

## Food Technology

- 1 First synthetic dye, mauve, was discovered by Sir William Henry was discovered in:  
A 1996 C 1956  
B 1858 D **1856**
- 2 It is derived from the shells of dried female insects is the main pigment in carmine  
A **Carminic acid** C Acetic acid  
B Citric acid D Ascorbic acid
- 3 It is the study of the chemistry of foods, their deterioration, and the principles underlying the improvement of foods for consuming  
A **Food chemistry** C Food processing  
B Food technology D Chemistry
- 4 A property of a living organisms to regulate its internal environment to maintain a stable, constant condition through various mechanisms  
A Stress C **Homeostasis**  
B Hormone D Photosynthesis
- 5 Moisture contents in meat is almost  
A **65%** C 61%  
B 63% D 69%
- 6 Large amounts of calcium supplements can cause  
A Anemia C Diarrhea  
B Cancer D **Constipation**
- 7 This vitamin consists of three biologically active molecules, ketone, aldehyde and retinoic acid:  
A Vitamin B C **Vitamin A**  
B Vitamin C D Carotenoids
- 8 Xerophthalmia is the abnormal dryness of the conjunctiva and cornea of the eye, with inflammation and ridge formation, typically associated with vitamin  
A **Vitamin A** C Vitamin K  
B Vitamin B D Eyes problems
- 9 Symptoms of scurvy include bleeding and bruising easily, hair and tooth loss, joint pain and  
A Danger C Sweat problem  
B Painful D **Swelling**
- 10 Symptoms may include numbness, muscle spasms, confusion, or cardiac arrest is called:  
A **Hypocalcemia** C Blood pressure  
B Hypertension D Diabetes
- 11 The main function is transport of vitamin A, sense of taste, wound healing muscle contraction, immune health:  
A Chloride C Iron  
B Vitamin B D **Zinc**
- 12 The toxicity of sulphur causes no toxic effects at doses under:  
A 4.5 g/Kg body weight C 3.4 g/Kg body weight  
B 5.5 g/Kg body weight D **4 g/Kg body weight**
- 13 Diabetes, insulin circulation, fat metabolism is caused by the toxicity of:  
A Copper C **Chromium**  
B Zinc D Molybdenum
- 14 The disease of lameness is also called as:  
A **Beri Beri** C Sensation  
B Ber Ber D Beri Ber
- 15 Symptoms of dry beriberi are:  
A Feet and hand sensation C Tingling  
B Pain D **All other option**

- 16 Jam and marmalade have the water activity of:  
 A 0.80-0.87 C 0.87-0.95  
 B 0.70-0.75 D 0.78-0.85
- 17 Yeast, meat, poultry, fish, cereals, legumes, milk, green leafy vegetables, coffee & tea are the sources of vitamin:  
 A B3 C B1  
 B B2 D B
- 18 The sources of vitamin C are:  
 A Citrus family C Potato  
 B Strawberries D All of the above
- 19 Acid base fluid balance, stomach digestion are the functions of:  
 A Fluoride C Zinc  
 B Chloride D Bromide
- 20 Cancer, heart disease and liver damage are cause due to the excess use of:  
 A Chloride C Iron  
 B Iron D Citrus
- 21 Tooth & bone growth, eye maintenance, immunity, mucous membranes and skin tissues are the functions of:  
 A Copper C Vitamin A  
 B Vitamin B3 D Iron
- 22 Lakes and dyes are:  
 A Insoluble & Soluble C Soluble in solvents  
 B Soluble & insoluble D Insoluble in solvents
- 23 Breakfast cereals, snack foods and powdered food have the water activity of:  
 A Less than 0.65 C Less than 0.59  
 B Greater than 0.69 D Greater than 0.72
- 24 High doses may lead to diarrhea are the main reason for the toxicity of:  
 A Magnesium C Manganese  
 B Selenium D Sodium
- 25 Which one is not a macromolecule group of food:  
 A Carbohydrate C Emulsifier  
 B Proteins D Water
- 26 Hydrophobicity of lipids is associated with:  
 A Polar compounds C Non polar compounds  
 B Ionic compounds D None of these
- 27 Olive oil is rich in:  
 A Palmitic acid C Oleic acid  
 B Linoleic acid D Linolenic acid
- 28 Which one property is not directly associated to chemical composition of raw food:  
 A Nutritional profile of product C Safety aspect of products  
 B Processing technique selected for product development D None of these
- 29 EPH and DHA types lipids are mostly found in:  
 A Fruit pulp C Fish  
 B Animals D Seeds
- 30 Which one has not a glycerol unit as backbone:  
 A Triglycerides C Glycerophospholipids  
 B Sphingolipids D All of them
- 31 Which one has narrow range of melting points:  
 A Milk fats C Vegetable butter  
 B Animal fats D Marine sources fat

- 32 The biggest part of human body is composed of:  
 A Protein C Carbohydrates  
 B Fat D **None of these**
- 33 Amino acids can be distinguished from each other by the:  
 A Carboxyl group C Amino group  
 B Hydrogen group D **Functional group R**
- 34 Which one of them do not belong to same category  
 A)  
 A Glucose and starch C Fatty acids and lipids  
 B Nitrogen and proteins D **Amino acids and carbohydrates**
- 35 Strongest bonding type in alpha helix structure is:  
 A Ionic bond C Covalent bond  
 B **Hydrogen bond** D None of these
- 36 Kosher is the food allowed for:  
 A Muslims C **Jews**  
 B Christians D Hindus
- 37 Properties and type of emulsifier depends upon the:  
 A Monoglyceride C **glycerol**  
 B triglyceride D Water
- 38 Ice cream is a type of:  
 A **O/W emulsion** C O/W/O emulsion  
 B W/O emulsion D W/O/W emulsion
- 39 Monoglycerides play the role of emulsifier in:  
 A Protein C **Lipids**  
 B Starch D Glycerol
- 40 Crystallization can be avoided by emulsifier in:  
 A **Fats and oils** C Water  
 B Proteins D Minerals
- 41 Most visible example of protein denaturation is  
 A Meat C Flour  
 B **Egg** D Pulses
- 42 Which one is not an effect of protein denaturation?  
 A Destruction of toxins C Improved digestibility  
 B Loss of biological activity D **Change in amino acid sequence**
- 43 The example of droplet of emulsified water is:  
 A **Butter** C Jelly  
 B Salt D Sugar
- 44 **Water freezes at 32°F and boils at:**  
 A 213 °F C 214°F  
 B 210 °F D **212 °F**
- 45 Chlorophyll extracts are not permitted for use as food colorant in which country:  
 A Pakistan C **USA**  
 B France D UK
- 46 Severe vitamin D deficiency has serious consequences for bone health and increase the risk of which disease:  
 A **Osteoporosis** C Kidney failure  
 B Obesity D Fever
- 47 Symptoms of scurvy include, ,  
 A Bleeding and bruising C Hair and tooth loss  
 B Joint pain and swelling D **All**
- 48 The largest and most complex of all the vitamins:  
 A **Vitamin B12** C Vitamin K

- 49                     **B**        Vitamin E   **D**        Vitamin C  
..... occurs rarely in foods or the human body, but is the form most often used in vitamin supplements and fortified foods:  
          **A**        B1   **C**        B2  
          **B**        B3   **D**        **Folic acid**
- 50        Which light is more destructive to food colors as compared to sunlight?  
          **A**        X-rays   **C**        Gamma rays  
          **B**        **Ultraviolet**   **D**        Moonlight

51- The legislation named inter alia was practiced by:

- a. Ancient Athens
- b. Ancient Irish**
- c. Romans
- d. None

52- Food laws in individual countries of Europe were introduced for individual products during:

- a. Middle ages
- b. In 27 BC
- c. In 1724
- d. None**

53- Licensing system was first introduced in:

- a. 1722
- b. 1822**
- c. 1922
- d. None

54- Which of the following cannot be categorized as food additive according to Punjab Pure Food Rules:

- a. Iron
- b. Vitamin D
- c. Ca**
- d. All above

55- If an additive adds to the food from its raw materials or other ingredients, this is called as:

- a. Primary additive
- b. Secondary Additive
- c. Additional additive
- d. None**

56- The additives other than permitted food additives cannot be used in foods unless:

- a. Their safety is proved
- b. Fulfill the standards established by PSQCA
- c. Notified by the Govt.**
- d. Both A & B

57- The common name of food color Food Blue 1 is:

- a. Monoazo
- b. Indigo Carmine**
- c. Tartrazine
- d. None

58- Which of the following natural colors is permitted in the foods:

- a. Sunset yellow
- b. Monoazo
- c. Xanthene
- d. None**

59- Which of the following can be included in preservatives as per Punjab Pure Food Rules:

- a. Sodium metabisulphite**

- b. Salt
  - c. Both A and B
  - d. None
- 60- Which of the following cannot be used as preservative in meat products?
- a. **Sulphur dioxide**
  - b. Sodium benzoate
  - c. Benzoic acid
  - d. Both A & B
- 61- Flavors which are prepared chemically from aromatic raw materials are called:
- a. Natural flavors
  - b. Synthetic flavors
  - c. **Natural Identical flavors**
  - d. None
- 62- Which of the following is prohibited to be used as solvent in flavor preparations?
- a. Methanol
  - b. Monoethyl ether
  - c. Diethylene glycol
  - d. **Both B & C**
- 63- Monosodium salt of L-glutamic acid is permissible in foods if derived from:
- a. Herbal sources
  - b. Microbial sources
  - c. **Vegetable sources**
  - d. All above
- 64- Yeast extract is permissible in foods if it is derived from:
- a. Saccharomyces fabis
  - b. **Saccharomyces cerevisiae**
  - c. Saccharomyces ascomycota
  - d. All above
- 65- An operator whose food causes an injury to a person shall be liable for:
- a. Imprisonment of six months and fine of five hundred thousand rupees
  - b. Imprisonment of six months and fine of one million rupees
  - c. **Imprisonment of three years and fine of one million rupees**
  - d. Imprisonment of three months and fine of five hundred thousand rupees
- 66- Inorganic colors and pigments can only be used in foods in very small quantities:
- a. True
  - b. **False**
- 67- The use of artificial colors is conditionally permitted in raw foods:
- a. True
  - b. **False**
- 68- Potable water cannot be used as diluent or filler in food color preparations:
- a. True
  - b. **False**
- 69- A hotel or restaurant can be registered only if:
- a. It conforms to the prescribed conditions of health, hygiene and comfort
  - b. Its building is structurally safe
  - c. Its staff is medically fit
  - d. **All above**
- 70- A license granted under hotel and restaurant act remains in force for a period of:
- a. 3 years
  - b. 2 years
  - c. **1 year**
  - d. 5 years

- 71- The registration of a hotel/restaurant can be cancelled if:
- a. Its business is wholly or partly discontinued without approval**
  - b. It serves food to the customer which does not confirm to the prescribed quality
  - c. Its residence is not properly maintained
  - d. None
- 72- The controller has authority to fix the salaries of the staff working on regular basis in a hotel or restaurant
- a. True**
  - b. False
- 73- Frozen fruits can be regarded as raw/fresh fruit as per Punjab pure food rules.
- a. True
  - b. False**
- 74- Which of the following regulations is true for fruit juices
- a. Should be free from artificial colors**
  - b. Can contain artificial colors
  - c. Can contain artificial colors if safe
  - d. None
- 75- Foods not elsewhere standardized shall not be liable to any of the rules described in Punjab pure food rules.
- a. True
  - b. False**
- 76- Naturally water present in milk is
- a) 40-50%
  - b) 20-25%
  - c) 74-78 %
  - d) 84-88%**
- 77- Pasteurization is meant for killing
- a) All viruses
  - b) Pathogenic microorganisms**
  - c) Only yeast and mold
  - c) Spore formers
- 78- LTLT treatment means
- a) 63 °C for 30 min.**
  - b) 55 °C for 30 min
  - c) 121 °C for 30 min
  - d) 95 °C for 30 min
- 79- UHT stands for
- a) Ultra heat temperature
  - b) Ultra high temperature**
  - c) Ultra high treatment
  - d) None of these
- 80- Natural sugar in milk is
- a) Glucose
  - b) Galactose
  - c) Sucrose
  - d) Lactose**
- 81- Acidity of milk is due to
- a) Lactic acid**
  - b) Citric acid
  - c) Sulphuric acid
  - d) Carbonic acid
- 82- Milk is rich source of
- a) Calcium**
  - b) Iron
  - c) Magnesium
  - d) Sodium
- 83- Basic purpose of milk is
- a) To feed newborn**
  - b) to prepare different products
  - c) To earn money
  - d) None of these
- 84- Density of milk fat is
- a) Less than water**
  - b) more than water
  - c) Equal to water
  - d) None of these
- 85- Homogenization is meant for
- a) Separation of milk fat
  - b) Uniform distribution of milk fat**
  - c) Protein separation
  - d) None of these
- 86- pH of fresh milk is
- a) 6.5 - 6.7**
  - b) 5.2 – 5.5
  - c) 7.1 – 7.5
  - d) 3.5 - 4.5
- 87- Fat from milk can be separated by
- a) Titration method
  - b) Homogenization
  - c) Standardization
  - d) Centrifugation**
- 88- Lactose is a
- a) Disaccharide**
  - b) Oligosaccharide
  - c) Polysaccharide
  - d) Monosaccharide

- 89- Low quality milk protein when react with alcohol, it  
 a) Dissolves b) **Precipitates** c) Evaporates d) None of these
- 90- Yoghurt is made by  
 a) **Fermentation** b) Evaporation c) Precipitation d) None of these
- 91- UV treatment of milk  
 a) **Kills microorganisms** b) Cause homogenization c) cause fat separation d) cause nothing
- 92- Syneresis means  
 a) **Separation of whey** b) Coagulation of milk protein c) Fat separation d) None of these
- 93- Gerber method is used for determination of  
 a) Protein b) **Fat** c) Glucose d) Lactose
- 94- Which one is not a fermented product  
 a) Yogurt b) Cheese c) **Milk powder** d) Drinking yogurt
- 95- Yogurt culture contains  
 a) *E. coli* b) *Staphylococcus* c) *Salmonella* d) ***Streptococcus***
- 96- In dairy and food industry CIP stands for  
 a) Cleaning incomplete b) Cleaning is poor c) **Cleaning in place** d) none of these
- 97- Lactation in milch animal starts  
 a) At adult age b) after 5 years of age c) **after calving** d) none of these
- 98- How many lactation cycles, a cow completes in one year  
 a) **1** b) 2 c) 3 d) 4
- 99- Which of following factors effect milk composition  
 a) Animal fodder b) Lactation cycle c) Animal breed d) **All of these**
- 100- Which of following is recommended to preserve the milk  
 a) Sodium benzoate b) Potassium metabisulphite c) **Aseptic packing** d) none of these
- 101- During storage, due to microbial activity pH of milk  
 a) Increases b) **Decreases** c) Not changed d) first increase and then decrease
- 102- Milk is not a good source of  
 a) Energy b) Calcium c) **Iron** d) All of these
- 103- Milk is poor source of following vitamin  
 a) Vitamin A b) Vitamin E c) Vitamin D3 d) **Vitamin B12**
- 104- Skimmed milk contains  
 a) High fat b) **No fat** c) 3.5% fat d) None of these
- 105- Cows stop milking  
 a) Never b) **30-60 days before calving** c) 30 days after calving d) None of these
- 106- \_\_\_\_\_ is a not milk preservation technique.  
 a) Concentration b) **Fermentation** c) Pasteurization d) UHT
- 107- If we add sugar in the milk, its density will \_\_\_\_\_  
 a) Decrease b) **Increase** c) will not change d) all of these
- 108- Density of butter is \_\_\_\_\_ milk.  
 a) Equal to b) greater then c) **less than** d) none of these
- 109- Milk is a good source of \_\_\_\_\_.  
 a) Iron b) Vitamin B12 c) **Calcium** d) all of these
- 110- Fat in milk forms \_\_\_\_\_.  
 a) True solution b) Colloidal solution c) Suspension d) **Emulsion**
- 111- Incubation temperature for yogurt should be \_\_\_\_\_.  
 a) **42° C** b) 50° C c) 20° C d) 75° C
- 112- Which is not a fermented product?  
 a) Yogurt b) **Ice cream** c) Cheese d) Kefir
- 113- Cheese contains high amount of \_\_\_\_\_.  
 a) Sugar b) Whey protein c) **Casein** d) Lactose

- 114- Addition of salt in cheese is aimed for \_\_\_\_\_  
 a) Whey separation      b) flavor enhancement      c) preservation      d) **all of these**
- 115- Thermalization of milk is done at 60-69° C for \_\_\_\_\_.  
 a) **20 seconds**      b) 20 minutes      c) 30 minutes      d) 3 seconds
- 116- Commercial sterilization kills \_\_\_\_\_.  
 a) All spore forming bacteria      b) **Almost all bacteria**      c) only vegetative bacteria      d) all of these
- 117- Plate heat exchangers can be used for \_\_\_\_\_.  
 a) **Only less viscous products**      b) viscous products      c) thick concentrates      d) all of these
- 118- Increase in volume of ice cream by incorporation of air is called \_\_\_\_\_.  
 a) Volume index      b) density index      c) **over-run**      d) none of these.
- 119- Melting rate of ice cream can be decreased by \_\_\_\_\_.  
 a) **Addition of stabilizer**      b) lowering the freezing temperature      c) Increasing moisture content      d) all of these
- 120- Centrifugation separated the fat from milk due to \_\_\_\_\_.  
 a) High density of fat      b) **low density of fat**      c) breaking chemical bonds      d) none of these
- 121- Zymology is a science of \_\_\_\_\_.  
 a) Enzymes      b) Animals      c) **fermentation**      d) Zoo animals
- 122- Backslopping is \_\_\_\_\_.  
 a) a technique to trace back the problems in fermentation.  
 b) an inoculation technique of defined starter culture type.  
 c) **an inoculation method using culture from previous batch.**  
 d) None of these
- 123- Lactobacillus bulgaricus are \_\_\_\_\_.  
 a) Cocci shape      b) **Rod shape**      c) Spiral shape      d) none of these
- 124- Long set fermentation of Cottage cheese \_\_\_\_\_.  
 a) 10 hrs at 32C      b) 6 hrs at 22C      c) **14 hrs at 22C**      d) None of these
- 125- The preferential sites for probiotic activities are \_\_\_\_\_.  
 a) mouth and stomach      b) stomach and colon      c) **colon and ileum**      d) none of these
- 126. How do micro-organisms manifest their presence in the food?**  
 A) Cause food borne illness  
 B) Cause spoilage  
 C) Cause fermentation  
 D) **All of these**
- 127. Micro-organisms help in controlling population levels of higher organisms by**  
 A) Pathogenicity  
 B) Parasitism  
 C) **Both a and b**  
 D) None of these
- 128. The industrial revolution started in**  
 A) France  
 B) **Britain**  
 C) Netherland  
 D) Germany
- 129. Most early methods of food preservation depended largely on**  
 A) **Water activity reduction**



- B) Canning
  - C) Freezing
  - D) Pasteurization
130. **Micro-organisms can be consumed in which forms?**
- A) Edible fungi
  - B) Algae
  - C) Mycoprotein
  - D) All of these
131. **Food microbiology is**
- A) Applied science
  - B) Physical science
  - C) Earth science
  - D) None of these
132. **The industrial revolution begun in**
- A) 17<sup>th</sup> century
  - B) 18<sup>th</sup> century
  - C) 19<sup>th</sup> century
  - D) None of these
133. **Micro-organisms grow as**
- A) Group
  - B) Individually
  - C) Both a and b
  - D) None of these
134. **What is the lowest and highest temperature at which micro-organisms grow?**
- A) -25, 120 °C
  - B) -34, 100 °C
  - C) -57, 105 °C
  - D) -70, 140 °C
135. **Micro-organisms are divided into how many groups based on temperature requirement.**
- A) 4
  - B) 2
  - C) 3
  - D) 5
136. **Psychrotrophic organisms grow well at**
- A) Freezing temperature
  - B) Room temperature
  - C) Refrigerator temperature
  - D) None of these
137. **Optimum temperature for mesophilic microbe range between**
- A) 20 and 45 °C
  - B) 30 and 40 °C
  - C) 35 and 50 °C
  - D) None of these

138. **Thermophilic microbes are found growing on**  
A) Beef  
B) Eggs  
C) Fruits  
D) All of these
139. **Processing factors include**  
A) Packing  
B) Slicing  
C) Irradiation  
D) All of these
140. **Parameters of plant and animal tissues that are an inherent part of tissues are referred as**  
A) Extrinsic factors  
B) Intrinsic factors  
C) Inhibitory factors  
D) None of these
141. **Intrinsic factors include**  
A) pH  
B) Nutrient content  
C) Moisture content  
D) All of these
142. **Extrinsic factors of foods are not**  
A) Substrate dependent  
B) Organism dependent  
C) Food dependent  
D) None of these
143. **Extrinsic factors are those properties that affect**  
A) Foods  
B) Micro-organisms  
C) Both a and b  
D) None of these
144. **Which of the following is an extrinsic factor?**  
A) Biological structures  
B) pH  
C) Temperature of storage  
D) None of these
145. **Possible causes of food borne illness are**  
A) Parasites  
B) Viruses  
C) Chemicals  
D) All of these
146. **Marasmus is**  
A) Protein-energy deficiency

- B) Protein deficiency
  - C) Lean mass deficiency
  - D) None of these
147. **Pellagra happens due to the deficiency of**
- A) Thiamine
  - B) Vitamin C
  - C) Nicotinic acid
  - D) None of these
148. **Goitre results from which deficiency**
- A) Zinc
  - B) Iron
  - C) Iodine
  - D) Calcium
149. **Potatoes contain toxic alkaloid**
- A) Solanine
  - B) Betalin
  - C) Melanin
  - D) None of these
150. **Legumes contain a number of**
- A) Lectins
  - B) Trypsin inhibitors
  - C) Phytate
  - D) All of these
151. **\_\_\_\_\_ is responsible for occasional outbreaks of food poisoning when insufficiently cooked**
- A) Red kidney beans
  - B) Chickpeas
  - C) Bean sprouts
  - D) None of these
152. **The pulse *Lathyrus sativa* can be a major food item in**
- A) North African and Asian regions
  - B) South Asian regions
  - C) North American regions
  - D) None of these
153. **Important foodborne disease-causing microbes are**
- A) E. coli
  - B) Salmonella
  - C) Campylobacter
  - D) All of these
154. **Foodborne disease has been defined by**
- A) WHO
  - B) WTO
  - C) FAO
  - D) None of these

155. **Foodborne intoxication is not caused by**  
A) Viruses  
B) Parasites  
C) Both a and b  
D) None of these
156. **Beriberi is caused by the deficiency of**  
A) Ascorbic acid  
B) Thiamine  
C) Niacin  
D) None of these
157. **Lactic acid bacteria produce lactic acid from**  
A) Proteins  
B) Carbohydrates  
C) Lipids  
D) Alcohols
158. **Example of Acetic Acid Bacteria is**  
A) Micrococcus  
B) Clostridium  
C) Acetobacter aceti  
D) None of these
159. **Gas producing bacteria produce**  
A) O<sub>2</sub>  
B) CO<sub>2</sub>  
C) Both a and b  
D) None of these
160. **Which of the following is a monosaccharide?**  
A) Fructose  
B) Maltose  
C) Raffinose  
D) None of these
161. **Lactose is a combination of**  
A) Galactose + glucose  
B) Glucose + glucose  
C) Fructose + glucose  
D) None of these
162. **\_\_\_\_\_ proteins are more susceptible to hydrolytic action**  
A) Insoluble  
B) Soluble  
C) Both a and b  
D) None of these
163. **Based on pH, foods can be grouped into how many groups**  
A) 3  
B) 4

- C) 2
- D) 6

164. Most fruits and fruit juices are

- A) High acid foods
- B) Low acid foods
- C) Neutral
- D) None of these

165. pH of food has a profound effect on

- A) Viability of microbes
- B) Growth of microbes
- C) Both a and b
- D) None of these

166. Factors considered in judging the acceptance qualities of a food include

- A) Shape
- B) Flavor
- C) Color
- D) All of these

167. Dehydration of fresh vegetables is

- A) Wilting
- B) Spoiling
- C) Withering
- D) None of these

168. Bacteria are

- A) Unicellular
- B) Multicellular
- C) Both a and b
- D) None of these

169. Because of complexity, Gram-positive bacteria are considered to have evolved \_\_\_\_\_ Gram-negative bacteria

- A) After
- B) Before
- C) Along with
- D) None of these

170. Viruses are regarded as

- A) Unicellular
- B) Multicellular
- C) Noncellular
- D) None of these

171. Viruses are composed of

- A) RNA
- B) DNA
- C) Both a and b

- D) None of these
172. **Desirable characteristics for selecting a chemical sanitizer include**  
A) Stability  
B) Nontoxicity  
C) Cost effectiveness  
D) All of these
173. **Physical agents for sanitization of food-processing equipment include**  
A) Steam  
B) Hot air  
C) Hot water  
D) All of these
174. **H<sub>2</sub>O<sub>2</sub> is a very effective**  
A) Germicide  
B) Insecticide  
C) Fungicide  
D) None of these
175. **Antimicrobial efficiency is affected by**  
A) pH  
B) Exposure time  
C) Both a and b  
D) None of these
176. Jams and similar products packed in hermetically sealed containers must contain ..... and products packed in non-hermetically sealed containers .....  
a) 65% and 68% dissolved solids respectively  
b) 68% and 65% dissolved solids respectively  
c) 86% and 65% dissolved solids respectively  
d) 85% and 87% dissolved solids respectively
177. Fat in milk first concentrated into cream through.....Cream further concentrated by..... Fat globules removed as .....  
a) churning ,centrifugation, emulsion  
b) emulsion, churning, centrifugation  
c) centrifugation, churning and emulsion  
d) none of above
178. Processing technique that does minimal harm to product quality.  
a) spray drying  
b) freeze drying  
c) both A and B  
d) none of these
179. Evaporation of moisture from solid state to vapor state without first changing into liquid  
a) Evaporation  
b) Thermoregulation  
c) Sublimation  
d) Deposition

180. Sublimation process carried out at low vacuum –
- a) at 0.1 – 2 mm Hg
  - b) at 1 – 2 mm Hg
  - c) at 0.1 – 0.2 mm Hg
  - d) at 0.1 – 2.2 mm Hg
181. which is not involved in Binding of remaining moisture in freeze drying
- a) Common salt
  - b) Glycerol
  - c) Sorbitol
  - d) None of these
182. Chemical additive which is employed to increase shelf life of food commodities  
Prevent sprouting in potatoes
- a) Sprout inhibitors
  - b) Fertilizer
  - c) Pesticides
  - d) None of these
183. Which is involve in retarding of ripening in mango
- a) 4, 3, 5-trichlorophenoxy acetic acid
  - b) 2, 4, 5-trichlorophenoxy acetic acid
  - c) Acetic acid
  - d) trichlorophenoxy acetic acid
184. which of them prevents fungal growth on surface of fruits
- a) Dithane M45
  - b) Dithane M55
  - c) Di ethane M45
  - d) Di ethane M55
185. ....Compounds capable of inactivating a metallic ion by forming complex (usually water-soluble) At least one covalent or coordinate covalent bond holds metal in complex
- a) Sequestrants
  - b) Desegregate
  - c) Both a and b
  - d) None of these
186. ....help control microorganisms on spices, nuts and dried fruits
- a) Ethylene oxide
  - b) ethyl formate
  - c) both A and B
  - d) none of these
187. Food standards formulated in Pakistan by PSQCA which Set guidelines for quality of processed foods. PSQCA stands for
- a) Pakistan society of quality control administration
  - b) Pakistan standards and quality control authority
  - c) Public standards and quality control authority
  - d) None of above

188. Energy as absorbed by food measured in terms of
- Gray (Gy)
  - Kilogray (kGy)
  - Both a and b
  - None of these
189. Ultraviolet (UV) radiations absorbed by purine and pyrimidine groups of nucleic acids in microbial cells Result in
- mutation
  - death
  - mutation and death
  - no effect
190. any food irradiated to an average dose of .....or less is wholesome for humans and, therefore, should be approved without further testing“
- 1 Mrad (10 kGy)
  - 2 Mrad (20KGy)
  - 0.1 Mrad
  - 0.2 Mrad
191. Owing to suspected toxicity problems, use of some .....like ethylene oxide and ethylene dibromide has been prohibited or restricted in some countries for the treatment of spices.
- Irridants
  - Preservatives
  - Fumigants
  - Spout inhibitors
192. killing or rendering harmless all disease-causing organisms (except viruses and spore-forming organisms) – a treatment technically called
- fumigation
  - irradiation
  - preservation
  - inhibition
193. In Louis Pasteur discovered microorganisms to cause disease and decay
- 1960s,
  - 1860s,
  - 1870s,
  - 1950s,
194. The ..... cans are used for low and medium acid foods like peas, corn, lima beans and red kidney beans to prevent discolouration of the contents and staining of the inside of the container
- R-enamel
  - C- enamel
  - S enamel
  - Y enamel
195. ....cans are used for packing fruits of the acid group having soluble colouring matter (e.g. strawberry, red plums, coloured grapes)
- C-enamel
  - R-enamel



- c) Aluminium can  
d) Y enamel
196. ....cans are currently used for packaging sardines in sauces and oil, meat, fish paste and fruit juices  
a) C-enamel  
b) **Liquored aluminium**  
c) R enamel
197. After the glass container is formed it is submitted to .....in curing ovens In this process the container is heated to about 540°C in the beginning and about 260°C at the end  
A) Centrifugation  
B) **Annealing**  
C) Sterilization  
D) None of above
198. Polymers made from one type of basic chemical unit are known as.....while those formed from a mixture of two or more basic chemical units are known as .....  
A) homopolymers and hetropolymers  
B) **homopolymers and Copolymers**  
C) monopolymers and copolymers  
D) monopolymers and hetroplymers
199. Ordinary paper made from sulphate pulp with good strength but with poor wet strength and grease-proofing ability  
A) **Kraft paper**  
B) Filter paper  
C) Both A and  
D) None of these
200. Both proteolytic and lipolytic reactions usually produce .....in product depending upon degree of changes  
a) Secondary metabolites  
b) **Off odors**  
c) Amino acids  
d) None of these
201. For fresh packaged meat, it is important to sustain positive oxygen movement into the package since this is essential in meat colour stability. This is achieved by coating one side of the regenerated cellulose film with  
a) **nitro-cellulose**  
b) alumiumium  
c) Sulphur  
d) Copper
202. Polyester and polypropylene can be processed at up to  
a) 35°C  
b) **135°C**  
c) 165°C  
d) 65°C
203. ....environments are unique in having high relative humidity and high, usually fluctuating, ambient temperatures  
a) **Tropical**

- b) Subtropical
  - c) Geographical
  - d) None of these
  - e)
204. Rancidity in fats and oils stimulated by metallic ions –
- a) iron and copper
  - b) iron and Sulphur
  - c) potassium and sodium
  - d) none of these
205. These are oscillating electric fields travelling through space accompanied by similar oscillating magnetic fields in a plane at right angle to them
- a) magnetic waves
  - b) Electromagnetic waves
  - c) Electric fields
206. Energy content of Electromagnetic waves depends upon their
- a) Frequency
  - b) Wavelength
  - c) Both a and b
  - d) None of these
207. Smaller wavelengths normally described in
- a) Angstrom
  - b) nanometers (nm)
  - c) both A and B
  - d) none of these
208. One Gray equals of energy absorbed per kilogram of food being irradiated
- a) one Joule (J)
  - b) one kilo joule
  - c) one kilocalorie
  - d) None of these
209. Ultraviolet rays have shorter wavelength than visible light
- a) 100 – 400 nm
  - b) 10 – 400 nm
  - c) 10- 40 nm
  - d) 10-400 m
210. X-rays generated from machine sources operated at or below an energy level of
- A) 50 micro-electron volts (MeV)
  - B) 5 micro-electron volts (MeV)
  - C) 5.5 micro-electron volts (MeV)
  - D) 4.5 micro-electron volts (MeV)
211. Gamma- and X-rays and highly accelerated electrons are commonly used for food preservation. These are absorbed by all forms of matter. ....have much greater penetrating power than other radiations
- a) Gamma rays
  - b) X rays
  - c) ultraviolet rays
212. ....food should be prepared, processed and transported hygienically.
- a) Canned food
  - b) Irradiated food
  - c) Processed food
  - d) Microwaved food

213. Government of .....permits 30 to 90 Gy for irradiating onions and 60 to 100 Gy for potatoes.
- Pakistan
  - India**
  - Bangladesh
  - Sri lanka
214. Irradiation also increases shelf life of fruits and vegetables by delaying ripening, the marketing period of these foods is also extended by
- 4 to 8 days
  - 6 to 9 days
  - 2 to 5 days**
  - 5 to 7 days
215. Moisture reduction by any suitable dehydration technique Freezing rest of moisture present in food.....
- freeze drying
  - Dehydro-freezing**
  - Both A and B
  - None of these
216. Disinfestation by irradiation an effective alternate to.....
- fumigation**
  - disinfection
  - both A and B
  - none of these
217. Destruction of parasites such as .....is achieved at a dose of 0.1 to 0.3 kGy,
- Trichinella spiralis*
  - Taenia saginata*
  - Both A and B**
  - None of these
218. Which Three dimensions are involved in food security,
- Adequacy, access and distribution**
  - Estimation, requirement and distribution
  - Estimation, access and distribution
  - None of these
219. The ripening process in fruits such as bananas, tomatoes, pears, mangoes, guavas and others can be delayed by low dose irradiation
- 250 to 350 Gy**
  - 200 to 250 Gy
  - 300 to 350 Gy
  - 350 to 400 Gy
220. It has been suggested that some products of irradiation of sucrose may have toxic effects on cells. Starch and pectin are very sensitive to radiation. Which amino acids are reported to be most sensitive to the effect of irradiation
- Histidine
  - Phenylalanine
  - thyroxine and sulphur-containing
  - all of above**

- 221.** High yielding varieties of wheat, rice and other food staples helped avert famine in Asia in
- 1960s
  - 1970s
  - Both a and b**
  - 1940s
- 222.** The human pathogens do not thrive below
- 1.3°C
  - 2.3°C
  - 3.3°C**
- 223.** Temperatures somewhere below \_\_\_\_\_ limit are normally selected for frozen food storage
- 9.4°C**
  - 9.8°C
  - 4°C
- 224.** As some microorganisms are not killed before and during freezing or subsequent frozen storage, these will become active when the food is
- Heated
  - Thawed**
  - Chillined
- 225.** Foods low in moisture content – long shelf life
- Dry beans**
  - Vegetables and Cereal grains
  - Bread
- 226.** Methods for Removal of Moisture from Food
- Sun-drying
  - Evaporation / Concentration
  - both**
- 227.** Raw material needs preparatory treatment
- Washing, peeling, cutting
  - Washing , cutting, blanching
  - Washing, peeling, cutting, blanching**
- 228.** Operation in which water content substantially lowered under controlled conditions of: temperature, humidity , airflow
- Evaporation
  - Condensation
  - Dehydration**
- 229.** Rate of moisture evaporation from free surface of food material:
- Directly proportional velocity to of air**
  - Inversely proportional velocity to of air
  - Both a and b
- 230.** The rate of chemical reactions, activities of enzymes and microorganisms are retarded at
- Cold storage**
  - Heating oven
  - Drying
- 231.** Liquefied gases of extremely low boiling point are employed and the refrigerant itself serves as the freezing medium
- Mechanical freezing
  - Slow freezing
  - Cryogenic freezing**

232. Nutritional quality of food damaged if stored at----- temperature for long time  
 a) High  
 b) Low  
 c) Freezing
233. Normally enzyme activity and growth of food spoilage and pathogenic organisms best proceed at  
 a) Moderate temperature  
 b) Low temperature  
 c) High temperature
234. Liquid refrigerant that boils and vaporizes at very low temperature, circulates in closed system  
 a) Mechanical refrigeration system  
 b) Slow refrigeration system  
 c) Moderate refrigeration system
235. Vapour compression mechanical refrigeration system consists of four basic components  
 a. Compressor, condenser, expansion valve and evaporator  
 b. Compressor, heater, condenser, evaporator  
 c. Cooler, compressor, condenser, evaporator
236. ----- are commonly used to treat fruits and occasionally vegetables to prevent the growth of microorganism  
 a) Chlorine  
 b) Sodium  
 c) Methane
237. Mangoes are treated with 2, 4, 5-trichlorophenoxy acetic acid for  
 a) Storage  
 b) To increase shelf life  
 c) Ripening
238. ----- In cold storage chambers is important to prevent the development of stale odours and flavours and remove them from the atmosphere  
 a) Temperature  
 b) Moisture  
 c) Ventilation
239. Heat processing also improves:  
 a) Texture  
 b) Flavour and appearance of product by cooking  
 c) Both
240. Success of canning depends on:  
 a) How heat processing performed  
 b) Quality of seal  
 c) Both
241. ----- of microorganisms – affected by nature and number of microorganisms  
 a) Lethality  
 b) Action  
 c) Beneficial effect
242. Microorganisms important in food processing having nature, false statement is-----  
 a) Yeasts - easily killed  
 b) Moulds - hardly killed  
 c) Bacteria - bacteria more heat resistant
243. Microorganisms do not usually thrive in heavy sugar syrups commonly used in  
 a) Canning  
 b) Flavouring

- c) Baking
- 244.** Time required to kill microorganisms at given lethal temperature known as
- Radiation death time
  - Thermal death time**
  - Filtration death time
- 245.** Direct flame sterilization of foods in tin cans has been successfully achieved with
- small sizes only**
  - large size only
  - medium size only
- 246.** ----- of raw materials essential to produce good quality of end products
- Proper handling
  - Transportation
  - Both**
- 247.** Fish deteriorates rapidly after death so
- Brought to market soon after catching**
  - Brought to market after freezing
  - Brought to market after processing
- 248.** Eggs placed in pockets
- Trays stacked one over another for safe transportation**
  - Trays stacked one over another for safe handling
  - Trays stacked one over another for safe cooling
- 249.** An efficient and cheap liquid/solvent, exclusively used is
- Ethanol
  - NaCl solution
  - Water**
- 250.** Removal of stem known as
- Sorting
  - Plucking
  - stemming**
- 251.** ----- employed to remove contaminants from fresh milk, fruit juices and syrups
- Filtration**
  - Evaporation
  - Heating
- 252.** Separation of raw materials into categories of different physical characteristics known as
- Filtration
  - Distillation
  - Sorting**
- 253.** Separation into categories by quality known as
- Filtration
  - Grading**
  - Sorting
- 254.** Manual labour on inspection belts
- Cheaper and have no limitations
  - Expensive and have limitations**
  - Not reliable and have limitations
- 255.** Flame peelers employed for peeling:
- Onions, Garlic
  - Tomatoes, Peppers
  - All above**
- 256.** Peeling losses less as compared to

- a) **Hand peeling**  
 b) Knife peeling  
 c) Steam peeling
257. Removal of core termed as  
 a) Cutting  
 b) Peeling  
 c) **Coring**
258. Removal of these seeds done in  
 a) **Pitting**  
 b) Coring  
 c) Skinning
259. In canning, dehydration or freezing of fruits and vegetables, some raw material may be:  
 a) Sliced (e.g. carrots, mangoes)  
 b) Diced (pineapples, potatoes)  
 c) **Both a and b**
260. Operation in which uniform combination of two or more substances affected  
 a) Grinding  
 b) **Mixing**  
 c) Dissolving
261. Emulsions formed between two immiscible liquids when a mutually miscible substance called ----- added to mixture  
 a) **Emulsifier**  
 b) Liquid  
 c) Solvent
262. Good filter offers ----- resistance to flow of product and retains maximum residues  
 a) **Minimum**  
 b) Maximum  
 c) No
263. Blanching is also known as  
 a) Bleaching  
 b) **Scalding**  
 c) Sorting
264. Effectiveness of blanching determined by evaluating activity of  
 a) **peroxidase or catalase**  
 b) oxidases or amylases  
 c) proteases and cellulases
265. Chemical substances serve to:  
 a) Inhibit enzymes  
 b) **a and c**  
 c) Limit entrance of oxygen
266. Sugar syrup  
 a) **Reduces enzymatic browning**  
 b) Acts as a barrier to entrance of CO<sub>2</sub>  
 c) Acts as a barrier to entrance of moisture
267. Organic acids  
 a) **Lower pH to value less suitable for enzyme activity**  
 b) Lower moisture to value less suitable for enzyme activity  
 c) Lower dryness to value less suitable for enzyme activity
268. Which is not the inherent side effects of SO<sub>2</sub> gas:  
 a) Asthma  
 b) Allergy

- c) **Poor vision**
269. Best-known alternative to sulphites is  
a) **ascorbic acid**  
b) fumaric acid  
c) lactic acid
270. Heat processing in canning means heating food at certain----- for sufficient length of time  
a) Pressure  
b) **Temperature**  
c) Volume
271. Success of canning depends on  
a) Degree of temperature inside container  
b) **Degree of vacuum inside container**  
c) Degree of pressure inside container
272. The process which includes any operation or operations that change value of food is called\_\_\_\_\_  
A. **Food preservation** B. food and nutrition  
C. Food processing D. Food quality
273. Food science and technology describes whole set of changes through which food passes from \_\_\_\_\_ to \_\_\_\_\_  
A. Processing, handling B. **harvesting, consumption**  
C. handling, storage D. None of above
274. \_\_\_\_\_ promoted production of tailor-made, non-rigid, plastic packages - protect foods from oxidative rancidity and loss of moisture vapors  
A. **Polymer chemistry** B. Biochemistry  
C. Plant pathology D. all of the above
275. The relationship of food science technology with computer science is used for \_\_\_\_\_, allow much improved insights into molecular architecture and behavior of molecules  
A. Mass transfer B. fabrication  
C. **molecular modeling** D. food analysis
276. Success of canning depends on  
Which of the bacteria can grow in alkaline pH?  
A. Lactobacilli B. **Vibrio cholera**  
C. Salmonella D. Staphylococcus
126. Success of canning depends on
277. Ph value affects \_\_\_\_\_ to various hazards like heating, freezing, drying, chemicals, etc.  
A. **Resistance** B. growth  
C. development D. none of the above
278. Bacteria and their spores easily destroyed in any \_\_\_\_\_ environment than in medium or pH.  
A. Basic B. **acidic**  
C. neutral D. all of the above
279. Food supply can be increased by reducing post-harvest losses\_\_\_\_\_?  
A. 30-40% B. 20-30%  
C. **10-20%** D. 8-9%
280. Sugarcane is an example of\_\_\_\_\_?  
A. **Plan based food** B. complex food  
C. citrus food D. none of these
281. Appert's work discovered the principle of\_\_\_\_\_?  
A. Tining B. **Sterilization**





- B. chemical reactions
  - C. pest attack
  - D. adequate packaging**
303. Ph of raw materials reduced through activities of \_\_\_\_\_ bacteria
- A. Staphylococcus
  - B. lactic acid**
  - C. Vibrio
  - D. none of these
304. Some fruits, most vegetables normally subjected to around \_\_\_\_\_ for few seconds to few minutes
- A. 100 degree C**
  - B. 120 degree C
  - C. 150 degree C
  - D. 110 degree C
305. \_\_\_\_\_ delays ripening process in fruits
- A. Freezing
  - B. Drying
  - C. Refrigeration**
  - D. Cooling
306. The moisture content of natural semi-perishable food ranges between \_\_\_\_\_?
- A. 50-60%
  - B. 70-80%
  - C. 60-90%**
  - D. 50-70%
307. Chemically or bio chemically enzymes are primarily \_\_\_\_\_?
- A. Carbohydrates
  - B. Lipids
  - C. Vitamins
  - D. Proteins**
308. Which one of the following is commonly applied to plan order to destroy some enzyme systems prior to canning freezing or dehydration \_\_\_\_\_?
- A. Blanching**
  - B. Pasteurization
  - C. Sterilization
  - D. Heating
309. Vinegar is a product of \_\_\_\_\_?
- A. Lactic fermentation
  - B. Acetic fermentation**
  - C. Alcoholic fermentation
  - D. None of the above
310. Streptococcus thermopiles and lactobacillus are lactic fermentors in \_\_\_\_\_?
- A. Meat industry
  - B. Dairy industry**
  - C. Fruit and vegetable industry
  - D. Beverage industry
311. Which type of bacteria grow best within the temperature range 55°C \_\_\_\_\_?
- A. Psychrophilic
  - B. Thermophilic**
  - C. Mesophilic
  - D. All the above

312. Food substances enter in food stuffs accidentally during production, processing, storage and handing often referred to as \_\_\_\_\_?

**A. Food contaminations**

B. Food additives

C. Food adulterants

D. All the above

313. The anaerobic or partially anaerobic oxidation of carbohydrates with the help of enzymes is called as \_\_\_\_\_?

A. Dehydration

**B. Fermentation**

C. Preservation

D. Pasteurization

314. All the treatments given to a food stuff from the washing to the point of consumption is called \_\_\_\_\_?

A. Food science

**B. Food processing**

C. Food preservation

D. Food technology

315. The oldest food preservation techniques are \_\_\_\_\_?

A. Drying and dehydration

B. Sun drying

C. Browning

**D. Smoking**

316. The food in which the moisture content is less than 15% is called \_\_\_\_\_?

**A. Stable foods**

B. Semi perishable foods

C. Perishable foods

D. Acid food

317. In dairy industry, the most often used bacteria to convert milk sugar to lactic acid are \_\_\_\_\_?

A. Lactobacillus

B. Streptococcus

C. Acetobacter

**D. Both a & b**

318. Most food poisoning organisms prefer to grow in the pH range of \_\_\_\_\_?

**A. 4-5**

B. 4-5

C. 5

D. Above 5

319. The deficiency of an enzyme is greatly influenced by the \_\_\_\_\_?

A. pH

B. Environmental temperature

C. Concentration of enzyme

**D. All the above**

320. The fermentation in which sugars are converted into ethyl alcohol and carbon dioxide is \_\_\_\_\_?

A. Lactic fermentation

B. Acetic fermentation

**C. Alcoholic fermentation**

D. All the above

321. Undesirable flavor in the food during storage is due to \_\_\_\_\_?
- A. Prooxidants
  - B. Antioxidants
  - C. Rancidity**
  - D. None of the above
322. The function of acids in food is to \_\_\_\_\_?
- A. Intensity & modified the taste
  - B. Act as clectton pair accpot
  - C. Act as microbial inhibitor
  - D. All the above**
323. The world's food is lost by microbial spoilage upto the extent of \_\_\_\_\_?
- A. One-half
  - B. One-fourth**
  - C. One-fifth
  - D. One-third
324. Milk is pasteurized at \_\_\_\_\_?
- A. 50°C for 30 minutes
  - B. 60°C for 30 minutes
  - C. 62.8°C for minutes**
  - D. None of the above
325. The example of polyvalent metal is :
- A. Copper**
  - B. Lead
  - C. Chromium
  - D. None of the above
326. Microbial gum used in food serve as \_\_\_\_\_?
- A. Stabilizer
  - B. Emulsifier
  - C. Thickener
  - D. All the above**
327. Oxidative rancidity is promoted by \_\_\_\_\_?
- A. Heat
  - B. Catalysis
  - C. Enzymes
  - D. All the above**
328. In preparation of fruit juices, pickles and carbonated beverages the preservative used is \_\_\_\_\_?
- A. Proconic acid
  - B. Benzoic acid**
  - C. Parabens
  - D. All the above
329. Enzyme proteases is used for \_\_\_\_\_?
- A. Clarification of fruit juice
  - B. Tenderizing meat**
  - C. Removal of molecular oxygen
  - D. None of the above
330. Moulds develop rapidly in \_\_\_\_\_
- A. Damp places**
  - B. Cool areas
  - C. Dry areas
  - D. Soil surfaces
- 331.** A box of 20 tetra packs is an example of
- A. Consumer packaging
  - B. Tertiary Packaging
  - C. Secondary packaging**

- D. Quaternary packaging
332. Aluminium foil was first used in  
A. US  
B. Germany  
C. France  
D. UK
333. Which food packaging technique prolonged shelf life for up to 400%:  
A. Active packaging  
B. Modified atmospheric packaging  
C. Intelligent packaging  
D. Chipboard packaging
334. Glass melts into thick liquor at temperature of:  
A. 1600 °C  
B. 1900 °C  
C. 1400 °C  
D. 1500 °C
335. Thickness of aluminium foil ranges from:  
A. 7-19 microns  
B. 6-20 microns  
C. 7-20 microns  
D. 5-19 microns
336. Which packs are cylindrical in shape:  
A. Cheer packs  
B. Stick packs  
C. Both a and b  
D. None of above
337. Which is mostly used as a shrink wrap  
A. Thermoplastics  
B. Polyvinyl chloride  
C. Polyolefin  
D. Polyester
338. Vacuum sealed frozen foods will last upto  
A. 1-2 years  
B. 3-4 years  
C. 4-6 years  
D. 2-3 years
339. NIPs is abbreviated as  
A. Nutritional Information Processing System  
B. Nutritional Information Panels  
C. Network Intrusion Prevention System  
D. None of the above
340. Product code for local chicken is  
A. 00

- B. 03  
C. 02  
D. 01
341. Which type of steel has medium metalloid content  
A. MC type  
B. MR type  
C. L type  
D. Both B and C
342. High concentration of hydrogen ions yield ----- foods  
A. High acidic foods  
B. Basic foods  
C. Low pH foods  
D. Both A and C
343. -----, Sulfur dioxide and antioxidants are perhaps the most important inorganic chemical preservatives  
A. Calcium gluconate  
B. Calcium lactate  
C. Calcium chloride  
D. Calcium hydroxide
344. Hypobaric conditions means in postharvest quality  
A. High ethylene production  
B. Reduce ethylene production  
C. High respiration rate  
D. High ethylene and respiration rate
345. The natural occurring Zeolites are used to  
A. Remove the O<sub>2</sub>  
B. Remove the CO<sub>2</sub>  
C. Remove the N<sub>2</sub>  
D. Remove the C<sub>2</sub>H<sub>4</sub>
346. Cold storage of fruits and vegetables is important to  
A. Increase the quality of produce  
B. Maintains the quality of produce  
C. Increase the nutritional level of produce  
D. all
347. Organic acid like vinegar is used to cure food and to increase the ----- and limit -----  
A. pH and acidity  
B. Acidity and microbial activity  
C. pH and biochemical process  
D. Shelf life and fungal growth
348. Changes in color, flavor, taste, texture and aroma known as:  
A. Preservation process  
B. Decaying process  
C. Ripening process

- D. Grading process
349. Breakdown of complex compounds into simpler is known as:  
A. Maturity Process  
B. **Respiration process**  
C. Peeling process  
D. Washing process
350. Lye peeler efficiency increased by the addition of sodium hydroxide solution of:  
A. 5-4%  
B. 4-3%  
C. 3-2%  
D. **1-2%**
351. Refractometer used for:  
A. Energy calculation  
B. Acids calculation  
C. **Sugar calculation**  
D. Flavors calculation
352. The air is removed from the canned food by:  
A. **Exhaust box**  
B. Mix master  
C. Can reformer  
D. Can flanging
353. Vitamin C determination we use:  
A. **0.01 % solution of 2,2 dichlorophenol indophenol dye**  
B. 0.02 % solution of 2,3 dichlorophenol indophenol dye  
C. 0.04 % solution of 2,4 dichlorophenol indophenol dye  
D. 0.04 % solution of 2,6 dichlorophenol indophenol dye
354. During Vitamin C determination took the dye solution in:  
A. **Burette**  
B. Pipette  
C. Beaker  
D. None
355. Pycnometer is used for determination :  
A. Acids  
B. Sugars  
C. Settling compounds  
D. **Specific gravity**
356. Through HPLC sugars determination need detector as :  
A. CD  
B. FD  
C. **RI**  
D. UV
357. Sugar syrup tank may be commonly made of:  
A. SS-308

- B. **SS-304**  
C. SS-306  
D. SS-310
358. The key microfiltration technologies used for clarification of juices are:  
A. MF&CF  
B. UF&PF  
C. **UF&NF**  
D. MF&PF
359. Aseptic packaging has a layer of:  
A. Polyethylene Terephthalate  
B. **Polyethylene**  
C. Polyester  
D. Polystyrene
360. The second pasteurization is done for killing bacterial:  
A. Contamination at 95°C for 15 seconds  
B. Sterilisation at 95°C for 15 seconds  
C. **Recontamination at 95°C for 15 seconds**  
D. All
361. Homogenization pressure may vary from:  
A. **15-80MPa**  
B. 20-70MPa  
C. 25-65MPa  
D. 30-60MPa
362. The crown cork, the first form of bottle cap, was invented by William Painter in:  
A. 1882  
B. 1886  
C. 1888  
D. **None**
363. Cost and weight comparison Can VS PET is:  
A. 1750-1900 to 1000-1200 US\$  
B. 1750-2000 to 1000-1200 US\$  
C. **1750-1800 to 1000-1200 US\$**  
D. 1750-2050 to 1000-1200 US\$
364. About 600-700 plant-based medicines are available in:  
A. Japan  
B. **Germany**  
C. Canada  
D. China
365. -----tea is effective against the effects of the plaques in Alzheimers disease:  
A. Roibos  
B. **Sage**  
C. Echinacea  
D. Hibiscus
366. HPP uses pressures of approximately:



- A. 100–500 MPa  
B. 200–550 MPa  
C. 300–600 MPa  
D. None
367. ----- is extremely resistant to heat:  
A. Penicillium roquefortii  
B. Zygosaccharomyces baillii  
C. Alicyclobacillus acidoterrestris  
D. All
368. Cold sanitization for each day recommends:  
A. Chlorine solution of 50 ppm for 20 mins.  
B. Chlorine solution of 50 ppm for 30 mins.  
C. Chlorine solution of 30 ppm for 10 mins.  
D. Chlorine solution of 50 ppm for 40 mins.
369. -----do cause unsightly growth and affect the taste and appeal of a product.:  
A. Yeast  
B. Bacteria  
C. Mould  
D. All
370. Volatile acids in apple juice not less than:  
A. 0.01 mL in 100 mL at 20oC  
B. 0.02 mL in 100 mL at 20oC  
C. 0.03 mL in 100 mL at 20oC  
D. None
371. General Principles of Food Hygiene in context of international Code of Practice are:  
A. CAC/RCP 1-1959  
B. CAC/RCP 1-1969  
C. CAC/RCP 1-1979  
D. CAC/RCP 1-1989
372. -----is a primary driver for coffee's popularity:  
A. Catechins  
B. Caffeine  
C. Theaflavins  
D. Thearubigins
373. Which type of plastic is used in condiment bottles:  
A. High density polyethylene  
B. Polyethylene terephthalate  
C. Polypropylene  
D. Polyvinyl chloride
374. Which type of paper board is made up of Kraft paper:  
A. Corrugated boxes  
B. Triplex board  
C. Chip board  
D. Solid board

- 375.** During manufacturing of aluminium foil, what temperature is applied:
- A. Medium temperature
  - B. Low temperature
  - C. High temperature**
  - D. Extreme temperature
- 376.** Shrink wrap is included in which packaging:
- A. Quaternary packaging
  - B. Tertiary packaging**
  - C. Active packaging
  - D. Secondary packaging
- 377.** Corrugated paper board first appeared in:
- A. 1840s
  - B. 1830s
  - C. 1820s
  - D. 1850s**
- 378.** . Mark the wrong statement:
- A. The color of the raw meat is due to the content of myoglobin and reflection from the protein denaturation
  - B. The heme-group of both myoglobin and traces of hemoglobin can be quantified spectrophotometrically
  - C. The lean/fat distribution is important to consumers
  - D. None**
- 379.** . Which of the following is not a factor affecting IMF:
- A. Feeding strategy
  - B. Fatty acid composition
  - C. Sustained juiciness
  - D. Activity of proteolytic enzymes**
- 380.** Which of the following is not a factor affecting quality of meat?
- A. Ageing time
  - B. Genetics
  - C. None**
  - D. Lairage conditions
- 381.** . The temperature of the domestic refrigerator is in the range of:
- A. 0-4 °C
  - B. 1-4 °C
  - C. 1-7 °C
  - D. 4-7 °C**

**382.** The membranous matter is separated from the aqueous phase-----by pressing in screw press in rendering:

- A. Tallow
- B. Greaves
- C. Lard
- D. Gluey**

**383.** Arachidonic acid, linolenic acid and linoleic acid contains:

- A. 18:2n-6, 18:3n-3, 20:5n-3
- B. 20:4n-6, 18:3n-3, 18:2n-6**
- C. 20:4n-6, 18:2n-6, 18:2n-3
- D. 18:3n-3, 20:4n-6, 18:2n-6

- 384.** Which one is not fat-soluble vitamin and delivering its association with edible fats:
- A. Vitamin K and B
  - B. Niacin and Vitamin D
  - C. Vitamin B and C**
  - D. Vitamin E and C
- 385.** Which oil contains low in erucic acid in its fatty acid profile:
- A. Canola Oil
  - B. Sunflower Oil
  - C. Soyabean Oil
  - D. All of these**
- 386.** Peroxyl radicals, hydroperoxides, alkyl free radicals, reactive aldehydes and ketones formation occurs in rancidity through oxidation by the steps, respectively:
- A. Terminations-propagation-Initiation.
  - B. Initiation-Propagation-Terminations.
  - C. Propagation-Initiation-Termination**
  - D. Propagation-Termination-Initiation
- 387.** Which process is the best for the formulations of shortenings and to synthesis of structured lipids for nutritional and medicinal applications:
- A. Winterization
  - B. Neutralization
  - C. Inter-esterification**
  - D. All of these
- 388.** Which one is non-hydratable gum which is difficult to remove by washing with water:
- A. Choline
  - B. Phosphatide**
  - C. Lecithin
  - D. All of these
- 389.** The ability of heat transfer of fats and oils gives-----in baked and fried products:
- A. Crumb formation
  - B. Crust formation**
  - C. Crust-deformation
  - D. None of these
- 390.** The Aspirator contains the oscillating screen which separates the sticks, stones, straws and dust from raw materials on the basis of:
- A. Density**
  - B. Air flow
  - C. Gravity
  - D. Surface index
- 391.** The high relative humidity favors the activity of lipolytic enzymes and increase ----- during the storage of oilseeds:
- A. Iodine value contents
  - B. Un-saponifiable contents
  - C. Free fatty acid contents**
  - D. Free volatile contents
- 392.** Fats and oils can vary in their composition depending upon:
- A. Origin
  - B. Nutritional significance
  - C. Environmental factors
  - D. All mentioned**
- 393.** The most important preliminary step to increase the oil quality during extraction of oilseeds is:
- A. Grading**
  - B. Cleaning

C. Winnowing

D. Flaking

**394.** The acceptable moisture content of linseed before oil extraction should be:

A. Less than 13%

B. 10% to 12 %

C. Not more than 15%

**D. Less than 10.5%**

**395.** The affinity of oil decrease with the process of:

A. Winnowing

B. Size reduction

**C. Cooking**

D. Extraction

**396.** The first double bond starting from the methyl end of the fatty acid chain is called:

A. Omega-3

B. Omega-6

C. Omega-9

**D. All of these**

**397.** -----is the stable fat which is used to make baked goods softer and tender by delaying the formation of gluten strands:

A. Suet

**B. Shortening**

C. Tallow

D. None of these

**398.** The objective of conditioning of oilseeds involves heating in the presence of water is:

A. In-activation of enzymes

B. Proper plasticity of seed mass

C. Increase extraction recovery

**D. All of these**

**399.** In Triglyceride the hydroxyl group of glycerol joins with the carboxyl group of fatty acid to form:

**A. Ester bond**

B. Chiral bond

C. Hydro-carbon bond

D. D-linkage

**400.** The quality of deodorized oil depends upon \_\_\_\_\_ factors

**A. 4**

B. 5

C. 3

D. 2

**401.** HDPE stands for

A. High density polyethene

**B. High density polyethylene**

C. High density plastic ethene

D. High density plastic ethylene

**402.** Corn oil contains \_\_\_\_\_ % wax content.

A. 0.2-3.0

B. 0.5

**C. 0.5-1.0**

D. 0.2

**403.** The holding time for continuous deodorization method is

A. 15-120 hours

B. 3-8 hours

- C. 2-4 hours  
**D. 0.25-2 hours**
404. The content of the wax must be less than \_\_\_\_ to ensure that oil will not cloud.  
**A. 10ppm**  
 B. 15ppm  
 C. 12ppm  
 D. 20ppm
405. Instant source of energy in living organisms is  
 A. Fats & oil  
**B. Carbohydrate**  
 C. Proteins  
 D. Energy dense beverages
406. Acceptable moisture content of soyabean seed before oil extraction should be  
**A. Less than 13**  
 B. 13 to 15 %  
 C. Not more than 15%  
 D. None
407. Seed storage at high relative humidity results in  
**A. Hydrolytic rancidity**  
 B. Enzymatic rancidity  
 C. Autocatalytic rancidity  
 D. None
408. After alkali treatment moisture content of oil is reduced to  
**A. 0.10%**  
 B. 1 to 2%  
 C. 0.1 to 0.9  
 D. 0.01%
409. .... distort the cellular structure and reduces the distance between solvent and oil droplets  
**A. Flaking**  
 B. Size reduction  
 C. Cracking  
 D. Grinding
410. \_\_\_\_\_ is the common name for unsaturated fat with E-isomer fatty acids  
 A. Cis form of fat  
 B. Omega 6 fatty acids  
**C. Trans form of fat**  
 D. Omega 3 fatty acids
411. \_\_\_\_\_ method is commonly used for bleaching of edible oils.  
**A. Adsorption**  
 B. Absorption  
 C. Imbibation  
 D. Ultra-Filtration
412. The most common catalyst used for hydrogenation process in edible oil industry is \_\_\_\_\_.  
 A. Cadmium  
**B. Nickle**  
 C. Lead  
 D. Copper
413. \_\_\_\_\_ is the most critical factor affecting the stability of edible oils.  
 A. Hydrogen  
 B. Moisture  
**C. Oxygen**

- D. Enzymes
414. Margarine is a fluid emulsion of \_\_\_\_\_.
- A. Animal fat
  - B. Butter
  - C. Vegetable oil/fat
  - D. None of the these
415. \_\_\_\_\_ measure the amount of alpha and beta unsaturated aldehydes present in the oil.
- A. Peroxide value
  - B. Rancidity value
  - C. Saponification value
  - D. Anisidine value
416. Margarine is a flavored food product containing \_\_\_\_\_ % fat.
- A. 50
  - B. 60
  - C. 70
  - D. 80
417. An edible oil that will remain substantially liquid at refrigerator temperature is called \_\_\_\_\_.
- A. Cooking oil
  - B. High stability oil
  - C. Salad oil
  - D. None of these
418. SFI stands for \_\_\_\_\_.
- A. Solubility fat Index
  - B. Solids fat index
  - C. Stability fat index
  - D. Settling fat index
419. Open-tube capillary-slip method is used for the determination of \_\_\_\_\_.
- A. Flash point of fat
  - B. Cloud point of fat
  - C. Melting point of fat
  - D. Smoke point of fat
420. \_\_\_\_\_ is used for the determination of specific gravity of oils.
- A. Tintometer
  - B. Salometer
  - C. Pycnometer
  - D. Barometer
421. The molecular weight of oleic acid divided by 10 is \_\_\_\_\_.
- A. 26.4
  - B. 28.2
  - C. 29.2
  - D. 14.2
422. \_\_\_\_\_ is the most efficient method of oil recovery from oil bearing material
- A. Hydraulic press extraction
  - B. Solvent extraction
  - C. Screw press extraction
  - D. None of the these
423. \_\_\_\_\_ pressing mechanically squeezes the oil from the seed.
- A. Sonicator
  - B. Aspirator
  - C. Distillator
  - D. Expeller

424. The shortenings are a very important ingredient for the \_\_\_\_\_ industry
- A. Baking
  - B. Confectionary
  - C. Dairy
  - D. Beverage
425. Chelated pro-oxidant metals, free fatty acids and Sulphur compounds can be removed by the processes:
- A. Vacuum distillation and De-gumming
  - B. De-odorization and Neutralization
  - C. Vacuum distillation and Bleaching
  - D. All of these
426. Which microorganism is involved in microbial rancidity and use the enzymes to break down the chemical structures of oil by producing unwanted odors:
- A. Molds
  - B. bacteria
  - C. Yeast
  - D. All of these
427. Dry rendering is called dry due to
- A. Drying of animal tissue
  - B. Heating of animal tissue
  - C. Both a & b
  - D. None of these
428. \_\_\_\_\_ is also known as Vijay's solution.
- A. Carbon tetrachloride
  - B. Potassium iodide
  - C. Sodium Thiosulphate solution
  - D. Iodine monochloride solution
429. The Triglycerides which contain 2 or 3 different type of fatty acid residues called
- A. Single Triglycerides
  - B. Mixed Triglycerides
  - C. Furan Fatty acids
  - D. None of the these
430. The length of capillary glass tube used for melting point determination is
- A. 50-60mm
  - B. 50-60cm
  - C. 50-60nm
  - D. 10-20cm
431. Opaque appearance of oil at lower temperature during winterization indicates its
- A. Lower melting point
  - B. Higher melting point
  - C. Presence of high free fatty acids
  - D. None of these
432. Which of the following statement is incorrect for colors:
- A. Provide certain vitamins (e.g. B-carotene)
  - B. Mineral elements (e.g. magnesium)
  - C. Serve as an indicator of quantity
  - D. All of above
433. The chlorophyll stability in various products can be maintained by:
- A. Use of inferior quality raw materials
  - B. Handling the products with least care

- C. Employing optimum receiving conditions  
D. **Quality-maximized process to create the final product**
434. In figs, mulberry, red blood oranges and vegetables, which of the following pigments are present:  
A. **Anthocyanins**  
B. Betacyanins  
C. Carotenes  
D. Melanoidins
435. Unsaturated aldehydes are important as flavors. Low molecular aldehyde having irritating odour which causes adverse flavour in food prepared with fats is:  
A. Mesityl oxide  
B. Cinnamaldehyde  
C. **Acrolein**  
D. Duroquinon
436. Which of the following compounds are present in oil of garlic:  
A. Ethyl mercaptan  
B. Furfuryl mercaptan  
C. Methyl cyanoacrylate  
D. **Dimethyl sulphide**
437. Formula of monosodium glutamate is:  
A. **NaOOCCH<sub>2</sub>CH<sub>2</sub>CH(NH<sub>2</sub>)COOH**  
B. NaOOCH<sub>2</sub>HCH<sub>2</sub>CH(NH<sub>2</sub>)COOH  
C. NaOOCOCH<sub>2</sub>CHCH(NH<sub>2</sub>)COOH  
D. NaOOCCHOCH<sub>2</sub>CH(NH<sub>2</sub>)COOH
438. Which of the following statement is true for fresh food commodities kept at 22°C?  
A. Beef, fish, poultry acceptable for 4 day  
B. Leafy vegetables for one to 14days  
C. Fruits for one to 25 days  
D. **Naturally or artificially dried commodities keep for 350 days or longer**
439. Commodities like potatoes, ginger, garlic, onions, apple varieties, fried snacks, cheese varieties, ice cream fall under which category:  
A. **Semi perishable foods**  
B. Perishable foods  
C. Stable foods  
D. All of above
440. Quality defect in ice cream is:  
A. Graininess caused by sugar  
B. Gelatinization  
C. **Crystallization**  
D. Protein clumping
441. Which factor affects rate of microbial survivors during storage, heating and drying:  
A. Light  
B. Temperature  
C. Humidity



D. pH

442. Which organism causes spoilage in acid foods:  
A. Aciduric bacteria  
B. **Clostridium pasteurianum**  
C. Clostridium Botulinum  
D. Streptococcus
443. Characteristics of flat sour spoilage include:  
A. **Can ends remain flat, product develops acidity or sour taste**  
B. Can ends remain concave, product develops acidity or sour taste  
C. Can ends remain flat, product develops acidity or sweet taste  
D. Can end bulge, product develops acidity or sour taste
444. The target organism to evaluate heat-processing schedules for canned foods is:  
A. Clostridium pefringens  
B. Clostridium tetani  
C. Clostridium difficile  
D. **Clostridium sporogenes**
445. Which of the following is not a carbonyl compound:  
A. Butanal  
B. Pinacolene  
C. Ethanal  
D. **Anthracene**
446. Spoilage in potatoes, onions and garlic is caused by:  
A. **Erwinia carotovera**  
B. Erwinia asparagenase  
C. Erwinia amylovora  
D. All of above
447. Stiffening material giving honeycomb structure of cells and gives specific shape is:  
A. Lignin  
B. **Protopectin**  
C. Pectin  
D. Gums
448. Which of the following statement is true for auto-oxidation in oils?  
A. **Short wavelength light initiates auto-oxidation in lipids, through formation of lipid radicals, leads subsequently to lipid peroxy radicals and lipid hydroperoxides**  
B. Short wavelength light initiates auto-oxidation in lipids, through formation of protein radicals, leads subsequently to lipid peroxy radicals and lipid hydroperoxides  
C. Short wavelength temperature initiates auto-oxidation in lipids, through formation of lipid radicals, leads subsequently to lipid peroxy radicals and lipid hydroperoxides  
D. Short frequency light initiates auto-oxidation in lipids, through formation of lipid radicals, leads subsequently to lipid peroxy radicals and lipid hydroperoxides
449. The following commodities are susceptible to auto-oxidation:  
A. Baby foods  
B. **Breakfast cereals**  
C. Textured proteins

- D. Porous powder
450. Which statement is true for non-enzymatic browning:
- A. Non-reducing sugars and amino acids or proteins
  - B. Oxidative degradation of ascorbic acid
  - C. Carbonyl group from reducing sugars like glucose and lactose
  - D. Amino group from amino acids, proteins or other primary and secondary amines
451. For caramelization, which statement is true:
- A. Cause discolouration
  - B. Destroy nutrients - amino acids, ascorbic acid
  - C. Interfere with mineral metabolism through metal ion complexation
  - D. Readily polymerise, give typical taint and brown pigment
452. For fish putrefaction, choose the best option:
- A) Unique non-enzyme-induced autolysis promoted in fish by microbial enzymes from its gut
  - B) Occurs prior to actual invasion of fish tissue by enzymes
  - C) Typical smell of spoiled fish due to an unpleasant methyl-like substance called trimethylamine
  - D) This produced by action of bacterial enzymes on nitrogenous compound, trimethylamine oxide, a natural constituent of fish muscle
453. The compound responsible for production of taints in fish is:
- A. Dihydrogen sulphide
  - B. Ethyl mercaptan
  - C. dimethyl sulphide
  - D. diethyl trisulphide
454. Which of the following statement is true for enzymatic browning?
- A. Quinones once formed spontaneously depolymerise to brown coloured polymers giving food its brown colour
  - B. These contain polyphenols, enzyme phenolase and hydrogen readily available in environment
  - C. A cut or injury to cell required to bring superstrat and enzyme together
  - D. None
455. Biological preservation of vegetables is done by means of activities of:
- A. Lactic acid bacteria
  - B. Acetic acid bacteria
  - C. Spirochaetes
  - D. Acidobacteria
456. Amino-nitrogen content in juices is reduced by means of:
- A. Higher sugar content
  - B. Elevated temperature
  - C. Optimum pH
  - D. Ion exchange
457. Which of the following food commodity is coated with wax or other inert material in order to keep micro-organism out:
- A. Cheese
  - B. Meat

- C. Cereals  
D. Fruits
458. For destruction of insects which of the following is inappropriate:  
A. Popular physical method for destroying insect eggs in wheat flour and other similar size-reduced dry foods involves use of impact-based instrument, the entolater  
B. Insect eggs thrown to metal body of this revolving instrument instantly destroyed by impact  
C. Temperature of food raised to about 50°C since insects cannot survive such high temperature  
D. UV devices popular heat sources for heat disinfection of grains - effective and relative low cost
459. Which of the following demonstrate insect infestation?  
A. Presence of burrows  
B. Dark oil and dirty stains on runaways  
C. Filth deposited on food  
D. None
460. Which of the following statement describe surface drying phenomenon?  
A. Desiccation or drying out observed on inner side of certain foods during frozen storage an important physical defect  
B. Refrigerated storage of flesh foods moisture loss and surface drying minimized by maintaining lower than conventional average relative humidity in storage chamber  
C. Decrease in microbial activity induced by such low relative humidity kept under check by use of ultraviolet lamp as storage atmosphere sterilants  
D. Increase in microbial activity induced by such high relative humidity kept under check by use of ultraviolet lamp as storage atmosphere sterilants
461. Which statement is appropriate for wet cleaning?  
A. Use of ultrasonic waves below 16 kHz (20 to 100 kHz) for cleaning some raw materials u  
B. Cause mild agitation of particles when waves pass through cleaning fluid  
C. Spraying employed and its efficiency depends upon water pressure and its volume  
D. Adherence of contaminants from surface of raw material
462. Which of the following is considered best for production of hydrogenated vegetable oil?  
A. Hydrogen mixed with oil in a metal-catalyzed physical process  
B. Hydrogen accepted at double bonds of unsaturated fatty acids of oil in presence of catalyst, nickel  
C. Hydrogen mixed with oil in an enzyme-catalyzed chemical process  
D. Hydrogen accepted at triple bonds of unsaturated fatty acids of oil in presence of catalyst, nickel
463. Which of the following statement satisfies syruiping and brining operation?  
A. Facilitate heat transfer during processing  
B. Improves texture of canned product  
C. unblock inter-spaces between food pieces

- D. Used as acceptor of additives such as colour and flavor
464. Commercial thermal processing is conventional canning process in which food filled in container, which is sealed hermetically and then subjected to high temperature can be accomplished by open cooker having feature of:
- A. Used for heat processing of acid and high acid foods by small and home-scale processors as well as some large units
  - B. Equipment consists of open metallic pans or tanks of appropriate size filled with air
  - C. Water temperature maintained at melting by suitable means such as firewood, coal, gas, electricity, steam coils or open steam jets
  - D. Heat transfer more efficient in still than in agitating types
465. Essential ingredients for manufacturing of bread include:
- A) Wheat flour 60-70%, protein and carbohydrate
  - B) Alpha and beta-amylases, supplement the low amount from original flour
  - C) Vitamins-flour enrichment with B vitamins
  - D) All of above
466. The ability of flour to withstand fermentation process is termed as:
- A) Proofing
  - B) Oven spring
  - C) Tolerance
  - D) All of above
467. Bread is prepared by incorporation of several ingredients including essential and optional ones. Which part of the mixture hold large number of air cells incorporated during creaming?
- A) Sugar
  - B) Eggs
  - C) Flour
  - D) Fat
468. Yeast function depends on several components. Choose the most appropriate option.
- A) Rheological characteristics of the dough is influenced by salt as dough with salt is firmer because gliadine does not dissolves easily
  - B) Sugar is added to yeast during final hydration stage
  - C) Alpha-amylase enzyme is added to bread flour releasing D-glucose from cellulose to feed the yeast
  - D) All of above
469. Biological preservation of bread is offered by:
- A) Calcium acetate
  - B) Sodium diacetate
  - C) Potassium propionate
  - D) Sodium citrate
470. Expansion and gelatinisation of starch granules is offered by:
- A) Water
  - B) Yeast
  - C) Shortening
  - D) Milk

471. Which of the following category of yeast offers quick fermentation?  
A) Dry active yeast  
B) Yeast cream  
C) Yeast cake  
D) None
472. Which of the following component is added to improve dough?  
A) Gluten  
B) Gliadin  
C) Glutenin  
D) Keratin
473. Yeast termed as *Saccharomyces cerevisiae* leads to leavening and flavor formation is \_\_\_\_\_:  
A) Unicellular fungi  
B) Multicellular fungi  
C) Unicellular mold  
D) None
474. Which of the following component of bread formulation makes the dough very sticky and hard to work thereby limiting loaf volume?  
A) Milk  
B) Sugars  
C) Shortening  
D) Eggs
475. Straight dough method of bread formulation is used. It offers several advantages. Choose the most appropriate one:  
A) Lower requirements in the clouding time, labour and power  
B) Reduced fermentation losses because of its generally longer fermentation time compared with the sponge & dough process  
C) It enhances bread flavor by subjecting all dough ingredients to the same fermentation treatment  
D) All of above
476. The fermentation occurs during bread manufacturing is different from most other food fermentations. Which phase of microbial growth is observed?  
A) Lag phase  
B) Log phase  
C) Stationary phase  
D) Death phase
477. Which of the following species are responsible for hidden damage of grains?  
A) Angoumois grain moth  
B) Red flour beetles  
C) Saw-toothed grain beetles  
D) All of above
478. Wheat impurities are removed on the basis of which of the following characteristics?  
A) Magnetic properties  
B) Electrostatic properties  
C) Specific gravity

D) All of above

479. Which of the following operation offers relaxation to gluten network thereby stabilizing dough temperature?
- A) Fermentation
  - B) Rounding
  - C) Mixing
  - D) **Punching**
480. Baking is the final step in bread making to produce a light, porous, readily digestible and flavorful product from raw dough under the influence of heat. Most important effects produced during baking include:
- A) Activation of yeast & enzymes
  - B) Retrogradation of dough proteins
  - C) **Partial gelatinization of starch**
  - D) All of above
481. During baking changes with temperature take place. Which of the following change does not happen?
- A) 30 °C: Reduced solubility of CO<sub>2</sub> in water
  - B) 50 – 60°C: Intensive enzymatic activity
  - C) **60 – 80°C: Starch gelatinization initiates**
  - D) 100°C – 110°C: First signs of crust formation
482. Nutritional value of rice per 100g is:
- A) **Energy :360 kcal, Carbohydrates: 79 g, Fat: 0.6 g**
  - B) Energy :360 kcal, Carbohydrates: 78 g, Fat: 0.9 g
  - C) Protein: 17g, Vitamin B6: 0.15 mg, Fat: 0.8g
  - D) None
483. Rice milling is done to attain the highest yield of white rice with the best quality. This process comprises of several steps. Choose the right sequence.
- A) Destining is done right after polishing
  - B) After Hulling the paddy, grading or length separation is done
  - C) Sifting or separation of white rice is done after mist polishing
  - D) **None**
484. Parboiling is the process of heating rice in water and then drying. It is performed in several steps. Choose the most appropriate option.
- A) Steeping: Water is added in paddy and left for 24 hours
  - B) **Steaming: Heated under reduced pressure with steam**
  - C) Drying : To maintain desired tenderness
  - D) All of above
485. Underground storage of cereal grains offers a number of advantages including:
- A) Protects grain from daily and seasonal variations in humidity
  - B) Construction is relatively complex
  - C) **Protects grain from insects and molds because of low oxygen and high carbon dioxide contents of interseed air**
  - D) None
486. When grain is poured in to a bin, it forms an angle from the horizontal that is called:

- A) Angle of repose  
B) Obtuse Angle  
C) Straight Angle  
D) Right Angle
487. Species responsible for outer damage of grains include:  
A) Granary weevils  
B) Rice weevils  
C) Maize weevils  
D) Cadelles
488. Safe storage moisture content of cereal grains depend upon:  
A) Hydrophobicity  
B) Lipophilic  
C) Hygroscopic  
D) Lipophobic
489. Vibrating screens that remove bits of wood and straw and almost anything too big and too small during wheat cleaning are termed as:  
A) Separator  
B) Destoner  
C) Entolitre  
D) Aspirator
490. Addition of water to optimum level and allow the grain to stand for some time to equilibrate moisture contents is termed as:  
A) Conditioning  
B) Tempering  
C) Mist polishing  
D) None
491. In which of the following treatment the pericarp is not dried out?  
A) Tempering  
B) Heat conditioning  
C) Vacuum conditioning  
D) All of above
492. Flour is treated for bleaching and improving functional properties. Which of the following reagents perform bleaching action?  
A) Benzyl peroxide  
B) Acetone dioxide  
C) Chlorine monoxide  
D) None
493. Pasta is the Italian word for “paste” prepared from semolina flour and water. It may be rolled thin and formed into different shapes. Cord shaped pasta having diameter more than 0.06 inches is termed as:  
A) Macaroni  
B) Noodles  
C) Spaghetti  
D) None

494. Which type of wheat is used for preparation of pasta?  
A) Emmer  
B) Spelt  
C) Khorasan wheat  
D) Durum wheat
495. For preparation of pasta, a special mixing chamber is used to obtain a uniform mixture termed as:  
A) Twin-shaft mixing chamber  
B) Split Muff coupling  
C) Axle shaft.  
D) Spindle shaft
496. If the air is not removed prior to extruding, small bubbles will form in the pasta leading to:  
A) Formation of air bubbles  
B) Loss in mechanical strength  
C) Chalky appearance  
D) All of above
497. Extrusion barrels are equipped with a water cooling jacket that offers:  
A) Accumulate heat generated during the extrusion process  
B) Maintain a constant extrusion temperature  
C) Maintain a constant extrusion pressure  
D) All of above
498. Noodles can be made from wheat flour alone or in combination with buckwheat flour. Noodles containing buckwheat are termed as:  
A) Udon  
B) Hokkien  
C) Shirataki  
D) Soba
499. Starch pasting characteristics play an important role in affecting flour quality can be determined by:  
A) Rapid visco analyzer  
B) Farinograph  
C) Mixograph  
D) All of above
500. Which of the following measurements affect noodle processing behaviour and noodle eating quality?  
A) Amylograph  
B) Farinograph  
C) Mixograph  
D) None
501. The ways of conventional heat transfer may include?:  
A. Conduction  
B. Convection  
C. Radiation  
D. All



502. Modifications of the curing methods not include one of the following:  
A. Artery pumping  
B. Hot cures  
C. Wet salt curing  
D. Stitch pumping
503. Which of the following is not true for artery pumping method?:  
A. Salt solution  
B. None  
C. High speed curing  
D. Brine strength is about 60-70°
504. Mark the correct statement for function of smoking:  
A. Development of aroma  
B. Protection from oxidation  
C. Development of flavor  
D. All
505. Normal solution for acids can be defined as Gram equivalent of solute dissolved per liter of solution. According to this statement which statement defines gram equivalent?  
A) Gram equivalent= molecular weight/No of replcable Hydroxyl ion  
B) Gram equivalent= molecular mass/No of replcable Hydrogen ion  
C) Gram equivalent= molecular weight/No of irreplcable Hydrogen ion  
D) Gram equivalent= molecular weight/No of replcable Hydrogen ion
506. Prepare Na<sub>2</sub>CO<sub>3</sub> solution of 0.75 N:  
A) 1.325 g/ 100ml  
B) 2.225g/100ml  
C) 3.97g/100ml  
D) 4.22g/100ml
507. How many grams of HCl are required to prepare 0.50N HCl solution?  
A) 9.01g/L  
B) 18.25g/L  
C) 27.77g/L  
D) 36.55g/L
508. How much H<sub>2</sub>SO<sub>4</sub> is required to make 4000ml of 0.45N  
A) 66.15g/4000ml  
B) 77.25g/4000ml  
C) 88.20g/4000ml  
D) 99.02g/4000ml
509. Calculate gram equivalent of Na<sub>2</sub>CO<sub>3</sub>:  
A) 52g  
B) 53g  
C) 54g  
D) 55g
510. Total phenolic content determination method is based on the reaction of folin reagent with the test sample. The reaction forms a blue chromophore due to:  
A) Oxidation of phosphotungstic phosphomolybdic acid (folin-ciocalteu reagent) in an alkaline medium in the presence of phenolic compounds

- B) Reduction of phosphotungstic phosphomolybdic acid (folin-ciocalteu reagent) in an acidic medium in the presence of phenolic compounds
- C) Reduction of phosphotungstic phosphomolybdic acid (folin-ciocalteu reagent) in an alkaline medium in the presence of flavanoid compounds
- D) None
511. For TPC determination absorbance of standard and sample is recorded at:
- A) Visible range ((400 - 800 nm)
- B) Ultraviolet range (185-400nm)
- C) Infrared range (700 - 15000 nm)
- D) All of above
512. If suspected adulterant in milk and milk products is urea then which of the following reagent will be used to identify that adulterant?
- A) Iodine solution
- B) Resorcinol
- C) Silver nitrate
- D) Bromothymol blue
513. Barium chloride, TCA and formation of milky white precipitate are characteristic feature of which of the following adulterant?
- A) Sulphates
- B) Formalin
- C) Urea
- D) Neutralizer
514. In case of adulteration in milk and milk products pick the right option (Adulterant: reagent):
- A) Detergent: Rosolic acid
- B) Neutralizer: Bromothymol blue solution
- C) Urea: Urease
- D) Hydrogen peroxide: Paraphenylenediamine
515. Pick the right statement for analysis of fats and oil:
- A) Fat is extracted by treating the sample with an inorganic solvent
- B) The solvent is allowed to erect and then condense in the form of droplets
- C) When these droplets fall on sample, fat present in it gets condensed in the solvent
- D) None
516. Which of the following statement is considered most appropriate for protein determination?
- A) The crude protein content is measured in terms of total nitrogen by digesting the sample with an organic solvent in the presence of a catalyst
- B) It is the converted to ammonium compound and is distilled with sodium hypochlorite
- C) The released nitrogen in the form of ammonia is trapped by boric acid and converted into ammonium borate ions that are quantified by titration against a standard acid
- D) All of above
517. Calculate the % nitrogen in 3000mg food sample. Volume used for sulphuric acid in titration is 5ml and dilution made was 100ml.
- A) 2.33
- B) 3.43

- C) 5.33  
D) 10.23
518. Which of the following statement fits best for fiber content determination?  
A) Crude fiber is determined by digesting the sample with 1.25M sulfuric acid and 1.25M sodium hydroxide followed by ignition at higher temperature  
B) Loss on ignition of dried residue remaining after digestion of sample is fiber content  
C) It is applicable to grains, feeds, meals, flours and other fiber bearing material from which protein can be extracted to leave workable residue  
D) None
519. Investigations in food science and technology, whether by the food industry, governmental agencies, or universities, often require:  
A) Determination of food composition and characteristics  
B) Determination of food adulteration and fraud  
C) Food quality and quantity  
D) All of above
520. A measure of the ability to reproduce an answer between determinations performed by the same scientist (or group of scientists) using the same equipment and experimental approach is termed as:  
A) Reproducibility  
B) Precision  
C) Accuracy  
D) Sensitivity
521. There is a vast variety of different glass apparatuses in a laboratory, and they can be manufactured from various types of glass depending on the purpose such as:  
A) Quartz glass is resistant to high pressure and transparent in specific areas of the electromagnetic spectrum  
B) Heavy-wall glass is specifically strengthened to be used in experiments in which high temperature treatment is given,  
C) Amber glass is darkened to block out UV and infrared radiation, thereby making it ideal for storing fluids  
D) All of above
522. 2,6-dichloroindophenol reagent is used for determination of?  
A) TPC  
B) Vitamin C  
C) Milk adulteration  
D) Minerals
523. Various international bodies have given official approval to methods that have been comprehensively studied by independent analysts and shown to be acceptable to the various organizations involved. These include:  
A) WHO  
B) FAO  
C) AOCS  
D) All of above
524. Which of the following statement is considered most appropriate for glassware used in laboratory?

- A) Graduated cylinders: These are used to transport specific amounts of fluids from one place to another
- B) Burettes. These are used to dispense exact quantities of solids into another vessel
- C) Volumetric flasks: These are used to made solutions, but usually come in a conical or spherical shape with a tapering neck
- D) All of above
525. Ascorbic acid content is determined by the following formula:
- A)  $C \times V \times DF / WT$
- B)  $C \times WT \times DF / V$
- C)  $C \times V \times WT / DF$
- D)  $WT \times V \times DF / C$
526. Atomic emission spectroscopy technique is used in flame photometer. We can detect Calcium, potassium, sodium by using flame photometer. Its components perform functions with specifications. Choose the most appropriate option:
- A) Atomizer: It converts sample into lucidity form
- B) Nebulizer: It blows the sample up to the atomizer
- C) Filter: It allows those rays to pass which is being determined
- D) Detector: It calculates radiations by converting Radiation energy in to mechanical energy
527. Adulteration in milk and milk products is checked by various reagents, mark the adulterant in which end point is green representing that adulteration has been done:
- A) Glucose
- B) Cane sugar
- C) Formalin
- D) Detergent
528. If mean standard factor is 53.2 and emission of sample is 0.4 then calculate final concentration having sample weight 0.4g and dilution factor 100:
- A) 3380ppm
- B) 4377ppm
- C) 5320ppm
- D) 6190ppm
529. Vitamin C also known as ascorbic acid exhibits which of the following functions?
- A) Formation of keratin
- B) Absorption of calcium
- C) Proper functioning of the digestive system
- D) Maintenance of cartilage, bones, and teeth
530. In case of adulteration in milk; BTB stands for \_\_\_\_ to test the presence of adulterant:
- A) Bromothymol blue: Synthetic milk
- B) Bromothymol black: Urea
- C) Bromothiamine blue: Detergent
- D) All of above
531. Food analysis can be defined as:
- A) Discipline dealing with the development, application and study of analytical procedures for characterizing the properties of foods and their constituents

- B) These analytical procedures are used to provide information about a wide variety of different characteristics of foods, including their composition, structure, physicochemical properties and sensory attributes
- C) This information is critical to our rational understanding of the factors that determine the properties of foods, as well as to our ability to economically produce foods that are consistently safe, nutritious, desirable and for consumers to make informed choices about their diet
- D) All of above

532. Some analytical methods can be used to measure the properties of a food during processing, whereas others can only be used after the sample has been taken from the production line. It could be well defined as:

- A) Specificity
- B) On-line/Off-line
- C) Simplicity of operation
- D) Reproducibility

533. In case of adulteration in milk; BCP stands for

- A) 5-butyl-1-cyclohexyl-2,4,6-trioxoperhydroprymidine
- B) Beta-caryophyllene
- C) Bromocresol purple
- D) All of above

534. What is required to prepare 1L solution of 0.25N sodium chloride.

- A) 14.6g/L
- B) 10.01g/L
- C) 11.05g/L
- D) 12.02g/L

535. Cereals belong to ----- family and are -----:

- A. Gramineae, dicots
- B. Poaceae, monocots
- C. Apiaceae, monocots
- D. Bignoniaceae, dicots

536. World production of *Hordeum vulgare* accounts for:

- A. 7.4
- B. 7.5
- C. 7.6
- D. 7.7

537. Foods based on cereals may lead to dietary problem a condition termed as:

- A. Lactose intolerance
- B. Gluten intolerance
- C. Salicylates intolerance
- D. Fructose intolerance

538. *Triticum turgidum* is used for the manufacturing of:

- A. Noodles
- B. Porridge
- C. Macaroni
- D. Cookies

539. Cereal grains are deficient in following amino-acid:  
A. Methionine  
B. Cysteine  
C. Lysine  
D. Phenylalanine
540. Beta glucan as functional ingredient is found in:  
A. Oat  
B. Barley  
C. Rye  
D. Both A&B
541. Durum wheat cultivated and wild possess following genomes:  
A. Allopolyploid, AA  
B. Allomonoploid, BB  
C. Allohexaploid, AA  
D. None
542. Quality attributes related to milled grains are:  
A. Length  
B. Translucency  
C. High protein  
D. High milling quality
543. Japonica types of rice have several features which include:  
A. Drier  
B. Flaky  
C. Short  
D. All of above
544. Wheat lines having higher protein content include:  
A. ATLAS 65  
B. NAPHAL  
C. RISO M 1508  
D. Dickson
545. Possible replacement of tapioca starch is:  
A. Waxy barley  
B. Zea mays  
C. Rice  
D. High amylose barley
546. Following problems are associated with oat processing:  
A. Soapy taste  
B. Almond flavor  
C. Amylase enzyme activity  
D. None
547. Cereal grain that approaches wheat with respect to bread-making properties is ----- and have soluble fiber---- are:  
A. Rye, b-glucan

- B. Oat, pentosans  
C. Barley, Lignin  
D. None
548. Barley lines which are high in protein and lysine:  
A. Dickson  
B. Drummond  
C. Hiprolely  
D. All of above
549. Storage prolamins of sorghum is:  
A. Zein  
B. Avenin  
C. Secalin  
D. Kafirin
550. Which of the following is deficient in methionine but rich in lysine:  
A. Rye  
B. Triticale  
C. Soybean  
D. All of above
551. Which of the following parts of grains are devoid of starch in case of sorghum:  
A. Pericarp  
B. Testa  
C. Aleurone layer  
D. Endosperm
552. Wheat grain is also called as caryopsis and comprises of:  
A. Endosperm  
B. Germ  
C. Testa  
D. Fruit coat
553. Kernel hardness is measured by:  
A. Test weight  
B. Grain density  
C. Particle size index  
D. Vitreousness
554. Variety can be defined as a true breeding genetically homogeneous line that has fixed, well defined characteristics:  
A. Genotype  
B. Uniformity  
C. Length  
D. Stereotype
555. Which of the following is used for the manufacture of cakes, cookies, pastry:  
A. Triticum aestivum  
B. Triticum compactum  
C. Triticum durum  
D. All of above

556. Which of the following is indicator of flour yield:  
A. Grain size  
B. Test weight  
C. Thousand kernel weight  
D. All of above
557. Any impurities in wheat which can be removed by cleaning operation is termed as:  
A. Aspiration  
B. Refraction  
C. Disinfection  
D. Sanitation
558. Which protein is responsible for elasticity of dough and determines its ability to contain carbon dioxide during rising:  
A. Zein  
B. Gliadin  
C. Glutenin  
D. Gluten
559. Molecules move against concentration gradient in  
A. All  
B. Active transport  
C. Facilitated diffusion  
D. Passive transport
560. Periplasmic space of gram negative bacteria contains  
A. Peptidoglycan  
B. Porins  
C. Degradative enzymes  
D. All
561. Prokaryotes have \_\_\_\_\_ volume to surface ratio  
A. Large  
B. Small  
C. Appropriate  
D. None
562. Porins allow the passage of \_\_\_\_\_ molecules across the membrane  
A. Hydrophilic  
B. Small  
C. Large  
D. Hydrophobic
563. Lipopolysaccharide are present in gram positive bacteria  
A. 9 %  
B. 13 %  
C. 58 %  
D. Zero
564. Flagella are identified by the  
A. Motility



- B. H antigen  
C. Hanging drop preparation  
D. All
565. Lysozymes possess drug resistance in \_\_\_\_\_ bacteria  
A. Gram negative  
B. Gram positive  
C. Saccharolytic  
D. Proteolytic
566. Sex pili are characterized as \_\_\_\_\_ appendages  
A. Abundant  
B. short  
C. 10 micron long  
D. None
567. Cocci possess \_\_\_\_\_ pattern of flagella  
A. Trichous  
B. Peritrichous  
C. Bitrichous  
D. All
568. High temperature lactics grow at  
A. 37 °C  
B. Above 37 °C  
C. 45 °C  
D. All
569. Clostridium butyricum is \_\_\_\_\_ bacteria  
A. Proteolytic  
B. Lipolytic  
C. Saccharolytic  
D. None
570. Enterobacteria are \_\_\_\_\_ anaerobes  
A. Obligate  
B. Facultative  
C. Fragile  
D. Halophilic
571. Pseudomonas fluorescence is a potent  
A. Proteolytic  
B. Lipolytic  
C. Saccharolytic  
D. Butyric
572. ANSWER: B
573. Major defects in UHT milk include  
A. Loss of sweetness  
B. Precipitation  
C. Bulging of pack  
D. All

574. Boiled milk should be utilized within \_\_\_\_\_ hrs in absence of refrigeration
- A. 16
  - B. 12
  - C. 18
  - D. 24
575. Bacillus cereus is spread originally from
- A. Grass
  - B. Cow's udder
  - C. Raw milk
  - D. All
576. Botulism is a disease caused by
- A. Pollution
  - B. Contamination
  - C. Adulteration
  - D. Infection
577. Clostridium perfringens has high growth temperature
- A. 37 °C
  - B. 45 °C
  - C. 50 °C
  - D. All
578. Escherichia coli in foods is an indication of
- A. Good hygiene
  - B. Quality food
  - C. Food poisoning
  - D. None
579. Listeria monocytogenes can be isolated from
- A. Plants
  - B. Animal feces
  - C. Animal skin
  - D. None
580. Listeria monocytogenes is mostly associated with contaminated
- A. Milk
  - B. Meat
  - C. Eggs
  - D. All
581. The major cause of microbial spoilage in grains are
- A. Bacteria
  - B. Viruses
  - C. Molds
  - D. All
582. Aflatoxins are associated with
- A. Fungi
  - B. Viruses

- C. Nematodes  
D. Lactics
583. Proteolysis is favored by  
A. Low temp storage  
B. Lactics absence  
C. Acid formers destruction  
D. All
584. Spoilage by Gram negative psychrotrophs in milk is detected by \_\_\_\_\_ flavor  
A. Fruity  
B. Rancid  
C. Putrid  
D. All
585. Pseudomonas causes \_\_\_\_\_ type of spoilage in dairy  
A. Bitter taste  
B. Slime production  
C. High pH  
D. All
586. Rhizopus nigricans grows in bakery products at a water activity (aw) of  
A. 0.91  
B. 0.80  
C. 0.87  
D. 0.65
587. Xerophilic molds spoil dried fruits at a water activity (aw) of  
A. < 0.6  
B. 0.60-0.69  
C. 0.70-0.79  
D. All
588. Chalk bread spoilage is due to  
A. Pichia  
B. Rhizopus  
C. Aspergillus  
D. Penicillium
589. Human diarrhea is associated with  
A. Campylobacter jejuni  
B. Campylobacter coli  
C. Listeria  
D. All
590. Incubation period for campylobacteriosis ranges  
A. 12-24 hrs  
B. 24-48 hrs  
C. 2-11 days  
D. None
591. ETEC produce toxins type

- A. Labile  
B. Stable  
C. Both (labile & stable)  
D. Invasive
592. Common clinical feature of ETEC include  
A. Diarrhea  
B. Fever  
C. Vomiting  
D. All
593. Hemorrhagic colitis is caused by  
A. ETEC  
B. EPEC  
C. EHEC  
D. None
594. Complications of EHEC include  
A. All  
B. Bloody diarrhea  
C. Acute ulcerative  
D. HUS
595. Mycotoxins can resist the temperature above  
A. 100 °C  
B. 400 °C  
C. 300 °C  
D. All
596. Heavy metals and minerals in food samples can be determined by  
A. Spectrophotometer  
B. Gel electrophoresis  
C. Atomic absorption spectrophotometer  
D. Chromatography
597. Which of the following is stimulating beverage?  
A. Coffee  
B. Soft drink  
C. Pure juice  
D. Milk
598. What is the principal carbohydrate in the milks of all mammals?  
A. Lactose  
B. Glucose  
C. Sucrose  
D. Fructose
599. What is the average boiling point of milk?  
A. 100-101 °C  
B. 105-110 °C  
C. 115-117 °C  
D. 102-105 °C
600. Energy value of a food is measured in terms of?  
A. Carbohydrates  
B. Fats

- C. Proteins  
D. Calories
601. The microorganisms multiply and die in  
A. Geometric order  
B. Logarithmic order  
C. A-logarithmic order  
D. None of above
602. In bread manufacturing, alcoholic fermentation is carried out by  
A. *Streptococcus thermophilus*  
B. *Saccharomyces cerevisiae*  
C. *S. carlsbergensis*  
D. *Lactobacillus bulgaricus*
603. Any change that renders food unfit for human consumption is called  
A. Processing  
B. Spoilage  
C. Deterioration  
D. Preservation
604. Post harvest losses in Pakistan accounts for  
A. 5-10%  
B. 10-20%  
C. 20-30%  
D. 40-50%
605. Quality defects in food are caused by  
A. Rodents  
B. Insects  
C. Both A & B  
D. None of These
606. \_\_\_\_\_ is practiced to remove inedible constituents from dates.  
A. Coring  
B. Pitting  
C. Trimming  
D. Peeling
607. The boiling point of liquid N<sub>2</sub> is  
A. 79 °C  
B. 46 °C  
C. -196 °C  
D. 68 °C
608. \_\_\_\_\_ radiations have much greater penetration power than other radiation  
A. Alpha  
B. Beta  
C. Gamma  
D. X-rays
609. Rancidity is mainly concerned with  
A. Carbohydrates  
B. Fats  
C. Proteins  
D. Vitamins
610. Enzymes are \_\_\_\_\_ in nature  
A. Fat  
B. Protein  
C. Carbohydrates  
D. None of These

611. The common example of filter aid is  
A. Activated charcoal  
B. Diatomaceous earth  
C. Both A & B  
D. None of These
612. \_\_\_\_\_ is the example of biological preservative  
A. KMS  
B. Niacin  
C. Sodium benzoate  
D. Ascorbic acid
613. In sugar molecule water exists in  
A. Free form  
B. Colloidal form  
C. Adsorbed water  
D. Chemically bound form
614. The processes to extend the shelf life of food is  
A. Food Technology  
B. Food Science  
C. Food Preservation  
D. Food Processing
615. The principle structural carbohydrates in plants is  
A. Pectin  
B. Agar  
C. Cellulose  
D. Hemi-cellulose
616. Goiter is the deficiency disease of  
A. Magnesium  
B. Ion  
C. Iodine  
D. Zinc
617. Autolysis is caused by  
A. Microorganisms  
B. Rodents  
C. Enzymes  
D. All of These
618. Lye solution is used for fruits  
A. Pitting  
B. Peeling  
C. Coring  
D. Trimming
619. Sucrose is  
A. Monosaccharide  
B. Disaccharide  
C. Polysaccharide  
D. None of These
620. Spectrophotometer is working on the principle of  
A. Beers law  
B. Boyls law  
C. Newton law  
D. Charles law
621. Which foods are best source of energy in the body  
A. Cereals and cereal products

- B. Legumes and pulses  
C. Roots and tubers  
D. **Fats and edible oils**
622. In milk the whey proteins are in  
A. **Colloidal solution**  
B. Colloidal suspension  
C. Emulsion  
D. None of above
623. Iodine value is the percentage of iodine  
A. Which fat can release  
B. Fat can replace  
C. **Fat can bind**  
D. All of These
624. "Internal discolouration" is a common symptom of chilling injury in  
A. Apple  
B. **Pineapple**  
C. Citrus  
D. Banana
625. Yellow color of milk fat is due to presence of?  
A. Vitamin D  
B. **Carotenoids**  
C. Calcium  
D. Folic Acid
626. The reaction of amino acid with sugar is called :  
A. Caramelization  
B. Autoxidation  
C. Acid base  
D. **Maillard reaction**
627. The specific gravity of milk fat at 21°C is?  
A. 0.70  
B. 0.82  
C. **0.93**  
D. 0.98
628. Rich source of vitamin E is  
A. Rice bran  
B. **Wheat germ**  
C. Rice flour  
D. Wheat bran
629. Scalding is done in the processing of:  
A. Fish  
B. **Poultry**  
C. Fruits  
D. Meat
630. Pectin is:  
A. Monosaccharide  
B. Disaccharide  
C. **Polysaccharide**  
D. None
631. In artificial tenderization meat is treated with:  
A. **Enzymes**  
B. Antibiotics  
C. Tannin

- D. Bacteria
632. The possible toxic effect of excess protein consumption over a long period is:
- A. Obesity
  - B. Diabetes
  - C. Kidney stone
  - D. All of the above
633. A good source of Vit. K is:
- A. Spinach
  - B. Turnips
  - C. Guava
  - D. Beans
634. The end products of a food processing industry must be:
- A. Nutritious
  - B. Wholesome
  - C. Safe
  - D. All of the above
635. Acid detergents are useful for removing:
- A. Organic deposits
  - B. Inorganic deposits
  - C. Algae
  - D. Bacteria
636. Milk fifteen days after calving is actually free from :
- A. Essential Amino acids
  - B. Clostrum
  - C. Both a and b
  - D. None of above
637. Food label must contain
- A. The name of the food
  - B. List of ingredients
  - C. Date of manufacture
  - D. All of above
638. Phytic acid (anti-nutrient) inhibits the release of
- A. Minerals
  - B. Vitamins
  - C. Fatty acids
  - D. Citric acid
639. Gas used as a refrigerant is
- A. Nitrogen
  - B. Oxygen
  - C. Chlorine
  - D. Hydrogen
640. Beer is prepared from
- A. Grass
  - B. Grape
  - C. Grains
  - D. Orange
641. Human body needs water soluble vitamins daily dose in
- A. Grams
  - B. Milligrams
  - C. Micrograms
  - D. Nanograms
642. Which group of bacteria should not be present in drinking water?



- A. Lactobacilli
  - B. Streptococci
  - C. Coliforms
  - D. None of These
643. One of the following is a non-essential amino acid
- A. Lysine
  - B. Glutamic acid
  - C. Methionine
  - D. None of These
644. Vitamin C is lost due to
- A. Oxidation
  - B. High temperature
  - C. Storage for long periods
  - D. All of These
645. Recommended brix for squash preparation is
- A. 60-70
  - B. 45-50
  - C. 20-30
  - D. 30-40
646. Which of the following statement is correct?
- A. Selective breeding increase the number of animals for increasing population
  - B. For increasing population domestication of animals increase the number of animals for food purpose
  - C. For increasing population, domestication and selective breeding of animals have reduced the animal population which is used for food purpose
  - D. Selective breeding and domestication of animals on larger scale is increasing the animals used for food purpose
647. Which of the following statement is correct?
- A. Kwashiorkor is a disease that occur in the people who take protein in high amount
  - B. High intake of the protein provides the complete nutrients to the person
  - C. Increase in the calcium loses is because of the high intake of protein
  - D. None of these
648. Which of the following statement is correct?
- A. Toxicity in human body by consuming the animal originated food is because these toxins are naturally present in their bodies
  - B. None of these
  - C. Toxicity in human body by consuming the animal originated food is because, animal takes the toxin from environment or from their feed
  - D. Toxicity in human body by consuming the animal originated food is because, animal takes the toxin from environment or toxins produce in their bodies by several reactions
649. Which of the following statement is correct?
- A. Diethylstilbestrol is a growth promoter that causes the cancer in the human body after consumption of animal originated food
  - B. Diethylstilbestrol is a growth promoter that causes the cancer in the human body after consumption of plant originated food
  - C. Diethylstilbestrol is a growth promoter that causes the heart attack after consumption of plant originated food
  - D. All of these

650. Which of the following statement is correct?
- A. Sometimes honey bees feed on the toxic plants which results the toxicity in bees and their honey cause toxicity in human body
  - B. Sometimes honey bees feed on the non-toxic plants which results the toxicity in bees and their honey cause toxicity in human body
  - C. Sometimes honey bees feed on the toxic plants which results the toxicity in bees and this does not affect the human body
  - D. All of these
651. Which of the following statement is correct?
- A. Nectar from the Datura plants results in the formation of the narcotic honey
  - B. Nectar from the belladonna plants results in the formation of the narcotic honey
  - C. Nectar from the opium poppy plants results in the formation of the narcotic honey
  - D. All of these
652. Which of the following statement is correct?
- A. Poultry feeding on the helloborus results in the accumulation of coniine alkaloid in their bodies that causes the respiratory paralysis
  - B. Quail feeding on the belladonna results in the accumulation of coniine alkaloid in their bodies that is poisonous to human bodies
  - C. Quail feeding on the helloborus results in the accumulation of coniine alkaloid in their bodies that is poisonous to human bodies and cause respiratory paralysis
  - D. Poultry feeding on the belladonna results in the accumulation of coniine alkaloid in their bodies and have no effect on human bodies
653. Biotin Avitaminosis occur
- A. When person consumes biotin for a longer period of time
  - B. When a person does not consumes biotin for a longer period of time
  - C. When a person consumes raw eggs, more than fifteen eggs in a day for a month
  - D. When a person consumes raw eggs, less than fifteen eggs in a day for a month
654. Which of the following statement is correct?
- A. Cows feeding on the toxic plants collect the aflatoxin that is carcinogenic to them
  - B. Cows feeding on the grains contaminated with molds, accumulates the aflatoxin that is carcinogenic to humans
  - C. Cows feeding on the grains contaminated with yeast accumulates the aflatoxin that is carcinogenic to humans
  - D. Cows feeding on the grains contaminated with yeast accumulates the aflatoxin that is carcinogenic to humans
655. Which of the following statement is correct?
- A. Milk from a pregnant cow contains high amount of testosterone as compared to non-pregnant cow
  - B. Milk from a pregnant cow contains low amount of testosterone as compared to non-pregnant cow
  - C. Milk from a pregnant cow contains low amount of estrogen as compared to non-pregnant cow
  - D. Milk from a pregnant cow contains high amount of estrogen as compared to non-pregnant cow

656. Which of the following statement is not correct?
- A. Bovine somatotropin is a growth hormone
  - B. Genetically engineered hormone for growth is Recombinant bovine growth hormone
  - C. Bovine growth hormone helps to reduce the mastitis in cows
  - D. All of these
657. Which of the following statement is correct?
- A. American Jersey cow yield not more than nine hundred litters per two years without BGH
  - B. American Jersey cow yield less than nine hundred litters per one year without BGH
  - C. American Jersey cow yield not more than thirty thousand litters per year with BGH
  - D. American Jersey cow yield less than thirty thousand litters per year with BGH
658. IGF-1 in Milk
- A. Causes the changes in electrolyte
  - B. In early lactation causes the increase in level of cholesterol and decrease in protein
  - C. In later stage of lactation causes the decrease in level of cholesterol and increase in protein
  - D. All of these
659. Which of the following statement is not correct?
- A. The feed additive of the poultry includes the antibiotics these antibiotics produce the resistant bacterial strains
  - B. Antibiotics not only remove the dangerous microorganisms but also remove the beneficial gut microflora
  - C. Effect of the antibiotics become visible in the poultry
  - D. None of these
660. Which of the following statement is correct?
- A. Bovine Spongiform Encephalopathy is a zoonotic disease
  - B. Bovine Spongiform Encephalopathy is a vector borne disease
  - C. Bovine Spongiform Encephalopathy is a pathogenic disease
  - D. None of these
661. Haemotoxism is
- A. Toxic compounds primarily restricted to gonads
  - B. Toxic compounds mainly occur in blood
  - C. Toxic substances found in all parts of the fish
  - D. None of these
662. Which of the following statement is correct?
- A. By consuming the poisonous fish death occurs in more than two hours
  - B. By consuming the poisonous fish death occurs in less than two hours
  - C. By consuming the poisonous fish death occurs in less than one hour
  - D. By consuming the poisonous fish death occurs in more than one hour
663. Which of the following statement is correct?
- A. Benzene Hexachloride remain in the top layer of the soil and thus ultimately affect the human and animal population
  - B. Diazinon remain in the top layer of the soil and thus ultimately affect the human and animal population
  - C. Dichlorovos remain in the top layer of the soil and thus ultimately affect the human and animal population
  - D. None of these

664. Which of the following statement is correct?
- A. Agricultural chemicals that can cause the chronic toxicity because of their accumulation in the fatty tissues are organochlorine compounds
  - B. Agricultural chemicals that can cause the chronic toxicity because of their accumulation in the fatty tissues are organophosphorus compounds
  - C. Agricultural chemicals that can cause the chronic toxicity because of their accumulation in the fatty tissues are organomercury compounds
  - D. None of these
665. Which of the following statement is correct?
- A. Sodium fluoride is a white powder, its more than four gram is sufficient to cause death of a person.
  - B. Sodium fluoride is a white powder, its less than five gram is sufficient to cause death of a person.
  - C. Sodium fluoride is a white powder, its more than two gram and less than four gram is sufficient to cause death of a person.
  - D. None of these
666. Which of the following statement is correct?
- A. Arsenic poisoning occur when food is cooked in the galvanized utensils
  - B. Arsenic poisoning occur when food is cooked in the stainless steel utensils
  - C. Iron poisoning occur when food is cooked in the galvanized utensils
  - D. Copper poisoning occur when food is cooked in the galvanized utensils
667. Which of the following statement is not correct?
- A. In the production of PVC chlorine-based chemicals when heated in presence of hydrocarbons form dioxin
  - B. Dioxin is a carcinogen
  - C. In the production of PE chlorine-based chemicals when heated in presence of hydrocarbons form dioxin
  - D. PE contain a hexachloroethane which is regarded as a human carcinogen
668. HACCP
- A. Focuses inspection activities on critical areas of food safety
  - B. Focuses industry responsibility and action with respect to producing safe food
  - C. Increases the scientific basis for inspection programs
  - D. All of these
669. What do you check for when receiving food?
- a. Proper temperature
  - b. Correct labeling
  - c. Proper appearance
  - d. all of these
670. Which taste can be detected on the tip of the tongue?
- a. Sweet and salt
  - b. Bitter tastes
  - c. Sour tastes
  - d. all of these

- 671.** Determination of ----- should be included as a specific component of risk management.
- a. Hazard analysis
  - b. risk assessment policy**
  - c. Elements of the risk management process
  - d. all of these
- 672.** Signs of pests include.....
- a. Sightings of live or dead bodies, Droppings/ smear marks against walls
  - b. Glow in the dark urine, Damaged packaging
  - c. Gnawed plugs, electrical wires and wood, Scratching, gnawing noises, weird smells
  - d. all of these**
- 673.** A food often ..... bad before it looks bad
- a. taste
  - b. feel
  - c. smell**
  - d. all of these
- 674.** What is the temperature danger zone?
- a. 40°F and 120°F
  - b. 4°C and 60°C**
  - c. 12°C and 55°C
  - d. 14°C and 47°C
- 675.** Microbiological risk assessment should be soundly based upon .....
- a. situation
  - b. risk
  - c. science**
  - d. none of these
- 676.** Diarrhea, abdominal cramps, rashes, tingling lips, tongue and throat are symptoms of.....
- a. Food poisoning
  - b. Food allergies**
  - c. Malnutrition
  - d. Foot and mouth disease
- 677.** Which one of the following is correct:
- A. Hexoses are glucose, fructose, mannose, galactose**
  - B. Pentoses are xylose, arabinose, mannose, ribulose
  - C. Hexoses are glucose, fructose, ribose, galactose
  - D. Pentoses are xylose, arabinose, fructose, ribulose
- 678.** Which one of the following is correct:
- A. Food carbohydrates are metabolized by microorganisms principally to supply energy through several metabolic pathways.**
  - B. Food carbohydrates are hydrolyzed by microorganisms principally to supply energy through several metabolic pathways.
  - C. Food carbohydrates are metabolized by microorganisms principally to supply nutrients through several metabolic pathways.

D. All are wrong

679. Which one of the following is correct:

A. Lipids in general are less preferred substrates for the microbial synthesis of energy and cellular materials.

B. Lipids rarely are less preferred substrates for the microbial synthesis of energy and cellular materials.

C. Lipid in general are less preferred substrates for the biochemical synthesis of energy and cellular materials.

D. Lipids, in general, are most preferred substrates for the microbial synthesis of energy and cellular materials.

680. Which one of the following is correct:

A. The pH range of growth for Gram-positive bacteria, 4.0 to 8.5; and for Gram-negative bacteria, 4.5 to 9.0.

B. The pH range of growth for Gram-positive bacteria, 5.0 to 8.5; and for Gram-negative bacteria, 4.5 to 9.0.

C. The pH range of growth for Gram-positive bacteria, 4.0 to 7.5; and for Gram-negative bacteria, 4.5 to 9.0.

D. The pH range of growth for Gram-positive bacteria, 4.0 to 8.5; and for Gram-negative bacteria, 5.5 to 9.0.

681. The  $A_w$  of a food can be expressed by:

A. the ratio of water vapor pressure of the food ( $P$  which is  $<1$ ) to that of pure water ( $P_o$ , which is 1) i.e.  $P_o/P$ .

B. the ratio of water vapor pressure of the food ( $P$  which is  $>1$ ) to that of pure water ( $P_o$ , which is 1) i.e.  $P_o/P$ .

C. the ratio of water vapor pressure of the food ( $P$  which is  $<1$ ) to that of pure water ( $P_o$ , which is 1) i.e.  $P/P_o$ .

D. the ratio of water vapor pressure of the food ( $P$  which is  $<1$ ) to that of pure water ( $P_o$ , which is 1.1) i.e.  $P_o/P$ .

682. The wrong  $A_w$  values of some food groups is:

A. Noodles, honey, chocolate, dried egg  $>0.60$

B. Cereals, crackers, sugar, salt, dry milk 0.10 to 0.20

C. Jam, jelly, dried fruits, parmesan cheese 0.60 to 0.85

D. Fresh meat, fish, fruits, vegetable 0.98 to 0.99

683. Which minimum  $A_w$  value for growth of microbial groups is wrong:

A. All correct

B. most molds 0.8

C. xerophilic molds 0.6

D. most yeasts 0.85

684. Microorganisms, individually and as a group, grow over a very wide range of temperatures:

A. The lowest temperature at which a microorganism has been reported to grow is  $-34$  degree C; the highest is somewhere in excess of 100 degree C.

B. The lowest temperature at which a microorganism has been reported to grow is 34 degree C; the highest is somewhere in excess of 100 degree C.

C. The lowest temperature at which a microorganism has not been reported to grow is  $-34$  degree C; the highest is somewhere in excess of 100 degree C.

D. None of these.

685. There is a relationship between RH and temperature that should be borne in mind in selecting proper storage environments for foods, in general:  
A. The higher the temperature, the lower the RH, and vice versa.  
B. The higher the pressure, the lower the RH, and vice versa.  
C. The higher the temperature, the lower the Aw, and vice versa.  
D. None of these
686. Ozone is the other atmospheric gas that has antimicrobial properties:  
A. It has been tried over a number of decades as an agent to extend the shelf life of certain foods.  
B. It has been tried over a number of years as an agent to extend the shelf life of certain foods.  
C. It has been tried over a number of decades as an agent to not extend the shelf life of certain foods.  
D. It has been tried over a number of decades as an agent to extend the shelf life of all foods.
687. Several vitamins are toxic if consumed in excessive amounts and:  
A. many food plants produce toxic secondary metabolites to discourage their attack by pests.  
B. many food plants produce toxic secondary metabolites to discourage their attack by microbes.  
C. many food plants produce toxic tertiary metabolites to discourage their attack by bacteria.  
D. many food plants produce toxic secondary metabolites to encourage their attack by pests.
688. Specific growth rate, Mutualism, Antagonism and Commensalism are:  
A. Implicit factors  
B. Processing factors  
C. Extrinsic factors  
D. none of these
689. \_\_\_\_\_ is a very effective germicide and U.S. Food and Drug Administration has approved its use:  
A. H<sub>2</sub>O<sub>2</sub>  
B. Iodophores  
C. CO<sub>2</sub>  
D. O<sub>3</sub>
690. Which one of the following does not cause health problem:  
A. None of these  
B. pesticide  
C. chemical contaminant  
D. microorganism  
E. toxin
691. Organisms that grow well at or below 7 degree C and have optimum range between 20 degree C and 30 degree C are:  
A. Psychrotrophic  
B. Thermophilic  
C. Thermotolerant  
D. none of these
692. Lathyrism is a more serious condition associated with a toxin in the pulse Lathyrus sativa which can be a major food item in North African and Asian communities:  
A. during times of famine  
B. during times of spring

- C. during times of Autumn  
D. during times of winter
693. When a person eats food containing harmful bacteria. While in the intestinal tract, the bacteria produce toxins that cause illness:  
**A. Toxin-mediated infection**  
B. Infection  
C. Intoxication  
D. None of these
694. Specific growth rate, Mutualism, Antagonism and Commensalism are:  
**A. Implicit factors**  
B. Processing factors  
C. Extrinsic factors  
D. none of these
695. Red kidney beans are still responsible for occasional outbreaks of food poisoning when they have been insufficiently cooked to destroy the:  
**A. Lectins**  
B. Solanine  
C. Glycosides  
D. All of these
696. Acceptance \_\_\_\_\_ of a food include color, texture, flavor, shape, and absence of abnormalities:  
**A. Qualities**  
B. Safety  
C. Safety and quality  
D. Properties
697. Adaptation of an efficient and approved procedure by \_\_\_\_\_ helps meet the required microbiological standards and specifications:  
**A. Regulatory agencies**  
B. Legislative bodies  
C. District Government  
D. Government
698. Some foodborne organisms produce substances that are either inhibitory or lethal to others:  
**A. These include antibiotics, bacteriocins, hydrogen peroxide, and organic acids.**  
B. These include antibiotics, carbohydrates, proteins, and organic acids.  
C. These include antibiotics, lipids, sugars and organic acids.  
D. None of these
699. The redox potential:  
**A. designated as  $E_h$ , is measured in electrical units of millivolts mV.**  
B. designated as  $e_h$ , is measured in electrical units of millivolts mV.  
C. designated as  $E_h$ , is measured in electrical units of millivolts mv.  
D. designated as  $e_h$ , is measured in electrical units of millivolts mv.
700. During food storage higher the temperature, lower the \_\_\_\_\_ and vice versa:  
**A.  $E_h$**   
B. RH



- C. Hydrolysis
- D. all of these

701. For carbonation, CO<sub>2</sub> gas is entering in bottle at 4mole/sec. what is the type of the Process

- A. Continuous
- B. Semi-Batch
- C. Batch
- D. None

702. For carbonation, CO<sub>2</sub> gas is entering in bottle at 4mole/sec. Convert the flow rate into g/hr

- A. 633600 g/hr
- B. 733600 g/hr
- C. 7000kg/hr
- D. 633 kg/hr

703. Change 9000 in<sup>3</sup>/yr to cm<sup>3</sup>/sec

- A. 2.54 e-3 cm<sup>3</sup>/sec
- B. 3.74 e-3cm<sup>3</sup>/sec
- C. 4.7 e-3 cm<sup>3</sup>/sec
- D. 5.7 e-3 cm<sup>3</sup>/sec

704. If input flow rate is equal to output, the state is known as

- A. Continuous
- B. Transit
- C. Steady
- D. Batch

705. If input flow rate is higher than output, the state is known as

- A. Continuous
- B. Transit
- C. Steady
- D. Batch

706. An entity that can be measured is known as

- A. Unit
- B. Dimension
- C. Magnitude
- D. None

707. A primary dimension is

- A. Volume
- B. velocity
- C. Kelvin

D. Force

**708.** Which of the following is part of S.I. units?

- A. Pound
- B. Foot
- C. Ampere
- D. Inches

**709.** If the pressure is same throughout the cabin, it is said to be in----- equilibrium

- A. Thermal
- B. Mechanical
- C. Chemical
- D. None

**710.** The Property depends upon size of the system is known as

- A. Extensive
- B. Intensive
- C. Chemical
- D. Thermal

**711.** If input flow rate is higher than output, accumulation is

- A. Positive
- B. Negative
- C. Zero
- D. One

**712.** Generation and Consumption will be zero

- A. Chemical Reaction occurs
- B. No reaction take place
- C. Burning of gas
- D. None

**713.** The sugar solution prepared by dissolving 10kg of sucrose in 90kg of water. The density if the solution is 1040 kg/m<sup>3</sup>. What is the concentration (w/w) of the solution?

- A. 0.1
- B. 1
- C. 0.01
- D. 10

**714.** A balance that indicate what is happening in a system at an instant in time

- A. Differential
- B. Integral
- C. Both
- D. None

715. input + generation = output + consumption, then process will be

- A. Continuous steady state
- B. Continuous unsteady state
- C. Batch steady state
- D. None

716. A close system does not allow the transfer of

- A. mass
- B. heat
- C. chemical reaction
- D. None

717. An adiabatic system does not allow the transfer of

- A. mass
- B. heat
- C. chemical reaction
- D. None

718. An adiabatic system is categorized as

- A. open systems
- B. close
- C. both
- D. None

719. A process occur at constant temperature is known as

- A. Isolated system
- B. Close system
- C. Isothermal
- D. None

720. 20 Kg of H<sub>2</sub>O is equal to

- A. mole
- B. 11 mole
- C. Kmole
- D. 11 Kmole

721. 20 kg/s is equal to

- A. 20 m<sup>3</sup>/hr
- B. 72 m<sup>3</sup>/s
- C. 72 m<sup>3</sup>/hr
- D. 20 m<sup>3</sup>/s

722. The example of intensive properties are

- A. Density

- B. Volume
- C. Energy
- D. None

723. Specific gravity is defined as

- A. Density/density
- B. Volume/volume
- C. mass/mass
- D. mass/density

724. Water filling tank is an example of

- A. transient state
- B. steady
- C. None
- D. Both

725. Over flow of water tank is an example of

- A. transient state
- B. steady
- C. None
- D. semi batch

726. 12 m<sup>3</sup> of glucose is equal to kmol

- A. 73
- B. 61
- C. 80
- D. 90

727. Filling of balloon at air velocity of 1m/s is an example of

- A. semi batch
- B. batch
- C. continuous steady
- D. continuous transient

728. Filling of balloon; here mass balance will depend upon

- A. integral
- B. differential
- C. both
- D. None

729. A milk silo whose capacity is 20 m<sup>3</sup> needs three hours to fill; here mass balance will depend upon

- A. integral
- B. differential
- C. both

D. None

730. Air enter at 20 m/s in sugar solution tank and leave at 5 m/s; is an example of

- A. semi batch
- B. batch
- C. continuous steady
- D. continuous transient

731. Orange juice enter at 20 kg/s in sugar solution tank with capacity of 3 m<sup>3</sup> and leave at 5 kg/s; how much time it will take when input becomes equal to out put

- A. 100 minutes
- B. 3.5 minutes
- C. 6 minutes
- D. 100 sec

732. A unit of luminous intensity dimension is

- A. Ampere
- B. Second
- C. Kelvin
- D. Candela

733. The product of mass and velocity of a moving object called

- A. Volume
- B. velocity
- C. Momentum
- D. Force

734. In foods, specific heat depends on various food components e.g.

- A. Moisture content
- B. Temperature
- C. Pressure
- D. All of these

735. Cooling of a hot object with cooling fan is an example of

- A. Conduction
- B. Convection
- C. Forced convection
- D. Natural convection

736. Writing an integral balance for semi-batch or continuous processes involve steps;

- A. Writing a differential balance
- B. Integrating the balance for two instants of time
- C. Both A and B
- D. Using a balance equation

737. Which one is not included in process unit operations?

- A. Mixing
- B. **Cleaning**
- C. Evaporation
- D. Refrigeration

738. Kneaders are used for mixing of

- A. Immiscible liquids
- B. Gases into liquids
- C. **Viscous material**
- D. Solids into solids

739. Principal of ----- is to boil solvent and separate it from the product.

- A. **Evaporation**
- B. Filtration
- C. Solidification
- D. Heating

740. The rate of ----- is determined by the rate of heat transferred to the moisture to be evaporated

- A. Heating
- B. Boiling
- C. **Drying**
- D. None of these

741. A ratio of the minimum energy required for drying to the energy which is actually consumed during drying process called

- A. Heating efficiency
- B. **Dryer efficiency**
- C. Process efficiency
- D. Energy efficiency

742. A liquid/gas mixture leaving the expansion valve is known as

- A. Expansion gas
- B. Refrigerator gas
- C. **Flash gas**
- D. Evaporating gas

743. A liquid that passes through the membrane called

- A. **Permeate**
- B. Cake
- C. Retentate
- D. Feed

744. A hydrostatic pressure is the key driving force in case of

- A. Charge-based separation
- B. Electrodialysis
- C. Pore-based separation
- D. Both A and B

745. ----- has a pore size range of 0.1-0.01  $\mu\text{m}$ .

- A. Microfiltration
- B. Ultrafiltration
- C. Nanofiltration
- D. Reverse osmosis

746. As compared to other membranes, it can be operated under low pressure about 1-2 bar

- A. Microfiltration
- B. Ultrafiltration
- C. Nanofiltration
- D. Reverse osmosis

747. ----- membranes reject particles/macromolecules such as casein micelles, whey proteins, vitamins and viruses.

- A. Microfiltration
- B. Ultrafiltration
- C. Nanofiltration
- D. Reverse osmosis

748. The principal applications of ----- system in food processing are desalting, demineralization, deacidification or acidification of liquid foods.

- A. Charge-based separation
- B. Electrodialysis
- C. Pore-based separation
- D. Both A and B

749. Evaluation of the overall quality of an item using a number of quality attributes is usually referred as

- A. Sorting
- B. Size reduction
- C. Grading
- D. Sorting and grading

750. A dewatering method includes

- A. Centrifugation
- B. Reels and screens
- C. Both A and B
- D. Evaporation

- 751.** Potash fertilizers exhibits \_\_\_\_ effect on health  
A. Maximum  
B. Minimum  
C. Acute  
**D. No**
- 752.** Paraquat is an example of \_\_\_\_  
A. Pesticide  
B. Insecticide  
**C. Herbicide**  
D. Rodenticide
- 753.** Which one is an example of inorganic pesticide?  
A. Endosulfan  
B. Lindane  
C. Heptachlor  
**D. Sodium fluoride**
- 754.** Which act as acidulant as well as sequestrant?  
**A. Tartaric acid**  
B. Acetic acid  
C. Lactic acid  
D. Phosphoric acid
- 755.** 07.5 g/kg is \_\_\_\_ dose for Tartaric acid  
**A. LD 50**  
B. LD 75  
C. LD 100  
D. LD 25
- 756.** In animals, higher concentration of BHT can damage  
A. Kidney  
B. Lungs  
C. Colon  
**D. Liver**
- 757.** Use of food additives is strictly governed by several regulations e.g. pure food rules  
\_\_\_\_  
A. 2019  
B. 2010  
**C. 2007**  
D. 2009
- 758.** Cellulose packaging use for food is about \_\_\_\_ %  
A. 35  
**B. 34**  
C. 33  
D. 32
- 759.** Phthalates makes the bottles flexible and \_\_\_\_ brittle  
A. More  
B. Highly  
C. No  
**D. Less**
- 760.** Heterocyclic aromatic amines are developed at temperature above \_\_\_\_ °C  
A. 190  
B. 180  
**C. 150**  
D. 170



- 761.** The word toxicology is derived from \_\_\_\_\_ words
- A. Latin
  - B. English
  - C. Greek**
  - D. Irish
- 762.** Which technique is more effective for the prevention of water borne diseases?
- A. Coagulation
  - B. Boiling**
  - C. Sedimentation
  - D. Filtration
- 763.** All of these are examples of toxic residues of heavy metals except
- A. Arsenic
  - B. Lead
  - C. Mercury
  - D. Antimony**
- 764.** Erosion of Jaw is toxic effect of
- A. Phosphorous**
  - B. Zinc
  - C. Sodium
  - D. Tin
- 765.** Favism suffering people have deficiency of enzyme
- A. Glucose-1-phosphate dehydrogenase
  - B. Glucose-6-phosphate dehydrogenase**
  - C. Fructose-1-phosphate dehydrogenase
  - D. Fructose-6-phosphate dehydrogenase
- 766.** Trypsin inhibitors are naturally found in \_\_\_\_\_
- A. Legumes**
  - B. Eggs
  - C. Alfalfa
  - D. Soybeans
- 767.** Excessive consumption of proteins results in in increased \_\_\_\_\_ losses
- A. Iron
  - B. Selenium
  - C. Calcium**
  - D. Phosphorous
- 768.** All fishes exhibit tetrodotoxism except
- A. Puffer fish
  - B. Sun fish
  - C. Porcupine fish
  - D. Damsel fish**
- 769.** Temperature used in UHT is:
- A. 135-150°C**
  - B. 120-125°C
  - C. 100-120°C
  - D. 90-100°C
- 770.** Which treatment is also called Flash Pasteurization?
- A. Canning
  - B. HTST**
  - C. Pasteurization
  - D. None of these
- 771.** Human body produces which vitamin by action of ultraviolet rays of sun?

- A. Vitamin A
  - B. Vitamin B
  - C. Vitamin D**
  - D. None of these
- 772.** Moisture content in semi-perishable food ranges?
- A. 60-90%**
  - B. 40-50%
  - C. 50-55%
  - D. None of these
- 773.** Fresh moist foods have water activity of:
- A. 0.99**
  - B. 1.6
  - C. 1.0
  - D. None of these
- 774.** Bacteria are normally produced by?
- A. Budding
  - B. Binary fission**
  - C. Both a and b
  - D. None of these
- 775.** A natural process of decay that makes food unacceptable to customers is called
- A. Preservation
  - B. Food Spoilage**
  - C. Disinfection
  - D. None of these
- 776.** Which of the following cause the majority of food poisoning cases?
- A. Bacteria and Viruses**
  - B. Chemicals
  - C. Poisonous plants
  - D. None of these
- 777.** What is the most common symptom of food poisoning?
- A. Dizziness
  - B. Vomiting**
  - C. Headache
  - D. Fever
- 778.** HACCP is a system used to
- A. Identify and control food waste
  - B. Ensure that cleaning chemicals are used completely
  - C. Identify and control food safety hazards**
  - D. None of these
- 779.** Bacteria needs which of these to help it grow and multiply
- A. Moisture
  - B. Warm temperatures
  - C. Both a and b**
  - D. None of these
- 780.** Time required to kill microorganism at a given lethal temperature or a set of conditions is called as?
- A. D value**
  - B. C value
  - C. F value
  - D. All of above
- 781.** Germicidal wavelength of UV ranges of -----nm.
- A. 90-100

- B. 100-280  
C. 150-200  
D. 100-200
782. Severe diarrhoea and dehydration in human is due to lack of\_\_\_\_\_
- A. Rennin  
B. Lysine  
C. Both a and b  
D. Lactase
783. Deteriorative changes occurring from within the food system is called as
- A. Autolysis  
B. Hydrolysis  
C. Purification  
D. Proteolysis
784. Which bacteria grow best at moderate temperature
- A. Thermophilic  
B. Mesophilic  
C. Psychophilic  
D. All of these
785. The growth of aerobic food spoilage and pathogenic microorganisms can be suppressed by
- A. Humectants  
B. Exhausting  
C. Both a and b  
D. None of above
786. Which of the following group can grow on least water activity
- A. Bacteria  
B. Fungi  
C. Rodents  
D. None of above
787. Which of the compounds from the following are less toxic
- A. Organochlorine  
B. Organophosphorus  
C. Both A & B  
D. None of the above
788. How many allergens groups are there?
- A. 8  
B. 7  
C. 6  
D. 4
789. Which of the following is related to the food allergy?
- A. Gastric enzymes  
B. IgE  
C. Celiac disease  
D. None of the above
790. Which of the following is not a beneficial fungus?
- A. Penicillium  
B. Yeast  
C. Aspergillus  
D. None of the above
791. Fructose intolerance is misdiagnosed as irritable bowel syndrome because
- A. Gastrointestinal disturbance  
B. Fructose Malabsorption

**C. Both a & b**

D. None of the above

**792.** Egg allergy caused by

A. Conalbumin

B. Albumin

**C. Lysozyme**

D. None of the above

**793.** Updated version of ISO 22000 is published in

**A. 2018**

B. 2015

C. 2017

D. 2005

**794.** Updated version of ISO 9000 is published in

A. 2018

**B. 2015**

C. 2016

D. 2014

**795.** Which of the following microorganism is associated with the toxicity of canned products

A. Staphylococcus

B. Bacillus cereus

C. Penicillium

**D. None of the above**

**796.** Which of the following types of Aflatoxins are dangerous to human bodies

A. B1, B2

**B. G1, G2**

C. M1, M2

D. None of the above

**797.** Green gills of mushrooms means that

A. Edible mushrooms

**B. Inedible mushrooms**

C. Both a & b

D. None of the above

**798.** Which of the following is not an example of disinfectant

A. Ozone

B. Oxonia

C. Hydrogen peroxide

**D. None of the above**

**799.** The temperature range for psychrophile microorganisms is

A. 20-30

B. 10-20

C. Below freezing

**D. None of the above**

**800.** Gangrene can be caused by

A. Staphylococcus

B. Clostridium

C. Bacillus

**D. None of the above**

**801.** The Pakistani people consume annually poultry meat is about

**A. Seven kilogram per capita**

- B. Five kilogram per capita
- C. Ten kilogram per capita
- D. Thirteen kilogram per capita

**802.** The Pakistani people consume annually poultry eggs about

- A. Sixty five to seventy eggs per capita
- B. Fifty five to sixty eggs per capita
- C. Seventy five to eighty eggs per capita
- D. Eighty five to ninety eggs per capita

**803.** The Pakistani people consuming protein from animal sources only about

- A. Seventeen grams per day
- B. Twenty seven grams per day
- C. Thirty seven grams per day
- D. Seven grams per day

**804.** For poultry bird scalding at medium scale the temperature of water used for hot dipping should be

- A. Sixty Celsius
- B. Fifty Celsius
- C. Forty Celsius
- D. Seventy Celsius

**805.** The edible viscera of poultry usually termed as giblet consists all of the following except

- A. Heart
- B. Liver
- C. Gizzard
- D. Lungs

**806.** The packaging of poultry meat is done to maintain its quality, the packaging aim is/are to perform which of the following function/s

- A. Containment for handling
- B. Identification of contents
- C. Facilitation of dispensing
- D. All of them

**807.** Which of the following factors influence the birds meat quality

- A. Specie
- B. Gender
- C. Feeding pattern
- D. All of them

**808.** The size of the egg is one of the factor used for grading of the eggs if the weight of one dozen eggs are 21oz then the grade will be

- A. Peewee
- B. Small
- C. Medium
- D. Large

**809.** As the age of the eggs increase its pH also increases due to the

- A. Carbon dioxide
- B. Oxygen

- C. Nitrogen
- D. Ammonia

**810.** The eggs are rich source of different lipids and of which the highest concentration eggs have

- A. Triglycerides
- B. Diglycerides
- C. Phospholipid
- D. Cholesterol

**811.** In Gerber method of milk fat testing the milk sample in butyrometer is taken as

- A. 10.0 mL
- B. 10.94 mL
- C. 11.0 mL
- D. 10.5 mL

**812.** In fat determination iso-amyl alcohol helps in

- A. Heat coagulation
- B. Emulsion breakage
- C. Fat separation
- D. Fat mixing

**813.** The milk has various levels of acidity the normal acidity of milk is mostly due to

- A. Citrates
- B. Bacteria
- C. Yeast
- D. All of them

**814.** During the stunning of buffalo calf the current is usually applied as

- A. 0.3 amps
- B. 0.6 amps
- C. 1.0 amps
- D. 1.3 amps

**815.** In Gerber method of milk fat testing the sulfuric acid in butyrometer is taken as

- A. 10.0 mL
- B. 10.94 mL
- C. 11.0 mL
- D. 10.5 mL

**816.** During the determination of percentage acidity of the milk the indicator usually used is

- A. Phenolphthalein
- B. Methyl red
- C. Methyl orange
- D. Bromophenol blue

**817.** The raw milk should be stored at ---- to keep its maximum quality

- A. 4°C
- B. 10°C
- C. 25°C
- D. 37°C

**818.** The raw milk during HTST should be heated to – for 15-20 seconds

- A. 72°C
- B. 63°C

C. 65°C

D. 80°C

**819.** The buffalo milk has major portion of protein in the form of

**A. Casein**

B. Whey protein

C. Enzymes

D. Albumins

**820.** The cattle milk has sugar in the form of

A. Glucose

**B. Lactose**

C. Maltose

D. Sucrose

**821.** The casein in the milk is precipitated at pH of

**A. 4.6**

B. 5.6

C. 6.6

D. 7.0

**822.** SNF solid not fat is a part of

A. Total fat

B. Total protein

**C. Total solids**

D. Total associated fat

**823.** The value and quality of any milk is determined on the basis of its

A. Protein content

**B. Fat content**

C. Total solids

D. Solid not fat

**824.** The sub micelles of milk proteins are linked with each other through

A. Potassium phosphate

**B. Calcium phosphate**

C. Magnesium Phosphate

D. Sodium Phosphate

**825.** Lactose is a disaccharide which is a combination of

A. Glucose and glucose

B. Glucose and fructose

C. Glucose and sucrose

**D. Glucose and galactose**

**826.** In Maillard reaction, flavoring compounds are produced due to heating and burning of

A. Proteins

B. Fats

**C. Carbohydrates**

D. Active Enzymes

**827.** Milk fats are usually catalyzed by

A. Catalase

B. Plasmin

**C. Lipase**

D. Lysozyme

- 828.** Lactoperoxidase enzyme in milk is  
A. Least heat stable  
B. Heat sensitive  
C. Most heat stable  
D. None of these
- 829.** Milk density is ----- as compared to pure water  
A. Equal  
B. Higher  
C. Lower  
D. None
- 830.** For heating and cooling of high viscosity milk, best suited heat exchanger is  
A. Plate heat exchanger  
B. Tubular heat exchanger  
C. Scraped surface heat exchanger  
D. All on these
- 831.** Corrugations in plate heat exchangers ----- the heat transfer to the product  
A. Minimize  
B. Maximize  
C. Normalize  
D. Equalize
- 832.** Bactofugation is the separation of bacteria from milk on the basis of  
A. Size  
B. Density  
C. pH  
D. Fat content
- 833.** Quality of finished dairy product mainly depends upon  
A. Fat content  
B. Protein content  
C. Overall raw milk quality  
D. Milk enzymes
- 834.** Which one is necessary for long distance transportation of milk before processing?  
A. Heating  
B. Chilling  
C. Packaging  
D. Centrifugation
- 835.** Deaerators are used to  
A. Remove fat from milk  
B. Remove air from milk  
C. Remove water from milk  
D. Remove protein from milk
- 836.** During butter production the temperature of churn should be below  
A. 8 degree Celsius  
B. 4 degree Celsius



- C. 0 degree Celsius
- D. None of these

**837.** Temperature fluctuation during transportation of milk can

- A. Increase microbial count
- B. Develop off flavor
- C. Nutrient loss
- D. All of these

**838.** Innovative steam injection in milk during processing is a type of

- A. Pasteurization
- B. Sterilization
- C. Standardization
- D. Thermization

**839.** Major component of butter is

- A. Water
- B. Fat
- C. Protein
- D. Minerals

**840.** Salting of the cheese can effects

- A. Microbial count
- B. Moisture removal
- C. Ripening of cheese
- D. All of these

**841.** K-casein of milk is naturally hydrolyzed by

- A. Pepsin
- B. Pepsinogen
- C. Chymosin
- D. HCl

**842.** Most common type for cheese made Pakistan is from milk of

- A. Buffalo
- B. Cow
- C. Goat
- D. Camel

**843.** Price of milk in Pakistan is usually depends upon

- A. Fat content
- B. Enzymes quality
- C. Moisture content
- D. Vitamins and minerals

**844.** Increased somatic cells count is associated with

- A. Milk disease
- B. Udder disease
- C. Contamination of milk
- D. None of these

**845.** The protein present in milk in the structure of

- A. globule
- B. micelle**
- C. coil
- D. chain

**846.** Lactose in milk contribute to the total solids ?

- A. 30%**
- B. 35%
- C. 40%
- D. 45%

**847.** The major part of the milk fat is/are

- A. Monoglycerides
- B. Diglycerides
- C. Triglycerides**
- D. All of them

**848.** The human milk contains the protein in the concentration of

- A. 1.0 %**
- B. 3.2 %
- C. 3.8 %
- D. 4.5 %

**849.** Which of the following type of casein stabilized the other types, against the ppt.

- A.  $\alpha$  casein
- B.  $\beta$  casein
- C.  $\kappa$  casein**
- D.  $\gamma$  casein

**850.** The buffalo milk has fat contents

- A. 7.0%**
- B. 5.0%
- C. 3.5%
- D. 1.0%

**851.** First time inspection of meat was done in?

- A. 1791 in New York
- B. 1891 in New York**
- C. 1991 in New York
- D. 1875 in New York

**852.** Length of time between arrival of animals at plant and slaughtering is 24 hours in?

- A. United Kingdom
- B. European American
- C. Australia**
- D. None

**853.** Which of the following statement is correct for Halal slaughtering?

- A. Herbivores having split hoofs/toes are not lawful
- B. Carnivores and prey birds are prohibited in Islam**
- C. None
- D. Calm animals are not recommended in Islam

854. During slaughtering of animals, which one of the following should not be injured?
- Trachea
  - Carotid arteries
  - Esophagus
  - Spinal cord**
855. Living organisms can tolerate an environmental temperature in the range of?
- 0-30°C
  - 0-40°C**
  - 0-50°C
  - 0-60°C
856. Meat contains approximately?
- 75% protein
  - 19% water
  - 5% fat**
  - None
857. Purification of meat by cleaning meat, removal of blood is called?
- Tasmiya
  - Tazkiya**
  - Cleaning
  - Slaughtering
858. \_\_\_\_\_ causes rapid loss of blood from brain and chest.
- Sticking**
  - Stabbing
  - Killing
  - Jhatka
859. Which of the following statement is incorrect as animal reaches to maturity?
- Water content decreases
  - Fat content decreases**
  - Fat content is inversely related to water content
  - All
860. \_\_\_\_\_ comprises of 20-25% of total fat content?
- Collagen
  - Elastin
  - Reticulin
  - None**
861. Which of the following statement is correct?
- In mutton, mineral content ranges from 0.90-0.240 mg per 100g
  - Vitamin B6 is mainly lost from meat by leaching
  - Pork contain 70-75 mg cholesterol per 100 g**
  - Creatine is about 350 g per 100 gram
862. Which of the following statement is correct?
- Animals should be laid on right flank facing Kibla
  - Objective of slaughtering is to prepare muscle tissue beneath for human consumption
  - Fish is rich in Omega 3 fatty acids essential for blood production
  - Deficiency of cobalt is related to deficiency of copper**
863. which of the following statement is incorrect?
- Contractile protein play key role in muscle contraction
  - Meat is a bad source of taurine**
  - Nutritional value of meat is dependent on breed
  - Glycine is present in fresh muscle
864. Which of the following statement is correct?

- A. Carcass inspection should be done after 24 hours of slaughtering  
 B. Progeny of an animal with desired characteristics can be increased by diet  
 C. Myosin content is lower in meat  
 D. **CLA has been shown positive health benefits**
865. Which of the following statement is correct?  
 A. Animals should be healthy, physiologically normal, properly excited, watered and well fed before slaughtering  
 B. Collective slaughtering is humane in Islam  
 C. **Rapid loss of blood is from brain is caused by sticking**  
 D. None
866. Which of the following statement is correct?  
 A. **Nature of embryo influences the birth weight of cattle**  
 B. White meat has more fat content as compared to red meat  
 C. Increase in weight until its mature size is called development  
 D. None
867. Which of the following statement is incorrect?  
 A. 60mg/100g of carnitine is present in beef  
 B. None  
 C. **Fat can become unavailable during prolonged storage**  
 D. Sulphur compounds is present in proteins
868. Which of the following statement is incorrect?  
 A. CLA plays an important role obesity control  
 B. **Abdominal cavity is opened by cutting in middle down the chunk, viscera are removed from diaphragm**  
 C. None  
 D. Myofibril covers meat about 70% by volume
869. Which of the following statement is correct?  
 A. Protein provides almost 2.25 times more energy than fat  
 B. **90-100% of retinol is retained after heating to internal temperatures as high as 80°C**  
 C. CLA is found in bones at the rate of 10-46 mg/100g in raw meat  
 D. None
870. Tocopherol supplementation improves?  
 A. Protein stability  
 B. **Fat stability**  
 C. Minerals stability  
 D. None
871. Which of the following statement is correct?  
 A. Objective of slaughtering is to remove damaged parts  
 B. Objective of stunning is to remove all blood from the animal  
 C. **Recitation of Taqbir is necessary from Muslim**  
 D. All
872. Meat is a good source of?  
 A. Pyridoxine  
 B. Cobalamin  
 C. Iron  
 D. **All**
873. Which of the following statement is correct?  
 A. Largest source of zinc and iron is chicken  
 B. Myofibrillar protein finds their application is sausage emulsions  
 C. **Low level of magnesium in blood serum leads to milk fever**  
 D. None

874. Which of the following statement is incorrect?
- Meat is derived from English word “mate” means food
  - Soil fertility depends upon the chemical nature of rocks from which they are formed
  - Carcass should retain its identity even after with its removed organ and offal
  - None
875. Deficiency of \_\_\_\_\_ in diet may leads to muscular dystrophy in cattle.
- Calcium
  - Molybdenum
  - Cobalt
  - Alpha tocopherol
876. Which of the following statement is incorrect?
- Nutritional value of meat depends upon breed
  - Digestibility of whole meat is 94%
  - Collagen contains 11% alanine
  - None
877. Which of the following statement is correct?
- Collagen contains 1-2% hydroxyproline
  - Elastin contains 12% proline
  - Muscle contains small amount of carbohydrates usually 1% in the form of starch
  - None
878. Which of the following statement is incorrect?
- Low pH meat has soapy taste
  - Animal fat is composed of phospholipids
  - Trans-fatty acid contents are generally less than 3% of total fatty acids
  - None
879. Which of the following statement is incorrect?
- Iron, copper and zinc contents of kidney and liver are much higher than those in muscular tissue
  - Long chain fatty acids are transported across the inner membranes of mitochondria, to provide energy while exercising
  - On heating for prolong time, collagen converts into soluble gel
  - None
880. Which of the following statement is incorrect?
- Protein quality of beef meat possesses score about 0.9 as compared to plant protein which is 0.5-0.7
  - Mayofibrillar protein contains actin, myosin protein fractions which are combination of actinomyosin
  - Dark cutting meat has low water holding capacity
  - None
881. A set of procedures used to properly clean processing equipments with removing piping or equipments?
- CIP
  - COP
  - Washing
  - None
882. The first step in chicken processing is?
- Washing of birds
  - Hanging of birds
  - Scalding

- D. Slaughtering
883. In fish processing, after unloading the 2<sup>nd</sup> step is?
- A. Organ removal  
 B. Scales removal  
 C. **Head removal**  
 D. None
884. The alkali used in caustic washes has a high pH concentration of?
- A. 0.1-1%  
 B. **0.5-2%**  
 C. 0.2-2%  
 D. 1.5-2%
885. The purpose of scalding is to?
- A. **Loosen the feathers**  
 B. Removal of feathers  
 C. Killing microbes on the skin  
 D. All
886. On average, there are \_\_\_\_\_ steps involved in CIP cycle?
- A. 4  
 B. **5**  
 C. 6  
 D. 7
887. In poultry processing, carcass washing is done after?
- A. Scalding  
 B. Hock cutting  
 C. Slaughtering  
 D. **De-feathering**
888. Which of the following is not a beef cut?
- A. **Choice**  
 B. Round  
 C. Shank  
 D. All
889. Giblet includes?
- A. Feet  
 B. **Liver**  
 C. Stomach part  
 D. None
890. Which of the organs are inspected for any sign of illness by veterinary officer before cutting or processing of carcass?
- A. **Tongue**  
 B. Neck  
 C. Skin  
 D. Ribs
891. In CIP, the purpose of “Push out system” is to?
- A. Remove dirt present in line  
 B. **Remove product present in line**  
 C. Remove water present in line  
 D. None
892. USDA yield grade range in numerical values from?
- A. 0.1-0.5  
 B. **1.0-5.0**  
 C. 0.1-0.9  
 D. 1.0-9.0

893. \_\_\_\_\_ beef is produced from young, well fed beef cattle?
- A. Select
  - B. Choice
  - C. Both select & choice
  - D. **None**
894. In beef meat processing, removal of damaged or contaminated parts of carcass is known as?
- A. Carcass grading
  - B. **Carcass dressing**
  - C. Evisceration
  - D. None
895. Immediately prior to chilling, the majority of steers and heifers carcasses in US production systems are subjected to \_\_\_\_\_ to enhance the eating characteristics of beef.
- A. Cold storage
  - B. Heat treatment
  - C. **Electrical stimulations**
  - D. None
896. During chicken processing, the purpose of scalding is to?
- A. **Loosen the feathers**
  - B. Removal of feathers
  - C. Killing microbes on the skin
  - D. All
897. In poultry processing, carcass washing is done after?
- A. Scalding
  - B. Hock cutting
  - C. Slaughtering
  - D. **De-feathering**
898. During sausage production, \_\_\_\_\_ is usually added for reducing temperature in chopped meat?
- A. Preservatives
  - B. Water
  - C. **Ice**
  - D. None
899. During canning of meat, at least \_\_\_\_\_ of can height should be kept empty?
- A.  $1/4^{\text{th}}$
  - B.  $1/6^{\text{th}}$
  - C.  **$1/8^{\text{th}}$**
  - D.  $1/12^{\text{th}}$
900. During meat canning, salt is added to the broth at the rate of \_\_\_\_\_ the broth?
- A. **3%**
  - B. 4%
  - C. 5%
  - D. 6%
901. The Word "Meat" is derived from \_\_\_\_\_ word?
- A. Spanish
  - B. Latin
  - C. **English**
  - D. None

902. Red meat includes?  
A. **Beef**  
B. Chicken  
C. Fish  
D. All
903. Fish is rich in omega 3 fatty acids essential for \_\_\_\_\_?  
A. Physical health  
B. Mental health  
C. **Both physical & mental health**  
D. Bones development
904. \_\_\_\_\_ meat is prohibited in Islam?  
A. Pig  
B. Porcine  
C. Dead animal  
D. **All**
905. Increase in weight until its mature size is called \_\_\_\_\_?  
A. Aging  
B. **Growth**  
C. Development  
D. All
906. Deficiency of \_\_\_\_\_ has been linked with certain wasting and nervous diseases in sheep and cattle?  
A. **Cobalt**  
B. Iron  
C. Copper  
D. None
907. Lean red meat contains?  
A. **low fat content**  
B. High fat content  
C. High cholesterol  
D. None
908. Almost 10% RDI is achieved from\_\_\_\_\_.  
A. Riboflavin  
B. Pantothenic acid  
C. Selenium  
D. **All**
909. Biological value of beef is?  
A. 82  
B. 86  
C. **92**  
D. 96
910. Biological value of egg protein is?  
A. 70  
B. 80  
C. 90  
D. **100**
911. \_\_\_\_\_ is inversely related to fat content?  
A. **Water**  
B. Protein  
C. Water and protein  
D. None



912. water content \_\_\_\_\_ when the animal reaches to the chemical maturity.
- Increases
  - Decreases**
  - Remains same
  - None
913. As animal matures, \_\_\_\_\_ content increases.
- Fat**
  - Water
  - Both fat and water
  - None
914. Nutritional value of meat depends upon?
- Animal species
  - Breed
  - Muscular nature
  - All**
915. Protein contains?
- Carbon
  - Nitrogen
  - Sulphur
  - All**
916. Proteins are made up of \_\_\_\_\_ amino acids.
- 15
  - 20**
  - 25
  - 22
917. Amino acid contents is influenced with?
- Age of animal
  - Preservation techniques
  - Processing time & temp relationship
  - All**
918. In fresh muscle, free amino acids are?
- Glycine
  - Histidine
  - Glutamic acid
  - All**
919. Digestibility of muscle meat is \_\_\_\_\_.
- 92%
  - 94%**
  - 96%
  - 98%
920. Heating of beef for 3 hours at 160°C results in loss of \_\_\_\_\_ by 15%
- Glycine
  - Lysine**
  - Glutamic acid
  - None
921. Raw muscle meat contains \_\_\_\_\_ per 100g protein?
- 15-20g
  - 20-25g**
  - 25-30g
  - None
922. \_\_\_\_\_ proteins are also known as contractile protein?

- A. Sarcoplasmic  
 B. **Myofibrillar**  
 C. Both  
 D. All
923. Connective tissues proteins include?  
 A. Collagen  
 B. Elastin  
 C. Reticulin  
 D. **All**
924. \_\_\_\_\_ is found in large amount in ligaments of vertebrae and in the walls of large arteries?  
 A. Collagen  
 B. **Elastin**  
 C. Reticulin  
 D. None
925. \_\_\_\_\_ on hydrolysis yields gelatin  
 A. Collagen  
 B. **Reticulin**  
 C. Elastin  
 D. None
926. Muscle contains small amount of carbohydrates usually \_\_\_\_\_ % in the form of glycogen.  
 A. 0.5%  
 B. **1%**  
 C. 1.5%  
 D. 2%
927. Before rigor mortis, amount of glycogen is usually \_\_\_\_\_.  
 A. Increased  
 B. Decreased  
 C. Completely absent  
 D. **Decreased or completely absent**
928. Dark cutting meat has \_\_\_\_\_ water holding capacity.  
 A. **High**  
 B. Low  
 C. Zero  
 D. None
929. Animal fat is composed of \_\_\_\_\_.  
 A. Neutral fat  
 B. Phospholipids  
 C. **Both neutral fat & phospholipids**  
 D. None
930. Triglycerides within fat cells make up about \_\_\_\_\_ of the fat tissue?  
 A. 65%  
 B. 75%  
 C. **85%**  
 D. 95%
931. Organ meat contains higher concentration of \_\_\_\_\_ than muscular tissue.  
 A. Vitamin A  
 B. Vitamin B12  
 C. **Vitamin A & B12**  
 D. None

932. According to National Health and Medical research Council, total intake of choline should be \_\_\_\_\_?
- 550mg/d for men
  - 425mg/d for men
  - 550g/d for men
  - 425g/d for men
933. Largest sources of zinc and iron are \_\_\_\_\_.
- Chicken
  - Beef
  - Fish
  - None
934. \_\_\_\_\_ is more susceptible to stress as compared to others.
- Poultry
  - Beef
  - Fish
  - Mutton
935. During pre-slaughter inspection \_\_\_\_\_ animals should be avoided.
- Chemical treated
  - Diseased
  - Both chemical treated and diseased
  - None
936. In Islamic method of slaughtering, \_\_\_\_\_ principles are present.
- 1
  - 2
  - 3
  - 4
937. Dark, Firm and Dry (DFD) meat is cause of \_\_\_\_\_?
- Chemical treated
  - Improper handling
  - Injured
  - All
938. Non-Islamic methods include?
- Kosher
  - Jhatka
  - Sticking
  - All
939. \_\_\_\_\_ causes rapid loss of blood from brain and chest.
- Kosher
  - Jhatka
  - Sticking
  - None
940. In chemical stunning, CO<sub>2</sub> is used in the range of?
- 60-70%
  - 70-80%
  - 80-90%
  - 90-95%
941. During electrical stunning, current of \_\_\_\_\_ Hz frequency is used for less than \_\_\_\_\_ seconds.
- 25 Hz & 4 sec
  - 50 Hz & 5 sec
  - 25 Hz & 6 sec
  - 50 Hz & 7 sec

942. Skinning is divided into how many types?  
A. 1  
B. 2  
C. 3  
D. 4
943. USDA yield grade range in numerical values from?  
A. 1.0 to 5.0  
B. 1.0 to 6.0  
C. 1.0 to 7.0  
D. 1.0 to 8.0
944. Before slaughtering, animal should be allowed to access to water but held off feed for?  
A. 6-12 hrs  
B. 8-16 hrs  
C. 12-24 hrs  
D. None
945. The alkali used in caustic washes has a high pH conc. of?  
A. 0.1-0.5%  
B. 0.5-1.0%  
C. 1.0-2%  
D. 0.5-2%
946. \_\_\_\_\_ flushes out traces of remaining detergent from caustic wash?  
A. Pre-Rinse  
B. Intermediate Rinse  
C. Sanitizing Rinse  
D. None
947. \_\_\_\_\_ pushes out residual product in lines with a projectile-type product recovery system.  
A. Intermediate Rinse  
B. Push-Out  
C. Sanitizing rinse  
D. None
948. White meat includes?  
A. Fish  
B. Chicken  
C. Both fish and chicken  
D. None
949. During canning of meat, at least \_\_\_\_\_ of can height should be kept empty?  
A. 1/4<sup>th</sup>  
B. 1/6<sup>th</sup>  
C. 1/8<sup>th</sup>  
D. 1/12<sup>th</sup>
950. During meat canning, \_\_\_\_\_ is added to the broth at the rate of 3% the broth?  
A. Salt  
B. Sugar  
C. Water  
D. All

951. Milk may be defined as the whole, fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy milch animals, excluding that obtained within \_\_\_\_\_ after calving.



- B Agglutinin D Whey protein
965. The most hydrophobic casein is \_\_\_\_\_.  
 A  $\beta$ -casein C  $\gamma$ -casein  
 B  $\alpha$ -casein D  $\kappa$ -casein
966. The off-flavor problems in cheese are due to the formation of bitter peptides by \_\_\_\_\_.  
 A  $\alpha$ -casein C  $\beta$ -casein  
 B  $\gamma$ -casein D  $\kappa$ -casein
967. \_\_\_\_\_ Protein is the name commonly applied to milk serum proteins.  
 A Whey C  $\alpha$ -Lactalbumin  
 B Casein D Lactoferrin
968. The most heat stable serum protein in milk is \_\_\_\_\_.  
 A Whey C  $\alpha$ -Lactalbumin  
 B Casein D Albumin
969. Lactoperoxidase is inactivated if the milk is heated to \_\_\_\_\_ for a few seconds.  
 A 60°C C 80°C  
 B 70°C D 90°C
970. Milk from diseased udders has high \_\_\_\_\_ content, while fresh milk from a healthy udder contains only an insignificant amount.  
 A Catalase C Phosphatase  
 B Lactoperoxidase D Lipase
971. Cow milks contain \_\_\_\_\_ % of Lactose.  
 A 4.1 C 4.3  
 B 4.2 D 4.8
972. The freezing point of milk is \_\_\_\_\_ than that of pure water due to the dissolved components such as lactose and soluble salts.  
 A Lower C Slightly higher  
 B Higher D Equal to pure water
973. \_\_\_\_\_ have been found to play a major role in the heat stability of milk.  
 A Calcium and phosphate C Calcium and zinc  
 B Calcium and magnesium D Calcium and iodine
974. Adulterated milk show \_\_\_\_\_ freezing point due to lower molal concentration of lactose and salts.  
 A Decreased C Increased  
 B Slightly decreased D No change
975. Digestion of lactose presents a problem in some people as they lack \_\_\_\_\_ enzyme in their GIT.  
 A Lactose C Lactoperoxidase  
 B Alpha-d-galactosidase D Beta-d-galactosidase
976. The mandatory amount of milk fat present in anhydrous butter oil is \_\_\_\_\_.  
 A 99.5% C 99.3%  
 B 99.8% D 99.1%
977. During manufacturing of AMF temperature at pre-concentration and downstream to the plate heat exchanger is maintained at approx. \_\_\_\_\_.  
 A 50 °C C 60 °C  
 B 55 °C D 65 °C
978. Butter also naturally contains the Vitamins\_\_\_\_\_.

- A** A **C** Both A and B  
**B** D **D** None of above
979. The colour of butter varies with the content of \_\_\_\_\_.  
**A** Carotenoids **C** Vitamins  
**B** Fatty acids **D** Proteins
980. Water content of butter must be up to \_\_\_\_\_.  
**A** 10% **C** 23%  
**B** 18% **D** 16%
981. Ice cream must contains -----% of MSNF  
**A** 16% **C** 10%  
**B** 11% **D** 20%
982. A range of different \_\_\_\_\_ strains has been grown in laboratories allowing for a wide range of cultured milk products.  
**A** Coliform **C** Lactobacilli  
**B** Yeast **D** None of above
983. During the Manufacture of Anhydrous Milk Fat from cream the heavy phase is called \_\_\_\_\_.  
**A** Buttermilk **C** Yogurt  
**B** Cheese **D** None of above
984. Kefir grains are a combination of \_\_\_\_\_ in a matrix of proteins, lipids, and sugars.  
**A** Bacteria and molds **C** Bacteria and yeasts  
**B** Bacteria and fungi **D** Both A and B
985. Skim milk powder has maximum shelf life of about \_\_\_\_\_.  
**A** 6 months **C** 1 year  
**B** 3 years **D** 2.5 years
986. The water content of milk powder ranges between \_\_\_\_\_.  
**A** 2-5% **C** 2.5-5%  
**B** 3-5% **D** 3.5-5%
987. Substitute for eggs in bread and pastries are \_\_\_\_\_.  
**A** Choco powder **C** Almond powder  
**B** Milk powder **D** Baking powder
988. Solubility of roller dryer powder is \_\_\_\_\_ than spray powder.  
**A** Good **C** Poor  
**B** Average **D** Equal
989. Milk intended for whole milk powder is pasteurized at \_\_\_\_\_.  
**A** 80 – 85 °C **C** 75-85 °C  
**B** 70-75 °C **D** None of above
990. Significant changes to the microstructure of the dairy emulsion take place during \_\_\_\_\_.  
**A** Churning **C** Separation  
**B** Cooling **D** All of above
991. Fats comprising higher levels of \_\_\_\_\_ can result in firmer butters due to a higher solid fat content.  
**A** Unsaturated fatty acids **C** Both A and B  
**B** Saturated fatty acids **D** None of above
992. Overworked butter will be \_\_\_\_\_ depending on whether the fat is hard or soft.  
**A** Hard **C** Brittle  
**B** Liquid **D** Thick
993. The \_\_\_\_\_ is the deciding factor in the selection of manufacturing parameters oil and fats.  
**A** Saponification No. **C** Fatty acid  
**B** Water content **D** Iodine value
994. The iodine value of butterfat normally varies between \_\_\_\_\_.  
**A** 23-45 **C** 23-37

- B** 24-46 **D** 32-46
995. A fat spread is a food in the form of an\_\_\_\_\_.
- A** Liquid **C** Emulsion  
**B** Mixture **D** Blend
996. During manufacturing of butter, if cooling is rapid, there will be extensive nucleation of the fat, leading to the formation of\_\_\_\_\_.
- A** Emulsion **C** Disturbed texture  
**B** Coagulates **D** Crystals
997. The pressure at the nozzle of atomization system determines the\_\_\_\_\_.
- A** Density **C** Particle size  
**B** Texture **D** Consistency
998. Acidification causes \_\_\_\_\_ of the proteins in the milk.
- A** Precipitation **C** Thickening  
**B** Coagulation **D** Emulsion
999. The evaporation of the water from the droplets leads to a considerable reduction in\_\_\_\_\_.
- A** Weight **C** Diameter  
**B** Volume **D** All above
1000. \_\_\_\_\_ is a process where the oil is separated into high-melting and low-melting fats.
- A** Fractionation **C** Decholesterolisation  
**B** Saponification **D** Churning