2A)

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| --- | --- | --- |
| **Diabetes** | **P(Diabetes | Smoke, Exercise)** | |
| **Bad Habit**  Smoke = 1 i.e. Yes  Exercise = 2 i.e. No | **Good Habit**  Exercise = 1 i.e. Yes Smoke = 2 i.e. No |
| 1 (Yes) | 0.1593 | 0.1351 |
| 2 (Only during pregnancy) | 0.0079 | 0.0077 |
| 3 (No) | 0.8127 | 0.8394 |
| 4 (Pre - Diabetic) | 0.0201 | 0.0179 |

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| **Stroke** | **P(Stroke | Smoke, Exercise)** | |
| **Bad Habit**  Smoke = 1 i.e. Yes  Exercise = 2 i.e. No | **Good Habit**  Exercise = 1 i.e. Yes Smoke = 2 i.e. No |
| 1 (Yes) | 0.0501 | 0.0368 |
| 3 (No) | 0.9499 | 0.9632 |

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| **Attack** | **P(Attack | Smoke, Exercise)** | |
| **Bad Habit**  Smoke = 1 i.e. Yes  Exercise = 2 i.e. No | **Good Habit**  Exercise = 1 i.e. Yes Smoke = 2 i.e. No |
| 1 (Yes) | 0.0724 | 0.0510 |
| 3 (No) | 0.9276 | 0.9490 |

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| **Angina** | **P(Angina | Smoke, Exercise)** | |
| **Bad Habit**  Smoke = 1 i.e. Yes  Exercise = 2 i.e. No | **Good Habit**  Exercise = 1 i.e. Yes Smoke = 2 i.e. No |
| 1 (Yes) | 0.0778 | 0.0523 |
| 3 (No) | 0.9222 | 0.9477 |

2B)

|  |  |  |
| --- | --- | --- |
| **Diabetes** | **P(Diabetes | BP, Cholesterol, BMI)** | |
| **Bad Health**  BP = 1 i.e. Yes  Cholesterol = 1 i.e. Yes  BMI = 3 i.e. Overweight | **Good Health**  BP = 3 i.e. No  Cholesterol = 2 i.e. No  BMI = 2 i.e. Normal |
| 1 (Yes) | 0.1223 | 0.0616 |
| 2 (Only during pregnancy) | 0.0067 | 0.0078 |
| 3 (No) | 0.8540 | 0.9199 |
| 4 (Pre - Diabetic) | 0.0170 | 0.1067 |

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| --- | --- | --- |
| **Stroke** | **P(Stroke | BP, Cholesterol, BMI)** | |
| **Bad Health**  BP = 1 i.e. Yes  Cholesterol = 1 i.e. Yes  BMI = 3 i.e. Overweight | **Good Health**  BP = 3 i.e. No  Cholesterol = 2 i.e. No  BMI = 2 i.e. Normal |
| 1 (Yes) | 0.0840 | 0.0139 |
| 2 (No) | 0.9160 | 0.9861 |

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| --- | --- | --- |
| **Attack** | **P(Attack | BP, Cholesterol, BMI)** | |
| **Bad Health**  BP = 1 i.e. Yes  Cholesterol = 1 i.e. Yes  BMI = 3 i.e. Overweight | **Good Health**  BP = 3 i.e. No  Cholesterol = 2 i.e. No  BMI = 2 i.e. Normal |
| 1 (Yes) | 0.1343 | 0.0159 |
| 2 (No) | 0.8657 | 0.9841 |

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| --- | --- | --- |
| **Angina** | **P(Angina | BP, Cholesterol, BMI)** | |
| **Bad Health**  BP = 1 i.e. Yes  Cholesterol = 1 i.e. Yes  BMI = 3 i.e. Overweight | **Good Health**  BP = 3 i.e. No  Cholesterol = 2 i.e. No  BMI = 2 i.e. Normal |
| 1 (Yes) | 0.1532 | 0.0128 |
| 2 (No) | 0.8468 | 0.9872 |

4a)

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| --- | --- | --- |
| **Diabetes** | **P(Diabetes | Smoke, Exercise)** | |
| **Bad Habit**  Smoke = 1 i.e. Yes  Exercise = 2 i.e. No | **Good Habit**  Exercise = 1 i.e. Yes Smoke = 2 i.e. No |
| 1 (Yes) | 0.2267 | 0.1025 |
| 2 (Only during pregnancy) | 0.0062 | 0.0089 |
| 3 (No) | 0.7429 | 0.8736 |
| 4 (Pre - Diabetic) | 0.0241 | 0.0149 |

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| **Stroke** | **P(Stroke | Smoke, Exercise)** | |
| **Bad Habit**  Smoke = 1 i.e. Yes  Exercise = 2 i.e. No | **Good Habit**  Exercise = 1 i.e. Yes Smoke = 2 i.e. No |
| 1 (Yes) | 0.0790 | 0.0253 |
| 3 (No) | 0.9210 | 0.9747 |

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| --- | --- | --- |
| **Attack** | **P(Attack | Smoke, Exercise)** | |
| **Bad Habit**  Smoke = 1 i.e. Yes  Exercise = 2 i.e. No | **Good Habit**  Exercise = 1 i.e. Yes Smoke = 2 i.e. No |
| 1 (Yes) | 0.1175 | 0.0303 |
| 3 (No) | 0.8825 | 0.9697 |

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| --- | --- | --- |
| **Angina** | **P(Angina | Smoke, Exercise)** | |
| **Bad Habit**  Smoke = 1 i.e. Yes  Exercise = 2 i.e. No | **Good Habit**  Exercise = 1 i.e. Yes Smoke = 2 i.e. No |
| 1 (Yes) | 0.1143 | 0.0359 |
| 3 (No) | 0.8857 | 0.9640 |

4B)

|  |  |  |
| --- | --- | --- |
| **Diabetes** | **P(Diabetes | BP, Cholesterol, BMI)** | |
| **Bad Health**  BP = 1 i.e. Yes  Cholesterol = 1 i.e. Yes  BMI = 3 i.e. Overweight | **Good Health**  BP = 3 i.e. No  Cholesterol = 2 i.e. No  BMI = 2 i.e. Normal |
| 1 (Yes) | 0.1311 | 0.0577 |
| 2 (Only during pregnancy) | 0.0065 | 0.0080 |
| 3 (No) | 0.8446 | 0.9240 |
| 4 (Pre - Diabetic) | 0.0179 | 0.1037 |

|  |  |  |
| --- | --- | --- |
| **Stroke** | **P(Stroke | BP, Cholesterol, BMI)** | |
| **Bad Health**  BP = 1 i.e. Yes  Cholesterol = 1 i.e. Yes  BMI = 3 i.e. Overweight | **Good Health**  BP = 3 i.e. No  Cholesterol = 2 i.e. No  BMI = 2 i.e. Normal |
| 1 (Yes) | 0.0858 | 0.0134 |
| 2 (No) | 0.9142 | 0.9866 |

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| --- | --- | --- |
| **Attack** | **P(Attack | BP, Cholesterol, BMI)** | |
| **Bad Health**  BP = 1 i.e. Yes  Cholesterol = 1 i.e. Yes  BMI = 3 i.e. Overweight | **Good Health**  BP = 3 i.e. No  Cholesterol = 2 i.e. No  BMI = 2 i.e. Normal |
| 1 (Yes) | 0.1362 | 0.0153 |
| 2 (No) | 0.8638 | 0.9847 |

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| --- | --- | --- |
| **Angina** | **P(Angina | BP, Cholesterol, BMI)** | |
| **Bad Health**  BP = 1 i.e. Yes  Cholesterol = 1 i.e. Yes  BMI = 3 i.e. Overweight | **Good Health**  BP = 3 i.e. No  Cholesterol = 2 i.e. No  BMI = 2 i.e. Normal |
| 1 (Yes) | 0.1549 | 0.0124 |
| 2 (No) | 0.8451 | 0.9876 |
| **Stroke** | **Before adding the edges** | **After adding the edges** |
| P(Stroke = 1 | Diabetes = 1) | 0.0451 | 0.0764 |
| P(Stroke = 1 | Diabetes = 3) | 0.0412 | 0.0359 |