UG/II/NUT/H/III/18(New)

2018

NUTRITION

[Honours]

PAPER – III

Full Marks : 90

Time : 4 hours

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

[NEW SYLLABUS]

UNIT – 5

GROUP – A

1. Answer any *five* questions from the following : 2×5

   (*a*) Mention one initiation codon and one stop codon.

(*b*) Name any two enzymes that has its optimum pH greater than 7.

(*c*) What are antioxidants ?

(*d*) Why is enzyme activity dependent on pH ?

(*e*) What do you mean by fatty liver ?

(*f*) What are ketone bodies ?

(*g*) What is symport and antiport ?

(*h*) What are the adverse effects of dietary fiber ?

GROUP – B

Answer any **four** questions from the following : 5 × 4

2. Describe how active vitamin D_3 is reflected to calcium absorption in the intestine. 5

3. What is the physiological importance of PUFA and MUFA ? Write the effects is of different carbohydrates on blood glucose. 2 + 3

4. What is okazaki fragments ? What are the role of tropoisomerase-II, SSB protein and DNA pol-III ? 2 + 3

5. What is Kitosis ? Briefly describe the process of β-oxidation of fatty acid. 1+4

6. Discuss the synergistic action of α-tocopherol and ascorbic acid as membrane antioxidant. What are pro-oxidants. 4+1

7. What are competitive and non-competitive enzyme inhibition ? How can we differentiate them kinetically ? 2+3

8. Differentiate between oxidative phosphorylation and substrate level phosphorylation. 5

GROUP – C

Answer any **one** question : 15×1

9. (*a*) Describe with a suitable diagram the fluid mosaic model of cell membrane.

   (*b*) What do you mean by membrane fluidity and state the factors affectings membrane fluidity.

   (*c*) Discuss the production of ketone bodies from acetyl CoA. 5+(2+3)+5

10. (*a*) State the salient features of Watson-Crick DNA double helix with suitable diagram. What is post transcriptional modifications ?

(*b*) What are lipoproteins ? Write briefly the importance of lipoproteins.

(*c*) Write the biological importance of colloidal system. (4 + 2 + 2) + (2 + 3) + 2

UNIT – 6

GROUP – D

11. Answer any *five* questions from the following : 2 × 5

(*a*) What is green tea ?

(*b*) What is GM food ?

(*c*) What is stevia ?

(*d*) Write any two nutritional attributes of eggs.

(*e*) Define self life of food ?

(*f*) Write two examples of food colours.

(*g*) What are fast foods ?

(*h*) Differentiate between vegetable and animal fat.

GROUP – E

Answer any **four** questions from the following : 5 × 4

12. Write the nutritional aspect of squashes and syrups. 5

13. Describe different nutritional aspect of tea and chocolates. 5

14. Explain the relationship between pectin, acid and sugar in jelly formation. 5

15. Mention the importance of food adjuncts from the angle of mutation. 5

16. Differentiate between legumes and pulses. Discuss in brief about the various storage methods of pulses. 1 + 4

17. Write short notes on 'breakfast cereals' ? 5

18. Write a short note on 'convenience foods' . 5

GROUP – F

Answer any **one** question from the following : 15×1

19. (*a*) Write advantages and disadvantages of parboiled rice.

(*b*) Discuss the anti-nutritional factors of pulses.

(*c*) "Nutritional values of germinating legumes is better than raw legumes" – Justify.

$4 + 4 + 4 + 3$

20. (*a*) Write in details on the composition of cow's milk.

(*b*) Why does boiling milk spill over ?

(*c*) Why nutritional value of total fruit is more than fruit juice ?

(*d*) Write short note on 'aerated beverages'.

$5 + 3 + 3 + 4$