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GD—19—2023

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

APRIL/MAY, 2023

(New Course)

BIOTECHNOLOGY

Paper : CCBT – 3B

(Biomolecules)

(Wednesday, 26-4-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) Attempt *all* questions.

(*ii*) *All* questions carry equal marks.

(*iii*) Represent your answers with well labelled diagrams.

1. Define Oligosaccharides. Describe in detail occurrence, structure and properties of Lactose and Sucrose. 15

Or

Write notes on :

(*a*) Starch 8

(*b*) Chemical properties of monosaccharides. 7

2. Describe in detail classification of proteins. 15

Or

(*a*) Describe classification of Enzymes. 8

(*b*) Explain peptides. 7

3. Define Nucleic acids. Describe in detail Watson and Crick model of DNA. 15

Or

(*a*) Explain physical properties of DNA. 8

(*b*) Explain clover leaf structure of t-RNA. 7

4. Describe in detail occurrence and deficiency disorders of B-Complex vitamins. 15

Or

(*a*) Explain structure and properties of cholesterol. 8

(*b*) Write a note on vitamin 'A'. 7

5. Write short notes on (any *three*) : 3×5=15

(*a*) Glycogen

(*b*) Amino acids classification

(*c*) Forms of DNA

(*d*) Secondary structure of proteins

(*e*) Vitamin-D.

GD-05

Faculty of: Science

Examination: B.Sc. First Year Semester Second

March/ April 2023

Subject: **B.Sc. Biotechnology**
Title: **Business Communication -AECBT - 2A**
Time: **03:00 Hrs** Max Marks: **75**

Note: 1. All main questions are compulsory
2. All main question carry equal marks

Q.1 What aspects do we consider while describing a Person? **15 M**

OR

A. Narrate any incident you witnessed. **07 M**

B. Describe the view of your Living Room in your own words. **08 M**

Q.2 Solve any three sub-questions among following: **15 M**

A. Rewrite sentences with correct form of the word **05 M**

1. The oil spill in the Gulf of Mexico has affected / effected the economy.
2. They could not decide if the weather / whether would stay nice or not.
3. The world's largest hot desert / dessert is the Sahara.
4. The captain led / lead the final charge in the battle.
5. I advice / advise you not to wait till the last minute to study for the test.

B. Give meaning of the following Idioms and phrases: **05 M**

1. A blessing in disguise
2. The best of both worlds
3. Once in a blue moon
4. Spill the beans
5. A storm in a teacup

C. Give antonyms of each word: **05 M**

1. Accept
2. Frequent
3. Rigid
4. Victim
5. Heavy

D. Give one word substitution for the following: **05 M**

1. Art related to ornate, good handwriting
2. One who loves his country
3. Government by nobility
4. A disease which attacks many people in a particular area in one time
5. abortion of a fetus

Q. 3. Read the passage carefully and answer the questions given below. **15 M**

Power foods are foods that provide rich levels of nutrients like fiber, potassium and minerals. With people becoming increasingly health conscious today, many fitness trainers encourage their clients to include these foods in their daily diet to increase muscle development.

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There are various ways of incorporating power foods in your daily diet. Of course, the key to enjoying power foods is proper preparation of these foods, the use of season-fresh foods, and identifying your choice of flavor among power foods.

Some of the recommended power food combinations are those that are prepared in our kitchens on a regular basis. Take for instance, the combination of chickpeas and onions. This combination is a powerful source of iron, which is required by the body to transport oxygen to its various parts. Iron deficiency can lead to anemia, fatigue, brain fog and tiredness. A study by the Journal of Agricultural and Food Chemistry says that Sulphur compounds in onion and garlic help in the absorption of iron and zinc from chickpeas. The combination is a hit with teenagers who need to be diligent about getting iron in their diet. A quick way to prepare this power food is to make a chickpea salad with chopped onions, chat masala and cilantro.

Another favorite combination with power food takers is yoghurt and bananas. This makes for a perfect snack after a rough game of football. Yoghurt is packed with proteins that help preserve muscle mass, and bananas are packed with carbohydrates that help in refueling energy and preventing muscle soreness. A quick and easy recipe with bananas is a banana smoothie topped with cool yoghurt.

Among beverages, green tea is the best source of Catechins that are effective in halting oxidative damage to cells. According to researchers at the Purdue University, adding a dash of lemon juice to green tea makes the Catechins even more easily absorbable by the body. Therefore, the next time you have friends at home serve them rounds of iced green tea with mint and lemon juice.

1. What are power foods? (2 marks)
2. What are the rules regarding the partaking of power foods? (2 marks)
3. What is the advantage of including onions and garlic in our diet? (2 marks)
4. Suggest a quick recipe with chickpea and onions. (2 marks)
5. Why is yoghurt and bananas, an enriching power food? (2 marks)
6. Why is green tea a recommended power food? (2 marks)
7. What is the advantage of combining green tea with lemon juice? (2 marks)
8. What is the opposite of '*ignorant*' from the passage? (1 mark)

OR

A. How to solve Para Jumble **07 M**

B. What is Cloze Test? **08 M**

Q. 4 Discuss elements and some tips to write an effective Research Paper. **15M**

OR

A. Write a complain email to META Network for poor network in your area. **07M**

B. What is Meeting Notice? What it should contain? **08M**

Q. 5 Write short notes on any three. **15M**

A. Giving Opinions

B. Types of Reading

C. Objectives of Meeting Minutes

D. Characteristics of Moral Stories

E. Tips to write an e-mail

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GD—32—2023

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

APRIL/MAY, 2023

(New Course)

BIOTECHNOLOGY

(Microbiology–II)

(Friday, 28-4-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) Attempt *all* questions.

(*ii*) *All* questions carry equal marks.

(*iii*) Draw well labelled diagrams wherever necessary.

1. Describe nurtitional types of microbes. 15

Or

(*i*) Describe selective and differential media. 8

(*ii*) Describe pour plate method. 7

2. Describe methods of enumeration of bacterial growth. 15

Or

(*i*) Describe streak plate method. 8

(*ii*) Describe differential media. 7

3. Describe methods of enumeration of bacterial growth. 15

Or

(*i*) Describe bacterial growth. 8

(*ii*) Describe continuous culture. 7

4. Define Disinfectant. Write a note on chemotherapeutic agents. 15

Or

(*i*) Describe sterilizing gases. 8

(*ii*) Describe halogens as distinfectant. 7

5. Write short notes on (any *three*) : 15

(*i*) Pour plate method

(*ii*) Diauxic growth

(*iii*) Pasteurization

(*iv*) Phenols

(*v*) Natural media.

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GD—12—2023

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

APRIL/MAY, 2023

(New Course)

BIOTECHNOLOGY

(Principle of Genetics)

(Monday, 24-4-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Each question carries equal marks.

1. What is multiple allele ? Describe it with suitable examples. 15

Or

(*a*) Describe in brief Mendel's law of independent assortment. 8

(*b*) Explain duplicate gene in detail. 7

2. Explain in detail structural and numerical changes in chromosomes. 15

Or

(*a*) Write a note on Linkage. 8

(*b*) Describe in brief crossing over. 7

3. What is Mutagen ? Explain in detail physical and chemical mutagen with suitable examples. 15

Or

(*a*) Describe in detail spontaneous mutation. 8

(*b*) Write a note on concept of gene. 7

4. Describe in brief conjugation. 15

Or

(*a*) Write a note on plasmid. 8

(*b*) Explain in detail transduction. 7

5. Write short notes on (any *three*) : 3×5=15

(*a*) Complementary gene

(*b*) Linkage groups

(*c*) Acridine dyes

(*d*) Transformation

(*e*) Transposable elements.