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**B.F.T.M. (Part - I) (Semester - I) Examination, April - 2017**  
**PRINCIPLES OF FOOD PREPARATION & PRESERVATION - I**  
**(Paper - I)**

**Sub. Code : 57280**

**Day and Date : Wednesday, 19 - 04 - 2017**

**Total Marks : 50**

**Time : 10.30 a.m. to 12.30 p.m.**

- Instructions :**
- 1) All questions are compulsory.
  - 2) Figures to the right indicate full marks.
  - 3) Draw neat labelled diagram wherever necessary.

**Q1) Choose the correct alternative from given choices :**

**[10]**

- a) \_\_\_\_\_ is an example of perishable foods.
- i) Milk
  - ii) Tomato
  - iii) Cereals
  - iv) Both i & ii
- b) Bringing frozen product to room temperature is called as \_\_\_\_\_.
- i) Thawing
  - ii) Refrigeration
  - iii) Cooking
  - iv) Blanching
- c) \_\_\_\_\_ is the optimum temperature of growth of micro organisms.
- i) 37°C
  - ii) 47°C
  - iii) 57°C
  - iv) 67°C
- d) Pasteurization is done to kill \_\_\_\_\_.
- i) MTB
  - ii) E.coli
  - iii) Salmonella
  - iv) Lactobacillus

**P.T.O.**

- e) \_\_\_\_\_ organisms grow best at temperature above 45°C.
- i) Mesophilic
  - ii) Psychrophiles
  - iii) Thermophiles
  - iv) None
- f) The temperature of cellar storage is \_\_\_\_\_.
- i) 15°C
  - ii) 18°C
  - iii) 12°C
  - iv) 8°C
- g) In HTST pasteurization, the food is hold for \_\_\_\_\_.
- i) 15-30 sec.
  - ii) 60 sec.
  - iii) 10-40 sec.
  - iv) 50 sec.
- h) Spoilage of citrus fruits is due to \_\_\_\_\_.
- i) P. brevicaulis
  - ii) P. italicus
  - iii) Both i & ii
  - iv) None
- i) Temperature of simmering is \_\_\_\_\_ °C.
- i) 100°C
  - ii) 85-90°C
  - iii) 120-160°C
  - iv) 320-360°C
- j) \_\_\_\_\_ is moist heat method of cooking.
- i) Toasting
  - ii) Roasting
  - iii) Frying
  - iv) Steaming

Q2) Answer the following (any two) :

[20]

- a) Define food. Explain methods of cooking by dry heat.
- b) Enlist reasons of food deterioration. Explain any four of it.
- c) Define canning. Explain with flow sheet.

Q3) Solve the following (any four) :

- a) Elaborate functions of food.
- b) Discuss effect of cold on micro organisms.
- c) Describe in brief principles of food preservation.
- d) Enlist cooking media & explain cooking methods in steam as media.
- e) Comment on objectives of food cooking.
- f) Explain pasteurization of packaged foods.





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**B.F.T.M. (Part - I) (Semester - I) Examination, April - 2017**

**INTRODUCTION TO FOOD SCIENCE - I (Theory)**

**Sub. Code : 57279**

**Day and Date : Tuesday, 18 - 04 - 2017**

**Total Marks : 50**

**Time : 10.30 a.m. to 12.30 p.m.**

- Instructions :**
- 1) All questions are compulsory.
  - 2) Figures to the right indicate full marks.
  - 3) Draw a neat labelled diagram wherever necessary.

**Q1) Choose correct alternative from given choices.**

**[10]**

- a) \_\_\_\_ & \_\_\_\_ are known as gluten proteins.
  - i) Gliadin & Glutelin
  - ii) Albumin & Globulin
  - iii) Gliadin & Globulin
  - iv) Albumin & Gliadin
- b) \_\_\_\_ is fermented liquor made from cashewapple.
  - i) Beer
  - ii) Wine
  - iii) Neera
  - iv) Feni
- c) Germ is separated from endosperm by \_\_\_\_\_.
  - i) Bran
  - ii) Seed coat
  - iii) Scutellum
  - iv) Testa
- d) Principal mineral content of coconut water is \_\_\_\_\_.
  - i) K
  - ii) Na
  - iii) Ca
  - iv) Fe
- e) \_\_\_\_ is an animal fat obtained from hogs.
  - i) Tallow
  - ii) Lard
  - iii) Butter
  - iv) Margarine

**P.T.O.**

- f) Ragi is also known as \_\_\_\_\_.  
 i) Pearl millet                      ii) Finger millet  
 iii) Proso millet                      iv) None
- g) \_\_\_\_\_ is the best example of protein rich nut.  
 i) Chestnut                      ii) Casheunut  
 iii) Almond                      iv) Groundnut
- h) The development of undesirable odour & flavour in fat & oil is known as \_\_\_\_\_.  
 i) Rancidity                      ii) Reversion  
 iii) Browning                      iv) Maillard reaction
- i) \_\_\_\_\_ is also known as testa.  
 i) Endosperm                      ii) Seed coat  
 iii) Aleurone layer                      iv) Bran
- j) \_\_\_\_\_ is the important carbohydrate in all cereals.  
 i) Glucose                      ii) Fructose  
 iii) Starch                      iv) Pectin

**Q2) Answer the following: (Any Two)**

**[20]**

- a) Enlist different nuts & explain products of coconut in detail.
- b) Define cereals. Comment on structure of cereals with diagram.
- c) Explain any two toxic constituents of pulses with their methods of elimination.

**Q3)** Solve the following: (Any Four)

- a) Define food. State the functions of food.
- b) Discuss chemical composition of pulses.
- c) Comment on peanut butter.
- d) Describe germination & fermentation processing methods of pulses.
- e) Elaborate role of fat in cookery.
- f) Write in brief about rice & ragi.





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**B.F.T.M. (Part - I) (Semester - I) Examination, April - 2017**

**FOOD CHEMISTRY - I**

**Sub. Code : 57282**

Day and Date : Friday, 21 - 04 - 2017

Total Marks : 50

Time : 10.30 a.m. to 12.30 p.m.

- Instructions :
- 1) All questions are compulsory.
  - 2) Figures to the right indicate full marks.
  - 3) Draw neat diagrams wherever needed.

**Q1)** Select the correct alternative from given choices :

**[10]**

- a) Glucose is stored in animal in the form of \_\_\_\_\_.
  - i) Starch
  - ii) Pectin
  - iii) Cellulose
  - iv) Glycogen
- b) Lactose is disaccharide of \_\_\_\_\_.
  - i) Glucose + Galactose
  - ii) Galactose + Sucrose
  - iii) Glucose + Lactose
  - iv) Glucose + Fructose
- c) Which of the following is not insoluble dietary fibre?
  - i) Pectin
  - ii) Cellulose
  - iii) Lignin
  - iv) Hemicellulose
- d) Amino acids are joined together by \_\_\_\_\_ to form proteins.
  - i) Glycosidic bond
  - ii) Hydrogen bond
  - iii) Peptide bond
  - iv) Sulphur bond
- e) \_\_\_\_\_ is obtained in rice husk.
  - i) Casein
  - ii) Zein
  - iii) Keratin
  - iv) Oryzenin
- f) Select the odd amino acids out.
  - i) Glycine
  - ii) Alanine
  - iii) Valine
  - iv) Serine

**P.T.O.**



- g) Chemical lipids are \_\_\_\_\_ of fatty acids & alcohols.
- |              |            |
|--------------|------------|
| i) Ethers    | ii) Esters |
| iii) Alkanes | iv) Alkyls |
- h) Which of the following is not antioxidant?
- |                |                |
|----------------|----------------|
| i) Lemon juice | ii) Tocopherol |
| iii) BHA       | iv) DHA        |
- i) Vitamin D deficiency causes \_\_\_\_\_.
- |               |             |
|---------------|-------------|
| i) Anaemia    | ii) Leprosy |
| iii) Pellagra | iv) Rickets |
- j) Select the odd vitamin out.
- |                 |                   |
|-----------------|-------------------|
| i) Pyridoxine   | ii) Thiamine      |
| iii) Riboflavin | iv) Retinoic acid |

**Q2)** Answer the following. (any two) :

[20]

- What are lipids? Describe classification of lipids.
- What is starch? Describe properties of starch.
- Describe structure of protein.

**Q3)** Solve the following (any four) :

[20]

- Describe protein classification on the basis of chemical composition and solubility.
- Write a note on optical activity of carbohydrates.
- Write a short note on rancidity of fats and lipids.
- Describe biological importance of proteins.
- Write a note on vitamin D deficiency diseases.
- Write a short note on sources of carbohydrates.



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**B.F.T.M. (Part - I) (Semester - I) Examination, April - 2017**  
**FUNDAMENTALS OF FOOD MICROBIOLOGY - I (Paper - I)**  
**Sub. Code : 57283**

Day and Date : Saturday, 22 - 04 - 2017

Total Marks : 50

Time : 10.30 a.m. to 12.30 p.m.

- Instructions :
- 1) All questions are compulsory.
  - 2) Figures to the right indicate full marks.
  - 3) Draw a neat labelled diagram wherever necessary.

**Q1)** Choose the correct alternative from given choices :

**[10]**

- a) *Salmonella typhi* shows \_\_\_\_\_ flagellar arrangement.
  - i) Amphitrichous
  - ii) Lophotrichous
  - iii) Peritrichous
  - iv) Monotrichous
- b) Which of the following is a macro - nutrient?
  - i)  $\text{Ca}^{2+}$
  - ii)  $\text{Mn}^{2+}$
  - iii)  $\text{Cu}^{2+}$
  - iv)  $\text{Zn}^{2+}$
- c) The study of algae is known as \_\_\_\_\_.
  - i) Mycology
  - ii) Phycology
  - iii) Protozoology
  - iv) Virology
- d) \_\_\_\_\_ are organisms which utilize radiant energy as a source of energy.
  - i) Heterotrophs
  - ii) Chemotrophs
  - iii) Autotrophs
  - iv) Phototrophs

**P.T.O.**

- e) \_\_\_\_\_ are infoldings of cell membrane.
- i) Mesosomes
  - ii) Ribosomes
  - iii) Nuclear material
  - iv) Pili
- f) Who invented the use of phenol as disinfectant?
- i) Louis Pasteur
  - ii) Robert Koch
  - iii) Joseph Lister
  - iv) Watson & Crick
- g) The cell membrane is chemically made up of \_\_\_\_\_ % phospholipids.
- i) 60-70
  - ii) 20-30
  - iii) 30-60
  - iv) 40-50
- h) Formation of living beings from non-living matter is known as \_\_\_\_\_.
- i) Abiogenesis
  - ii) Spontaneous generation
  - iii) Microbiology
  - iv) Both a & b
- i) Flash pasteurization of milk is carried at \_\_\_\_\_ °C.
- i) 71.7
  - ii) 63.2
  - iii) 82.2
  - iv) 75.3
- j) \_\_\_\_\_ are humans natural defensive cells.
- i) Bacteria
  - ii) Ribosomes
  - iii) Mesosomes
  - iv) Phagocytes

Q2) Answer the following (any two) :

[20]

- a) Describe cell wall of Gram negative bacteria with a neat labelled diagram.
- b) What is sterilization? Explain sterilization by use of heat.
- c) Discuss flagella in detail.

**Q3) Solve the following (any four) :**

**[20]**

- a) Comment on controversy over spontaneous generation.
- b) Write functions of cell membrane.
- c) How does formaldehyde act as sterilizing agent?
- d) Give nutritional categories of micro - organisms depending on carbon and energy source.
- e) Write chemical composition & functions of capsule.
- f) What are the important contributions of Joseph Lister and Robert Koch?



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**B.F.T.M. (Part - I) (Semester - I) Examination, April - 2017****INTRODUCTION TO COMPUTER - I****Sub. Code : 57284****Day and Date : Monday, 24 - 04 - 2017****Total Marks : 50****Time : 10.30 a.m. to 12.30 p.m.**

- Instructions :**
- 1) All questions are compulsory.
  - 2) Figures to the right indicate full marks.

**Q1) Choose the correct alternatives.****[10]**

- a) The set of instruction is known as \_\_\_\_\_.
  - i) Algorithm
  - ii) Flow Chart
  - iii) Program
  - iv) None of these
- b) EDSAC stands for
  - i) Electric Delay Storage Automatic Computer.
  - ii) Electronic Delay Storage Automatic Calculator
  - iii) Electronic Delay Storage Automatic Computer
  - iv) None of these
- c) RAM is also called as \_\_\_\_\_ memory.
  - i) Volatile memory & Auxiliary Memory
  - ii) Volatile memory & Read-Write
  - iii) Non-Volatile Memory & Primary Memory
  - iv) None of these
- d) In the computer memory location or cell can store a fixed number of bits called as \_\_\_\_\_.
  - i) Word Length
  - ii) Address
  - iii) Bytes
  - iv) None of these

**P.T.O.**

- e) System is the combination of \_\_\_\_\_.  
 i) Software & Firmware    ii) Hardware & Firmware  
 iii) Hardware & Software    iv) None of these
- f) \_\_\_\_\_ is the output the device.  
 i) Scanner    ii) Plotter  
 iii) Compact Disk    iv) None of these
- g) \_\_\_\_\_ is used for the decision making purpose.  
 i) Data    ii) Instruction  
 iii) Information    iv) None of these
- h) \_\_\_\_\_ is the example of application software.  
 i) MS-Word    ii) Window  
 iii) DOS    iv) None of these
- i) \_\_\_\_\_ technology is used in the fourth generation computers.  
 i) SSI & MSI    ii) MSI & LSI  
 iii) LSI & VLSI    iv) None of these
- j) \_\_\_\_\_ secondary device is used for direct access or random access of the data.  
 i) Magnetic Tape    ii) Magnetic Disk  
 iii) Optical Disk    iv) None of these

Q2) Answer any two of the following:

[20]

- a) Define Computer. Draw and explain the block diagram of the computer.
- b) Explain semiconductor memories in detail.
- c) Explain in detail the concept of Hardware and Software.

Q3) Answer any four of the following:

[20]

- a) Explain characteristics of computer.
- b) Explain memory representation in detail.
- c) Describe in detail magnetic tape.
- d) Explain the fifth generation of computer.
- e) Explain the impact and non-impact printers.
- f) Explain the functions of computer.







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**B.F.T.M. (Part - I) (Semester - I) Examination, April - 2017****HUMAN PHYSIOLOGY - I****Sub. Code : 57281****Day and Date : Thursday, 20 - 04 - 2017****Total Marks : 50****Time : 10.30 a.m. to 12.30 p.m.**

- Instructions :**
- 1) All questions are compulsory.
  - 2) Figures to the right indicate full marks.
  - 3) Draw neat diagrams wherever needed.

**Q1) Choose the correct answer from the given choices : [10]**

- a) The tissue covering the outer side of body and lining the cavities of body is \_\_\_\_\_.
- i) Muscle tissue
  - ii) Epithelial tissue
  - iii) Nervous tissue
  - iv) Adipose tissue
- b) \_\_\_\_\_ is a bag of hydrolytic enzymes.
- i) Mitochondria
  - ii) Endoplasmic reticulum
  - iii) Lysosomes
  - iv) Nucleus
- c) The \_\_\_\_\_ cells secrete antibodies.
- i) Lymphocytes
  - ii) Neutrophils
  - iii) Eosinophils
  - iv) Monocytes
- d) The cells constitute \_\_\_\_\_ % of blood volume.
- i) 55%
  - ii) 45%
  - iii) 90%
  - iv) None
- e) The \_\_\_\_\_ causes constriction of blood vessel during bleeding.
- i) Plasmin
  - ii) serotonin
  - iii) Heparin
  - iv) None
- f) The Rh negative blood can be donated to \_\_\_\_\_.
- i) Rh positive person
  - ii) Rh negative person
  - iii) Both
  - iv) None

**P.T.O.**

- g) Upper chambers of heart are called \_\_\_\_\_
- |             |                |
|-------------|----------------|
| i) Auricles | ii) ventricles |
| iii) Both   | iv) None       |
- h) Pulse rate is increased in \_\_\_\_\_.
- |                 |               |
|-----------------|---------------|
| i) Fear         | ii) Anxiety   |
| iii) Excitation | iv) All above |
- i) \_\_\_\_\_ is the first organ of respiration.
- |              |             |
|--------------|-------------|
| i) Bronchi   | ii) Nose    |
| iii) Trachea | iv) Pharynx |
- j) \_\_\_\_\_ are respiratory muscles.
- |              |                          |
|--------------|--------------------------|
| i) Diaphragm | ii) Inter-costal muscles |
| iii) Both    | iv) None                 |

**Q2) Answer the following long answer questions (any two) :** **[20]**

- Discuss in brief the different systems of the body.
- Explain the process of haemostasis.
- With the help of diagram explain human respiratory system.

**Q3) Answer the following short answer questions (any four) :** **[20]**

- Write a short note on structure and functions of mitochondria.
- Write the process of Rh grouping and add a note on it's significance.
- Define Blood pressure. Add a note on factors affecting blood pressure.
- With help of diagram, explain the structure of heart
- Describe the structure & function of Platelets.
- Explain the mechanism of respiration.

