

**King Saud University  
Collage of Applied Medical Sciences  
Community Health Sciences Department  
Clinical Nutrition**

**1<sup>st</sup> Term Exam**

**CHS 457**

**Functional Food**

**Time: 2 Hours**

**Date:4/11/2012**

**Student's Name:**

.....

**Student's ID**

.....

**Total Grade**

**/20**

**I. Please Answer the Following Questions****1. Define functional food: (2 grades)**

--Any substance that may be considered a food or part of a food & provides health or medical benefits, including prevention & treatment of disease—

Or Foods or dietary components that may provide a health benefit beyond basic nutrition.

Or Foods that by virtue of physiologically active food components provide health benefits beyond basic nutrition

**2. How do free radicals contribute to heart disease? (2 grades)**

--When a free radical comes in contact with the inner lining of arteries, microscopic injuries result.

-This process is called lipid peroxidation (the process that causes fats to become rancid) and is recognized as one of the underlying causes of atherosclerosis. Eventually the build-up of fat, cholesterol, toxic metals and other substances at the site of injury narrows the arteries.

**3. What are the grades of olive oil? List them as per quality. (2 grades)**

1. Extra virgin olive oil
2. virgin olive oil
3. Regular olive oil

**4. List 3 advantages of using olive oil in frying: (3 grades)**

--- The digestibility of heated olive oil does not change even when re-used for frying several times -----

olive oil for frying is that it forms a crust on the surface of the food that impedes the penetration of oil and improves its flavour. Food fried in olive oil has a lower fat content than food fried in other oils, making olive oil more suitable for weight control. Olive oil, therefore, is the most suitable, the lightest and the tastiest medium for frying.-----

without over-heating, it undergoes no substantial structural change and keeps its nutritional value better than other oils, not only because of the antioxidants but also due to its high levels of oleic acid.

**5. Kindly fill out the following table: (9 grades)**

Food	Active Component	Contribution to Health
Garlic	Sulfur compounds Allin	<ul style="list-style-type: none"> <li>- Immunity</li> <li>- Heart disease</li> <li>- Cancer</li> <li>- Antioxidant capacity</li> <li>- Antimicrobial</li> </ul>
Tomato	Lycopene	<ul style="list-style-type: none"> <li>- Cancer</li> <li>- Immunity</li> <li>- Prevent heart disease</li> <li>- Antioxidant capacity</li> </ul>

**6. Write T for true statements and F for false ones: (1 grade)**

- In garlic, Alliin concentrations are increased during storage **T**
- Frying garlic retards its ability to inhibit platelet aggregation **F**

**7. Fill in the blanks with the suitable answer: (1 grade)**

- Ripe olives are ...**dark bluish**... while un ripe are .....**green**..... "color"