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FPT-614/F&NFB/6th Sem/2017/N

**FERMENTED AND NON-FERMENTED  
BEVERAGES**

Full Marks – 70

Pass Marks – 28

Time – Three Hours

The figures in the margin indicate full marks  
for the questions.

**PART – A**

1. Multiple choice questions :  $1 \times 20 = 20$

(i) When energy depleted elements associated  
with a proton are accepted by an organic  
molecule, the process is called

- (a) Fermentation      (b) Respiration  
(c) Anabolism      (d) Catabolism

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(ii) In the following terms which is not the definition of fermentation process ?

- (a) Do not require an electron transport system
- (b) Use an organic compound as the final electron acceptor
- (c) Use an inorganic compound as the final electron acceptor
- (d) Alcohol is formed from sugar

(iii) Which of the following is not a product of fermentation ?

- (a) Lactate
- (b) Oxygen
- (c) Carbon dioxide
- (d) Ethanol

(iv) The final electron acceptor in lactic acid fermentation is

- (a) Oxygen
- (b) Lactic acid
- (c) Pyruvate
- (d) NAD

(v) 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, screening, removal of waste, downstream processing

(vi) \_\_\_\_\_ is the detrimental effect of microorganisms in the food.

(a) Generation of flavor

(b) Process of fermentation

(c) Spoilage of food

(d) All of the above.

(vii) Which is not an advantage of the fermented food ?

- (a) Makes the food more digestible
- (b) Increase storage life
- (c) Synthesize vitamins
- (d) Decrease intestinal microflora

(viii) Which is not fruit or vegetable based fermented product ?

- (a) Wine
- (b) Beer
- (c) Vinegar
- (d) Sauerkraut

(ix) Fermentation which is carried by yeast is called

- (a) Pyruvic fermentation
- (b) Acrylic fermentation
- (c) Lactic acid fermentation
- (d) Alcoholic fermentation

(x) Beer may be produced by

- (a) Germinating barley
- (b) Fermenting grape
- (c) Fermentation of rice
- (d) All of these

(xi) Vermouths and aperitifs are

- (a) Sparkling wines
- (b) Fortified wines
- (c) Organic wines
- (d) Aromatic wines

(xii) Fortified wines contain about

- (a) 12% alcohol
- (b) 20% alcohol
- (c) 30% alcohol
- (d) 42% alcohol

(xiii) Which of the following is not one of the ingredients of beer ?

- (a) Hops
- (b) Yeast
- (c) Malt
- (d) Must

- (a) Iran and ...
- (b) Ethiopia and Mocha
- (c) Persia and Turkey
- (d) Greece and Turkey

(xv) Fermentation is

- (a) an aerobic process of converting sugars into alcohols or acids and carbon dioxide
- (b) an anaerobic process of converting sugars into alcohols or acids and carbon dioxide
- (c) an anaerobic process of converting sugars into alcohols or acids and oxygen
- (d) an aerobic process of converting sugars into alcohols or acids and oxygen

(xvi) A biological method of food preservation is

- (a) Freezing
- (b) Drying
- (c) Fermentation
- (d) Adding salt

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(6)



(xiv) Coffee first came from

- (a) Iran and Saudi Arabia
- (b) Ethiopia and Mocha
- (c) Persia and Turkey
- (d) Greece and Turkey

(xv) Fermentation is

- (a) an aerobic process of converting sugars into alcohols or acids and carbon dioxide
- (b) an anaerobic process of converting sugars into alcohols or acids and carbon dioxide
- (c) an anaerobic process of converting sugars into alcohols or acids and oxygen
- (d) an aerobic process of converting sugars into alcohols or acids and oxygen

(xvi) A biological method of food preservation is

- (a) Freezing
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- (d) Adding salt

(xvii) Bacteria that can grow in the absence of oxygen are called

- (a) anaerobes (b) molds  
(c) aerobes (d) yeasts

(xviii) The organisms used in the process of fermentation

- (a) metabolize all the oxygen in food.  
(b) produce water in the food.  
(c) utilize all the nutrients in a food.  
(d) produce products, such as acids, that inhibit the growth of other organisms.

(xix) Acetic acid bacteria

- (a) convert ethanol to acetic acid  
(b) convert acetic acid to ethanol  
(c) convert acetic acid to vinegar  
(d) convert raw vinegar to distilled vinegar

(xx) Wine yeast can tolerate up to \_\_\_\_\_ % ethanol.

- (a) 4-5 (b) 12-14  
(c) 20-22 (d) 30-32



2. Write true or false : 5×1=5

- (i) Glycolysis provides the pyruvic acid molecules used in fermentation.
- (ii) Fermentation allows glycolysis to continue by providing the NADPH needed to accept high-energy electrons.
- (iii) Fermentation is an aerobic process.
- (iv) Fermentation occurs in the mitochondria of cells.
- (v) Alcoholic fermentation gives off carbon dioxide and is used in making bread.

### PART - B

3. (a) What is the importance of yeast in making of beer? 3
- (b) What are the ingredients used in beer? 3
- (c) What are hops? Write the advantages of hops in making of beer. 3

4. Write short notes on any *three* of the followings :

3×3=9

- (a) Green tea
- (b) Black tea
- (c) Oolong tea
- (d) Coffee bean
- (e) Withering of tea.

5. Explain in details the production process of wine in industry. 9

6. Discuss the status and scope of various fermented beverages in North-East region of India. 9

7. (a) How does alcohol affect a person? 3

(b) Are the tea, good for health? Justify it. 3

(c) What are the health problems associated with excessive use of alcohols? 3