10. (2.5 points)

An insured is subject to experience rating under the National Council on Compensation Insurance (NCCI)'s Experience Rating Plan Manual for Workers Compensation and Employers Liability Insurance. The following information about the insured is given:

Payroll (Experience Period)	$5,000,000
State	Alabama
Class	7705

The following claims apply to the experience period. Each claim involves only one person, and none are disease claims:

Claim Number	Type	Loss
1	Indemnity	29,000
2	Medical	30,500
3	Indemnity	90,000
4	Indemnity	1,500
5	Medical	45,000

Calculate the experience modification for this insured.

QUESTION: 10	
TOTAL POINT VALUE: 2.5	**LEARNING OBJECTIVE(S): B3**
SAMPLE ANSWERS	

Sample 1
Use 2011 tables
Lookup Class 7705: ELR = 2.02, D = 0.17

$$E = \frac{5,000,000}{100} * 2.02 = 101,000$$
$$E_E = 101,000 * (1 - 0.17) = 83,830$$

Lookup E: W = 0.14, B = 28,000

Claim	A_p	A_e
1	5,000	24,000=29,000-5,000
2	1,500=5,000*0.3	7,650=(30,500-5,000)*0.3
3	5,000	85,000
4	1,500	0
5	1,500	12,000=(45,000-5,000)*0.3
Total	14,500	128,650

$$Mod = \frac{A_p + wA_e + (1-w)E_e + B}{E + B}$$
$$= \frac{14,500 + 0.14 * 128,650 + (1 - 0.14) * 83,830 + 28,000}{101,000 + 28,000}$$
$$= 1.03$$

Sample 2
Use 2010 tables
Class 7705: ELR = 1.84, D-ratio = 0.2

$$Expected\ Loss = \frac{5,000,000}{100} * 1.84 = 92,000$$
W = 0.14, B = 26,800
$$E_E = 92,000 * (1 - 0.2) = 73,600$$

Risk	A_p	A_e
1	5,000	24,000=29,000-5,000
2	1,500=5,000*0.3	7,650=(30,500-5,000)*0.3
3	5,000	85,000
4	1,500	0
5	1,500	12,000=(45,000-5,000)*0.3
Total	14,500	128,650

$$Mod = \frac{14{,}500 + 0.14 * 128{,}650 + (1 - 0.14) * 73.600 + 26{,}800}{92{,}000 + 26{,}800}$$

$$= 1.03$$

Sample 3
Use 2011 tables
Based on Class Code 7705: ELR = 2.02, D = 0.17

$$Expected\ Loss = \frac{5{,}000{,}000}{100} * 2.02 = 101{,}000$$
$$E_P = 101{,}000 * 0.17 = 17{,}170$$
$$E_E = 101{,}000 - 17{,}170 = 83{,}830$$

Claim	A_p	A_e
1	5,000	24,000=29,000-5,000
2	1,500=5,000*0.3	7,650=(30,500-5,000)*0.3
3	5,000	85,000
4	1,500	0
5	1,500	12,000=(45,000-5,000)*0.3
Total	14,500	128,650

Based on Expected Loss: W = 0.14, B = 28,000
$$Z_p = \frac{E}{E + B} = 78.29\%$$

$$Z_e = w * Z_p = 10.96\%$$

$$Mod = \frac{A_p * Z_p + E_p * (1 - Z_p) + A_e * Z_e + E_e * (1 - Z_e)}{E}$$
$$= \frac{103{,}821.929}{101{,}000}$$
$$= 1.03$$

EXAMINER'S REPORT

Candidates were expected to use the NCCI manual to correctly calculate an experience modification factor.

Credit was given for using either the 2010 or 2011 tables, as long as they were used consistently.

Common mistakes include:
- Incorrectly calculating ratable losses for medical only claims, i.e., not applying 0.3 factor to medical only claims.
- Mixing values from different years, e.g. selecting ELR from 2011 table but picking up W and/or B from 2010 or vice versa.
- Incorrectly selecting W and/or B from the tables.