Direction
To earn the CME credit, please answer the following questions and return the answers to the CME Office at Sina & Sadra Convention Center, Neshaat Street, Shiraz, 71345.1846, Iran. Successful completion of the test is defined as a score of at least 70% correct.

1) What is the earliest change in the artery wall, which precedes the formation of lesions of atherosclerosis?
   a. LDL-C deposition
   b. Endothelial injury
   c. Fatty streaks formation
   d. Fibrous cap replacement

2) Which of the following statements is true?
   a. Endothelial dysfunction, decreased leukocyte adhesion, and decreased endothelial permeability to lipoproteins are found in atherosclerosis initiation.
   b. Endothelial dysfunction, increased leukocyte adhesion, and increased endothelial permeability to lipoproteins are found in atherosclerosis initiation.
   c. Intact endothelium, normal leukocyte adhesion, and increased endothelial permeability to lipoproteins are found in atherosclerosis initiation.
   d. Leukocyte adhesion alteration and endothelial permeability do not have a major role in atherosclerosis initiation.

3) Which of the following statements is false?
   a. Formation of a fibrous cap overlying a lipid-rich core is associated with advanced atherosclerotic lesions.
   b. Ruptured fibrous cap results in vascular thrombosis.
   c. Inflamed fibrous cap is more prone to acute thrombosis.
   d. Thinner fibrous cap is associated with lower rates of acute thrombosis.

4) Atherosclerosis:
   a. Is a linear model.
   b. Usually shows a predictable progression.
   c. Can be detected by imaging techniques.
   d. Never shows a plateau trend.

5) What is the I index in our proposed formula:
   \[ v = \frac{(V \times I\text{ index})}{t} \]
   a. True percentage of lumen stenosis/ or plaque volume at \( t_0 \) time
   b. True percentage of lumen stenosis/ or plaque volume at \( t_1 \) time
   c. Atherosclerosis velocity (% or nm / months)
   d. Indices of instability of a plaque

6) If the I index is valued 2 for the plaque, the plaque experiences:
   a. Acute thrombosis
   b. Subacute thrombosis
   c. Chronic occlusion
   d. A normal condition

7) Occurrence of a microcalcification in the atherosclerotic plaque fibrous cap:
   a. Increases the risk of the rupture of a vulnerable plaque.
   b. Decreases the risk of the rupture of a vulnerable plaque.
   c. Does not have any affect on the plaque rupture.
   d. Results in atherosclerosis regression.
8) Intraplaque hemorrhage results in:
   a. Regression of the atherosclerosis plaque.
   b. Acute thrombosis recovery.
   c. Acceleration of atherosclerosis.
   d. A and d are correct.

9) What is the impact of diabetes mellitus on plaque instability/rupture?
   a. Oxidative stress induction
   b. Vascular smooth-muscle cell proliferation
   c. Vascular smooth-muscle cell apoptosis
   d. All of the above

10) Increased C-reactive protein:
    a. Is a predictive risk factor of atherosclerosis progression.
    b. Shows a successful anti-atherosclerosis activity of macrophages.
    c. Has not shown any association with atherosclerosis.
    d. Cannot predict atherosclerosis velocity.

11) Which of the following statements is true?
    a. Decreased interleukin 6 is associated with increased atherosclerosis velocity.
    b. Increased interleukin 6 is associated with increased atherosclerosis velocity.
    c. Interleukin 6 does not play any role in the atherosclerosis process.
    d. Increased interleukin 6 is a biomarker of atherosclerosis regression.

12) Which of the following statements is false?
    a. Plaque instability has an inverse relation with atherosclerosis velocity.
    b. Plaque instability is a component of atherosclerosis velocity description.
    c. Plaque instability has a direct relation with atherosclerosis velocity.
    d. Plaque instability modification results in atherosclerosis velocity reduction.

13) Which of the following statements is true?
    a. HDL-C improvement increases atherosclerosis velocity.
    b. HDL-C improvement reduces atherosclerosis velocity.
    c. HDL-C improvement has no impact on atherosclerosis velocity.

14) Which of the following statements is false?
    a. Increased HDL-C/ LDL-C ratio is associated with decreased atherosclerosis velocity.
    b. HDL-C/ LDL-C ratio is associated with atherosclerosis velocity.
    c. Decreased HDL-C/ LDL-C ratio is associated with decreased atherosclerosis velocity.
    d. Decreased HDL-C/ LDL-C ratio is associated with increased atherosclerosis velocity.

15) Which of the following statements is true?
    a. Statin therapy results in augmented atherosclerosis velocity.
    b. Statin therapy results in decreased atherosclerosis velocity.
    c. No relation exists between statin therapy and atherosclerosis velocity.

16) Hypertension results in plaque:
    a. Instability
    b. Stability
    c. Regression

17) Which of these items is not included in “Atherosclerosis Velocity” description:
    a. Volume of the plaque
    b. Time/duration of plaque progression
    c. Plaque stability
    d. Inflammation index
18) Which of the following statements is true?
   a. Recognition of atherosclerosis velocity in further experiments could result in a practical curve of atherosclerosis.
   b. Atherosclerosis velocity can be applied in medical practice immediately.
   c. Atherosclerosis velocity is only a parameter that can be used in medical practice.
   d. Atherosclerosis velocity terminology can be used only in animal models.

19) IVUS can quantify:
   a. Atherosclerotic plaques
   b. Vascular remodeling
   c. Subacute plaque
   d. All of the above

20) Which of the following statements is false?
   a. Risk factor modification is a tool which may decrease atherosclerosis velocity.
   b. Anti-inflammatory effects of antiplatelet medication by decreasing the volume of atherosclerosis plaques are effective in atherosclerosis velocity reduction.
   c. MMPs variation does not have any association with plaque instability.
   d. Optical coherence tomography and IVUS have shown sufficient feasibility to characterize lipid-rich plaques and fibrous plaques.