A 67 year old black American female. She is currently being treated for Hypertension.

Pharmacologic
- Acetylsalicylic acid (Aspirin),
- Enoxaparin (Lovenox)
- GPIIb/IIIa agents (Glycoprotein IIb/IIIa) (Tirofiban/Aggrastat; Eptifibatide/Integrelin; Abciximab/ReoPro)
- Heparin sodium
- Morphine sulfate
- Nitroglycerin
- Tissue plasminogin activator (tPA) (Thrombolytic agent)

Client Profile
Mrs. Darsana was sitting at a family cookout at approximately 2:00P.M. When she experienced what she later describes to the nurse as “nausea with some heart-burn.” Assuming the discomfort was because of something she ate; she dismissed the discomfort and took Tums. After about two hours, she explains, “my heartburn was not much better and it was now more of a dull pain that seemed to spread to my shoulder. I also noticed that I was a little short of breath.” Mrs. Darsana told her son what she was feeling. Concerned, her son called emergency medical services.

Case Study
En route to the hospital, emergency medical personnel established an intravenous access. Mrs. Darsana was given four children’s chewable aspirins and three sublingual nitroglycerin tablets without relief of her chest pain. She was placed on oxygen 2 liters via nasal cannula. Upon arrival in the emergency department, Mrs. Darsana is very restless. She states, “It feels like an elephant is sitting on my chest,” “Her vital signs are blood pressure 160/84, pulse 118, respiratory rate 28, and temperature 99.3 F (37.4 C). Her oxygen saturation is 98% on 2 liters of oxygen. A 12 lead electrocardiogram (ECG, EKG) shows sinus tachycardia with a heart rate of 120 beats per minute. An occasional premature ventricular contraction (PVC), T wave inversion, and ST segment elevation are noted. A chest X-ray is within normal limits with not signs of pulmonary edema. Mrs. Darsana’s laboratory result include potassium (K+) 4.0 mEq/L, magnesium (Mg) 1.9/dL, total creatine kinase (CK) 157 u/L, CK-MB 7.6 ng/ml, relative index 4.8%, and troponin I 2.8 ng/ml. Her stool tests were negative for occult blood.
Questions:

1. What are the components of the initial nursing assessment of Mrs. Darsana when she arrives in the emergency department?
2. Mrs. Darsana has a history of unstable angina. Explain what this is?
3. Briefly discuss what causes and MI,. Include in the discussion the other terms used for this diagnosis?
4. The nurse listens to Mrs. Darsana’s heart sounds to see if S3, S4, or a murmur can be heard. What would the nurse suspect if these heart sounds were heard?
5. What factors are considered when diagnosing an acute myocardial infarction?
6. Describe what T wave inversion and ST segment elevation look like on an ECG monitor strip and what causes each in a client with an MI?
7. Besides her unstable angina, what factors increased Mrs. Darsana’s risk for an MI?
8. Identify which of Mrs. Darsana’s presenting symptoms are consistent with the profile of a client who is having an MI.
9. The nurse overhears Mrs. Darsana’s son asking his mother sternly “Mom, Why didn’t you tell me that you were having chest pain sooner. You could have died right there at my house.” How might the nurse explain Mrs. Darsana’s actions to the son?
10. Provide a rationale for why Mrs. Darsana was given sublingual nitroglycerin and aspirin en route to the hospital.
11. Briefly discuss the laboratory tests that are significant in the determination of an acute myocardial infarction (AMI).
12. Laboratory results in the emergency department on April 1 at 1645:
   Total CK = 216 u/L, CK-MB = 5.6 ng/ml, relative index = 2.2%, Troponin I 2.8 ng/ml
   April 2 at 0045
   Total CK = 242 u/L, CK-MB = 8.1 ng/ml, relative index = 3.3%, Troponin I 5.2 ng/ml
   April 2 at 1645:
   Total CK = 298 u/L, CK-MB = 9.2 ng/ml, relative index = 3.0%, Troponin I 4.1 ng/ml
   April 2 at 0045
   Total CK = 203 u/L, CK-MB = 6.1 ng/ml, relative index = 3.0%, Troponin I 1.7 ng/ml
   Are Mrs. Darsana’s laboratory results consistent with those expected for a client having an acute myocardial infarction? WHY?
13. Briefly describe four interventions you anticipate will be initiated/considered during the acute phase of Mrs. Darsana’s MI.
14. Identify five criteria that could exclude an individual as a candidate for thrombolytic therapy with tissue plasminogen activator (tPA).
15. An echocardiogram reveals that Mrs. Darsana has an ejection fraction of 50%.
   How could the nurse explain that meaning of this result to Mrs. Darsana? How will this finding affect her nursing care?
16. Identify five appropriate nursing diagnoses for the client experiencing an AMI. Prioritize your five (5) and explain why?