UG/5th Sem/Nut(H)/T/19

2019

B.Sc. (Honours)

5th Semester Examination

NUTRITION

Paper - DSE-1T

Full Marks : 60 Time : 3 Hours

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

[Chemical Safety of Foods]

Group - A

1. Answer any *ten* questions from the following. 10×2=20

(a) What is acrylamide ? When it is used ? 1+1

(b) What are the sources of carbamates ?

(c) What is high-fructose syrup ?

[Turn Over]

(d) What are food additives ? Write its examples. 1+1

(e) What is potassium bromate ? Write down its health hazards. 1+1

(f) What are low-caloric and zero caloric sweeteners ?

(g) Write one advantage & one disadvantage of monosodium glutamate. 1+1

(h) What is herbicide ? Write two examples of stabilizers. 1+1

(i) What are sources of antibiotic contaminants in food ?

(j) What is hydrolysed vegetable protein ?

(k) What is Phenyl Ketoneurea ? Write its Physiological sign and symptoms. 1+1

(l) Write down the health hazards of brilliant blue. 2

(m) Write two health hazards of PAHs.

(n) What is autolyzed yeast extract ?

(o) What is LD50 ?

Group - B

2. Answer any *four* questions from the following. 4×5=20

(a) What are the impacts of acrylamide in human health ? Briefly describe the quantification methods of it. 2+3

(b) What are the roles of antibiotics in food ? How much food steroids are beneficial for health. 2½+2½

(c) Write down the mechanism of action of antioxidants in foods.

(d) What do you mean by cross contamination ? How different food contaminants contaminate the substance during packaging. 1+4

(e) How high-fructose syrup is synthesized ? What are the health effects of boiler water additives. 2+3

[Turn Over]

(f) What are the sources of oxyhalides contaminants in food ? Write its health impact. 2+3

Group - C

3. Answer any *two* questions from the following. 10×1=20

(a) Write the name of 4 food additives with mentioning its disadvantages. Write down the health hazards of food colourants. (2+3)+5

(b) Explain the action of $KBrO_3$ in dough oxidation. Mention the different legal guidelines on uses of potassium bromate in bakery products. 5+5

(c) Write the names of four preservatives. Describe the physiological roles of hydrolyzed vegetable protein. Write a short note on artificial sweeteners. 2+3+5

(d) What is emulsifiers ? Write the health hazards of candelilla wax, carbamide, argan. What is propyl gallate ? State the negative impacts of BHT. 2+5+1+2

[Microbiological Safely of Foods]

Group - A

1. Answer any *ten* questions from the following. 10×2=20

(a) State the name of two chemical used in food preservation ?

(b) Write the name of two factors which affects the growth of microorganisms in food ?

(c) What do you mean by food borne diseases ?

(d) Define food intoxication.

(e) Write the name of two organisms and the illness caused by them.

(f) Write the name of organisms causing spoilage of cereal based food.

(g) What do you mean by beneficial microbes ?

(h) What are food grade microbes ?

[Turn Over]

(i) Name two media used in microbiology laboratory ?

(j) What is aflatoxicosis ?

(k) What is meant by a_w ?

(l) What is metagenomics ?

(m) Write the name of two immunological methods used to determine the presence of microbes in food.

(n) What do you mean by HACCP ?

(o) Write the name of two protozoa and their associated diseases.

Group - B

2. Answer any *four* questions from the following. 4×5=20

(a) How microorganisms are associated with food safety ?

(b) Elaborate the illness associated with Salmonella infection.

(c) How canned food get spoiled ? Write the name of the potent pathogens present in improperly processed meat products. 3+2

(d) How is bacteria presence in a particular food sample quantified ?

(e) Write the principle of DGGE.

(f) Write in brief about thermal food preservation technique.

Group - C

3. Answer any *two* questions from the following. 2×10=20

(a) Write the process, merits and demerits of irradiation in the context of food preservation. 4+3+3

(b) Write the mode of action of any two microbial toxins associated with food poisoning. 5+5

(c) How spoilage of fruits and vegetables can be controlled ? State the significance of Pasteurization. 5+5

[Turn Over]

(d) Write note on :

(i) Culture independent technique of microbiological analysis.

(ii) Mushroom poisoning.

[Food Sanitation & Hygiene]

Full Marks : 40 Time : 2 Hours

Group - A

1. Answer any *five* questions from the following. 5×2=10

(a) What do you mean by food spoilage ?

(b) Write the name of any two instrument/method used to control microbe by heat treatment.

(c) Write the names of any two food borne diseases and respective causing agent.

(d) What is HACCP ?

(e) What do you mean by sanitation ?

(f) How soil act as a reservoir of infection ?

(g) What is personal hygiene ?

(h) What is disinfection ?

[Turn Over]

2. Answer any *four* questions from the following. 4×5=20

(a) Describe the different methods adopted to a control infestation by rodent.

(b) Distinguish between sterilization and disinfection. Write the different sources of microorganism for food contamination. 2+3

(c) How chemical and metal causes hazardous effect on health ? 'Personal hygiene of food handler is important for food health'—Justify. 2+3

(d) State the mode of transmission of infection.

(e) Write the intrinsic factors that modulate microbial growth.

(f) State briefly the environmental effect on the growth of microorganisms.

3. Answer any *one* questions from the following. 1×10=10

(a) Discuss about any two food borne diseases. What preventive measures should be taken for the control of food borne illness ? (3+3)+4

(b) State the relation between sanitation and hygiene. Write the role of training programme for health personnel to improve food sanitation. How kitchen hygiene is maintained ? "Our hands called as the most dangerous serving tool"—Justify.

2+2+2+4
