Short answer type questions

Q1. Discuss the role of shortenings in biscuit making?

Ans. Shortenings tenderize the crumb by being dispersed in films and globules during mixing, which interferes with gluten development. Fat acts as a barrier and prevents water from reaching the protein and as a result gluten does not form and the ingredients are not strongly bound together, giving the short, crumbly texture required.

Q2. Name some surfactants required in biscuit making?

Ans. Surfactants like lecithin, mono- and diglycerides, polysorbate 60, and sodium stearoyl 2-lactylate are commonly used in biscuit making.

Q3. Describe the role of egg as leavening agent in biscuit making?

Ans. Eggs help to retain air that is beaten into batter during mixing. During baking this air will expand and being held in a fine network of egg protein (albumin) and flour protein that cannot escape and so remains to increase the volume of the final product.

Q4. What is baking powder?

Ans: Baking powder is combination of sodium bicarbonate and an acid salt like monocalcium phosphate, sodium acid pyrophosphate, and potassium acid tartarate. When these agents combine with water, they react to form controlled amounts of carbon dioxide, which leavens the product giving it volume and making light and easy to digest.

Q5. What is neutralization value?

Ans. The reactivity of baking powder is determined by their neutralization value (NY), which is defined as the numbers of grams of soda that 100 g of acidic salt will neutralize.

Q6. Describe classification of baking powders?

Ans. Baking powders are classified as 'fast acting' 'slow acting' and 'double acting'.

Fast acting powders release most of their gas at room temperature. Slow acting powders release a portion of the available carbon dioxide during mixing but generate most of it by reactions occurring at elevated temperatures. Double acting powders are version of the slow acting type that has somewhat more gas producing potential during mixing. This type of baking powder is most widely used by bakers.

Q7. What are the disadvantages of vertical spindle mixers?

Ans: The primary disadvantage of vertical mixers is their slow operating speed. Other disadvantages include lack of uniformity of the mix, and labour-intensive nature of the system's design.

Q8. What are the advantages of horizontal mixers?

Ans: The advantages of horizontal mixers are their high speed, ability to supply dough to a processing line continuously, uniformity of the mixes they produce, and their potential for complete automation.

Q9. What are different ways of generating heat in the oven?

Ans: Heat energy is generated by burning oil or more usually gas in the oven or by electric elements. Some ovens are built to transfer heat to the product by radiation from the burners and from the hot internal surface of the wall and roof of the oven. Other types of oven rely on directed currents of heated air to transfer heat to the product by convection.

Q10. What are the different types of packaging materials used in biscuits?

Ans: The most commonly used material for biscuit packaging is orientated polypropylene (OPP), either as plain or pearlized OPP film, co-extruded OPP or acrylic-coated on both sides. If a superior oxygen barrier is required, acrylic-coated OPP is used, and sometimes one side is coated with polyvinyl chloride/polyvinylidene chloride copolymer rather than acrylic.

Q11. Name some hard dough biscuits?

Ans: In this category the biscuits that can be included are: water biscuits, sweet gluco biscuits, semi sweet marie type or cabin biscuits.

Q12. What are the three basic steps of biscuit making?

Ans: Biscuit making process is accomplished through three basic operations i.e., mixing, forming, and baking.

Q13. What are the main functions of salt in biscuit making?

Ans: Salt performs two principal functions in biscuit doughs. The first is flavor. It accelerates the flavor of other ingredients e.g, the sweetness of sugar is emphasized. Salt also controls fermentation and aids in suppressing undesirable texture.

Q14. Name some primary vegetables sources used in shortening production?

Ans: Soya bean, cotton seed, palm, coconut and peanut oils are the primary vegetables sources used in shortening production.

Q15. What is the function of sugar in biscuit making?

Ans: Sugar imparts sweet taste, acts as a vehicle for other flavours, improves texture, crust colour and extends shelf life.