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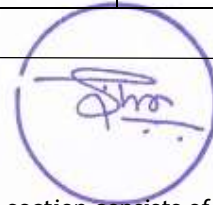
Branch: Signature of Invigilator:

Semester: VIth Date: 29/04/2022 (MORNING)

Subject with Code: FT331 FOOD INDUSTRY WASTE MANAGEMENT

Marks Obtained	Section A (30)	Section B (20)	Total Marks (50)

INSTRUCTION TO CANDIDATE



1. The booklet (question paper cum answer sheet) consists of two sections. First section consists of MCQs of 30 marks. Candidates may mark the correct answer in the space provided / may also write answers in the answer sheet provided. The Second section of question paper consists of subjective questions of 20 marks. The candidates may write the answers for these questions in the answer sheets provided with the question booklet.
2. The booklet will be distributed to the candidates before 05 minutes of the examination. Candidates should write their roll no. in each page of the booklet.
3. Place the Student ID card, Registration Slip and No Dues Clearance (if applicable) on your desk. All the entries on the cover page must be filled at the specified space.
4. Carrying or using of mobile phone / any electronic gadgets (except regular scientific calculator)/chits are strictly prohibited inside the examination hall as it comes under the category of unfair means.
5. No candidate should be allowed to enter the examination hall later than 10 minutes after the commencement of examination. Candidates are not allowed to go out of the examination hall/room during the first 30 minutes and last 10 minutes of the examination.
6. Write on both side of the leaf and use pens with same ink.
7. The medium of examination is English. Answer book written in language other than English is liable to be rejected.
8. All attached sheets such as graph papers, drawing sheets etc. should be properly folded to the size of the answer book and tagged with the answer book by the candidate at least 05 minutes before the end of examination.
9. The door of examination hall will be closed 10 minutes before the end of examination. Do not leave the examination hall until the invigilators instruct you to do so.
10. Always maintain the highest level of integrity. Remember you are a BITian.
11. Candidates need to submit the question paper cum answer sheets before leaving the examination hall.

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: IMSc
BRANCH: Food
Tech

SEMESTER : VI
SESSION: SP/22

SUBJECT: FT 331 Food Industry Waste Management

TIME: 2 hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains two sections section A is MCQ type and mandatory to attempt all questions
 2. Section B is short question type and attempt ten questions only
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Put tick mark on question paper only

Section A is mandatory for all questions

1 A hazard is a situation where there is

- a. Threat of natural calamity
- b. Threat to property and lives from calamities
- c. Threat for consequences of disaster
- d. All of the above

2 What is true about Aerobic bacteria?

- (a) Flourish in the presence of free oxygen
- (b) Consume organic matter as their food
- (c) Oxidise organic matter in sewage
- (d) All

3 Coliform bacteria in water is an indication of the presence of

- a) radioactive wastes
- b) excess fertilizer
- c) decaying animals and plants
- d) human feces

4 The process of decomposition of biodegradable solid waste by earthworms is called

-
- a) Land fills
 - b) Shredding
 - c) Vermi-composting
 - d) Composting

5 Which of the following is most likely to be a source of food poisoning bacteria?

- (a) Frozen peas
- (b) Pasteurised milk
- (c) Tinned salmon
- (d) Raw meat

6 Why is recycled paper banned for use in food containers?

- (a) Because it creates a lot of spaces
- (b) Because it creates contamination
- (c) Because paper can be used only one time
- (d) Because paper is very thick and can't cover the food containers

7 The organic material of the solid waste will decompose

- (a) By the flow of water
- (b) By the soil particles
- (c) By the action of microorganisms
- (d) By oxidation

8 When the organic matter present in the sanitary landfill decomposes, it generates

- (a) Methane
- (b) Nitrogen
- (c) Hydrogen
- (d) All of the above

9 Which of the following statements is true about zero waste management?

- (a) Separate collection of each kind of waste
- (b) Segregation of garbage at the source
- (c) Community involvement
- (d) All of the above

10 Which Industry generates solid waste more?

- a) Chip Industry
- b) Juice Industry
- c) Jelly Industry
- d) None of the above

11 Animal glue is based upon

- a) Cellulose
- b) Protein
- c) Fats
- d) Lipids

12 Dextrin is prepared from

- a) Casein
- b) Protein
- c) Starch
- d) Lipids

13 **Brewery and sugar factory waste alter the quality of a water body by increasing**

- a. temperature
- b. turbidity
- c. pH
- d. COD and BOD

14 The facultative pond functions like a _____

- a) Primary clarifier
- b) Secondary clarifier
- c) Aerator
- d) Sedimentation unit

15 The increase in concentration of which gas is not responsible for Global Warming?

- (a) Sulphur dioxide
- (b) Nitrogen
- (c) Carbon dioxide
- (d) Methane

16 _____ occur when the rate of oxygen transfer from the lagoon surface is less than the rate of oxygen consumption in the lower levels of the lagoon.

- a) Temperature rise
- b) Objectionable odour
- c) Raised pH
- d) Temperature fall

17 Which of the following is major source of water pollution?

- (a) Industrial wastes
- (b) Untreated sewage
- (c) Use of fertilisers
- (d) Toxic metals

18 Greenhouse effect is

- (a) Painting house green in colour
- (b) Wearing green colour dress
- (c) Having green room in the house
- (d) Sun's heat is trapped and not allowed to escape

19 _____ is a commonly used chemical method for purifying water.

- (a) Bromination
- (b) Flourination
- (c) Filtration
- (d) Chlorination

20 Which of the following is called the secondary air pollutant?

- (a) PANs
- (b) Ozone
- (c) Carbon monoxide
- (d) Nitrogen Dioxide

21 Incomplete oxidation of glucose into pyruvic acid with several intermediate steps is known as

- (A) TCA-pathway
- (B) Glycolysis
- (C) HMS-pathway
- (D) Krebs cycle

22 End products of aerobic respiration are

- (A) Sugar and oxygen
- (B) Water and energy
- (C) Carbon dioxide, water and energy
- (D) Carbon dioxide and energy.

23 Life without air would be

- (A) Reductional
- (B) Free from oxidative damage
- (C) Impossible
- (D) Anaerobic.

24 When yeast ferments glucose, the products obtained are

- (A) Ethanol and CO₂
- (B) Methanol and CO₂
- © Ethanol and water
- (D) Water and CO₂

25 The enzymes which break up starch into sugar are called

- a. Hydrolases
- b. Amylases
- c. Lipases
- d. Nucleases

26 Which of the following statement is "NOT" correct

- a. All enzymes are thermolabile
- b. All enzymes are biocatalysts
- c. All enzymes are proteins
- d. All proteins are enzymes

27 Which fermentation product is important for making bread rise?

- A. ethanol
- B. CO₂
- C. lactic acid
- D. hydrogen gas

28 The objective of ISO-9000 family of Quality management is

- a. Customer satisfaction
- b. Employee satisfaction
- c. Skill enhancement
- d. Environmental issues

29 Which of the following is for Environment management?

- A ISO-9000
- B ISO-14000
- C ISO-26000
- D ISO-31000

30 ISO 9000 determines

- (A) If the company practices its written procedures
- (B) If vendors are performing well
- (C) Process capability
- (D) The kind of control chart to be used

Section B

Answer any ten questions only

Short questions

- 1 Define the different quality parameters in ISO9001 [2]
- 2 Compare between By –product and waste. [2]
- 3 Why five days incubation is required for BOD? [2]
- 4 What is bio magnification? [2]
- 5 What is Jar test for optimum coagulant dosage? [2]
- 6 What should be done to reuse waste? [2]
- 7 What are the health related pollutants from backyard burning? [2]
- 8 What is bioreactor landfills? [2]
- 9 What are the different types of problem in food waste? [2]
- 10 Why removal of ammonia is necessary from waste water? [2]
- 11 What is called oil seeds? [2]
- 12 How coffee powder is make? [2]
- 13 What are the different types of waste and byproducts generated from citrus fruit?[2]
- 14 What is dextrin and how it is prepared? [2]
- 15 What are the advantages of RBC? [2]