HUMAN HEALTH AND DISEASES

1. Which of the following adversely affects human health?
   (A) Change in lifestyle
   (B) Genetic disorders
   (C) Rest and exercise
   (D) Both (A) and (B)

2. Human health cannot be maintained by
   (A) maintaining personal hygiene
   (B) consuming a diet rich in carbohydrate only
   (C) regular physical exercise
   (D) None of the above

3. Measures for personal hygiene include.
   (A) Intake of clean drinking water
   (B) Keeping the body clean
   (C) Disinfection of water resources
   (D) Both (A) and(B)

4. Salmonella typhi generally enters the small intestine through .....A..... and migrates to other body parts through .....B..... . The most appropriate combination to fill the blanks is
   (A) A–contaminated food and water; B–blood
   (B) A–contaminated food; B–blood
   (C) A–skin; B–blood
   (D) A–air; B–blood

5. Common symptoms of typhoid are
   (A) high fever 39°C to 40°C and weakness
   (B) stomach pain and constipation
   (C) headache and loss of appetite
   (D) All of the above

6. Which of the following health disorder includes symptoms of fever, chills, cough, headache, grey to bluish lips and fingers nails?
   (A) Filariasis
   (B) Typhoid
   (C) Pneumonia
   (D) Malaria

7. Infection of pneumonia occurs due to
   (A) droplets released from an infected person
   (B) released droplets/aerosols inhaled by healthy person
   (C) sharing contaminated objects such as glasses and utensils with an infected person
   (D) All of the above

8. Where will you look for the sporozoites of the malarial parasite?
   (A) RBCs of humans suffering from malaria
   (B) Spleen of infected person
   (C) Salivary glands of freshly moulted female Anopheles mosquito
   (D) Saliva of infected female Anopheles mosquito

9. Which of the following toxic substances is responsible for the high malarial fever?
   (A) Haemoglobin
   (B) Haemocyanin
   (C) Haemozoin
   (D) Haemoriden

10. Plasmodium completes its life cycle in two hosts. Asexual phase in …… host and sexual phase in …… host. The correct option with words to fill the blanks is
   (A) human; Culex mosquito
   (B) human; female Anopheles mosquito
   (C) human; Aedes mosquito
   (D) human; male Anopheles mosquito

11. Entamoebahistolytica is a parasite of
   (A) large intestine
   (B) liver
   (C) lungs
   (D) kidney

12. Give the name of two helminths, which cause ascariasis and filariasis, respectively.
   (A) Ascaris and Wuchereria
   (B) Wuchereria and Ascaris
   (C) Roundworm and flatworm
   (D) Plasmodium and Wuchereria

13. Elephantiasis, a chronic inflammation that results in gross deformities is caused by

(A) Trichophyton
(B) Wuchereria
(C) coli
(D) Ascaris

14. Elephantiasis causing organism belongs to
(A) Aschelminthes
(B) Platyhelminthes
(C) Cnidaria
(D) Porifera

15. Which one of the following pairs is not correctly matched?
(A) Filariasis — Wuchereria
(B) Syphilis — Trichuristrichiura
(C) Plague — Yersinia pestis
(D) Dengue fever — Flavi-ribo virus

16. The group of diseases carried (transmitted) by insects are
(A) typhoid, jaundice, tuberculosis
(B) mumps, measles, smallpox
(C) scabies, ringworm, swine flu
(D) malaria, filaria, yellow fever

17. Fungi belonging to genera–Microsporum, Trichophyton and Epidermophyton are responsible for
(A) ringworm infection
(B) skin allergy
(C) amoebiasis
(D) measles

18. Gambusia is a fish which can control the mosquito borne disease like
(A) dengue
(B) malaria
(C) chikungunya
(D) All of these

19. Ability of the body to fight against the disease causing organisms is called
(A) vulnerability
(B) susceptibility
(C) irritability

(D) immunity

20. Non-specific host defence that exists prior to the exposure to an antigen is called
    (A) acquired immunity
    (B) passive immunity
    (C) innate immunity
    (D) active immunity

21. Full form of PMNL is
    (A) Poly Morpho-Nuclear Leucocytes
    (B) Para Morpho-Nuclear Lymphocytes
    (C) PentaMorpho-Nuclear Leucocytes
    (D) Poly Morpho-Nuclear Lymphocytes

22. A person has developed interferons in his body. He seems to carry an infection of
    (A) typhoid
    (B) filariasis
    (C) malaria
    (D) measles

23. Each antibody has ...A... polypeptide chains, ..B.. small chains called ...C... chains and ....D... longer chains called ...E... chains. The antibody, therefore, is represented as ... F.. Here A to F refers to
    (A) A–four, B–two, C–light, D–two, E–heavy, F–H2L2
    (B) A–six, B–three, C–light, D–three, E–heavy, F–H3L2
    (C) A–two, B–one, C–light, D–one, E–heavy, F–H1L1
    (D) A–five, B–two, C–light, D–three, E–heavy, F–H2L2

24. Antigen binding site of immunoglobulin (antibody) is
    (A) variable region of heavy chain
    (B) variable region of light chain
    (C) constant region of light chain
    (D) variable region of both heavy and light chain

25. Humoral immunity is also called as
    (A) antibody mediated immunity
    (B) non-specific immune response
    (C) antigen mediated immunity
    (D) None of the above

26. Humoral immunity is mediated by
    (A) B-cells
    (B) T-cells
    (C) macrophages
    (D) monocytes

27. Active immunity development is related to
    (A) natural killer cells
    (B) memory cells
    (C) helper T-cells
    (D) suppressor T-cells

28. Colostrum, the yellowish fluid, secreted by mother during the initial days of lactation is very essential to impart immunity to the new born infants because it contains
    (A) monocytes
    (B) macrophages
    (C) immunoglobulin-A
    (D) natural killer cells

29. What is injected into the patient's body for determining the cause of allergy?
    (A) Allergen to which the patient is allergic
    (B) IgG
    (C) IgE
    (D) Steroids

30. Which of the given sets include the primary lymphoid organs?
    (A) Thymus, lymph nodes and spleen
    (B) Bone marrow and thymus
    (C) Bone marrow, Peyer's patches and thymus
    (D) Thymus, liver and tonsils

31. Thymus is a lobed organ located near the..... A .....and beneath the ....B.... . The most appropriate combination for A and B is
    (A) A–heart; B–breast bone
    (B) A–liver; B–ribs
    (C) A–heart; B–ribs
    (D) A–intestine; B–ribs

32. T-lymphocytes mature in the .....while B-lymphocyte mature in the ..... .
Most appropriate combination of words to fill the blanks is
(A) thymus; bone marrow
(B) bone marrow; thymus
(C) thyroid; bone marrow
(D) yellow bone marrow; red bone marrow

33. Full form of MALT is
(A) Mucosal Associated Lymphoid Tissue
(B) Memory Associated Lymphoid Tissue
(C) Memory Associated Lymphocyte Tissue
(D) Mucosa Associated Lymphocyte Tissue

34. Genetic material found in Human Immunodeficiency Virus (HIV) is
(A) double-stranded RNA
(B) single-stranded RNA
(C) double-stranded DNA
(D) single-stranded DNA

35. Transmission of HIV infection from infected mother to her child occurs through
(A) liver
(B) placenta
(C) skin
(D) None of these

36. A patient is suspected to be suffering from Acquired Immuno Deficiency Syndrome (AIDS). Which diagnostic technique will you recommend for its detection?
(A) ELISA
(B) MRT
(C) Ultrasound
(D) WIDAL

37. The word NACO stands for
(A) National AIDS Control Organisation
(B) Non-governmental AIDS Control Organisation
(C) National Agrochemical Organistation
(D) Both(B) and(C)

38. The property of normal cells by virtue of which contact with other cells inhibits their uncontrolled growth is called

(A) contact inhibition
(B) metastasis
(C) benigntumour
(D) metagenesis

39. The uncontrolled proliferation of cancerous cells produces masses of cells, called
(A) tumours
(B) neoplastic cells
(C) protooncomass
(D) Both (A) and(B)

40. Physical carcinogens, e.g. UV-ray, X-ray and g-rays cause
(A) DNA damage
(B) RNA damage
(C) Both (A) and(B)
(D) Protein damage

41. Normal cell have genes called .....A..... which are present in inactivated state but under certain conditions like .....B... they get transformed to ...C.... Here A, B and C refers to
(A) A–cellular oncogenes, B–mutation, C–cancer causing oncogenes
(B) A–viral oncogenes, B–mutation, C–disease causing genes
(C) A–viral oncogenes, B–mutation, C–tumour causing genes
(D) None of the above

42. Cancer cells are more easily damaged by radiation than normal cells because they are
(A) starved of mutation
(B) undergoing rapid division
(C) different in structure
(D) non-dividing

43. Alpha-interferons
(A) activate the immune system
(B) help in destroying the tumour
(C) Both (A) and(B)
(D) None of the above

44. Cannabinoid are the group of chemicals, which interact with cannabinoid receptors present principally in

(A) brain
(B) neuron
(C) nephron
(D) dendron

45. Cannabinoids are obtained from
(A) inflorescence of the plant Cannabis sativa
(B) fruits of the plant Papaversomniferum
(C) latex of the plant Cannabis sativa
(D) plantPapaversomniferum inflorescence

46. The flower tops, leaves and the resin of Cannabis sativa are used to produce
(A) marijuana
(B) hashish
(C) charas
(D) All of these

47. Identify the pictures A, B and C.

.
(A) A–Opium poppy, B–Cannabis sativa, C–Datura
(B) A–Cannabis sativa, B–Opium poppy, C–Datura
(C) A–Datura, B–Opium poppy, C–Cannabis sativa
(D) A–Opium poppy, B–Datura, C–Cannabis sativa

48. Drugs, that are normally used as medicines to help the patients cope with mental illness are
(A) barbiturates
(B) amphetamines
(C) benzodiazepines
(D) All of these

49. LSD is derived from
(A) Clavicepspurpurea
(B) Pseudomonas putida

(C) Cannabis indica
(D) Cannabis sativa

Answer Key

1	(D)	2	(B)	3	(D)	4	(A)	5	(D)
6	(C)	7	(D)	8	(D)	9	(C)	10	(B)
11	(A)	12	(A)	13	(B)	14	(C)	15	(B)
16	(D)	17	(A)	18	(D)	19	(D)	20	(C)
21	(A)	22	(D)	23	(A)	24	(D)	25	(A)
26	(A)	27	(B)	28	(C)	29	(A)	30	(B)
31	(A)	32	(A)	33	(A)	34	(B)	35	(B)
36	(A)	37	(A)	38	(A)	39	(D)	40	(A)
41	(A)	42	(B)	43	(C)	44	(A)	45	(A)
46	(D)	47	(A)	48	(D)	49	(A)		

HINTS AND EXPLANATION

8. (D) When an infected female Anopheles bites a healthy person, Plasmodium in the form of 'sporozoites' are transmitted from saliva of mosquito into the human body. Thus, one can look for the sporozoites of the malarial parasite in the saliva of the infected female Anopheles mosquito.
9. (C) Haemozoin is the toxic substance which is responsible for the high malarial fever. It is released due to the rupture of RBCs in the liver of human by the malarial parasite.
11. (A) Entamoebahistolytica causes amoebiasis. It is a parasite of the large intestine of humans and is commonly contracted by ingesting contaminated water or food.
12. (A) Ascariasis is caused by an intestinal endoparasite of human, 'Ascarislumbricoides,' commonly called roundworm. Filariasis is caused by filarial worms, Wuchereriabancrofti and Wuchereriamalayi. Both of these causative agents are helminths.
15. (B)Pair in option(B) is not correctly matched and can be corrected as Syphilis is caused by bacteria Trypanosomapallidum. Rest of the other pairs show correct match.
16. (D) The group of diseases carried (transmitted) by insects are Malaria transmitted by by Anopheles mosquito (female). Filariasis transmitted by byCulex (female). Yellow fever transmitted by Aedes (female).
17. (A)Fungi parasitic on the skin, usually belong to the genera of Microsporum, Epidermophyton or Trichophyton. Such fungi are responsible for ringworm infection and are also called cutaneous fungus.
18. (D)Gambusia is a fish which can control mosquito borne diseases like dengue, chikungunya, malaria, etc. These fishes feeds on larvae and pupae of certain mosquitoes and help in eradication of various insect borne diseases.
22. (D) Interferons block viral reproduction in healthy cells and measles is caused by the measles virus.Thus, a person will develop interferons in his body, for the infection of measles.
25. (A) Humoral immunity is also called as antibody mediated immunity. It refers to immunity provided by substances in the body fluid. Since, antibodies are found in the blood, therefore antibody mediated immunity is also referred to as humoral immunity.
26. (A) Humoral immunity consists of antibodies in the blood and lymph. B-lymphocytes secrete antibodies. Thus, humoral immunity is mediated by B-cells or B-lymphocytes.
27. (B)Active immunity development is related to memory cells formed when B-cells and T-cells are activated by a pathogen. These cells recognise the pathogen

quickly on subsequent exposure and overwhelm the invaders with a massive production of antibodies.

28. (C)Colostrum, the yellowish fluid, secreted by mother during the initial days of lactation is very essential to impart immunity to the newborn infants because it contains immunoglobulin-A. As IgA is secreted in mother's milk, it is also called secretory immunoglobulin.
29. (A) For determining the cause of allergy, the patient is exposed to or injected with very small doses of possible allergens and the reactions displayed or observed.
30. (B) The primary lymphoid organs are bone marrow and thymus. The secondary lymphoid organs are spleen, lymph nodes, tonsils, Peyer's patches of small intestine and appendix.
31. (A) The thymus is a lobed gland located near the heart and beneath the breast bone, consisting mainly of lymphatic tissues and serving as the site of T-cell differentiation.
40. (A) Physical carcinogens include a wide range of agents, e.g. ionising radiations like X-rays and g-rays and non-ionising radiations like UV rays. These cause DNA damage leading to neoplastic transformation
42. (B) Cancer is caused by loss of control over cell's reproductive capacity. They undergo rapid division and therefore, they are more easily damaged by radiations than normal cells.
43. (C) Tumour cells have been shown to avoid detection and destruction by immune system. Therefore, the patients are given substances called biological response modifiers such as a-interferon, which activates their immune system and helps in destroying the tumours.
45. (A) Natural cannabinoids are btained from the leaves, resin and inflorescence of Cannabis sativa.

48. (D) Drugs like barbiturates, amphetamines, benzodiazepines, Lysergic Acid Diethylamide (LSD) and other similar drugs, are normally used as medicines to help patients cope with mental illnesses like depression and insomnia.

49. (A) Lysergic Acid Diethylamide (LSD) is an extremely potent psychedelic ergot alkaloid derived from the fungus, Clavicepspurpurea. LSD is one of the most powerful hallucinogenic drugs known. It was invented in 1938 by the Swiss chemist, Albert Hoffman, who was interested in developing medicines from compounds in ergot, a fungus that attacks rye.