

CFA Level II Practice Paper 1

Item-Set Mock Examination

22 item sets · 88 questions · 3 options each · 264 minutes

How to use this booklet

- Each item set is a vignette with exhibits followed by four questions. Every question has three options (A, B or C); choose the one best answer.
- The real Level II exam gives about 3 minutes per question (132 minutes for each of two sessions of 44 questions). Use the same pace here.
- Use the information in the vignette and exhibits only. Formulas and a calculator are allowed; round only at the end of a calculation.

SESSION 1 — ITEM SETS 1 TO 11

44 questions · 132 minutes

Read each vignette carefully. Not every number in a vignette is needed for every question.

Item Set 1 · Financial Statement Analysis

Basic and diluted EPS: Marrow Software

Chloe Voss, CFA, of Summit Hollow Capital is calculating earnings per share for Marrow Software, a listed company with convertible debt and employee stock options outstanding throughout the year. Net income was 300 million and preferred dividends were 20 million. The average number of common shares was 150 million. The convertible bonds have a face value of 250 million with a 5.0% coupon, are convertible into 10 million shares, and the tax rate is 25%. The options and the bonds are both potentially dilutive.

Exhibit 1: EPS data

Item	Value
Options outstanding (millions)	10
Exercise price	\$28.00
Average market price	\$44.80
Convertible bond coupon	5.0%
Shares on conversion (millions)	10

1. Basic EPS is closest to:

- A \$2.000
- B \$1.867
- C \$1.750

2. Under the treasury stock method, the incremental shares from the options are closest to (millions):

- A 3.750
- B 10.000
- C 6.250

3. Under the if-converted method, the after-tax interest added back to the numerator is closest to (millions):

- A 12.500
- B 3.125
- C 9.375

4. Diluted EPS (assuming both instruments are dilutive) is closest to:

- A \$1.767
- B \$1.867
- C \$1.710

Item Set 2 · Quantitative Methods

Evaluating a default-prediction model: Quenby Devices

Daniel Sandoval, CFA, of Wexcombe Investments has trained a supervised classification model to flag the medical devices companies most likely to default on their debt within a year. The model was tested on 660 out-of-sample companies, of which 115 actually defaulted. The confusion matrix is in Exhibit 1. A default is the positive class. Daniel wants to evaluate the model, bearing in mind that defaults are rare and that missing a default is costlier than a false alarm.

Exhibit 1: Confusion matrix

	Predicted default	Predicted no default
Actual default	90	25
Actual no default	45	500

5. The accuracy of the model is closest to:

- A 78.3%
- B 66.7%
- C 89.4%

6. The precision of the model is closest to:

- A 78.3%
- B 13.6%
- C 66.7%

7. The F1 score of the model is closest to:

- A 0.720
- B 0.522
- C 0.725

8. Given the costs of the errors and the rarity of defaults, which metric should Daniel emphasise most?

- A Precision, because false alarms are the costlier error
- B Accuracy, because it uses all four cells of the confusion matrix and so is the most informative
- C Recall (the proportion of actual defaults caught), because missing a default is the costlier error and defaults are rare, which also makes accuracy misleading

CFA LEVEL II — ANSWERS

Answers & worked solutions

Answer Key

1 B	2 A	3 C	4 A	5 C	6 C
7 A	8 C	9 B	10 C	11 A	12 B
13 B	14 A	15 B	16 C	17 B	18 A
19 C	20 B	21 C	22 C	23 B	24 A
25 C	26 B	27 B	28 C	29 A	30 C
31 A	32 C	33 C	34 B	35 C	36 B
37 C	38 B	39 A	40 B	41 B	42 A
43 A	44 C	45 B	46 A	47 B	48 C
49 B	50 C	51 C	52 A	53 A	54 B
55 A	56 C	57 B	58 A	59 B	60 C
61 A	62 A	63 B	64 A	65 C	66 B
67 A	68 B	69 A	70 C	71 B	72 C
73 A	74 A	75 B	76 A	77 C	78 A
79 A	80 B	81 C	82 A	83 B	84 A
85 C	86 B	87 A	88 C		

Item Set 1 · Basic and diluted EPS: Marrow Software

1. Basic EPS is closest to: [FSA · Basic EPS]

Correct answer: B — \$1.867

- Basic EPS = (net income – preferred dividends) ÷ weighted average common shares.
- = (300 – 20) ÷ 150 = 280 ÷ 150 = \$1.867.
- Why the other options are wrong:
- A (\$2.000): Preferred dividends must be deducted to get earnings available to common shareholders.
- C (\$1.750): Basic EPS uses only the weighted average common shares outstanding.

LOS: Financial Statement Analysis: calculate basic and diluted EPS using the treasury stock and if-converted methods

KEY TAKEAWAY

Basic EPS = (NI – preferred dividends) ÷ weighted average shares.