

KATHMANDU UNIVERSITY
End Semester Examination
July/August, 2019

Mark scored:

Level : B.Tech.

Year : IV

Exam Roll No. :

Time: 30 mins.

Course : BIOT 417

Semester: II

F. M. : 20

Registration No.:

Date :

SECTION "A"

[20Q × 0.75 = 15 marks]

Choose and encircle the most appropriate answer from the given choices.

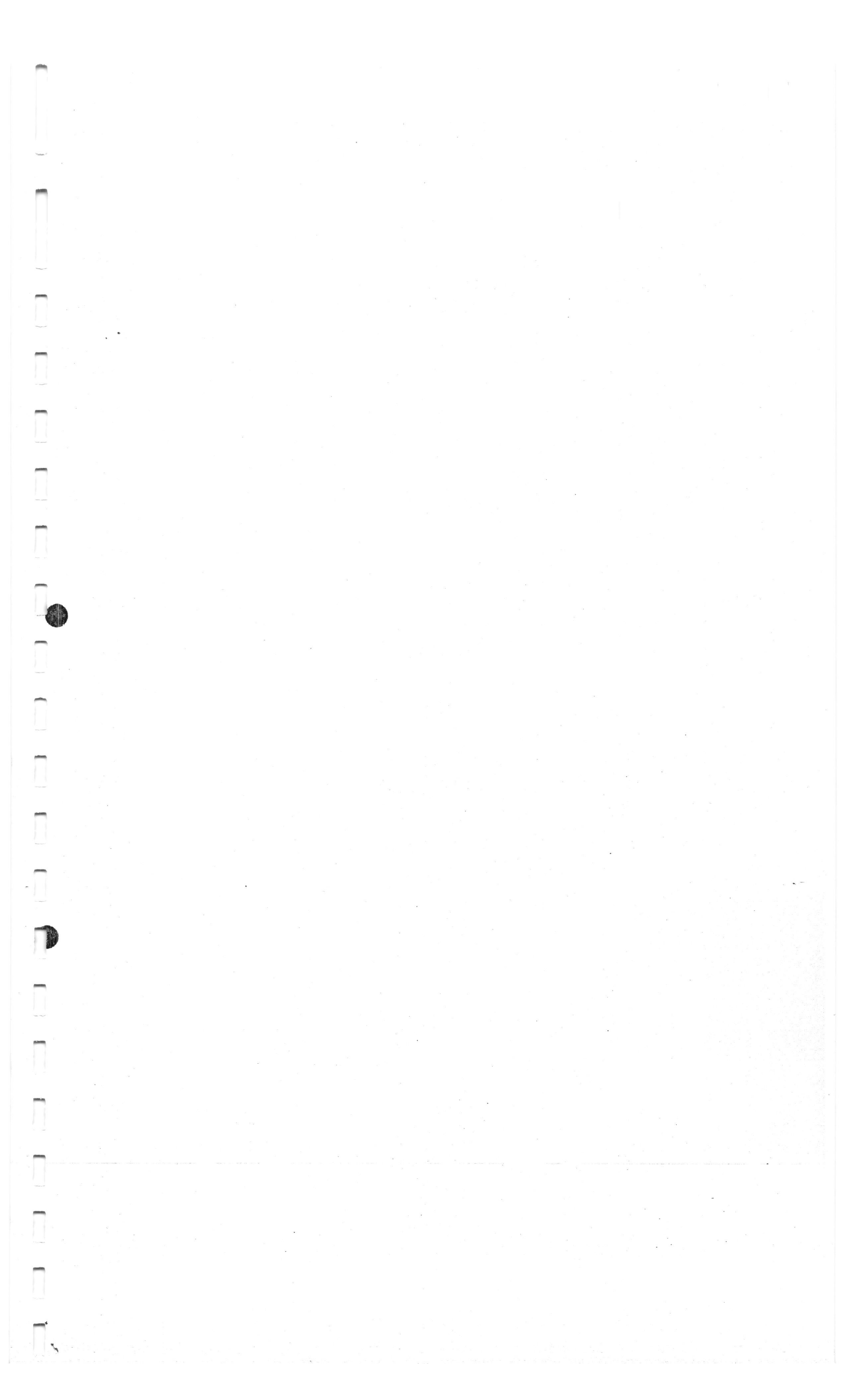
1. Risk of adverse effect by too much intake of Vitamin D
 - a. Osteoporosis
 - b. Kidney stone
 - c. Scurvy
 - d. Hypercalcaemia
2. No risk to human health if consumed excessive amount of
 - a. Vitamin B 12
 - b. Iodine
 - c. Calcium
 - d. Vitamin A
3. Which of the following has low risk of exceeding SUL?
 - a. Fluoride
 - b. Beta-carotene
 - c. Vitamin E
 - d. Zinc
4. Which one of the following is a part of nutrient?
 - a. Saponin
 - b. Lectin
 - c. Lecithin
 - d. Tannin
5. Health benefits of functional food do not apply to
 - a. Improved memory
 - b. Reduced risk of cancer
 - c. Reduced risk of CVD
 - d. Enhanced food safety
6. Suggested intake of probiotic lactic should be in the range of
 - a. 4 – 5 log cfu/g
 - b. 5 – 6 log cfu/g
 - c. 6 – 7 log cfu/g
 - d. > 8 log cfu/g
7. Which of the following body tissues contain higher amount of water?
 - a. Teeth
 - b. Bone
 - c. Blood
 - d. Muscle
8. The concept of functional food was developed in Japan
 - a. 1960
 - b. 1970
 - c. 1980
 - d. 2000
9. The term "nutraceutical" was coined from
 - a. Food & Nutrition
 - b. Food & Pharmaceutical
 - c. Nutrition & Pharmaceutical
 - d. Food & Medicine
10. Health benefit of Sauerkraut from the perspective of carcinogenesis is due to
 - a. Isothiocyanates
 - b. Cyanides
 - c. Vitamin C
 - d. Lactic acid

11. In clinical trials, daily Kimchi consumption was positively correlated with
 - a. HDL cholesterol
 - b. LDL cholesterol
 - c. Triglycerides
 - d. Total lipid
12. Omega – 3 fatty acid is present in
 - a. Meat
 - b. Fish oil
 - c. Milk
 - d. Cheese
13. Source of 'Quercetin' is
 - a. Onion
 - b. Walnut
 - c. Almond nut
 - d. Cinnamon
14. Which one of the following is not prebiotic
 - a. Inulin
 - b. Polydextrose
 - c. Fructo – oligosaccharide
 - d. Lactitol
15. Cancer preventive phytochemical in green tea is
 - a. Coumarin
 - b. Monoterpenes
 - c. Sulphides
 - d. Carotenoides
16. Which one of the following is not relevant to health benefit of oligosaccharide?
 - a. Proliferation of bifidobacteria
 - b. Reduction of detrimental bacteria
 - c. Reduction of serum cholesterol
 - d. Lowering of pH of large intestine
17. Nutraceuticals is defined by
 - a. Louis Pasteur
 - b. Stephen Defelice
 - c. Nicholas Appert
 - d. Joseph Juran
18. Which of the following cereal is not a functional food?
 - a. Wheat
 - b. Brown rice
 - c. Buckwheat
 - d. Polished rice
19. Lycopene from tomatoes and tomato products have potential health benefits as:
 - a. Maintenance of prostate health
 - b. Neutralizes free radicals
 - c. Healthy vision
 - d. Bolsters cellular antioxidant defenses
20. Probiotic lactic culture is
 - a. Lactobacillus bulgaricus
 - b. Leuconostoc mesenteroides
 - c. Pediococcus pentosaceus
 - d. None of them

SECTION "B"
[10Q × 0.5 = 5 marks]

Fill in the blanks.

21. Recommended intake of probiotic products for effective dosage of live bacteria is _____.
22. Majority of probiotics are _____.
23. Initial concentration of yoghurt culture must be maintained at _____ in milk.
24. Soya saponin has modest _____.
25. Tomato paste and other processed tomato products prevent _____.
26. Consumption of Natto lowers _____.
27. An uncertainty factor in toxicological threshold of functional food is determined by _____.
28. A process for assessment of scientific support for claims on foods is abbreviated by _____.
29. Biomarkers must be both _____ and _____ valid.
30. FOSHU is _____.



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F. M. : 55

SECTION "C"

(Long answer questions)

[3Q × 7 = 21 marks]

Attempt *ANY THREE* questions.

1. Elaborate the significance and application of functional foods and nutraceuticals in the Nepalese context.
2. Explain the practical implication of scientific substantiation of health claims.
3. To what extent, you foresee the relevance of safety evaluation of functional foods with reference to vitamins and minerals?
4. Discuss the health benefits of probiotics and prebiotics functional products.

SECTION "D"

(Short answer questions)

[6Q × 5 = 30 marks]

Attempt *ANY SIX* questions.

5. Why Tempeh is called nutraceutical?
6. What is the contribution of functional food science in Japan?
7. Characterize the nutritive value of protein and its classification.
8. Why is antioxidant so important in characterizing functional and nutraceutical products?
9. Illustrate the health benefits of Yoghurt.
10. Why is Kimchi recognized as a functional food product?
11. What are the major challenges and opportunities in promoting functional foods from indigenous knowledge resources?

SECTION "E"

12. Write an account on (*ANY TWO*): [2 + 2 = 4]
 - a. RDA
 - b. Consumer concern of functional foods
 - c. Probiotic culture

