# EXERCISE-III

1. Indicator water pollution :-
   (1) E.Colt (2) Chlorella
   (3) Beggiatoa (4) Ulothrix

2. Nucleic acid in HIV:-
   (1) ss RNA (2) ds RNA
   (3) ss DNA (4) ds DNA

3. Reason for trisomy in down's syndrome:-
   (1) Non disjunction during sperm formation
   (2) Non disjunction during egg formation
   (3) Non disjunction at the time of egg or sperm formation
   (4) Addition of one extra chromosome during mitosis

4. Typhoid caused by:
   (1) Rickettssiae (2) Chlamydia
   (3) Salmonella typhi (4) Mycobacterium

5. Symptoms of Lathyrism:-
   (1) Bone deformation
   (2) Muscular dystrophy and paralysis
   (3) Asphyxia
   (4) Cordiac arrest

6. Botulism affects:-
   (1) Digestive system
   (2) Blood vascular system
   (3) Nervous system
   (4) Respiratory system

7. Sewage purification is performed by:-
   (1) Microbes (2) Fertilisers
   (3) Antibiotics (4) Antiseptics

8. Koch's postulates not applicable to:-
   (1) Mycobacterium leprae
   (2) Tuberculosis
   (3) Pneumonia
   (4) Cholera

9. HIV infects:-
   (1) RBC (2) T- helper cells
   (3) B-cells (4) Basophils

10. During injury mast cells secrete:-
    (1) Histmamine (2) Heparin
    (3) Prothrombin (4) Antibodies

11. Which one is associated with occupational hazard is:-
    (1) Flurosis (2) Pneumoconieosis
    (3) Silicosis (4) Asthma

12. Agglutination occurs in blood present in a test tube.
    This indicate:-
    (1) Antibodies are present in plasma
    (2) Antibodies are present on R.B.C.
    (3) Antigens are present in plasma
    (4) Antibodies are present on R.B.C.

13. Which is showing accurate pairing-
    (1) Syphilis- Treponema pallidum
    (2) AIDS-Bacillus conjugalis
    (3) Gonorrhoea- Leishmania denovoni
    (4) Typhoid –mycobacterium leprae

14. Mangolian idiots are due to trisomy in 21$^{st}$ chromosome is called:-
    (1) Down's syndrome
    (2) Turner's syndrome
    (3) Kleinfeltes syndrome
    (4) Triplex syndrome

15. L.S.D. is:-
    (1) Hallucinogenic (2) Sedative
    (3) Stimulant (4) Tranquiliser

16. Salmonella is related with:-
    (1) Typhoid (2) Polio
    (3) T.B. (4) Tetanus

17. Which of the most infection disease is:-
    (1) Hepatitis-B
    (2) AIDS
    (3) Allergic Cough and cold
    (4) Malaria

18. Sickle cell anemia is due to:-
    (1) Change of Amino Acid in - Chain of Haemoglobin
    (2) Change of Amino Acid in – Chain of hemoglobin
    (3) Change of Amino acid either or chain of hemoglobin

(4) Change of Amino Acid either or chain of hemoglobin

19. Which of the following is correct match-
(1) Down syndrome = 21st Chromosome
(2) Sickel cell anemia = X-Chromosome
(3) Hemophilia = Y – Chromosome
(4) Parkinson Disease = X & Y Chromosome

20. Which of the following is used in the treatment of Thyroid cancer:-
(1) $I_{131}$ (2) $U_{238}$
(3) $Ra_{224}$ (4) $C_{14}$

21. Stool of a person contian whitish grey colour due to malfunction of which type of organ:-
(1) Pancrease (2) Spleen
(3) Kidney (4) Liver

22. Cancerous cells can easily be destroyed by radiations due to:-
(1) Rapid cell div.
(2) Lack of nutrition
(3) Fast mutation
(4) lack of oxygen

23. Which of the following is the example of sex linked disease:-
(1) AIDS
(2) Colour blindness
(3) Syphilis
(4) Gonorrhoea

24. Fluoride pollution mainly affects:-
(1) Brain (2) Heart
(3) Teeth (4) Kidney

25. Carcinoma refers to:-
(1) Malignant tumours of the connective tissue
(2) Malignant tumours of the skin or mucous membrane
(3) Malignant tumours of the colon
(4) Benign tumours of the connective tissue

26. Short-lived immunity acquired from mother to foetus across placenta or through mother's milk to the infant is categoriesd as:-
(1) Active immunity
(2) Passive immunity
(3) Cellular immunity
(4) Innate non-specific immunity
(5)

27. What is true about T-lymphocytes in mammals:-
(1) There are three main types-cytoxic T-cells, helper T-cells and suppressor T- cells
(2) These originate in lymphoid tissues
(3) They scavenge damaged calls and cellular debris
(4) These are produced in thyroid
(5)

28. Which one of the following conditions though harmful in itself, is also a potential saviour from a mosquito borne infectious disease:
(1) Thalassaemia
(2) Sickle cell anemia
(3) Pernicius anemia
(4) Leukemia

29. ELISA is used to detect virus where the key regent is :-
(1) Alkaline phosphatase (2) Catalase
(3) DNA probe (4) RNase

30. Cancer cells are more easily damaged by radiation than normal cells because they are-
(1) Undergoing rapid division
(2) Different in structure
(3) Non-dividing
(4) Starved of mutation

31. Which one of the following pairs is not correctly matched:-
(1) Serratia- Drug addiction
(2) Spirulina-Single cell protein
(3) Rhizobium – Biofertilizer
(4) Streptoyces-Antibiotic

32. ELISA is used to detect viruses, where:-
(1) Southern blotting is done
(2) Alkaline phosphatase is the key reagent
(3) Catalase is the key reagent
(4) DNA- probes are required

33. Common indicator organism of water pollution is:-

(1) Eichhornia crassipes
(2) Escherichia coli
(3) Entamoeba histolytica
(4) Lemna pancicostata

34. Molecular weight of IgG antibody is:-
(1) 146,000 (2) 160,000
(3) 190,000 (4) 200,000

35. Membrane attack complex (Mac) associated with:-
(1) B- lymphocytes
(2) Compliments system
(3) Macrophages
(4) T-lymphocytes
MAC= It causes pores in invading microbes

36. In emphysema:-
(1) Gas exchange area of lungs is reduced
(2) Gas exchange area of lungs is increased
(3) Trachea gets narrowed
(4) Larynx is permanently closed

37. Antibodies are the macromolecule of :-
(1) Fats (2) Protein
(3) Carbohydrate (4) Nucleic acid

38. A women with 47 chromosomes due to three copies of chromosome 21 is characterized by:-
(1) Turner syndrome
(2) Triploidy
(3) Down syndrome
(4) Superfemaleness

39. G-6-P dehdrogenase deficiency is associated with hemoglobin or:-
(1) Leucocytes (2) Lymphocytes
(3) Platelets (4) RBCs

40. AIDS is caused by HIV that principally infects:-
(1) All lymphocytes
(2) activator B cells
(3) T-4 lymphocytes
(4) Cytotoxic T cells

41. Damage to thymus in a child may lead to:-
(1) A reduction in hemoglobin content of blood
(2) A reduction in stem cell production
(3) Loss of antibody mediated immunity
(4) Loss of cell mediated immunity.

42. Which one of the following depresses brain activity and produces feeling of calmness, relaxation and drowsiness?
(1) Hashish (2) Morphine
(3) amphelamines (4) Valium

43. A patient is genrally advised specially consume more meal, lentils, milk and eggs in diet only when he suffers from:-
(1) Kwashiorkor (2) Anemia
(3) Rickets (4) Scurvy

44. Euthanasia (mercy killing) was first legalized in:-
(1) Switzerland (2) Netherland
(3) France (4) Italy

45. Positron emission tomography (PET) is one of the best methods for functional imaging because
(1) Isotopes f basic body elements are used for imaging.
(2) Isotopes with long hald-lives are used
(3) Isotopes with short half-lives are used
(4) Positorons are directly involved used in imaging.

46. The disease, Tetanus also known as:-
(1) Gangrene
(2) Shingles
(3) Lockjaw
(4) Whooping cough

47. The crystal of lead zirconate is a key component of:-
(1) Eletronecephalography
(2) Eletrocardiography
(3) Mangetoencephalography
(4) Sonography

48. Which one of the following is a matching pair of a certain body feature and its value/ count in a normal human adult
(1) Urea- 5-10 mg/100 ml of blood
(2) Blood sugar (fasting)-70-100mg/100ml
(3) Total blood volume -3-4 litres
(4) ESR in Wintrobe method -9-15 mm in males and 20-34 mm in females

49. Electron beam theraphy is a king of radiation theraphy to treat
(1) Enlarged prostate gland
(2) Gall bladder stones by breaking them

(3) Certain types of cancer
(4) Kidney stones
(5)

50. Severe Acute Respiratory Syndrome (SARS)
(1) Is caused by a variant of Pneumococcus pneumoniae
(2) Is caused by a variant of the common cold virus (corona virus)
(3) Is an acute form of asthma
(4) Affects non-vegetarian much faster than the vegetarians

51. Cattle fed with spoilt hay of sweet clover which contains dicumarol
(1) Are healthier due to a good diet
(2) Catch infections easily
(3) May suffer vitamin K deficiency and prolonged bleeding
(4) May suffer from Beri-Beri due to deficiency of B vitamins
(5)

52. Minamata disease was caused due to the consumption of
(1) Sea food containing lot of cadmium
(2) Fish contaminated with mercury.
(3) Oysters with lot of pesticide
(4) Sea food contaminated with selenium

53. Women who consumed the drug thalidomide for relief from vomiting during early months of pregnancy gave birth to children with
(1) No spleen
(2) Hare-lip
(3) Extra-fingers and toes
(4) Underdeveloped limbs

54. The treatment of snakd-bite by antivenine is an example of
(1) Artificially acquired active immunity
(2) Artificially acquired passive immunity
(3) Naturally acquired passive immunity
(4) Specific natural immunity
(5)

55. An insect bite may result in inflammation of that spot. This is triggered by the alarm chemical such as:-
(1) Histamine and dopamine
(2) Histamine and kinins.
(3) Interferons and opsonin.
(4) Interferons and histones.

56. Formation of non-functional methaemoglobin causes blue-body syndrome. This is due to:-
(1) Excess of arsemic concentration in drinking water.
(2) Excess of nitrates in drinking water.
(3) Deficiency of iron in food
(4) Increased methane content in the atmosphere.

57. Two of the body parts which do not appear in MRi may be:-
(1) Molar teeth and eye lens
(2) Scapula and canies
(3) Ligaments and ribs
(4) Tendoms and premolars

58. A young drug addict used to show symptoms of depressed brain activity feeling of calmness, relaxation and drowsiness. Possibley he was taking:-
(1) Amphetamine (2) Marijuana
(3) Pethidine (4) Valium

59. Antigen binding site in antibody is found between:-
(1) Two light chains
(2) Two heavy chains
(3) One heavy and one light chain
(4) Either between two light chain or between one heavy and one light chain depending upon the nature of antigen.

60. The “cri-du-chat” syndrome in caused by change in chromosome structure involving:-
(1) Deletion (2) Duplication
(3) Inversion (4) Translocation

61. The term ‘CPR’ often used in first aid stands for-
(1) Clinic for pulmonary Rehabilition
(2) Chemical prevention of Rhinitis
(3) Chemo-prophylaxis response
(4) Cardio-pulmonary resuscitation

62. Alzheimer’s Disease affects –
(1) Childhood (2) Adolescent
(3) Young people (4) Elderly people

63. The vaccination for which one of the following diseases is not covered in the immunization schedule so far-
(1) Tuberculosis (2) Diphtheira

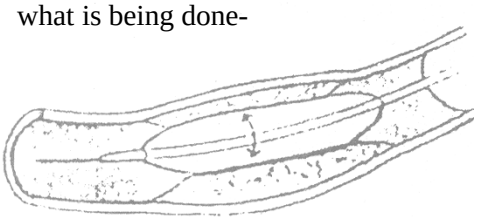
(3) Measles (4) Pneumonia

64. X-rays were discovered by –
(1) Wilhelm K. Roentgen
(2) H.Kissinger
(3) Sir C.V. Raman
(4) Meghnad Saha

65. A very much publicized treatment method "DOTS" is being adopted for the cure of
(1) Dimentia
(2) Tetanus
(3) Tuberculosis
(4) Sexually transmitted disease

66. A person who shows unpredictable moods outbursts of emotion, quarrelsome behaviour and confilicts with others is suffering from
(1) Borderline personality disorder (BPD)
(2) Mood disorder
(3) Addictive disorder
(4) Schizophrenia

67. The figure below shows an angiogram of the coronary blood vessel. Which one of the following statements correctly descriebs, what is being done-



(1) It is coronary artery which has a cancerous growth that is being removed
(2) It is coronary artery which is blocked by a plaque and the same is being cracked
(3) It is coronary vein in which the defective valves are being opened
(4) It is coronary vein blocked by a parasite (blood fluke) that is being removed

68. Antibodies in our body are complex:
(1) Prostaglandins (2) glycoproteins
(3) Lipoproteins (4) Steroids

69. Cri-du-chat syndrome in humans is caused by the:
(1) Loss of half of the long arm of chromosome 5
(2) Trisomy of 21$^{st}$ chromosome
(3) Fertilization of an XX egg by a normal Y-bearing sperm
(4) Loss of half of the short arm of chromosome 5

70. The 'blue baby' syndrome results from:
(1) Excess of dissolved oxygen
(2) Excess of TDS (total dissolved solids)
(3) Excess of chloride
(4) Methemoglobin

71. Mast cells secrete:
(1) Histamine (2) Hemoglobin
(3) Hippurin (4) Myoglobin

72. HIV that causes, AIDS, first starts destroying:
(1) Thrombocytes
(2) helper T-lymphocytes
(3) B-lymphocytes
(4) Leucocytes

73. Both sickle cell anemia and Huntington's chorea are:
(1) Pollutant-induces disorders
(2) Virus-related diseases
(3) Bacteria-related diseases
(4) Congenital disorders

74. Sickle cell anemia has not been eliminated from the African population because:
(1) It provides immunity against malaria
(2) It is controlled by dominant genes
(3) It is controlled by recessive genes
(4) It is not a fatal disease

75. A person showing unpredictable moods, outbursts of emotion, quarrelsome behaviour and conflicts with others is suffering from:
(1) Mood disorders
(2) Addictive disorders
(3) Schizophrenia
(4) Borderline personality disorder (BPD)

76. The most active phagocytic blood cells are:
(1) Lymphocytes and macrophages
(2) Eosinophils and lymphocytes
(3) Neutrophils and monocytes
(4) Neutrophils and eosinophils

77. To which type of barriers under innate immunity, to the saliva in the mouth and the tears from the eyes, belong?:
(1) Cellular barriers

(2) Physiological barriers
(3) Physical barriers
(4) cytokine barriers

78. Which one of the following condition in humans is correctly matched with its chromosomal abnormality/linkage?
(1) Colour blindness – Y-linked
(2) Eythroblastrosis foetalis – X – linked
(3) Down syndrome -44 autosomes+XO
(4) Klinefelter's syndrome -44 autosomes+XXY

79. Which one of the following is the correct statement regarding the particular psychotropic drug specified?
(1) Opium stimulates nervous system and causes hallucinations
(2) Morphine leads to delusions and disrobed emotions
(3) Barbiturates cause to delusions and temporary euphoria
(4) Hashish causes after though perceptions and hallucinations

80. Consider the following statements about biomedical technologies:
(a) During open heart surgery blood is circulated in the heart-lung machine
(b) Blockage in coronary arteries is removed by angiography
(c) Computerized Axial Tomography (CA) shows detailed internal structure as seen in a section of body
(d) X-ray provides clear and detailed images of organs like prostate glands and lungs
(1) C and D (2) A and C
(3) A and B (4) B and D

81. Cornea transplant in humans is almost never rejected. This is because:
(1) It has no blood supply
(2) It is composed of enucleated cells
(3) It is a non-living layer
(4) Its cells are least penetrable by bacteria

82. Match the disease in column-I with the appropriate items (pathogen/ prevention/ treatment) in column-II:

| | Column I | Column II |
|---|---|---|
| (a) | Amoebiasis | (i) Treponema pallidum |
| (b) | Diphtheria | (ii) Use only sterilized food |
| (c) | Cholera | (iii) DPT Vaccine |
| (d) | Syphilis | (iv) Use oval rehydration therapy |

(1) A (ii), b-(iv), c-(i), d(iii)
(2) A-(ii), b-(i), c-(iii), d(iv)
(3) A-(ii), b-(iii), c-(iv), d(i)
(4) A-(i), b-(ii), c-(iii), d(iv)

# ANSWER KEY EXERCISE-III

| Q. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A. | 1 | 1 | 3 | 3 | 2 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 | 1 |
| Q. | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| A. | 1 | 1 | 2 | 1 | 1 | 4 | 1 | 2 | 3 | 2 | 2 | 1 | 2 | 1 | 1 |
| Q. | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
| A. | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 3 | 4 | 3 | 4 | 4 | 1 | 2 | 3 |
| Q. | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| A. | 3 | 4 | 2 | 3 | 2 | 3 | 2 | 4 | 2 | 2 | 2 | 2 | 4 | 3 | 1 |
| Q. | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 |
| A. | 4 | 4 | 4 | 1 | 3 | 1 | 2 | 2 | 4 | 4 | 1 | 2 | 4 | 1 | 4 |
| Q. | 76 | 77 | 78 | 79 | 80 | 81 | 82 | | | | | | | | |
| A. | 3 | 2 | 4 | 3 | 2 | 1 | 3 | | | | | | | | |