

B.Sc. DEGREE EXAMINATION, APRIL 2022
BRANCH IV - CHEMISTRY
FOURTH SEMESTER

COURSE : MAJOR ELECTIVE
PAPER : FOOD CHEMISTRY
TIME : 3 HOURS

MAX. MARKS : 100

SECTION – A

ANSWER ALL THE QUESTIONS.

(30x1=30)

I Choose the correct answer.

- Which one of the following has the highest glycemic index?
a) Egg b) Potato c) Corn oil d) Mango
- Dietary fiber is an indigestible _____ that serves separately as a body regulatory agent.
a) Fat b) Protein c) Carbohydrate d) Amino acid
- The formula for calculating BMI is
a) $\frac{\text{Weight}}{\text{height}}$ b) $\frac{\text{Weight in Kg}}{(\text{height in m})^2}$ c) $\frac{\text{Weight in pounds}}{(\text{height in m})^2}$ d) $\frac{\text{Weight in Kg}}{(\text{height in cm})^2}$
- An agency of India engaged in periodic diet and nutrition survey is -
a) Indian Council of Medical Research
b) World Health Organisation
c) Food and Agricultural Organisation
d) National Nutrition Monitoring Bureau
- The full form of AGMARK is
a) Agricultural Marketing b) Agriculture Market
c) Agro-marketing d) None of the above
- Amla is good source of _____
a) Vitamin C b) Vitamin A c) Vitamin D d) Vitamin K
- _____ is not the function of anti-oxidant.
a) Color preservation b) preventing protein degradation
c) Minimizing rancidity d) preserving flavor
- For preventing Goiter _____ is necessary in diet
a) Iodine b) phosphorus c) vitamin C d) Magnesium
- Honey is a
a) Protein b) carbohydrates c) Fat d) Mineral
- To determine the amount of free water available for microbes to use in a food system, a food scientist would measure the _____ of that food.
a) Water activity b) percent water c) pH d) Brix
- When fruits and vegetables are bruised or cut, discoloration occurs. This is called
a) Caramelization b) sulfating
c) dehydration d) enzymatic browning
- This involves cooking in minimum amount of liquid at a temperature of 80-85°C.
a) Simmering b) Poaching c) Stewing d) Boiling

II Fill in the blanks:

13. Expansion of ISI is _____.
14. Enzyme present in saliva is _____.
15. The energy released in the body from food is measured as _____.
16. Cyanocobalamin is _____ (Vitamin)
17. One gram of fat gives _____ kcal of energy.
18. Expansion of BIS is _____.
19. An example of carotenoid containing vegetable is _____.
20. Indian Institute of Crop Processing Technology, Thanjavur is one of the referral food laboratories associated with _____.

III Match the following

21.	Essential amino acid	a.	Calcium
22.	Milk protein	b.	Aspartame
23.	Artificial Sweetener	c.	Lysine
24.	Food Preservative	d.	casein
25.	Spinach (Palak)	e.	Sodium benzoate

IV State whether true or false:

26. The protein present in wheat is casein
27. Minerals constitute about 25% of the total body weight.
28. Proteins are best energy source for the body.
29. High levels of salt in pickles aids as an anti-microbial agent
30. Bile juice acts as an emulsifier in digestion of fats

Section – B**Answer any five questions.****(5 x 6 = 30)**

31. Discuss the various functions of lipids.
32. Discuss the hot water extraction and mechanical expeller extraction of vegetable oil.
33. Explain the following with respect to flavour and colour production by carbohydrates – a. caramelization b. Enzymatic browning (3+3)
34. a. Give an account on pectin. (3)
b. What is a balanced diet for an average adult? (3)
35. A cup of mushroom fried rice has 8 grams protein, 50 grams carbohydrate and 14 grams fat. Calculate the energy provided by the rice. What percentage of the energy in the fried rice comes from each of the energy yielding nutrient?
36. Discuss the salient features of FPO.
37. a) Differentiate between natural and artificial flavours. (3)
b) Explain the various components of total energy requirement. (3)

