******University of Salahaddin Subject: Postharvest technology

College of Agriculture Stage: second

Engineering science Time: 1hour

 (2022-2023) Date: 22/2/2023

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**Q1/ Define the followings:** (15 Marks)

-post harvest technology -Maturation - Manual harvesting

**Q2/ Fill the blanks with appropriate answers:**  (40 Marks)

1. To reduce these losses, producers and handlers must understand the ------------------------ and ------------------------factors involved in deterioration and use postharvest techniques that delay senescence and maintain the best possible quality.
2. Starch content estimating the percentage of the starch amount in the fruits like (apple, pear and mango) by iodine pigment, the areas containing starch in the fruit its color turns to

 --------------------------, but the areas containing sugars remain ------------------.

1. -------------------------- are relatively expensive but are durable, reusable and easy to clean, When empty, they can be nested to save space in storage or transport.
2. Fruit content of total soluble solids are measure by -----------------------.
3. The degree of hardness of fruit -------------and the freshness of fruit-----------------with completion of growth and ripening of fruit.
4. ---------------, --------------, ----------------are harvest factors affecting quality of the fruits and vegetables.
5. Easy separation of seeds from the fleshy part of fruits such as --------------------------.
6. Losses in quantity and quality affect horticultural crops between ---------------------

and ----------------------.

1. ------------------------ can be used for determining the date of fruit harvest time and sometimes useful in determining the date of fruit out from cold storage for marketing.
2. Many changes in pigments occurs during development and maturation of the commodity on the plant. Pigments concentration such as loss of chlorophyll and development of

 ----------------------- and ---------------------- pigments depending on species and cultivars.

1. The damage of fruits and vegetables after harvest can be reduced by improving the operations of ----------------, ----------------- and ------------------ these means reducing the damage and thereby increase production,

**Q3/ Enumerate of the followings:**

A/ The objectives of postharvest technology? (8 Marks)

B/ Advantages and disadvantages of Mechanical harvesting? (12 Marks)

**Q4/ Answer of the followings:**

A/ Write best maturity index for each of the following fruits? (10 Marks)

Apple - orange - grapes - tomato - potato - melon - walnuts - avocado

 - pomegranate -peach

B/ Why Fruits and vegetables known as protective food? (10 Marks)

C/ Most problems of fruits and vegetables damage in some countries due to exposure to heat and other factors, including: (5 Marks)

***Good Luck***

***Dr. shabaq M. Nafea Hanan F. Khalil***