



BRAINWARE UNIVERSITY
Term End Examination 2020 - 21
Programme – Master of Science in Microbiology
Course Name – Food Microbial Technology
Course Code - MMB301

Semester / Year - Semester III

Time allotted : 75 Minutes

Full Marks : 60

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

1. *(Answer any Sixty)*

(i) Acid content in Kimchi food after 3-4 days fermentation

- | | |
|----------|----------|
| a) 0.008 | b) 0.006 |
| c) 0.06 | d) 0.024 |

(ii) Olives prepared by fermentation of olive fruits for

- | | |
|---------------|--------------|
| a) 6-8 days | b) 6-8 weeks |
| c) 6-8 months | d) One month |

(iii) Fermented Olives contains

- | | |
|-------------------------------|------------------------------|
| a) Both gram+, gram- bacteria | b) Only gram+ bacteria |
| c) Only gram- bacteria | d) No such bacteria is found |

(iv) Cottage cheese is an example of

- | | |
|------------------------|----------------------|
| a) Soft unripened | b) Soft ripened |
| c) Semi soft unripened | d) Semi soft ripened |

(v) Cream cheese contains

- | | |
|------------------|---------------|
| a) Lactococcus | b) Bacillus |
| c) Streptococcus | d) Penicillin |

(vi) Cheese is enriched with

- a) Vit-D
- b) Vit-A
- c) Vit-E
- d) Vit-K

(vii) Srikhand helps the absorption of calcium with ____

- a) Vit-A
- b) Vit-C
- c) Vit-B
- d) Vit-E

(viii) Agaricus species is called

- a) Oyster mushroom
- b) Button mushroom
- c) Milky mushroom
- d) Shiitake mushroom

(ix) Amanita species come under

- a) Poisonous mushroom
- b) Edible mushroom
- c) Medicinal mushroom
- d) Puffball

(x) Mushroom 'Spawn" refers

- a) Mycelial vegetative culture
- b) Mycelial inoculum on cereal grain
- c) Mycelial inoculum on substrate
- d) Fruit body tissue

(xi) Phenotypic traits except for color, the Crimini mushroom is similar to

- a) Oyster mushroom
- b) Milky mushroom
- c) Paddy straw mushroom
- d) Button mushroom

(xii) Spore bearing part of the mushroom fruit body is

- a) Lower part of the gill
- b) Upper part of the gill
- c) Stipe
- d) On vegetative culture medium

(xiii) Spawn maturation of oyster mushroom takes place within

- a) 12-14 hours
- b) 12-14 weeks

c) 12-14 months

d) 12-14 days

(xiv) Lentinula edodes is an example of

a) Oyster mushroom

b) Shiitake mushroom

c) Button mushroom

d) Milky mushroom

(xv) Natto food is originated from

a) Nigeria

b) China

c) Korea

d) Japan

(xvi) The water content in edible mushroom found

a) >90%

b) 70-90%

c) 50-60%

d) <50%

(xvii) Edible mushroom was first discovered by French Botanist JP de Tournefort in

a) 1907

b) 1807

c) 1507

d) 1707

(xviii) The term 'Zymurgy' is referred to as

a) Hormone synthesis

b) Enzyme synthesis

c) Glucose metabolism

d) Fermentation technology

(xix) Kimchi food was originated from

a) Japan

b) China

c) Korea

d) France

(xx) Miso food is fermented _____?

a) Cabbage

b) Potato

c) Mushroom

d) Soybean

- (xxi) Fermentation technology was first discovered by
- a) Alexander Fleming
 - b) Watson crick
 - c) Luis Pasteur
 - d) Champbell
- (xxii) The raw materials required for Idly preparation are
- a) Milk and rice
 - b) Rice and lentil
 - c) Lentil and milk
 - d) Rice and milk
- (xxiii) Natto food is prepared using
- a) Bacillus sp.
 - b) Zymomonas sp.
 - c) Yeast
 - d) None of these
- (xxiv) Yogurt is made
- a) By adding live bacteria to milk
 - b) By freezing milk
 - c) By mixing milk with cheese
 - d) By letting milk age
- (xxv) Milk contains ___% of calcium.
- a) 20
 - b) 25
 - c) 30
 - d) 35
- (xxvi) Niacin percentage in milk is
- a) 12
 - b) 15
 - c) 10
 - d) 8
- (xxvii) Evaporated milk is produced by removing water content upto
- a) 0.4
 - b) 0.6
 - c) 0.3
 - d) 0.5
- (xxviii) Acidophilus milk is prepared by adding ___ in the milk
- a) HCl
 - b) Lemon juice

c) Enzymes

d) All of these

(xxix) In yogurt the aroma is added using

a) Streptococcus

b) Lactobacillus

c) Yeast

d) All of these

(xxx) Low fat yogurt/cup contains zinc

a) 2.8 mg

b) 3.2 m

c) 3.4 mg

d) 2.2 mg

(xxxi) Milk contains

a) 5% lactose

b) 10% lactose

c) 20% lactose

d) 30% lactose

(xxxii) One molecule of glucose can be converted into how many molecules of lactic acid?

a) 1

b) 2

c) 3

d) 4

(xxxiii) Proteolytic enzymes from _____ break down milk proteins into peptides.

a) *L. bulgaricus*

b) *L. thermophilus*

c) *S. thermophilus*

d) *L. lactis*

(xxxiv) Dahi

a) Makes bones stonger

b) Reduce immunity

c) Increases weight

d) Bad for heart

(xxxv) In lactic acid fermentation, the final electron acceptor is

a) Lactic acid

b) Oxygen

c) Pyruvate

d) NAD

(xxxvi) Glucose molecule during the process of glycolysis is broken down into

- a) Four pyruvic acid
- b) Three pyruvic acid
- c) Two pyruvic acid
- d) One pyruvic acid

(xxxvii) Which of the following product is an example of containing non-viable microorganism?

- a) Yogurt
- b) Cheese
- c) Wine
- d) Curd

(xxxviii) Fermentation process is done for

- a) Increasing shelf life
- b) Enhancing taste and texture
- c) Increase in nutritive value
- d) All of these

(xxxix) Yellow color of milk fat is due to presence of

- a) Vitamin A
- b) Carotenoid
- c) Folic acid
- d) Calcium

(xl) Which one of the following is a hetero fermentative lactic acid bacteria?

- a) *Lactobacillus acetotolerans*
- b) *Lactococcus lactis* subsp. *Lactis*
- c) *Lactococcus lactis* subsp. *Cremonis*
- d) *Lactobacillus kimchii*

(xli) The protein present in milk is

- a) Casein
- b) Glutenin
- c) Ovalbumin
- d) None of these

(xlii) The pH range of fermented milk is

- a) 4-7.
- b) 3.8 - 4.6
- c) 2.2 – 4.8
- d) 7-9.

(xliii) The large holes in the cheese are due to

- a) oxygen production
- b) carbon dioxide production

- c) sulfur dioxide release
- d) lead oxide release

(xliv) Which of the following is a soft cheese?

- a) cottage cheese
- b) cheddar cheese
- c) parmesan cheese
- d) Swiss cheese

(xlv) The starter composition of Swiss cheese

- a) *S. thermophilus*
- b) *L. helveticus*
- c) *Propionibacterium shermanii*
- d) All of these

(xlvi) Optimum temperature for heating (preheating) curd (dahi) is

- a) 18-25°C
- b) 25-30°C
- c) 48-60°C
- d) 35-40°C

(xlvii) During manufacture of dahi pasteurization is done at a temperature of for mins

- a) 80-90°C/15-30mins
- b) 100°C/15-30mins
- c) 120-150°C/30-45mins
- d) 90-120°C/15-20mins

(xlviii) Rennet is

- a) the hard cheese
- b) the complex set of enzyme
- c) the soft cheese
- d) the semi-hard cheese

(xlix) During production of yoghurt, *L. bulgaricus* break down milk protein into peptide to form

- a) proteolytic enzyme
- b) formic acid
- c) lactose
- d) All of these

(l) Buttermilk is a fluid product resulting from the manufacture of

- a) cheese
- b) yogurt
- c) ice-cream
- d) butter

(li) Which of the following is not obtained by fermenting milk

- a) curd
- b) lassi
- c) buttermilk
- d) butter

(lii) Temperature used in UHT treatment is

- a) 90-1000c
- b) 120-1250c
- c) 100-1200c
- d) 130-1400c

(liii) Water content level in dahi is

- a) 85-88%
- b) 75-80%
- c) 50-60%
- d) 60-70%

(liv) Which of the following is obtained by fermenting milk?

- a) Gundruk
- b) Cheese
- c) Sinki
- d) Kombucha

(lv) Production of _____ occurs in the fermentation of grains

- a) Must
- b) Brine
- c) Lactic acid
- d) None of these

(lvi) _____ is the detrimental effect of microorganisms in the food

- a) Generation of flavor
- b) Process of fermentation
- c) Spoilage of food
- d) All of these

(lvii) Identify the correct sequence during the industrial production of substances

- a) Inoculation, screening, fermentation, downstream processing, removal of waste
- b) Screening, Inoculation, fermentation, downstream processing, removal of waste
- c) Fermentation, screening, inoculation, removal of waste, downstream processing
- d) Fermentation, inoculation, inoculation, removal of waste, downstream processing

(lviii) What is the process called due to which idli and dosa makes it fluffy and soft?

- a) Pasteurisation
- b) Fermentation
- c) Vaccination
- d) None of these

(lix) Yeast contains

- a) Zymase
- b) Lactase
- c) Phytase
- d) All of these

(lx) Dosa and Idli are preparations of

- a) Wheat flour
- b) Rice
- c) Rice and Black gram
- d) Wheat and Black Gram