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P.G. Entrance Examination, May - 2023**M.Sc. FOOD SCIENCE AND TECHNOLOGY****Sub. Code : 58724****Day and Date : Wednesday, 10 - 05 - 2023****Total Marks : 100****Time : 01.00 p.m. to 02.30 p.m.**

- Instructions :**
- 1) All questions are compulsory.
 - 2) Each question carries 1 mark.
 - 3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
 - 4) Follow the instructions given on OMR sheet.
 - 5) Rough work shall be done on the sheet provided at the end of question paper.

- 1) Sucrose is made up of _____
 - A) Glucose and Galactose
 - B) Glucose and Lactose
 - C) Lactose and Glucose
 - D) Glucose and Fructose

- 2) The phase change that results from a solid going into the liquid phase is
 - A) Melting
 - B) Boiling
 - C) Vaporization
 - D) Sublimation

- 3) Proteins are formed primarily from _____ bonds.
 - A) glycosidic
 - B) peptide
 - C) phosphodiester
 - D) disulphide

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- 4) The structure in which all peptide chains are stretched out to full extension and laid side by side through intermolecular hydrogen bonds is called _____
- A) α -helix
B) β -pleated sheet
C) tertiary structure
D) quaternary structure
- 5) Chemically, fats and oils are
- A) acids
B) alcohols
C) esters
D) alkenes
- 6) Anti-oxidant activity is present in
- A) β -Carotene
B) Retinol
C) Retinoic acid
D) All of these
- 7) Which of the following are examples of macro minerals?
- A) Sodium
B) Calcium
C) Chloride
D) All of the above
- 8) Degree of Unsaturation of lipid can be measured by _____
- A) Saponification Value
B) Iodine Number
C) Polenske Number
D) RM Number
- 9) Smoke point of Butter is _____ °C
- A) 600
B) 500
C) 150
D) 550

10) The most important epimer of glucose is

- A) Galactose
- B) Fructose
- C) Arabinose
- D) Xylose

11) Milk is deficient of which mineral?

- A) Phosphorus
- B) Sodium
- C) Iron
- D) Potassium

12) Which of the following is located in the mitochondria?

- A) Cytochrome oxidase
- B) Succinate dehydrogenase
- C) Dihydrolipoyl dehydrogenase
- D) All of these

13) The power house of the cell is

- A) Nucleus
- B) Cell membrane
- C) Mitochondria
- D) Lysosomes

14) The Starch is a

- A) Polysaccharide
- B) Monosaccharide
- C) Disaccharide
- D) None of these

15) The carbohydrate reserved in human body is

- A) Starch
- B) Glucose
- C) Glycogen
- D) Inulin

16) An example of chromoprotein is

- A) Hemoglobin
- B) Sturine
- C) Nuclein
- D) Gliadin

17) Essential fatty acid:

- A) Linoleic acid
- B) Linolenic acid
- C) Arachidonic acid
- D) All these

18) A high fiber diet is associated with reduced incidence of

- A) Cardiovascular disease
- B) C.N.S. disease
- C) Liver disease
- D) Skin disease

19) Anemia is defined as a lack of _____ in the diet.

- A) Sodium
- B) Calcium
- C) Iron
- D) None of the above

20) Goiter is disease caused by deficiency of

- A) Zinc
- B) Iron
- C) Vitamin A
- D) Iodine

21) Compound microscope was discovered by

- A) Antony von
- B) Pasteur
- C) Johnsen & Hans
- D) None of these

- 22) The most common mode of cell division in bacteria is
- A) Binary fission
B) Transverse binary fission
C) Longitudinal binary fission
D) None of these
- 23) The organisms which can grow best in the presence of a low concentration of oxygen
- A) Aerophilic
B) Microaerophilic
C) Aerobic
D) Anaerobic
- 24) Listeriosis was _____disease.
- A) Food borne
B) Water borne
C) Milk borne
D) Air borne
- 25) Batch fermentation is also called
- A) Closed system
B) Open system
C) Fed-Batch system
D) Sub-merger system
- 26) Most spoilage bacteria grow at
- A) acidic pH
B) alkaline pH
C) neutral pH
D) any of the pH
- 27) Yeast and mould count determination requires-
- A) nutrient agar
B) acidified potato glucose agar
C) MacConkey agar
D) violet Red Bile agar

- 28)** The organism which grows best above 45°C are called
- A) psychophilic
 - B) mesophilic
 - C) thermophilic
 - D) any of these
- 29)** Quantitative measurement of bacterial growth can be carried out by measuring
- A) cell count
 - B) cell mass
 - C) cell activity
 - D) all of these
- 30)** Botulism is caused by the presence of toxin developed by
- A) *Clostridium tyrobutyricum*
 - B) *Clostridium sporogenes*
 - C) *Clostridium botulinum*
 - D) None of these
- 31)** Golden rice is a source of
- A) Fatty acids
 - B) Vit. A
 - C) Vit.E
 - D) Citric acid
- 32)** Vitamin K is also known as
- A) Antisterility vitamin
 - B) Coagulating vitamin
 - C) Vitamin B1
 - D) Vitamin B3
- 33)** Minamata disease related to
- A) Methyl Mercury
 - B) Uranium
 - C) Methyl Cyanide
 - D) Lead

- 34)** A hybrid is also known as?
- A) often homozygous
 - B) heterozygous
 - C) homozygous
 - D) all of these
- 35)** PCR and restriction fragment length polymorphism are the techniques for
- A) Study of enzymes
 - B) Genetic fingerprinting
 - C) Genetic transformation
 - D) DNA sequencing
- 36)** Which technique is used to introduce genes into dicots?
- A) electroporation
 - B) particle acceleration
 - C) microinjection
 - D) Ti plasmid infection
- 37)** Lichen involves two organisms as
- A) virus and bacteria
 - B) algae and bacteria
 - C) algae and fungi
 - D) fungi and mosses
- 38)** The proteins that forms the walls of the microtubules are
- A) actin
 - B) tubulin
 - C) pectin
 - D) hydroxyproline
- 39)** A genetically engineered microorganism used successfully in bioremediation of oil spills is a species of
- A) Trichoderma
 - B) Bacillus
 - C) Xanthomonas
 - D) Pseudomonas

40) What are the main constituents of culture for animal cell growth?

- A) Glucose and Glutamine
- B) Growth factors
- C) Cytokines
- D) All of these

41) Which of the following are voluntary standards?

- A) Food Safety and Standards Act, 2006
- B) The Essential Commodities Act, 1955
- C) The Insecticides Act, 1968
- D) Codex Alimentarius Standards

42) Who among the following is most at risk to food poisoning?

- A) Elder people
- B) Toddlers, babies, and pregnant women
- C) Individuals who are already unwell
- D) All of the above

43) PFA is abbreviated as

- A) Prevention of Food Act
- B) Protection of Food Act
- C) Prevention of Food Adulteration Act
- D) None of the above

44) Adulteration occurs at what point in the process?

- A) Producer
- B) Distributor
- C) Retailer
- D) All of the mentioned

- 45) Chromatography is used
- A) to separate mixtures
 - B) to purify compounds
 - C) to test the purity of compounds
 - D) all of these
- 46) Soxhlet Extraction method is used for determining the _____ content of food.
- A) Moisture
 - B) Fat
 - C) Protein
 - D) Mineral
- 47) _____ is not a sensory property.
- A) Taste
 - B) Smell
 - C) Brix
 - D) Texture
- 48) Strach is adulterated with _____
- A) Chalk Powder
 - B) Brick Powder
 - C) Both A and B
 - D) None of these
- 49) ISO 9001 sets out the criteria for a _____
- A) quality management system
 - B) quantity management system
 - C) qualified marketing system
 - D) quality marketing system
- 50) Hazard identification mainly focus on _____
- A) Chemical source and concentration
 - B) Chemical exposure
 - C) Chemical analysis
 - D) Chemical pathway

- 51) Fruits and vegetables are graded based on their ____ and ____.
- A) size, shape
 - B) smell, shape
 - C) color, size
 - D) smell, color
- 52) _____ is the transfer of heat from one particle to another by contact.
- A) Conduction
 - B) Radiation
 - C) Convection
 - D) Combustion
- 53) _____ is the transfer of energy in the form of electromagnetic waves.
- A) Compulsion
 - B) Convection
 - C) Radiation
 - D) Conduction
- 54) Vinegar usually has an acetic acid content of ____ percent.
- A) 6
 - B) 4
 - C) 7
 - D) 9
- 55) _____ containers come in direct contact with the food.
- A) Secondary
 - B) Tertiary
 - C) Primary
 - D) All of the above
- 56) _____ drying is the most used method for producing milk powders.
- A) Wet
 - B) Spray
 - C) Heat
 - D) Air

57) _____ flour has a slightly higher percentage of gluten and a much stronger and more elastic gluten than other types of flour.

- A) Bread
- B) Pastry
- C) Cake
- D) Rice

58) The principal ingredient of candies, including chocolate, is the _____.

- A) eggs
- B) sweetener
- C) milk
- D) butter

59) _____ is an alcoholic beverage made from fermented grape juice.

- A) Wine
- B) Scotch
- C) Beer
- D) Whiskey

60) Grapes for wine are harvested when they contain the optimum balance of _____ and acidity.

- A) color
- B) sugar
- C) size
- D) alcohol

61) Use of several methods like temperature (high or low), control of acidity, control of water activity for preservation of food is known as

- A) Hurdle technology
- B) Mixed technology
- C) Stumbling technology
- D) Multiple technology

- 62)** Lecithin is used as a/an
- A) Antimicrobial agent B) Foaming agent
C) Leavening agent D) Emulsifier
- 63)** The anti-nutritional factor present in egg is
- A) Albumin B) Avidin
C) Biotin D) Prolamine
- 64)** Monosodium glutamate is used as
- A) Artificial sweetener B) Anticaking agent
C) Flavour enhancer D) Cleaning agent
- 65)** Which of the following is the class 1 preservative?
- A) Sodium benzoate B) Potassium sorbate
C) Sucrose D) All of the above
- 66)** Theobroma cacao is botanical name of
- A) Coconut B) Vanilla
C) Cocoa D) None of the above
- 67)** Roasting of coffee leads to
- A) Moisture reduction B) Flavour generation
C) Both (A) and (B) D) Either (A) or (B)

68) Principal component of pepper is

- A) d - pinene
- B) limonene
- C) eugenol
- D) anethole

69) Which of the following is sulphur containing spice?

- A) Dill
- B) Asafoetida
- C) Clove
- D) Vanilla

70) A widely used material for packaging of carbonated soft drinks and water is

- A) HDPE
- B) PET
- C) PP
- D) PC

71) What is WVTR?

- A) Water to Vapour transient rate
- B) Water to vapour transfer rate
- C) Water vapour transfer rate
- D) Water to vapour total ratio

72) Lard is obtained from

- A) Coconut
- B) Hogs
- C) Soybean
- D) Beef

73) Citral is obtained from

- A) Peppermint
- B) Lemongrass oil
- C) Orange
- D) Mango

74) Chicken is classified on the basis of

- A) Fat content
- B) Protein content
- C) Age of the bird
- D) None of the above

75) The proteolytic enzymes used in tenderization of meat are

- A) Papain
- B) Bromelin
- C) Ficin
- D) All of the above

76) Which of the following is used as color fixative agent in curing of meat?

- A) Common salt
- B) Sugar
- C) Sodium nitrite
- D) None of the above

77) Myoglobin is

- A) Protein
- B) Lipid
- C) Carbohydrate
- D) Vitamin

78) The chief muscle pigment is

- A) Myoglobin
- B) Myoerythrin
- C) Myocyanin
- D) Myocholine

79) Buffer flavour is due to

- A) Ammonia
- B) Diacetyl
- C) Ethylene
- D) Vanillin

80) As per the FPO regulations amount of preservatives added to canned fruits must not exceed

- A) 5 ppm
- B) 0.5 ppm
- C) 0.05 ppm
- D) Not permitted

81) Moisture content of dehydrated onion should not exceed

- A) 16%
- B) 8%
- C) 4%
- D) 2%

82) Pine apple is

- A) Compound fruit
- B) Aggregate fruit
- C) Pome
- D) Simple fruit

83) Chip Sona I is processing variety of

- A) Tomato
- B) Potato
- C) Banana
- D) Tapioca

84) Which of the following statements is/ are correct?

- A) Jelly is made from fruit pulp
- B) Jelly have the TSS of 65.5°bx
- C) Jelly can be converted to jam by altering pH
- D) None of the above

85) In high methoxy pectin the amount of methylation is

- A) 25%
- B) 30-36%
- C) 40-46%
- D) 50-60%

86) What is KMS?

- A) Kilogram meter second
- B) Potassium metabisulphide
- C) Potassium magnesium sulphate
- D) Kilogram of magnesium sulphide

87) Fruit juices have

- A) 10% TSS
- B) 20% TSS
- C) 25% TSS
- D) 40% TSS

88) Fruit beverages have TSS of

- A) 5%
- B) 10%
- C) 15%
- D) 20%

89) Moisture content of banana is nearly

- A) 10%
- B) 40%
- C) 80%
- D) 95%

90) Which of the following can be used for the preservation of breads and baked goods?

- A) Nitrites
- B) Propionates
- C) Benzoates
- D) Sugar

91) Heating of the frozen food is termed as

- A) Dehydrofreezing
- B) Thawing
- C) Freeze drying
- D) None of the above

92) pH range of high acid foods is

- A) 5.3 -7
- B) below 3.7
- C) 6.5-7.8
- D) none of the above

93) Which of the following is being used in immersion freezing?

- A) Glycol
- B) Dry ice
- C) Ammonia
- D) All of the above

94) Sulphur dioxide is much effective against

- A) Yeast
- B) Mold
- C) Bacteria
- D) All of the above

95) Nisin is used as

- A) An antimicrobial agent
- B) An emulsifier
- C) A stabilizer
- D) A acidulant

96) Anticaking agents are

- A) Those used to destroy the cake while disposing the spoiled cakes
- B) Those used to maintain the free flowing nature of granular or powdered products
- C) Those used to kill microorganisms growing cakes
- D) Those used to maintain the shape of cakes and pastries

97) Baking powder is used in baking as

- A) Antimicrobial agent
- B) Anticaking agent
- C) Leavening agent
- D) None of the above

98) Sugar more than _____ acts as preservative.

- A) 10%
- B) 40%
- C) 70%
- D) 95%

99) For manufacturing of biscuits, wheat variety used is

- A) Soft wheat
- B) Hard wheat
- C) Durum wheat
- D) Other

100) Pasta products are prepared from _____

- A) Hard wheat
- B) Soft wheat
- C) Durum wheat
- D) Buckwheat flour



Rough Work

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