

**Domain Knowledge Test for recruitment of Assistant Professor in DUVASU, Mathura**

**Subject: Livestock Products Technology**

- Q. No. 1 The principal saturated fatty acid in milk is**
- a Oleic acid
  - b Stearic acid
  - c Palmitic acid
  - d Myristic acid
- Q. No. 2 Which of the following statement is wrong?**
- a A1  $\beta$ -casein of A1 milk releases  $\beta$ -casomorphin-7 upon digestion
  - b A1 and A2  $\beta$ -caseins of A1 and A2 milks respectively differs in amino acid at the position 67
  - c A2  $\beta$ -casein has the amino acid proline at the position 67
  - d The frequency of A2 allele responsible for A2 milk among all indigenous cattle breeds of India is 100%
- Q. No. 3 Which of the following statement is correct?**
- a Milk procured from rural areas is of very poor microbiological quality, in general.
  - b In India, milk from rural areas are sent to large organised dairy plant for processing without any intervention chilling
  - c Methylene blue dye reduction test is a platform test used to assess microbiological quality of incoming raw milk.
  - d Dye reduction tests can show variations in test results particularly in case of chilled milk
- Q. No. 4 Which of the following physical condition of concentrated milk is not caused by heat instability during heat treatment?**
- a Frothing
  - b Sedimentation during storage
  - c Gelation
  - d Flocculation
- Q. No. 5 High heat treatment for pasteurization in milk intended for hard cheese making is not preferred because**
- a The cheese will have bitter flavor
  - b The coagulum/curd will be softer
  - c There will not be any coagulation as denatured  $\beta$ -lactoglobulins block  $\kappa$ -casein resulting in failure of rennet action
  - d There will not be any coagulation as denatured  $\alpha$ -lactalbumins block  $\alpha_s$ -casein resulting in failure of rennet action

- Q. No.6** A sub-pasteurization heat treatment method applied to raw milk usually between 62–65°C for 10–20 sec with intention to extend the storage life of raw milk but inadequate to destroy any pathogens of concern is known as
- Low Temperature Long Life pasteurization
  - Ultra pasteurization
  - Thermisation
  - Shelf life extension sub-pasteurization
- Q. No. 7** Which of the following statements regarding muscle contraction is false?
- On translocation of tropomyosin and consequent uncovering of thin filament, the myosin head will bind to the actin filament to form an actomyosin complex
  - ADP + Pi release from the myosin head cause conformational shift at the hinge of the myosin heavy chain (MHC) in the form of a head “tilt” towards the z- disk of the sarcomere
  - A new ATP then binds to the myosin head detaching the myosin head from the thin filament and dissociating the actomyosin complex
  - The ATP is then hydrolyzed to ADP + Pi by the ATPase on the myosin head causing the myosin head to tilt back to its original position
- Q. No. 8** Which of the following yields the leanest carcass?
- Rabbit
  - Beef
  - Mutton
  - Pork
- Q. No. 9** Milk appears white by reflecting all light wavelengths and without absorbing any, due to
- Lactose
  - Colloidal calcium
  - Micelles
  - Beta carotene
- Q. No. 10** The ISO standard that deals with food safety management system
- ISO 22000
  - ISO 14000
  - ISO 9002
  - ISO 9003
- Q. No. 11** Which of the following is not a omega-3 fatty acid?
- Oleic acid
  - n*-3 fatty acids
  - Eicosa pentaenoic acid
  - Docosahexaenoic acid

- Q. No. 12 The amino acid unique to elastin is**
- a Elastine
  - b Desmosine
  - c Hydroxy lysine
  - d Lysine
- Q. No. 13 Meat obtained from old animals are tough because**
- a The connective tissue content becomes greater than myofibrillar content
  - b The number and stability of collagen intermolecular cross linkages increases
  - c The elastin content of muscle increases during ageing
  - d The intermuscular fat increases
- Q. No. 14 Which of the following is/are characteristics of white fibers of muscle?**
- a White fibers have lower myoglobin content than red fibers
  - b White fibers have low content of glycolytic enzymes and a low oxidative enzyme activity
  - c White fibers are tonic in mode of action
  - d White fibers are having high lipid content
- Q. No. 15 Which of the following fatty acid is most abundant in animal body?**
- a Eicosapentaenoic acid
  - b Docosahexaenoic acid
  - c Oleic acid
  - d Palmitic acid
- Q. No. 16 Which of the following is not a regulatory protein?**
- a Troponin
  - b  $\alpha$ -actinin
  - c Tropomyosin
  - d Actin
- Q. No. 17 Which of the following statements is correct?**
- a Electrical stimulation shortens the time to onset of rigor mortis
  - b Electrical stimulation results in elongated sarcomeres
  - c Electrical stimulation results in increased glycogen content of meat
  - d Electrical stimulation increases the pH of meat
- Q. No. 18 Which of the following can cause cold shortening in buffalo carcasses?**
- a Improper packaging and quick freezing
  - b Rapid chilling to 10-15°C or below when the muscle pH is >6.2
  - c Rapid chilling to 10-15°C or less when the muscle is in rigor
  - d Improper stunning

- Q. No. 19 Which of the following is not necessary for muscle contraction in a carcass?**
- a Calcium ions
  - b ATP
  - c Nerve impulse/stimulation
  - d Glycogen
- Q. No. 20 Post mortem rigor onset is triggered by**
- a Glycogenolysis
  - b Postmortem glycolysis
  - c Exhaustion of ATP
  - d Exhaustion of glycogen
- Q. No. 21 Which of the following is the most energy intensive method of meat preservation?**
- a Canning
  - b Intermediate moisture meat products
  - c Irradiation
  - d Freezing
- Q. No. 22 Case hardening in dried meat products can be prevented during drying by**
- a Increasing the rate of drying
  - b Reducing the rate of drying
  - c Maintaining constant temperature and pressure around the product
  - d Reducing the pressure and increasing rate of drying around the product
- Q. No. 23 Which of the following statement indicates that meat emulsion is not an ideal food emulsion?**
- a Meat emulsion contains two phases
  - b Fat is present as dispersed phase
  - c Fat particle size varies widely and can be up to 50 microns
  - d The continuous phase is an aqueous phase consisting of salt extracted myofibrillar protein solution
- Q. No. 24 Which of the following is used as synthetic colour additive in cured meat products?**
- a Carmine
  - b Fermented rice with Angkak
  - c Paprika
  - d Erythrosine
- Q. No. 25 Which of the following statements is wrong?**
- a Texture is a sensory property
  - b Texture profile analysis can be done sensorily as well as with instruments
  - c The variation in texture among samples are bare minimal in instrumental texture profile analysis
  - d Texture is a multi parameter attribute

- Q. No. 26 Which of the following ingredient can act as phosphate replacer in meat products?**
- a Monosodium glutamate
  - b Certain types of functional native starches
  - c Added water in formulation
  - d None of the above
- Q. No. 27 The objective of preservation of meat is**
- a to kill microorganisms
  - b to inactivate enzymes
  - c to improve taste
  - d to extend the shelf life
- Q. No. 28 'Freezer burn' in frozen meat is caused by**
- a surface desiccation due to improper packaging
  - b injury to muscle tissue by enzymes during freezing
  - c burning caused by temperature fluctuations
  - d use of excessively low temperature during freezing
- Q. No. 29 Which of the following statement is false with regard to thermal processing of meat?**
- a D value reflects the resistance of an organism at a specific temperature
  - b z-value provides relative resistance of an organism to different specific temperatures.
  - c z-value helps to determine equivalent thermal process at different temperatures
  - d F-value is the measure of the capacity of a heat process to help germination of spores
- Q. No. 30 Which of the following phosphate can be used as acidulant during curing of meat?**
- a Sodium tripolyphosphate citrate
  - b Sodium hexameta phosphate
  - c Potassium pyrophosphate
  - d Sodium acid pyrophosphate
- Q. No. 31 Which of the following unit operation does not extract myofibrillar proteins during meat processing?**
- a Tumbling
  - b Mixing
  - c Massaging
  - d Mincing

- Q. No. 32** Which among the following ingredients is responsible for preservation effect in cured meat products?
- a Nitrate
  - b Nitrite
  - c Salt
  - d Ascorbate
- Q. No. 33** Which of the following equipment is used in high speed high volume emulsion sausage manufacturing lines?
- a Bowl chopper
  - b Emulsifier
  - c Vacuum tumbler
  - d Massager
- Q. No. 34** Which of the following concept/ method is used in new product development?
- a Innovation product
  - b Fresh gate method
  - c Stage-Gate process
  - d New stage system
- Q. No. 35** Strategy for detection of GMO in foods involves
- a Detection of regulatory sequences or marker genes or specific genes of GMO and their quantification
  - b Identification of metabolites of host cells
  - c Identification of specific vitamin and mineral of GMO
  - d Detection of *mav* gene
- Q. No. 36** The white muscle contains
- a Higher amount of omega 3 fatty acids
  - b Lower amount of myoglobin
  - c Lower number of sarcoplasmic reticulum
  - d Higher number of mitochondria
- Q. No. 37** The temperature of hot water in the sterilizer of a slaughter house should be not less than
- a 72°C
  - b 82°C
  - c 65°C
  - d 78°C
- Q. No. 38** The system of slaughter most suitable for an abattoir to be located in a small village in Uttar Pradesh is
- a Canpak system
  - b Continuous powered system
  - c Intermittent powered system
  - d Slaughter slab system

- Q. No. 39** A medium sized abattoir of 50000+ livestock units per year requires an area of
- a 1-2 acres
  - b 7-8 acres
  - c 2-4acres
  - d 4-6 acres
- Q. No. 40** The temperature of chilling room in an abattoir is maintained at
- a 5°C
  - b 0-4°C
  - c -18°C
  - d 10°C
- Q. No. 41** Physico-chemical process of removing soil in an meat plant is known as
- a Sanitizing
  - b Sanitation
  - c Desoiling
  - d Cleaning
- Q. No. 42** Which of the following detergent is most appropriate for modern meat processing plant?
- a Acid detergent
  - b Alkaline detergent
  - c Neutral detergent
  - d Quaternary ammonium compounds
- Q. No. 43** Which of the following method is used in primary treatment of meat plant effluents?
- a Screening
  - b Anaerobic digestion
  - c Dissolved air floatation
  - d Activated sludge process
- Q. No. 44** Which of the following is the most common physical sanitizing agent used in a meat plant?
- a Steam
  - b High pressure steam
  - c Chlorine
  - d Hot water
- Q. No. 45** Which of the following factors is not monitored during chilling of carcasses under normal operating conditions?
- a Temperature and RH
  - b Air velocity
  - c Spacing of carcasses
  - d Method of hanging carcasses

- Q. No. 46** Which of the following benefit is not obtained through electrical stimulation of carcasses in abattoir?
- a Preventing cold shortening in carcasses
  - b Improving tenderness of muscles
  - c Permitting rapid chilling of carcasses
  - d Improving keeping quality of meat
- Q. No. 47** Which of the following section is not essential in an abattoir?
- a Cloak and shower for employees
  - b Veterinary laboratory
  - c Suspect meat room
  - d Head room
- Q. No. 48** Which of the following statements is false regarding processing of meat products?
- a Nitrite when used in curing shall be added as curing mixture rather than directly as sodium nitrite.
  - b Sodium tripolyphosphates before addition to meat need to be dissolved first in small quantities of warm water and added to the formulation along with rest of water as ice.
  - c Erythorbate when intended to be used in curing brine, shall be mixed in the brine just prior to injection or immersion of meat.
  - d When curing brine is accurately prepared, level of brine injection/ brine pick-up yield will not affect the composition of the product.
- Q. No. 49** The acceptable level of “purge” in a vacuum packaged meat is:
- a 1-2%
  - b 4-5% approx.
  - c 7-10% approx.
  - d 15% approx.
- Q. No. 50** Which of the following MAP combination provides a long microbiological shelf life and a stable cherry red colour of meat?
- a 70% O<sub>2</sub>+ 30% CO<sub>2</sub>
  - b 30% O<sub>2</sub> + 30% CO<sub>2</sub> + 40% N<sub>2</sub>
  - c 60-70% CO<sub>2</sub> + 30-40% N<sub>2</sub> + 0.4% CO
  - d 70% O<sub>2</sub>+ 30% CO<sub>2</sub>+ 10%N<sub>2</sub>



- Q. No. 51 Which of the following section of Food Safety and Standards Regulations (2011) of FSSAI deals with 'sanitary and hygienic requirements for the retail meat shops'?**
- a Food Safety and Standards (Packaging) Regulation, 2018
  - b Food Safety and Standards (Prohibition and Restriction of Sales) Regulation, 2011
  - c Food Safety and Standards (Food Products Standards and Food Additives) Regulation, 2011
  - d Food Safety and Standards (Licensing and Registration of Food Businesses) Regulation, 2011
- Q. No. 52 Which of the following is least important while choosing packaging system for frozen restructured meat products?**
- a Colour
  - b Lipid oxidation
  - c Microbial spoilage
  - d Moisture loss
- Q. No. 53 Which of the following factors does not influence the colour intensity of red meat?**
- a Age
  - b Stress
  - c Technology adopted during dressing
  - d Specific gas like O<sub>2</sub>, CO<sub>2</sub> etc. in package atmosphere
- Q. No. 54 The principal microbiological safety concern in vacuum packaged refrigerated pasteurized foods of extended durability (REFPED) is**
- a Nonproteolytic *C. botulinum*
  - b *Brochothrix thermosphacta*
  - c Lactobacilli
  - d *Bacillus cereus*
- Q. No. 55 Which of the following organism is not a safety risk in chilled MAP poultry?**
- a *C. jejuni*
  - b *L. monocytogenes*
  - c *A. hydrophila*
  - d *Clostridium perfringens*
- Q. No. 56 The biological oxygen demand level mandated by FSSR (2011) for effluents emanating from meat processing units must be less than**
- a 500 mg/L
  - b 1000 mg/L
  - c 1500 mg/L
  - d 2000 mg/L

- Q. No. 57 Which of the following statements regarding livestock marketing is false?**
- a On the farm sales are the best choice for livestock producers
  - b Taking livestock to market or buying place entails transport expenditure and shrink loss to farmers account
  - c Brokers or commission agents do not take ownership of livestock
  - d Brokers or commission agents are less efficient than direct buyers in places where animals need to be bought from scattered locations and assembling and sorting for transport
- Q. No. 58 One of the lipophilic compound responsible for boar taint is**
- a Inosine
  - b Glutamate
  - c Oleic acid
  - d Skatole
- Q. No. 59 Which of the following statement is false?**
- a During contraction of muscle, H-zone width decreases
  - b During contraction of muscle, A-band width decreases
  - c During contraction of muscle, I- band width decreases
  - d During contraction of muscle, the sarcomere length decreases
- Q. No. 60 Catty odour is observed in**
- a Aged pork flesh
  - b Excessively irradiated meat
  - c Improperly canned meat
  - d DFD beef
- Q. No. 61 Throughout the world the 'live bird shrink' during transport is ordinarily borne by**
- a Transporters/ hauliers
  - b Owners of processing plant
  - c Government
  - d Farmers
- Q. No. 62 Pasteurization of liquid egg products targets reliable destruction of**
- a *Listeria monocytogenes*
  - b *Salmonella* sp.
  - c *Coxiella burnetti*
  - d *Clostridium botulinum*
- Q. No. 63 Which of the following ingredient is essential for development of cured colour and cured flavour?**
- a Nitrite
  - b Nitrate
  - c Salt
  - d Ascorbate

- Q. No. 64 Usual average dead on arrival birds at broiler processing plant can be**
- a 0.25-0.5 percent
  - b 4-5 percent
  - c 10 percent
  - d 15 percent
- Q. No. 65 Optimizing water usage in broiler processing plant to possible minimum level can result in**
- a Improved economics of plant and lowered adverse environmental effect
  - b Hygienically poor production and increased microbial load
  - c Reduced labour cost and improved profitability
  - d Increased microbial load and higher effluent treatment cost
- Q. No. 66 Which of the following statement most appropriately describes Good Manufacturing Practices (GMPs) in a poultry processing plant?**
- a The plant has necessary infrastructure to produce safe and wholesome meat
  - b The plant follows necessary hygienic procedures to produce safe and wholesome meat
  - c The plant has necessary infrastructure and follows necessary hygienic procedures to produce safe and wholesome meat
  - d The plant has necessary infrastructure, follows necessary hygienic procedures to produce safe and wholesome meat and maintains the infrastructure in appropriate condition
- Q. No. 67 Which of the following operations in broiler processing is determined by marketing of poultry?**
- a Slaughter method
  - b Scalding method
  - c Slaughter method and scalding method
  - d Line speed
- Q. No. 68 'Level of automation' in head removal in a broiler slaughter and dressing line can determine**
- a Methods of stunning, bleeding, bleeding time, method of evisceration, chilling and packaging
  - b Methods of stunning, bleeding and bleeding time
  - c Methods of bleeding and bleeding time
  - d Methods of preservation and marketing
- Q. No. 69 Which of the following appropriately describes a poultry roll?**
- a Restructured meat product
  - b Sectioned and reformed product
  - c Shelf stable product
  - d Intermediate moisture meat product

- Q. No. 70** Removal of which of the following ingredient is necessary before drying of egg liquids?
- a Sucrose
  - b Proteins
  - c Unsaturated fatty acids
  - d Glucose
- Q. No. 71** Which of the following is not a functional property of egg?
- a Coagulation
  - b Foaming
  - c Crystallization
  - d Emulsification
- Q. No. 72** Which of the following unit operation is typical of section and reformed meat product manufacture?
- a Tumbling
  - b Mixing
  - c Emulsification
  - d Chopping
- Q. No. 73** Which of the following liquids contains highest viscosity?
- a Egg albumen
  - b Whole egg
  - c Salted egg yolk
  - d Sugared egg yolk
- Q. No. 74** During whole egg powder manufacturing which of the following ingredient is added to egg liquid to retain whipping quality (loss of foaming power) before drying?
- a Sugar
  - b Salt
  - c Sodium silico aluminate
  - d Sodium tripolyphosphate
- Q. No. 75** Which of the following statement regarding development of Maillard browning during drying of foods is false?
- a It proceeds rapidly when meat is dried to 15-20% moisture
  - b Drying must be scheduled such that the drying passes through the moisture range of 15-20% rapidly to minimize the time for Maillard browning
  - c It can be controlled by removing reducing sugars, if any, in the product formulation
  - d Addition of sorbitol in formulation does not inhibit maillard browning.

- Q. No. 76 Which of the following statements is not true regarding intermediate moisture meat products?**
- a They are ready-to-eat products without any need for reconstitution or preparation prior to consumption
  - b The major hurdle employed is reduction of water activity along with other hurdles
  - c They must strictly contain a moisture content between 15-50% and  $a_w$  between 0.6-0.85
  - d They may spoil by yeast and moulds if care is not taken by addition of fungistats
- Q. No. 77 Which of the following ingredients when used in frankfurter sausage formulation gives antibotulinal effect?**
- a Sodium chloride
  - b Ascorbate
  - c Nitrite
  - d  $\beta$ -glucono- $\delta$ - lactone
- Q. No. 78 Which of the following statement regarding freezing is true?**
- a It is a short term method of preservation
  - b It inactivates parasites, viruses and other microbes
  - c It inactivates toxins produced by microbes
  - d The shelf life of frozen products is limited by lipid oxidation and changes in texture and organoleptic qualities.
- Q. No. 79 Which of the following factors deployed during meat pickle preparation act as hurdles to microbial growth?**
- a  $a_w$ , pH, and heat
  - b  $a_w$ , pH,  $E_h$ , antimicrobial substances and heat
  - c pH, spices and heat
  - d  $a_w$ , pH,  $E_h$ , atmosphere, antimicrobial substances and heat
- Q. No. 80 Soy lecithin is an example for**
- a Reducing agent
  - b Emulsifier
  - c Oxidizing agent
  - d Flavor enhancer
- Q. No. 81 Which of the following is a shelf stable meat product?**
- a Franfurter
  - b Biltong
  - c Hamburger
  - d Weiner

- Q. No. 82 Which is the country of origin of Mozzarella cheese?**
- a Switzerland
  - b Germany
  - c Turkey
  - d Italy
- Q. No. 83 Which of the following statement is false with regard to thermal processing of meat?**
- a D value = reciprocal of the slope of the survivor curve
  - b z-value=reciprocal of the slope of the TDT curve
  - c  $F_0 = D_r (\log a - \log b)$  where, a is the number of cells in the initial population and b is the number of cells in the final population
  - d 12-D concept refers to minimum heat process that reduce the probability of survival of the most resistant *Clostridium tetani* spores to  $10^{-12}$  during canning of meat products
- Q. No. 84 During grading, carcasses of which food animal are segregated into cuttability grades?**
- a Cattle
  - b Sheep
  - c Goat
  - d Pigs
- Q. No. 85 Cow milk as per recent Food Safety Standards (Food Products Standards and Food Additives) 13th Amendment Regulations 2017 shall contain**
- a 3.2 percent fat and 8.3 percent SNF
  - b 3.0 percent fat and 9.0 percent SNF
  - c 3.0 percent fat and 8.5 percent SNF
  - d 1.5 percent fat and 8.5 percent SNF
- Q. No. 86 Which of the following statement regarding milk souring is not correct?**
- a Lactose is converted to lactic acid during souring
  - b Lactic acid is not responsible for sour acid flavour
  - c Souring is principally brought by yeast fermentation
  - d Sour flavor is due to volatile acids and compounds
- Q. No. 87 Which of the following cut-up part of poultry is more highly perishable under chilled (fresh) marketing?**
- a Breast
  - b Back
  - c Leg
  - d Wings

**Q. No. 88** Which of the following retort pouch laminate is not suitable for microwave reheating?

- a OPA-PVdC-CPP
- b PET-OPA-CPP
- c PET-Al-CPP
- d AlO<sub>x</sub> PET-OPA-CPP

**Q. No. 89** Which of the following biobased packaging materials are fully biodegradable?

- a Third generation materials
- b Seventh generation materials
- c Second generation materials
- d First generation materials

**Q. No. 90** Which of the following characteristic of the materials used for packaging pasteurized toned milk is necessary to prevent loss of nutrients and development of off-flavours?

- a Should not transmit sunlight
- b Should not transmit more than 8 percent of incident light at 500 nm  $\lambda$  and not more than 2 percent at 400 nm  $\lambda$
- c Should be transparent completely
- d Should be completely dark

**Q. No. 91** Consider the following statements regarding packaging of frozen meat-

- i. Ionomer film can be used for packaging to keep the bright red colour for one year when stored in dark at -20°C.
- ii. When frozen meat is exposed to light, immediately the red colour begins to darken.
- iii. The freezer burn can occur even when the packaging material has adequate moisture vapour barrier and with package head space eliminated.
- iv. Oxidative changes are effectively reduced through vacuum packaging.

**Which of the above statement(s) is/are correct?**

- a (i) is correct
- b (i) and (ii) are correct
- c (i), (iii) and (iv) are correct
- d (i), (ii), (iii) and (iv) are correct

**Q. No. 92** Which of the following when used in packaging is classified as active packaging?

- a Time-temperature Indicators
- b Quality Indicators
- c RFID tags
- d Oxygen absorbers

- Q. No. 93** A packaging is classified as intelligent packaging when which of the following is used in it?
- a Microwave doneness indicators
  - b Microwave susceptors
  - c Self heating cans
  - d Antioxidant release pouches
- Q. No. 94** Which of the following packaging material is suitable for use in dehydrated and freeze dried meat products?
- a Linear low density polyethylene
  - b Poly vinyl chloride
  - c PA-LDPE coextruded as 5 layer film
  - d Polystyrene
- Q. No. 95** Which of the following packaging is used in *sous vide* products?
- a Controlled atmosphere packaging
  - b Canning
  - c Retort pouch packaging
  - d Vacuum packaging
- Q. No. 96** Which of the following statement about least cost formulation (LCF) is false?
- a Least cost formulation is based on linear programming technique
  - b LCF requires basic information on constraints and limitations of various raw materials required in formulation of a particular product
  - c The composite formula model is used whenever there are limitations in supplies of ingredients or in production capacity and LCF can generate competitive least cost formulas for several products
  - d The multiformula model could be used as a management guide for decisions relative to product mix and pricing strategy
- Q. No. 97** The tolerance limit for DDT on fat basis in milk and milk products is
- a 1.25 ppm on a fat basis
  - b 25 ppm on a fat basis
  - c 1.25 ppm on whole basis
  - d 25ppb on whole basis
- Q. No. 98** Commercial cold storage of butter is carried out at
- a  $-10^{\circ}\text{C}$  to  $-12^{\circ}\text{C}$
  - b  $-23^{\circ}\text{C}$  to  $-29^{\circ}\text{C}$
  - c  $0^{\circ}\text{C}$  to  $4^{\circ}\text{C}$
  - d  $-5^{\circ}\text{C}$  to  $-7^{\circ}\text{C}$



- Q. No. 99 Which of the following is used as emulsifier in ice-cream mix?**
- a Sodium alginate
  - b Diglycerides
  - c Carboxy methyl cellulose
  - d Carageenan
- Q. No.100 Currently, the price of milk is scientifically determined based on**
- a Fat content or lactometer reading
  - b Solids not fat (SNF) content
  - c Fat and SNF content
  - d Fat and minerals content
- Q. No.101 The colour of whey is due to the greenish yellow pigment**
- a Sulfglobin
  - b Flavin Adenine Dinucleotide
  - c Riboflavin
  - d Lactoglobulin
- Q. No.102 .....is used legally in detection of adulteration of milk with water?**
- a Freezing point determination
  - b Chilling point depression
  - c Lactose concentration detection
  - d Fat percent
- Q. No.103 Which of the following enzyme present in milk, along with thiocyanate and peroxide, is exploited in short term preservation of milk in developing countries?**
- a Peroxidase
  - b Lactoperoxidase
  - c Xanthine oxidase
  - d Alkaline phosphatase
- Q. No.104 Which of the following is not 'true constituent' of milk?**
- a Milk fat
  - b Casein
  - c Lactose
  - d Lactalbumin
- Q. No.105 Which of the following is not a coagulated milk product?**
- a Cheese
  - b Yoghurt
  - c Khoa
  - d Kulfi

- Q. No.106** Which of the following is an intrinsic factor that influences the growth of microorganisms?
- a Atmospheric composition
  - b Relative humidity
  - c Moisture content
  - d Temperature
- Q. No.107** The temperature at which meat freezes is
- a  $-18^{\circ}\text{C}$
  - b  $-1$  to  $-2^{\circ}\text{C}$
  - c  $0^{\circ}\text{C}$
  - d Exactly at  $-1.5^{\circ}\text{C}$
- Q. No.108** Which of the following condition observed in meat is not a fungal spoilage?
- a Whisker
  - b White spot
  - c Bone taint
  - d Black spot
- Q. No.109** Which of the following is not a hygienic practice in an abattoir?
- a Reverse knife technique
  - b Multiple knife technique
  - c Stunning of animals
  - d Wearing proper uniform
- Q. No.110** z-value refers to
- a Time taken at a constant temperature to reduce the surviving bacteria in a suspension to 10% of their original number.
  - b Time taken at  $250^{\circ}\text{F}$  for heat process to destroy spores or vegetative cells
  - c Degrees F required for the thermal destruction curve to traverse one log cycle
  - d Degrees F required for thermal death point to traverse two log cycle
- Q. No.111** Thaw rigor results in
- a Tough meat
  - b Tough, dry and unpalatable meat
  - c Dark coloured meat
  - d Tender meat
- Q. No.112** Which of the following standards are considered as harmonious standard for countries under WTO?
- a Codex standards
  - b USDA standards
  - c BIS standards
  - d EEC standards

- Q. No.113 Ageing of meat**
- a Improves shelf life
  - b Improves flavour
  - c Improves tenderness and flavor of meat
  - d Improves shelf life and tenderness but decreases flavour
- Q. No.114 Water activity is defined as**
- a ratio of vapour pressure of food to vapour pressure of pure water at 0°C
  - b ratio of vapour pressure of food to vapour pressure of pure water at same temperature
  - c ratio of vapour pressure of pure water to vapour pressure of food
  - d ratio of vapour pressure of saturated salt solution to vapour pressure of food
- Q. No.115 Which of the following statement regarding radication is wrong?**
- a It reduces number of viable specific non-sporing pathogens to nil
  - b It is considered equivalent of pasteurization in milk
  - c It uses higher irradiation dosage than radurization but lesser than radappertization
  - d It destroys enzymes and viruses
- Q. No.116 Exudation of fluid on thawing (drip) of frozen meat is influenced by**
- a Rate and extent of freezing
  - b Rate and extent of chilling
  - c Rate of chilling of meat
  - d Atmosphere surrounding the meat
- Q. No.117 Which of the following is the largest constituent in muscle on dry weight basis?**
- a Protein
  - b Fat
  - c Water
  - d Iron
- Q. No.118 Which of the following operation does not influence the value of hides?**
- a Stunning method
  - b Fleshing
  - c Mechanical dehiding
  - d Ripping Pattern
- Q. No.119 ISO 22000:2018 does not contain**
- a PRPs and OPRPs
  - b GMPs
  - c HACCP and risk assessment
  - d Environmental safety
- Q. No.120 Which method of rendering is commonly adopted in modern meat industries of India?**
- a Continuous high temperature rendering
  - b Continuous low temperature wet rendering
  - c Batch wet rendering
  - d Batch dry rendering

### KEY: Livestock Products Technology

Question No.	Answer	Question No.	Answer	Question No.	Answer
1.	c	41.	d	81.	b
2.	d	42.	b	82.	d
3.	d	43.	c	83.	d
4.	a	44.	d	84.	d
5.	b	45.	d	85.	a
6.	c	46.	d	86.	c
7.	b	47.	d	87.	c
8.	a	48.	d	88.	c
9.	c	49.	a	89.	a
10.	a	50.	c	90.	b
11.	a	51.	d	91.	c
12.	b	52.	c	92.	d
13.	b	53.	c	93.	a
14.	a	54.	a	94.	c
15.	c	55.	d	95.	d
16.	d	56.	c	96.	c
17.	a	57.	d	97.	a
18.	b	58.	d	98.	b
19.	c	59.	b	99.	b
20.	c	60.	c	100.	c
21.	d	61.	d	101.	c
22.	b	62.	b	102.	a
23.	c	63.	a	103.	b
24.	d	64.	a	104.	d
25.	c	65.	a	105.	d
26.	b	66.	d	106.	c
27.	d	67.	c	107.	b
28.	a	68.	b	108.	c
29.	d	69.	b	109.	c
30.	d	70.	d	110.	c
31.	d	71.	c	111.	b
32.	c	72.	a	112.	a
33.	b	73.	c	113.	c
34.	c	74.	a	114.	b
35.	a	75.	d	115.	d
36.	d	76.	c	116.	a
37.	b	77.	c	117.	a
38.	d	78.	d	118.	a
39.	c	79.	d	119.	d
40.	b	80.	b	120.	b