

Ans 4 Nutrition profile of Boiled egg vs Boiled rice and daal.

• Boiled egg

• one medium size approximately 70-80 calories

• eggs are high in protein. ~~It~~^{It} contain 7-8 gram protein.

• It is very low in carbohydrate (about 1 gram)

• \Rightarrow Boiled rice and daal ($\frac{1}{2}$ cup rice + $\frac{1}{2}$ cup daal)

• It contains 200-250 calories per serve.

• Moderate protein as compared to boiled egg. (7-9 grams in one serving)

• It is very high in carbohydrates & most of the carbohydrate comes from rice. (50-60 gram).

Ans 5 5 uncommon food ingredient.

1) Mahua flowers.

- (a) common name :- mahua
- (b) English name :- Indian butter tree flower
- (c) seasonal use :- Harvested in spring and used to make beverages, sweets and fermented liquor
- (d) nutritional value :- rich in sugar, vitamins, minerals like calcium, iron and phosphorus

2) Tezpatta

- common name :- Tezpatta
- English name :- Indian Bayleaf
- (a) seasonal use :- used as a spice in food.
- (b) nutritional value :- contains essential oils, antioxidants; promotes digestion.

3) Kachri:

- common name :- Kachri
- English name :- Wild melon
- seasonal use :- Available in Summer used as a tenderizer in meat dishes and ~~digestion~~ chutney.
- nutritional value :- Rich in enzymes, vitamins A and C; aids digestion

4. Kantola

common name : Kantola

English name :- Spine Gourd.

Seasonal use : Available in monsoon ; used in stir-fries and curries.

nutrition value : Rich in fibre, vitamin A, C and antioxidants.

5) Bael fruit :-

common name : Bael

English name : wood apple

Use : Available in Summer ; used in beverages and dessert

nutritional value : High in fibre, Vitamin C and calcium :-

Ans 6.

- a) cooking food in microwave destroys its nutritional value.

This statement is a myth.

Reason →

cooking in microwave is done for shorter times compared to other methods. This results in using ~~more~~ minimum water hence reducing nutrients loss. nutrients like vitamin C and B can be lost by heat and prolonged cooking. So cooking in microwave can help retain them.

- b) Refrigerating food destroys its 'nutritional value'

This statement is a myth.

Reason →

It helps in slowing down enzymatic process ~~which lead~~ and microbe growth which lead to food spoilage, which in result help to preserve nutrients for a longer period. ~~The~~

c) Genetic modification in plants or animals are bad.

c) This statement is a myth.

Reasons:

c) genetic modification is a method for introducing desirable features, like disease resistance or higher production. The safety of genetically modified foods is assessed via rigorous scientific testing and multiple studies have demonstrated that they are ~~by~~ safe for ingestion and can increase food and agriculture sustainability.

Ans 7) The technique, mostly used to find calorific value is bomb calorimetry.

- (i) The food is burned completely in the presence of oxygen in a sealed container.
- (ii) The heat released which is absorbed by surrounding water bath.
- (iii) The change in temperature of water is measured.
- (iv) The calorific content is calculated by using the formula using specific heat capacity of water.
- (v) At last, the result is expressed in calories, indicating energy when its metabolized.

Ans: 8 Specific technologies / products that could emerge from the application of Computational gastronomy paradigm.

(i) AI-Recipe Generator:- This tool will help in creating personalized recipe based on user preference and available ingredients.

(ii) Nutrient optimization software:- tool that adjust ingredient proportions in recipe to meet specific nutritional goal.

(iii) Flavor feedback system:- tool that uses sensor and machine learning to predict aroma and taste of food during cooking and enhance it.

(iv) A VR tool that simulates the experience of tasting food, allowing user to explore flavors before preparing food.

(v) A chatbot that gives nutritional advice and portion control tips according to individual needs.

(vi) An allergen detection system which uses sensor to detect allergen which help in ensuring safety for those who suffer from allergy.

(c) A tool for restaurants that uses customer preference, seasonal availability, and sales data to optimize menu offerings.

(c) An app which use data analytics to ~~use~~ that suggest ways to use leftover ingredients effectively.