You are working in a rural Emergency Department when a 27 year old with a swollen leg and shortness of breath presents to your department. Your resident has reviewed the patient but asks you some questions regarding the diagnostic strategy for a Pulmonary Embolus.

1. State **5 hereditary** risk factors for a Pulmonary Embolism: (5 marks)

|  |
| --- |
| Prothrombin Gene mutations |
| Antithrombin III deficiency |
| Protein C deficiency |
| Protein S deficiency |
| Factor V Leiden mutation |

1. In the Simplified Wells Score, state 3 of the features with the highest points: (3 marks)

|  |
| --- |
| 3 points each for Clinical signs of a DVT and Alternative diagnosis less likely |
| 1.5 points for HR>100, Immobilisation / Surgery in the previous 4 weeks, Previous DVT / PE |

1. Describe one **diagnostic finding** of these tests in Pulmonary Embolism. (4 marks)

|  |  |
| --- | --- |
| ECG | S1,Q3, T-wave inversion in 3 with right axis deviation, RBBB, p pulmonale, RVH and strain |
| ABG | Hypoxia on room air, Increased A-a gradient (>20) |
| Echocardiogram | RV dilation and hypokinesia, McConnell’s sign, Thrombus visible in RV or main pulmonary artery |
| Chest X-ray | Westermark’s sign, Hampton’s hump, pulmonary infarct |