E 8705 (Pages : 3) Reg. No.....

Name.....

UNDER GRADUATE (C.B.C.S.S.) EXAMINATION, OCTOBER 2014

Fifth Semester

Open Course—HUMAN GENETICS, NUTRITION, COMMUNITY HEALTH AND SANITATION

(Offered by the Board of Studies – Zoology)

Time : Three Hours Maximum Weight : 25

Part A (Objective type)

Answer **all** *questions.*
Weight 1 *each for a bunch of four.*

I. 1. An example for a disease caused by non-disjunction of the X-chromosome is :

(a) Haemophilia. (b) Sickle cell anaemia.

(c) Turner's syndrome. (d) Down's syndrome.

2. The vitamin known by the name 'antihaemorrhagic vitamin' is :

(a) Vitamin A. (b) Vitamin B.

(c) Vitamin C. (d) Vitamin K.

3. When serum from a patient who needs a blood transfusion was cross matched against blood groups A and B, both gave agglutination reactions. The blood group of the patient must be :

(a) AB. (b) B.

(c) O. (d) A.

4. Institutions that train sports persons are situated in high altitude areas. This helps in :

(a) Building up muscle mass.

(b) Exercising in clean air.

(c) Elevating haemoglobin levels and thereby oxygen carrying capacity.

(d) Reducing body temperature thereby reducing fatigue.

II. 5. The calorific value of protein is 5.6, while its physiological value is 4. This difference is because :

(a) Amino groups in amino acids are toxic.

(b) Heat energy is lost while metabolising proteins.

(c) The side chains of amino acids cannot be metabolised.

(d) Living organisms are unable to derive energy from the amino group.

Turn over

6. Which among the following can be considered as a consequence of high physical activity ?

(a) Fall in body temperature. (b) Alkalosis.

(c) Hypercapnia. (d) Hypocapnia.

7. Psychedelic drugs cause their effect by interfering with the normal functioning of the :

(a) Visual system. (b) Excretory system.

(c) Nervous system. (d) Skeletal system.

8. A disease caused by insufficient intake of protein is :

(a) Pellagra. (b) Kwashiorkor.

(c) Beriberi. (d) Ricketts.

III. 9. The vitamin known by the name 'sunshine vitamin' is :

(a) Vitamin E. (b) Vitamin D.

(c) Vitamin A. (d) Vitamin B..

10. According to BMI grading system, a person weighing 100 Kgs and having a height of 150 cms will be considered as :

(a) Overweight. (b) Healthy.

(c) Obese. (d) Morbidly obese.

11. The metabolic pathway which gets directly affected in diabetes is that of :

(a) Glucose metabolism. (b) Amino acid metabolism.

(c) Biosynthesis of glucose. (d) Fatty acid metabolism.

12. The category of cancers that are derived from mesodermal tissues is called :

(a) Lipomas. (b) Blastomas.

(c) Sarcomas. (d) Lymphomas.

V. 13. Infectious hepatitis is caused by :

(a) Bacteria. (b) Alcoholism.

(c) Viruses. (d) Vibrio cholerae.

14. Control of rodents can prevent :

(a) Plague. (b) Leptospirosis.

(c) Cholera. (d) Both plague and leptospirosis.

15. The zoonoses of leptospira are :

(a) Anopheles mosquitoes. (b) Culex mosquitoes.

(c) Rats. (d) Cattle.

16. An example for an emerging virus that causes respiratory distress is :

    (a) Chikungunya virus. (b) SARS virus.

    (c) Mycobacterium tuberculosis.. (d) Bacillus anthracis.

(4 × 1 = 4)

Part B (Give Short Answer)

Answer any **five** *questions.*
Weight 1 *each.*

17. Write down the WHO approved definition of health.
18. What is a balanced diet ?
19. What is the purpose of chorionic villus sampling ?
20. How is the incidence of sickle cell anaemia and malaria related ?
21. What is the first aid for first degree burns ?
22. What is a paternity test ?
23. How does yoga and meditation help in maintaining a healthy life ?
24. What are the different categories of carcinogens ?

(5 × 1 = 5)

Part C (Short Essay)

Answer any **four** *questions.*
Weight 2 *each.*

25. Write a short essay on Down's syndrome.
26. How does exercise improve the efficiency of the respiratory system ?
27. What is calorific value ? How is it different from physiological value ?
28. Give a brief description of the human genome project.
29. Distinguish between a blastema and a lymphoma.
30. Describe any *one* method for the large scale purification of water for drinking purposes.

(4 × 2 = 8)

Part D (Essays)

Answer any **two** *questions.*
Weight 4 *each.*

31. Discuss the importance and role of community health programmes in maintaining a healthy society.
32. Give a detailed account of the biological principle, advantages and methods involved in vermicomposting.
33. Describe the cause and course of AIDS. How can AIDS be prevented ?

(2 × 4 = 8)