## PU M Sc Food Science and Nutrition

### 1 of 100
112 PU_2015_389
Some enzymes require the presence of a non-protein substance if they are to catalyse a reaction. Which of the following terms is the best general term for such a substance?

- cofactor
- co-enzyme
- prosthetic group
- modulator

### 2 of 100
136 PU_2015_389
The Danger Zone for food-borne illness is the temperature range of:-

- 30 - 100 °F
- 10 - 60 °F
- 40 - 140 °F
- 20 - 90 °F

### 3 of 100
149 PU_2015_389
A common anthropometric measure for infants is:-

- Recumbent height
- Sitting height
- Standing height
- Laying height

### 4 of 100
181 PU_2015_389
A method of food preservation that does destroy microorganism and enzymes is _____.

- Drying
- Freezing
- Microwaving foods
- Pressure canning

### 5 of 100
211 PU_2015_389
The Acceptable Daily Intake (ADI) of a non.carcinogen is:-

- one-tenth of a no-observed effect level (NOEL)
- 1/1 000 of no-observed effect level (NOEL)
- 1/100 of a no-observed effect level (NOEL)

- zero

**6 of 100**

183 PU_2015_389

The apolipoprotein which forms the integral component of chylomicron is:-

- B-100
- D
- B-48
- C

**7 of 100**

111 PU_2015_389

Recurrent vomiting leads to loss of:-

- Bicarbonate
- Chloride
- Potassium
- All of these

**8 of 100**

169 PU_2015_389

Storage part of vitamin A in body:-

- Liver
- Adipose tissue
- Pancreas
- Islets of Langerhans

**9 of 100**

102 PU_2015_389

Which of the following is not involved in the biosynthesis of DNA?

- Enzymes
- Carbonic anhydrase
- Mononucleotides
- Energy from ATP

**10 of 100**

123 PU_2015_389

An example of phosphoprotein present in egg yolk is:-

- Ovovitellin
- Ovoglobulin
- Ovoalbumin

- Avidin

**11 of 100**

154 PU_2015_389

Which is a chemical that combines with a substance and sets aside?

- Emulsifier
- Stabilizer
- Sequestratants
- Humicans

**12 of 100**

177 PU_2015_389

Which of the following is not a polymer of glucose?

- Inulin
- Dextrin
- Amylose
- Cellulose

**13 of 100**

113 PU_2015_389

Palmitate has 16 carbon atoms with:-

- 2 double bonds
- 3 double bonds
- One double bond
- None of these

**14 of 100**

138 PU_2015_389

Trace minerals are those needed in amounts less than _____ mg per day in our diets.

- 5
- 50
- 100
- 200

**15 of 100**

164 PU_2015_389

Green rot in egg is due to:-

- *Pseudomonas flurescens*
- *Aspergillus niger*
- *Serratia marcescens*

- *Cladosporium*

**16 of 100**

193 PU_2015_389

_____ grams of a day's food intake should be protein.

- 65
- 45
- 35
- 55

**17 of 100**

197 PU_2015_389

Only Lactic acid bacteria can ferment sugars and nutrients in pickles because they:-

- Use acetic acid
- Produce lactic acid
- Are tolerant of salt levels
- Use a naturally occurring enzyme

**18 of 100**

139 PU_2015_389

Jack eats 1600 Kcals and 50 grams of protein per day. The percentage of total energy that comes from protein is:-

- 50%
- 12.5%
- 25%
- 3.1%

**19 of 100**

212 PU_2015_389

Cholesterol is a chemical that actually belongs to the ____ family.

- protein
- carbohydrate
- alcohol
- fat

**20 of 100**

114 PU_2015_389

All the following statements about primary gout are true except:-

- Its inheritance is X-linked recessive.
- It can be due to increased activity of PRPP synthetase.

- De novo synthesis of purines is increased in it.
- It can be due to increased activity of hypoxanthine guanine phosphoribosyl transferase.

**21 of 100**
198 PU_2015_389
The following part is absent in Leeuwenhoek's microscope:-

- Focusing Screw
- Lens
- Specimen holder
- Condenser

**22 of 100**
214 PU_2015_389
Which of the following is not a primary function of protein?

- provides good and readily available source of energy
- production of antibodies
- growth and maintenance of cells
- tissue and nerve development

**23 of 100**
131 PU_2015_389
A high-protein diet increases the risk of:-

- Parkinson's disease
- Type I diabetes
- Multiple sclerosis
- Osteoporosis

**24 of 100**
162 PU_2015_389
DEFT is based on:-

- Conductance
- Turbidity
- Direct microbial count using microscope
- Cellular activity

**25 of 100**
179 PU_2015_389
The specimen for an electron microscope is always:-

- Sliced in to thin sections
- Killed

- Stained with dyes
- Viewed directly

**26 of 100**
196 PU_2015_389
The term culture refers to the _____ growth of microorganism in media.

- Microscopic
- Rapid
- Macroscopic
- Artificial

**27 of 100**
184 PU_2015_389
One who approves the use of pesticide tolerance levels for pesticide levels in food in the US.

- NMFS
- EPA
- FDA
- USDA

**28 of 100**
166 PU_2015_389
Sunk like flavor in milk is caused by:-

- *Streptococcus lactis*
- *Callus cereus*
- *Aeromonas hydrophila*
- *Pseudomonas mephitica*

**29 of 100**
218 PU_2015_389
Which of the following is the intrinsic factor affecting the microbial growth?

- Water activity
- Packaging
- RH
- Preservatives

**30 of 100**
137 PU_2015_389
The sequence of amino acids that make up a protein molecule is specified by:-

- sex
- heredity

- age
- diet

**31 of 100**

147 PU_2015_389

To which of the following does thymine form hydrogen bonds in DNA?

- thymine
- guanine
- adenine
- cytosine

**32 of 100**

133 PU_2015_389

The process by which yeast changes sugar into carbon dioxide is called:-

- Fermentation
- Kneading
- Knocking back
- Proofing

**33 of 100**

176 PU_2015_389

Which one of the following statements concerning glucose metabolism is correct?

- An elevated level of insulin leads to a decreased level of fructose 2, 6-bisphosphatein hepatocyte
- The conversion of Glucose to lactate occurs only in the R.B.C
- Glucose enters most cells by a mechanism in which Na+ and glucose are co-transported
- Pyruvate kinase catalyses an irreversible reaction

**34 of 100**

122 PU_2015_389

Atherosclerosis can cause blood:-

- Clotting
- Thinning
- Thickening
- None of these

**35 of 100**

192 PU_2015_389

If the legal maximum of nitrite ($NO_2$) is 156 ppm, how much sodium nitrite can you `legally add to 1 kg. of meat?

- 31.2 oz

- 15.6 ounces
- 156 mg
- 78 mg

**36 of 100**

148 PU_2015_389

Best indicator for nutritional status for a child is:-

- Head circumference
- Mid arm circumference
- Chest circumference
- Rate of increase of height and weight

**37 of 100**

121 PU_2015_389

Cholesterol is the precursor of:-

- a) steroid hormones
- b) vitamin A
- c) bile salts
- d) both (a) and (c)

**38 of 100**

199 PU_2015_389

How many ATPs are formed during complete oxidation of palmitate?

- 35
- 131
- 96
- 129

**39 of 100**

194 PU_2015_389

Soy sauce is made with the use of _____.

- Bacteria
- Fungi
- Mold
- Yeast

**40 of 100**

163 PU_2015_389

Role of stabilizers:-

- To preserve flavour

- Prevents products from separating
- Provide an even texture
- Allow substances to flow freely

**41 of 100**
168 PU_2015_389
Sonti is:-

- Rice beer
- Barley beer
- Ginger beer
- Wheat beer

**42 of 100**
103 PU_2015_389
Which of the following statements is not true regarding the active site of an enzyme?

- An active site is normally a hollow or cleft on the surface of an enzyme.
- An active site contains amino acids which are important to the binding process and the catalytic mechanism.
- Substrates fit into active sites and bind to functional groups within the active site.
- An active site is normally hydrophilic in nature.

**43 of 100**
191 PU_2015_389
Anaemia is a disease resulting from a low red blood cell count. The red blood cells are the cells that carry _____ throughout the body ~ or absorption.

- Fibre
- Vitamin B12
- Iron
- Carbon dioxide

**44 of 100**
152 PU_2015_389
An obligate halophile requires high:-

- pH
- Temperature
- Salt
- Pressure

**45 of 100**
167 PU_2015_389
Hops are:-

- Not effective against bacteria
- Effective against gram positive bacteria
- Effective against gram negative as well as gram positive bacteria
- Effective against gram negative bacteria

**46 of 100**

134 PU_2015_389

Which of the following milks can form the basis of a caramel sauce?

- Powdered milk
- Buttermilk
- Evaporated milk
- Condensed milk

**47 of 100**

216 PU_2015_389

When a food scientist appraises a food using sight, smell, taste and possibly touch, this is often referred to as:-

- sensory evaluation
- extra sensory perception
- sensory perception
- sensory orientation

**48 of 100**

219 PU_2015_389

Turbidostat and chemostats are:-

- Types of sterilizer
- Types of fermenter
- Instrument to enumerate the microbial cells
- Continuous culture medium

**49 of 100**

153 PU_2015_389

A chemical with sporicidal properties is:-

- Quaternary Ammonium Compound
- Glutaraldehyde
- Alcohol
- Phenol

**50 of 100**

151 PU_2015_389

Among the following which is not cell adhesion protein?

- Selectin
- Integrin
- Catherin
- Immunoglobulin

**51 of 100**

217 PU_2015_389

Bacteria do not thrive below 40 degrees Fahrenheit or above _____ degrees Fahrenheit.

- 13
- 12
- 14
- 11

**52 of 100**

165 PU_2015_389

Heating of cream at low pressure is called:-

- Pasteurization
- Vacreartion
- Thermo sterilization
- Sterilization

**53 of 100**

132 PU_2015_389

What percentage of weight does bread lose during baking?

- 25-33 percent
- 10-13 percent
- 0-3 percent
- 16-23 percent

**54 of 100**

124 PU_2015_389

The daily water loss through gastrointestinal tract in an adult is about:-

- Less than 100 ml/day
- 400 ml/day
- 300 ml/day
- 200 ml/day

**55 of 100**

146 PU_2015_389

During parenteral nutrition, the infusion of large amounts of dextrose increases electrolyte requirements for:-

- Potassium and phosphorus
- Sodium and phosphorus
- Sodium and potassium
- Potassium and chloride

**56 of 100**

178 PU_2015_389

Two factors that accelerate rancidity in food products are _____.

- Light and moisture
- Light and soluble minerals
- Light and oxygen
- Temperature and light

**57 of 100**

213 PU_2015_389

Which is of the following food component is primarily derived from red meat and poultry?

- carbohydrates
- minerals
- ash
- protein

**58 of 100**

182 PU_2015_389

The food pyramid indicates that the group is the where you should obtain the most servings each day:-

- Bread
- Fruit
- Milk
- Vegetable

**59 of 100**

101 PU_2015_389

The major source of NH3 produced by the kidney is:-

- Alanine
- Leucine
- Glutamine
- Glycine

**60 of 100**

104 PU_2015_389
L-glutamic acid is subjected to oxidative deamination by:-

- L-glutamate dehydrogenase
- Glutaminase
- L-amino acid dehydrogenase
- Glutamine synthetase

**61 of 100**

226 PU_2015_389
Essential fatty acids serves as a precursors of:-

- Retinol
- Niacin
- Vitamin C
- Prostaglandin

**62 of 100**

221 PU_2015_389
When water is used as an ingredient in food formulations, it must be:-

- hard water
- soft water
- potable water
- purified water

**63 of 100**

243 PU_2015_389
Ergotism is due to:-

- Polypeptides
- Alkaloids
- Phenolic compounds
- None of the above

**64 of 100**

248 PU_2015_389
Father of canning is:-

- Peter Durand
- Alexander Fleming
- Nicholas Appert
- Louis Pasteur

**65 of 100**

251 PU_2015_389
The effectiveness of many chemical preservative depends primarily on the food:-

- acidity
- water content
- pH
- temperature

**66 of 100**

225 PU_2015_389
Which lipid is Saponifiable?

- a) Simple
- b) Complex
- c) Both a & b
- d) None

**67 of 100**

228 PU_2015_389
With the increase in temperature the rate of browning reaction?

- Remain constant
- First decreases and then increases followed by a constant phase
- Decreases
- Increases

**68 of 100**

244 PU_2015_389
Citreoviridin is the mycotoxin produced by:-

- *Mushroom*
- *Penicillium*
- *Fusarium*
- *Aspergillus*

**69 of 100**

246 PU_2015_389
Ghee is adulterated with:-

- Protein
- Starch
- Lipid
- Vanaspati

**70 of 100**

252 PU_2015_389
*E.coli* O157:H7 is thought to have acquired enterohemorrhagic genes from:-

- *Shigella*
- *Clostridium*
- *Bacillus*
- *Campylobacter*

**71 of 100**

223 PU_2015_389
Which one of the following uses mold to derive the final product?

- whole milk
- soysauce
- pickles
- yogurt

**72 of 100**

242 PU_2015_389
Which one is a constituent of coenzyme?

- Ascorbic acid
- Sucrase
- $B_2$
- Lipase

**73 of 100**

227 PU_2015_389
Iodine value measures:-

- Amount of carbon present
- Degree of saturation
- Number of iodine present
- Degree of unsaturation

**74 of 100**

247 PU_2015_389
Kojic acid is:-

- An acidulant used in food processing
- An acid produced during carbohydrate metabolism
- A mycotoxin
- None of the above

**75 of 100**

253 PU_2015_389
The chief spoilage organisms on smoked fish are:-

- a) Molds
- b) Bacteria
- c) both (a) and (b)
- d) Fungi

**76 of 100**

241 PU_2015_389
Paper chromatography is based on:-

- Size exclusion chromatography
- Adsorption chromatography
- Partition chromatography
- Ion-exchange chromatography

**77 of 100**

245 PU_2015_389
Aflatoxin G1 is :-

- Nephrotoxin
- Carditoxin
- Neurotoxin
- All of the above

**78 of 100**

224 PU_2015_389
Which of the following would be a requirement or function of a commercial food container?

- gas and odor protection
- resistance to impact
- degradable
- sanitary protection

**79 of 100**

222 PU_2015_389
_____ means that the product contains bacteria that can make more of the product:-

- active ingredients
- active culture
- active byproducts
- live bacteria

**80 of 100**

249 PU_2015_389
Which of the following acts as a bacteriostatic?

- Cumic acid
- Elaidic acid
- Cinnamic acid
- All of the above

**81 of 100**

299 PU_2015_389
_____ is a fructosan.

- Glycogen
- Insulin
- Cellulose
- Agar

**82 of 100**

277 PU_2015_389
Which of the following statements is incorrect regarding transport proteins?

- They are required to transport amino acids across cell membranes
- They are required to transport hydrophobic steroids across cell membranes
- They are present in cell membranes
- They serve to carry polar molecules across the hydrophobic cell membrane

**83 of 100**

274 PU_2015_389
The chief type of spoilage in sweetened condensed milk may be:-

- gas formation by sucrose fermenting yeasts
- thickening caused by micrococci
- mold colonies growing on the surface
- all of the above

**84 of 100**

271 PU_2015_389
Salmonellois is caused by the:-

- neurotoxin of *Salmonella* spp
- exoenterotoxin of *Salmonella* spp
- endotoxin of *Salmonella* spp
- enterotoxin of *Salmonella* spp

**85 of 100**

291 PU_2015_389
Why cannot fatty acids be converted into glucose in starvation?

- Fatty acids are oxidised in mitochondria and glucose is synthesised in the cytosol
- Acetyl CoA cannot be converted into pyruvate
- Fatty acids are esterified to triacylglycerols
- Fatty acids are transported on albumin which interferes with their metabolism

**86 of 100**

296 PU_2015_389
Which is an important function of cholesterol in cell membranes?

- It acts as a fluidity barrier in bacterial membranes
- It stabilises the structure of mammalian membranes
- It allows polar substances to pass through the membrane
- It increases the fluidity of the membrane at 37° C

**87 of 100**

273 PU_2015_389
Prontosil is:-

- not used as an antibacterial agent
- an effective antibacterial when used in in-vitro cultures
- an effective antibacterial both in animals as well as in in-vitro cultures
- an effective antibacterial when used in animals

**88 of 100**

263 PU_2015_389
The first transgenic plant to be produced:-

- Rice
- Tobacco
- Maize
- Cotton

**89 of 100**

276 PU_2015_389
Histidine is degraded to to α-ketoglutarate and is described as a:-

- Ketogenic amino acid
- Gluco amino acid
- Glucogenic amino acid
- Keto-gluco acid

**90 of 100**

264 PU_2015_389
The first crop plant genome sequenced:-

- Tobacco
- Rice
- Maize
- Cotton

**91 of 100**

293 PU_2015_389
Which of the following cell types or systems is not part of an innate immune response to a pathogen?

- The inflammatory response
- Cytotoxic T-lymphocytes
- Phagocytes
- Natural killer cells

**92 of 100**

297 PU_2015_389
Which of the following statements about SDS polyacrylamide gel electrophoresis is correct?

- SDS polyacrylamide gel electrophoresis separates proteins on the basis of size.
- SDS polyacrylamide gel electrophoresis separates proteins on the basis of charge.
- Wanted proteins can be tested for their biological activity after separation by SDS polyacrylamide gel electrophoresis.
- Proteins are solubilized but not denatured when separated by SDS polyacrylamide gel electrophoresis.

**93 of 100**

262 PU_2015_389
The best source of salt tolerant gene:-

- Sea anemones
- Mangroves
- Mussels
- Fishes

**94 of 100**

261 PU_2015_389
Syntrophism is a type of:-

- Mutalism
- Commensalism
- Parasitism
- Synergism

**95 of 100**

278 PU_2015_389

Which of the following statements best describes an allosteric binding site?

- It is a description of an active site which has undergone an induced fit
- It is a binding site containing amino acids with aliphatic side chains
- It is a binding site, which is separate from the active site, and affects the activity of an enzyme when it is occupied by a ligand
- It is a binding site that can accept a wide variety of differently shaped molecules

**96 of 100**

294 PU_2015_389

Where do precursor T-lymphocytes develop into fully competent but not yet activated T-cells?

- The bone marrow
- The spleen
- The lymph nodes
- The thymus gland

**97 of 100**

275 PU_2015_389

In a normal healthy individual with a total lung capacity of 6 litres:-

- The functional residual capacity would be about 2 litres
- The $FE_{V1}$ would be equivalent to about 1.5 litres
- The tidal volume at rest is about 1 litre
- The expiratory reserve volume at rest would be about 2 litres

**98 of 100**

292 PU_2015_389

Which of the following statements about Nicotinamide Adenine Dinucleotide ($NAD_+$) is correct?

- $NAD^+$ is a prosthetic group for several dehydrogenases.
- $NAD^+$ is the initial electron donor in many metabolic oxidation reactions.
- $NAD^+$ is the initial electron acceptor in many metabolic oxidation reactions
- NADH is the initial electron acceptor in many metabolic oxidation reactions.

**99 of 100**

298 PU_2015_389

_____ is a structural homopolysaccharide.

- Starch
- Chitin
- Hyaluronic acid

- Inulin

**100 of 100**

272 PU_2015_389

Esters like flavors in butter are resulted from the action of:-

- *Aeromonashydrophila*
- *P. mephitica*
- *Pseudomonas synxantha*
- *P. fragi*