Starter Quiz ·

University Computer Science Name: _____ Score: _____

1. A* chooses the node minimising –
   - ☐ f = g + h
   - ☐ g(n)
   - ☐ depth
   - ☐ h(n)
2. Forward chaining starts from –
   - ☐ negation
   - ☐ the facts
   - ☐ the empty clause
   - ☐ the query
3. A Bayesian network factorises –
   - ☐ the prior
   - ☐ the joint into CPTs
   - ☐ the loss
   - ☐ the graph
4. The decision boundary is where –
   - ☐ features are scaled
   - ☐ the model changes its answer
   - ☐ training data lies
   - ☐ the loss is zero
5. The update rule steps –
   - ☐ along the contour
   - ☐ randomly
   - ☐ with the gradient
   - ☐ against the gradient
6. The test set is –
   - ☐ reused for tuning
   - ☐ spent once, at the end
   - ☐ merged into training
7. City recall 0.90, rural 0.75: the disparity is –
   - ☐ 5 points
   - ☐ 25 points
   - ☐ 15 points
   - ☐ not measurable
8. On the course graph, A* expands – nodes before the goal
   - ☐ four
   - ☐ two
   - ☐ six
   - ☐ all
9. The course KB derives RefundRisk in – waves
   - ☐ never
   - ☐ one
   - ☐ three
   - ☐ two
10. With the course numbers, P(Storm | Complaint) = –
    - ☐ 0.1475
    - ☐ 0.49
    - ☐ 0.667
    - ☐ 0.976

1. **f = g + h**

   Cost so far plus admissible estimate to go.

2. **the facts**

   Flood from what is known; backward chaining aims from the goal.

3. **the joint into CPTs**

   Each node keeps a CPT given its parents; the joint is their product.

4. **the model changes its answer**

   The score crosses zero: the answer flips.

5. **against the gradient**

   Downhill is the negative gradient, scaled by eta.

6. **spent once, at the end**

   Spent once: it becomes a second validation set otherwise.

7. **15 points**

   0.90 - 0.75: one in four rural lates missed vs one in ten.

8. **four**

   Pops D, B, C, then G at cost 8 - four expansions.

9. **two**

   Wave one: Delayed, HeavyTraffic; wave two: RefundRisk.

10. **0.976**

    0.49 x 0.3 / 0.2205 = 0.667 - marginalise D both ways first.