXAMINATION**

**FIRST SEMESTER EXAM 2007/2008**

**COURSE NAME:** FINANCIAL MATHEMATICS

**TRACK:** COMMERCIAL

**COURSE CODE:** Fin 214

**TIME:** 1.5 Hours

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**First part: Compound Interest:**

Question 1:

Study the following table carefully then answer these questions:

| Interest table No. 1 | Equation : $CA = P \times (1 + I)^N$ |        |               |        |        |        |        |        |        |        | CA for monetary unit |
|----------------------|--------------------------------------|--------|---------------|--------|--------|--------|--------|--------|--------|--------|----------------------|
| N                    | 0.5%                                 | 0.75%  | 1%            | 1.25%  | 1.5%   | 1.75%  | 2%     | 2.25%  | 2.5%   | 2.75%  |                      |
| 1                    | 1.0050                               | 1.0075 | 1.0100        | 1.0125 | 1.0150 | 1.0175 | 1.0200 | 1.0225 | 1.0250 | 1.0275 |                      |
| 2                    | 1.0100                               | 1.0151 | 1.0201        | 1.0252 | 1.0302 | 1.0353 | 1.0404 | 1.0455 | 1.0506 | 1.0558 |                      |
| 3                    | 1.0151                               | 1.0227 | 1.0303        | 1.0380 | 1.0457 | 1.0534 | 1.0612 | 1.0690 | 1.0769 | 1.0848 |                      |
| 4                    | 1.0202                               | 1.0303 | <b>1.0406</b> | 1.0509 | 1.0614 | 1.0719 | 1.0824 | 1.0931 | 1.1038 | 1.1146 |                      |
| 5                    | 1.0253                               | 1.0381 | 1.0510        | 1.0641 | 1.0773 | 1.0906 | 1.1041 | 1.1177 | 1.1314 | 1.1453 |                      |

If the value of  $(1 + i\%)^N$  from the previous table is equal BD 1.0406 - Find the following:

a- The interest rate :

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b- The number of years:

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c- The compound amount for the principal of BD 2,600 at end of 2.5 years (same rate):

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