Ravi Maths Tuition

7 Human Health and Disease

12th Standard

Biology

Multiple Choice Question 164 x 1 = 164

1) L.S.D, morphine and bhang are respectively obtained from

(a) Claviceps, Papaver and Cannabis (b) Claviceps, Cannabis and Rauwolfia

(c) Cannabis, Claviceps and Fuscarium (d) Claviceps, Rauwolfia and Papaver

2) Hashish and Ganja are got from

(a) Erythroxylon (b) Nicotiana (c) Papaver (d) Cannabis

3) The stimulant present in tea, cocoa and cola drinks is

(a) Cocaine (b) Tannin (c) Astringent (d) Caffeine

4) LSD is

(a) Lying diethylamide (b) Lysergic acid diethylamide (c) Lysing dimethylamide

(d) Lysergic acid diethylamide

5) Which of the following properties of acquired immunity is the basis of vaccination?

(a) Specificity (b) Diversity (c) Memory (d) Discrimination between self and non self.

6) Immunodeficiency can result from which of the following?

(a) Gene mutation (b) Infection (c) Malnutrition (d) All of the above

7) HIV attacks which of the following?

(a) B cells (b) T cells (c) Antigen presenting cells (d) T helper cells

8) Marijuana is extracted from

(a) Dried leaves and flowers of hemp plant (b) Ergot fungus (c) Roots of hemp plant (d) Cocoa plant

9) Which of the following is not a component of innate immunity?

(a) Antibodies (b) Interferons (c) Complement proteins (d) Phagocytes

10) Opiates (opium, heroin) are obtained from

(a) Papaver sominiferum (b) Cannabis sativa (c) Theobroma (d) Thea chinensis

11) THC is associated with

(a) Papaver (b) Cannabis (c) Erythroxylon (d) Theobroma

12) Formation of alcohol by yeast is

(a) Anaerobic process (b) Extracellular process (c) Microbial process (d) All of the above

13) Which of the following is involved in defence mechanism of the body?

(a) Lymphocytes (b) Neutrophils (c) Macrophages (d) All of these

14) T-lymphocytes first mature in

(a) Thymus (b) Pancreas (c) Liver (d) Spleen

15) HIV mainly infects

(a) Cytotoxic T-lymphocytes (b) Helper lymphocytes (c) Cell-mediated T-lymphocytes

(d) Killer lymphocytes

16) A person is injected with gamma-globulin against hepatitis. This is

(a) Artificially acquired active immunity (b) Artificially acquired passive immunity

(c) Naturally acquired active immunity (d) Naturally acquired passive immunity

17) Short-lived immunity acquired from mother to foetus across placenta or through mother's milk to the infant is categorised as

(a) Active immunity (b) Passive immunity (c) Cellular immunity (d) Innate non-specific immunity

18) Which part of the brain is involved in loss of control when a person drinks alcohol?

(a) Cerebellum (b) Medulla oblongata (c) Cerebrum (d) Pons varoli (e) Thalamus

19) Marijuana and charas are

(a) Stimulant (b) Hallucinogens (c) Depressant (d) Sedative

20) Caffeine is a stimulant present in

(a) Coffee (b) Tea (c) Cold drinks (d) All of the these

21) Which one of the following is a matching pair of a drug and its category?

(a) Amphetamines-Stimulant (b) Lysergic Acid Diethylamide-Narcotic (c) Heroin-psychotropic

(d) Benzodiazepam-pain killer

22) 'AIDS' is due to

(a) Destruction of killer T-cells (b) Destruction of helper T-cells (c) Lack of Interferons

(d) Autoimmunity

23) Aspirin is a/an

(a) Antibiotic (b) Antipyretic (c) Antiseptic (d) None of these

24) A young drug addict used to show symptoms of depressed brain activity, feeling of calmness, relaxation and drowsiness. Possibly he was taking

(a) Amphetamine (b) Marijuana (c) Pethidine (d) Valium

25) Antigen binding site in an antibody is found between

(a) Two light chains (b) Two heavy chains (c) One heavy and one light chain

(d) Either between two light chains or between one heavy and one light chain depending upon the nature of antigen

26) The disease elephantiasis is due to

(a) Ascaris (b) Wuchereria (c) Entamoeba (d) Plasmodium

27) A person showing unpredictable moods, outbursts of emotion, quarrelsome behavior and conflicts with others is suffering from

(a) Addictive disorders (b) Schizopherenia (c) Borderline personality disorder (BPD)

(d) Mood disorder

28) HIV that cause AIDS, first starts destroying

(a) Helper T-lymphocytes (b) B-lymphocytes (c) leucocytes (d) Thrombocytes

29) In malaria, the product released by mosquito into blood that causes chill and fever is called

(a) Haematin (b) Schuffner's dots (c) Haemozoin (d) Haemotoxin

30) Morphine obtained from Opium is

(a) Latex (b) Pome (c) Alkaloid (d) Tannin

31) If you suspect major deficiency of antibodies in a person, to which of the following would you look for confirmatory evidence?

(a) Serum globulins (b) Fibrinogen in the plasma (c) Haemocytes (d) Serum albumins

32) The term vaccine and vaccination were coined by

(a) Mendel (b) Robert Hooke (c) Pasteur (d) Robert Brown

33) In the cycle of Plasmodium, exflagellation occurs in

(a) Sporozoites (b) Microgametes (c) macrogametes (d) Signet ring

34) Which of the following malarial parasites has the longest inculation period?

(a) Plasmodium vivax (b) Plasmodium falciparum (c) Plasmodium ovale (d) Plasmodium malariae

35) Match the following:

A. Leishmania donovani	p. Malaria
B. Wuchereria bancrofti	q. Amoebiasis
C. Trypanosoma gambiense	r. Kalaazar
D. Entamoeba histolytica	s. Filariasis
	t. Filariasis

(a) A - s, B - r, C - q, D - p (b) A - r, B - s, C - t, D - t (c) A - r, B - t, C - s, D - q

(d) A - r, B - t, C - q, D - p

36) Interferons are

(a) Anti-bacterial protein (b) Anti-viral protein (c) Complex protein (d) Anti-clotting protein

37) Carriers of Entamoeba histolytica are

(a) Mosquito of genus anopheles (b) cattle (c) Musca domestica (housefly) (d) Health human host

38) 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. Diptheria	(ii). Use only sterilized food and water
C. Cholera	(iii). DPT vaccine
D. Syphilis	(iv) Use oral rehydration therapy

(a) A - (i), B-(i), C-(iii), D-(iv) (b) A-(ii), B-(iii), C-(iv), D-(i) (c) A-(i), B-(ii), C-(iii), D-(iv)

(d) A-(ii), B-(iv), C-(i), D-(iii)

39) To which type of barriers under innate immunity, do the saliva in the mouth and the tears from the eyes, blong?

(a) Physiological barriers (b) Physical barriers (c) Cytokine barriers (d) Cellular barriers

40) Which one of the following is the correct statement regarding the particular psychotropic drug specified?

(a) Morphine leads to delusions and disturbed emotions

(b) Barbiturates cause relaxation and temporary euphoria

(c) Hashish causes after thought perceptions and hallucinations

(d) Opium stimulates nervous system and causes hallucinations

41) Pathogenicity of bacteria causing tuberculosis and leprosy is due to

(a) Cholesterol (b) Ergosterol (c) Prostaglandins (d) Glycerol (e) Wax-D

42) Neurasthenia refers to

(a) Undue concern about health (b) Traumatic experience like rape

(c) Disorder of sensory perception (d) Mental inability to concentrate on or enjoy things

(e) A mood upswing

43) Diacetylmorphine is commonly known as

(a) Morphine (b) Cannabis (c) Heroin (d) Cocaine (e) Hashish

44) The cancer of the epithelial cells is called

(a) Leukemia (b) Lipoma (c) Sarcoma (d) Emphysema (e) Carcinoma

45) Which one of the following is the infective stage of Ascaris lumbricoides?

(a) Unsegmented egg (b) Egg with first stage larva (c) Egg with second stage larva

(d) Free third stage larva

46) The vector of the kala-azar is

(a) Aedes sp (b) Anopheles stephensi (c) Culex fatigens (d) Phlebotomus sp

47) Passive immunity can be obtained through

(a) Antigens (b) Vaccines (c) Antibiotics (d) Antibodies

48) Active immunity developed is related to

(a) Natural killer cells (b) Memory cells (c) Helper T cells (d) Suppressor T cells

49) Filariasis is caused by

(a) Dead adult filariae (b) Microfilariae (c) Biting of filarial worm

(d) Presence of bacteria in filarial wall

50) Cornea transplant in humans is almost never rejected. This is because

(a) It is composed of enucleated cells (b) It is non-living layer

(c) Its cells are least penetrable by bacteria (d) It has no blood supply

51) Choose the wrong statement.

(a) HIV virus has RNA as it genetic material (b) HIV virus replicates in $T_{H\ lymphocytes}$

(c) Antiretroviral drugs are only partially effective for AIDS treatment

(d) HIV spreads be sexual contact or sharing needle with the infected person and not by mere touch or physical contact

(e) The time-lag between the infection and appearance of AIDS symptoms may vary from few hours to a week.

52) The athlete's foot disease in humans is caused due to

(a) Bacteria (b) Fungi (c) Virus (d) None of these

53) Which of these sets is incorrect?

(a) Plasmodium falciparum, malaria, relapse, mosquito

(b) Trypanosoma gambiense, Glossina, sleeping sickness, winter bottom,s sign

(c) Wuchereia bancrofti, elephantiasis, microfilariae, moaquio

(d) Entamoeba histolytica, dysentry, quadrinucleate cyst, colon

54) Rejection of tissue or organ transplants is brought about mainly by

(a) Cytotoxic T cells (b) NK cells (c) Suppressor T cells (d) B cells

55) Colostrum provides the infant with

(a) Auto immunity (b) Passive immunity (c) Active immunity (d) Innate immunity

56) True/False type questions
Ascariasis is a communicable disease.

(a) True (b) False

57) True/False type question.
Amphetamines are stimulants

(a) True (b) False

58) This class of antibodies os made up of five immunoglobulin units

(a) IgG (b) IgM (c) IgA (d) IgD

59) Which Ig is produced in primary immune response?

(a) IgA (b) IgE (c) IgG (d) IgM

60) T-lymphocyte is produced in

(a) Bone marrow (b) Spleen (c) Pancreas (d) Thymus

61) In AIDS, HIV kills

(a) Antibody molecule (b) T Helper cell (c) Bone marrow cells (d) T cytotoxic cell

62) The scientific name of Asian Tiger mosquito is

(a) Aedes aegypti (b) Aedes albopictus (c) Aedes taeniorhychus (d) Aedes albolibeatus

63) Morphine, which is used as an analgesic, is obtained from

(a) Chinchona officinalis (b) Papaver somniferum (c) Taxus brevifolia (d) Berberis nilghiriensis

(e) Cupressus cashmeriana

64) Match column I with column II and choose the correct answer

Column I	**Column II**
A. Neoplasm	1. Hematopoietic cell tumours
B. benign tumour	2. Bones cartilage tissue cancers
C. Carcinomas	3. Cancer of epithelial
D. Sarcomas	5. Non-cancerous tumour
E. Lymphomas	6. Initiation of new tumours

(a) A-3, B-5, C-4, D-2, E-1 (b) A-3, B-5, C-4, D-1, E-2 (c) A-6, B-3, C-4, D-2, E-1

(d) A-6, B-4, C-3, D-2, E-1 (e) A-2, B-5, C-4, D-3, E-6

65) Match the following and choose the correct answer.

column I	**column II**
A. Phobia	1. Maladaptive hait
B. Neurosis	2. Undue concern about health
C. Hypochondria	3. Lack of sleep
D. Insomnia	4. Intense feat

(a) A-2, B-1, C-4, D-3 (b) A-2, B-1, C-3, D-4 (c) A-4, B-1, C-3, D-2 (d) A-3, B-4, C-2, D-1

(e) A-4, B-1, C-2, D-3

66) Choose the wrong statement regarding AIDS

(a) AIDS is an innunodefiency disease. (b) It is caused by retrovirus HIV

(c) HIV selectively infects and kills B-lymphocytes

(d) Retroviruses have RNA genomes that replicate via DNA intermediate

(e) Viral RNA genome is converted into DNA copy by reverse transcriptase

67) If the person shows the production of interferons in his body, chances are that he suffering from

(a) Measles (b) Tetanus (c) Anthrax (d) Malaria

68) HIV is classified as a retrovirus because its genetic information is carried in

(a) DNA instead of RNA (b) DNA (c) RNA instead of DNA (d) Protein coat

69) Aedes aegypti is a vector of

(a) Both dengue and yellow (b) Dengue fever (c) Yellow fever (d) Japanese encephalitis

70) When is AIDS Day celebrated?

(a) 7th July (b) Lymphocytes (c) 1st December (d) 23rd May

71) Antibodies are produced by

(a) Leucocytes (b) Lymphocytes (c) Erythrocytes (d) None of these

72) Aedes mosquito is a vector of

(a) Malaria (b) Filariasis (c) Cholera (d) Dengue

73) BCG vaccine is given against

(a) Typhoid (b) Cholera (c) TB (d) Diptheria

74) The abbreviation 'Bt' in 'Bt' toxin stands for

(a) Biotechnology (b) Biotoxin (c) Toxin released by Bacillus thuringiensis

(d) Toxins released by bacteria

75) The infection of Entamoeba histolytica takes place by

(a) Trophozite (b) Binucleated cyst (c) Trinucleated cyst (d) Quadrinucleated cyst

76) Acquired immunodeficiency syndrome (AIDS) is

(a) Reduction in the number of killer T-cells (b) An autoimmune disease

(c) Reduction in the number of helper T-cells

(d) Result of the inability of the body to produce interferons

77) Blood group agglutinogen is

(a) Glycoprotein (b) Phosphoprotein (c) Haemoprotein (d) Phospholipid

78) Wuchereria is found in

(a) Lymph nodes (b) Lungs (c) Eye (d) Gonads

79) A health disorder that results from the deficiency of thyroxine in adults and characterized by (i) a low metabolic rate (ii) increase in body weight and (iii) tendency to retain water in tissue is:

(a) Cretinism (b) Hypothyroidism (c) Simple goitre (d) Myxoedema

80) Which one of the following statements is correct?

(a) Malignant tumours may exhibit metastasis

(b) Patients who have undergone surgery are given cannabinoids to relieve pain

(c) Benign tumours show the property of metastasis (d) Heroin accelerates body functions

81) Which of the following is a pair of viral diseases?

(a) Typhoid, Tuberculosis (b) Ringworm, AIDS (c) Common cold, AIDS (d) Dysentry, common cold

82) A person likely to develop tetanus is immunised by administering:

(a) Weakened germs (b) Dead germs (c) Preformed antibodies (d) Wide spectrum antibodies

83) Use of antihistamines and steroids give a quick relief from:

(a) Headache (b) Allergy (c) Nausea (d) Cough

84) Alzheimer disease in humans is associated with the deficiency of

(a) Gamma-aminobutyric acid (GABA) (b) Dopamine (c) Glutamic acid (d) Acetylcholine

85) What is true about 'Bt' toxin

(a) The concerned Bacillus has antitoxins

(b) The inactive protoxin gets converted into active form in the insect gut

(c) Bt protein exists as active toxin in the Bacillus

(d) The activated toxin enters the ovaries of the pest to sterilise it and thus prevent its multiplication

86) The letter T in T-lymphocyte refers to:

(a) Thymus (b) Thyroid (c) Thalamus (d) Tonsil

87) Which of the following are the reason(s) for rheumatoid arthritis? Choose the correct option.
(i) Lymphocytes become more active
(ii) Body attacks self-cells
(iii) More antibodies are produced in the body
(iv) The ability to differentiate pathogens or foreign molecules from self-cells is lost

(a) (ii) and (iv) (b) (ii) and (iv) (c) (iii) and (iv) (d) (i) and (iii)

88) AIDS is caused by HIV. Among the following, which one is not a mode of transmission of HIV?

(a) Transfusion of contaminated blood (b) Sharing the infected needles

(c) Shaking hands with infected persons (d) Sexual contact with infected persons

89) 'Smack' is drug obtained from the:

(a) Latex of Papaver somniferum (b) Leaves of Cannabis sativa (c) Flowers of Dhatura

(d) Fruits of Erythroxyl coca

90) The substance produced by a cell in viral infection that can protect other cells from further infection is:

(a) Serotonin (b) Colostrum (c) Interferon (d) Histamine

91) Transplantation of tissue/organs to save certain patients often fails due to rejection of such tissue/organs by the patient. Which type of immune response is responsible for such rejections?

(a) Auto-immune response (b) Humoral immune response (c) Physiological immune response

(d) Cell-mediated immune response

92) Antibodies present in colostrum which protect the newborn from certain diseases is of

(a) Ig G type (b) Ig A type (c) Ig D type (d) Ig E type

93) Tobacco consumption is known to stimulate secretion of adrenaline and nor-adrenaline. The component causing this could be:

(a) Nicotine (b) Tannic acid (c) Curaimin (d) Catechin

94) Anti venom against snake poison contains:

(a) Antigens (b) Antigen-antibody complexes (c) Antibodies (d) Enzymes

95) Which of the following is not a lymphoid tissue?

(a) Spleen (b) Tonsils (c) Appendix (d) Thymus

96) Which of the following glands is large-sized at birth but reduces in size with aging?

(a) Pineal (b) Pituitary (c) Thymus (d) Thyroid

97) Haemozoin is

(a) A precursor of haemoglobin (b) A toxin from Streptococcus (c) A toxin from Plasmodium species

(d) A toxin from Haemophilus species

98) One of the following is not the causal organism for ringworm

(a) Microsporum (b) Trichophyton (c) Epidermophyton (d) Macrosporum

99) A person with sickle cell anemia is

(a) More prone to malaria (b) More prone to typhoid (c) Less prone to malaria

(d) Less prone to typhoid

100) Which one of the following statements is correct with respect to AIDS?

(a) The causative HIV retrovirus enters helper T-lymphocytes thus reducing their numbers.

(b) The HIV can be transmitted through eating food together with an infected person

(c) Drug addicts are least susceptible to HIV infection

(d) AIDS patients are being fully cured cent percent with proper care and nutrition.

101) Select the correct statements from the ones given below:

(a) Cocaine is given to patients after surgery as it stimulates recovery

(b) Barbiturates when given to criminals make them tell the truth

(c) Morphine is often given to persons who have undergone surgery as a pain killer

(d) Chewing tobacco lowers blood pressure and heart rate.

102) The characteristic chills and shivering during infection of Plasmodium coincides with

(a) Release of haemozoin granules by rupture of RBC during release of merozoites

(b) Increase in trophozoites size that give out certain toxins

(c) Release of sporozoites from RBCs and their break down inside spleen

(d) Destruction of microgametocytes and megagametophytes by the WBCs.

103) One of these techniques is the safest for the detection of cancers?

(a) Computed tomography (CT) (b) Radiography (X-ray) (c) Magnetic resonance imaging (MRI)

(d) Histopathological studies

104) Which one of the following cannot be used for preparation of vaccines against plague?

(a) Formalin-inactivated suspensions of virulent bacteria (b) Avirulent live bacteria

(c) Heat-killed suspensions of virulent bacteria (d) Synthetic capsular polysaccharide material

105) Every time, when the dosage of a drug has to be increased to achieve the same 'kick' that initially occurred in response to a smaller dose, this condition is known as

(a) Withdrawl symptoms (b) Addiction (c) Rebound effect (d) Tolerance

106) Match the types of immunity listed in column I with the examples listed in column II. Choose the answer that gives correct combination of a alphabets of the two columns:

Column I	**Column II**
A. Natural active	(p) Immunity developed by heredity
B. Artificial passive	(q) From mother to foetus through placenta
C. Artificial active	(r) Injection of antiserm to travellers
D. Natural passive	(s) Fighting infections naturally
	(t) Induced by vaccination

(a) A = p, B = q, C = r, D = t (b) A = s, B = r, C = t, D = q (c) A = s, B = t, C = q , D = r

(d) A = t, B = s, C = r, D = p

107) Which one of the following diseases is spread by housefly?

(a) Dengue fever (b) Encephalitis (c) Filariasis (d) Typhoid

108) Tuberculosis is caused by

(a) Mycobacterium sp (b) Aspergillus sp (c) Clostridium sp (d) Vibrio sp

109) Sand fly act as vector for which disease

(a) African sleeping sickness (b) Kala azar (c) Oriental sore (d) Filaria

110) Japanese encephalitis is transmitted by

(a) Housefly (b) Tse tse fly (c) Sand fly (d) Mosquito

111) Polio is caused by

(a) Bacteriophage (b) Virus with a single stranded RNA (c) Virus with a single stranded DNA

(d) Virus with a double-stranded DNA

112) Disadvantage of MRI is inability to image

(a) Bone (b) Parts of brain (c) Spinal cord (d) Cancerous tissues

113) Which of the following pairs of diseases is viral as well as transmitted by mosquitoes?

(a) Elephantiasis and dengue (b) Yellow fever and sleeping sickness

(c) Encephalitis and sleeping sickness (d) Yellow fever and dengue

114) Where will you look for the sporozoites of the malarial parasite?

(a) Saliva of infected female Anopheles mosquito

(b) Red blood corpuscles of human suffering from malaria (c) Spleen of infected humans

(d) Salivary glands of freshly moulted female Anopheles mosquito

115) At which stage of HIV infection does one usually show symptoms of AIDS?

(a) When the infecting retrovirus enters host cells

(b) When viral DNA is produced by reverse transcriptase

(c) When HIV replicates rapidly in helper T-lymphocytes and damages large number of these

(d) With 15 days of sexual contact with an infected person

116) 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) MRI (c) Ultrasound (d) WIDAL

117) Which one of the following options gives the correct matching of a disease with its caustic organism and mode of infection?

(a)

Disease	**Causative Organism**	**Mode of Infection**
Typhoid	Salmonella typhi	With inspired air

(b)

Disease	**Causative Organism**	**Mode of Infection**
Pneumonia	Streptococcus pneumoniae	droplet infection

(c)

Disease	**Causative Organism**	**Mode of Infection**
Elephantiasis	Wuchereria bancrofti	With infected water and food

(d)

Disease	**Causative Organism**	**Mode of Infection**
Malaria	Plasmodium vivax	Bite of male Anopheles mosquito

118) Common cold is not cured by antibiotics because it is

(a) Caused by a virus (b) Caused by a Gram-positive bacterium

(c) Caused by a Gram-negative bacterium (d) Not an infectious disease

119) Which one of the following acts as a physiological barrier to the entry of microorganisms in human body?

(a) Epithelium of urogenital tract (b) Tears (c) Monocytes (d) Skin

120) Select the correct statements with respect to diseases and immunization

(a) If due to some reason B and T lymphocytes are damaged, the body will not produce antibodies against a pathogen

(b) Injection of dead/inactivated pathogens causes passive immunity

(c) Certain protozoans have been used in mass production of hepatitis B vaccine

(d) Injection of snake antivenom against snake bite is an example of active immunization

121) Motile zygote of Plasmodium occurs in

(a) Gut of female Anopheles (b) Salivary glands of Anopheles (c) Human RBCs (d) Human liver

122) Widal Testis carried out to test

(a) Malaria (b) Diabetes mellitus (c) HIV/AIDS (d) Typhoid fever

123) Common cold differs from pneumonia in that

(a) Pneumonia is a communicable disease whereas the common cold is a nutritional deficiency disease

(b) Pneumonia can be prevented by a liver attenuated bacterial vaccine whereas the common cold has no effective vaccine

(c) Pneumonia is caused by a virus while the common cold is caused by the bacterium Haemophilus influenzae

(d) Pneumonia pathogen infects alveoli whereas the common cold affects nose and respiratory passage but not the lungs

124) Cirrhosis of liver is caused by the chronic intake of

(a) Opium (b) Alcohol (c) Tobacco (chewing) (d) Cocaine

125) Which one of the following is not a property of cancerous cells whereas the remaining three are?

(a) They compete with normal cells for vital nutrients

(b) They do not remain confined in the area of formation (c) They divide in an uncontrolled manner

(d) They show contact inhibition

126) In which of the following option the two examples are correctly matched with their particular type of immunity.

(a)

Examples	**Type of immunity**
Polymorphonuclear leucocytes	Cellular barrier and monocytes

(b)

Examples	**Type of immunity**
Anti-tetanus and anti-snake bite injection	Active immunity

(c)

Examples	**Type of immunity**
Saliva in mouth and tears in eyes	Physical barriers

(d)

Examples	**Type of immunity**
Mucus coating of epithelium lining the urinogenital tract and the HCl in stomach	Physiological barriers

127) Which one of the following sets of items in the option (a-d) are correctly categorized with one exception in it?

(a)

Items	Category	Exception
UAA, UAG, UGA	Stop codons	UAG

(b)

Items	Category	Exception
Kangaroo, koala, wombat	Australian marsupials	Wombat

(c)

Items	category	Exception
Plasmodium, Cuscuta, Trypanosoma	Protozoan parasites	Cuscuta

(d)

Item	Category	Exception
Typhoid, pneumonia diptheria	Bacterial diseases	Diphtheria

128) Which one of the following statements is correct with respect to immunity?

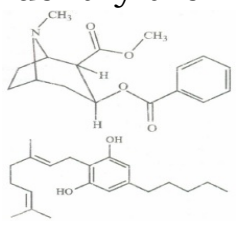
(a) Preformed antibodies need to be injected to treat the bite by a viper snake

(b) The antibodies against smallpox pathogen are produced by T-lymphocytes

(c) Antibodies are protein molecules, each of which has four light chains.

(d) Rejection of a kidney graft is the function of B-lymphocytes

129) Identify the molecules (A) and (B) shown below and select the right option giving their source and use.



(a)

Molecule	Source	Use
A-Cocaine	Erythroxylum coca	Accelerates the transport of dopamine

(b)

Molecule	Source	Use
B-Heroin	Cannabis sativa	Depressant and slows down body functions

(c)

Molecule	Source	Use
B-Cannabinoid	Atropa belladonna	Produces hallucinations

(d)

Molecule	Source	Use
A-Morphine	Papaver somniferum	Sedative and pain killer

130) 'Athlete's foot' is caused by

(a) Tinea pedis (b) Tinea capitis (c) Candida albicans (d) Rickettsia

131) Hepatitis B virus is a

(a) Hepadna (b) Variola virus (c) Retrovirus (d) Picornavirus

132) It is normally a rare cancer but became a marker for AIDS/HIV patients.

(a) Squamous cell carcinoma (b) Retinoblastoma (c) Kaposi's sarcoma (d) Leukemia

133) Immunoglobulins serving as mediators in allergic response are

(a) IgE (b) IgD (c) IgM (d) IgA

134) Xenograft means

(a) A graft between two genetically identical individuals

(b) A graft in which a tissue is grafted from one individual to another individuals of the same species

(c) A graft between individuals of different species

(d) Tissue grafted from one area to another of the same individual

135) Expand ELISA. Mention its applications.

(a) ELISA is Enzyme Linked Immuno Sorbent Assay. It is used to diagnose diseases like AIDS.

136) In the immune system, interferons are a part of

(a) physiological barriers (b) cellular barriers (c) physical barriers (d) cytokine barriers.

137) The letter T in T-Iymphocytes refers to

(a) tonsil (b) thalamus (c) thymus (d) thyroid

138) Use of anti-histamines and steroids gives a quick relief from

(a) allergy (b) nausea (c) cough (d) fever

139) The immunoglobulin abundant in colostrum, is

(a) Ig D (b) Ig A (c) Ig G (d) Ig M

140) Diacetyl morphine is commonly known as

(a) cocaine (b) hashish (c) ganja (d) heroin

141) Opium is extracted from

(a) Atropa belladona (b) Papaver somniferum (c) Erythroxylum coca (d) Cannabis sativa

142) The disease chikungunya is transmitted by

(a) houseflies (b) Aedes mosquitoes (c) cockroach (d) female Anopheles

143) Many diseases can be diagnosed by observing the symptom is in the patient. Which group of symptoms are indicative of pneumonia ?

(a) Difficulty in respiration, fever, chills, cough, headache

(b) Constipation, abdominal pain, cramps, blood clots

(c) Nasal congestion and discharge, cough, sorethroat, headache.

(d) High fever, weakness, stomach pain, loss of appetite and constipation.

144) Match the organisms (Pathogens) in Column I with the diseases they cause in Column II.

Column I	Column II
A. Rhino virus	1. Ringworm
B. Plasmodium	2. Filariasis
C. Salmonella	3. Common cold
D. Trichophyton	4. Typhoid
E. Wuchereria	5. Malaria
	6.Amoebiasis.

(a) A - 3, B - 5, C - 4, D - 1, E - 2 (b) A - 5, B - 3, C - 4, D - 1, E - 2

(c) A - 3, B - 5, C - 4, D -2, E - 1 (d) A - 3, B - 5, C - 1, D - 4, E - 2

145) Match the items in Column I with those in Column II.

Column I	Column II
A. Physiological barrier	1. Interferons
B. Cytokine barrier	2. Skin of the body
C. Cellular barrier	3. Tear in the eyes
D. Physical barrier	4. Antibodies in colostrum
	5. Polymorphonuclear- leucocyte

(a) A - 1, B-3, C - 5,D - 2 (b) A - 5, B-1, C - 3,D - 2 (c) A - 2, B-1, C - 5,D - 3

(d) A - 3, B-1, C - 5,D - 2

146) Which of the following sets of diseases are non-contagious?

(a) Chickenpox, cholera, influenza (b) Typhoid, ringworm, smallpox

(c) Taeniasis, ringworm, influenza (d) Cholera, typhoid, taeniasis

147) Fever, delirium, slow pulse and abdominal tenderness indicate the disease

(a) typhoid (b) measles (c) tetanus (d) chicken pox

148) Select the pathogen mismatched with the symptoms of disease caused by it from the given below.

(a) Entamoeba histolytica : Constipation, abdominal pain

(b) Wuchereria bancrofti: Chronic inflammation of lymphatic vessels of lower limb

(c) Haemophilus influenzae: Blockage of the intestinal passage

149) The symptoms caused by 'X' disease are lymphadenapathy, fever, cripling joint, etc. Identify the X disease.

(a) Malaria (b) Typhoid (c) Chikungunya (d) Elephantiasis

150) Name the stage that is responsible for relapsing in malarial parasite.

(a) Trophozoite (b) Gametocyte (c) Gametophyte (d) Sporozoite

151) The active form of Entamoeba histolytica feeds upon

(a) erythrocytes, mucosa and submucosa of colon (b) food in intestine

(c) mucosa and submucosa of colon (d) blood only

152) Which one of the following is not correctly matched?

(a) Glossina palpalis - Sleeping sickness (b) Culex pipiens - Filariasis

(c) Aedes aegypti - Yellow fever (d) Anopheles - Malaria

153) Which one of the following is not correctly matched?

(a) Glossina palpalis - Sleeping sickness (b) Culex pipiens - Filariasis

(c) Aedes aegypti - Yellow fever (d) Anopheles - Malaria

154) Column I lists the components of body defence and Column II lists the corresponding descriptions. Match the two columns and choose the correct option from codes given below.

	Column I		**Column II**
A.	Active natural immunity	1.	Injection of gamma globulins
B.	First line of defence	2.	Complement proteins and interferons
C.	Passive natural immunity	3.	Direct contact with the pathogens that have entered inside the body
D.	Second line of defence	4.	Surface barriers
		5.	Antibodies transferred through the placenta

(a)

A	B	C	D
4	3	5	2

(b)

A	B	C	D
3	4	2	5

(c)

A	B	C	D
3	4	5	2

(d)

A	B	C	D
5	3	2	1

155) Tetanus antitoxin (Tetanus toxoid) when injected into the human body it immediately provides:

(a) innate immunity (b) passive immunity (c) auto immunity (d) active immunity

156) The decrease in the T-lymphocytes count in human blood will result in

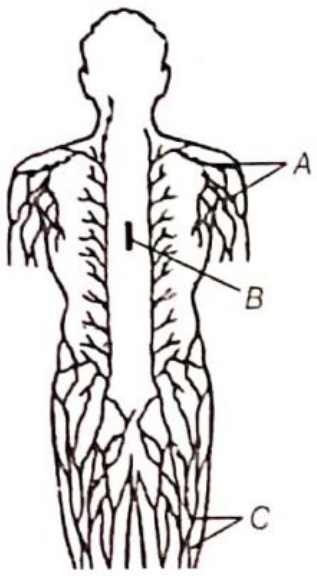
(a) decrease in antigens (b) increase in antibodies (c) decrease in antibodies

(d) increase in antigens

157) Interferons are proteins. In humans they are secreted by

(a) thymus gland (b) B-lymphocytes (c) viral infected cells (d) tonsils

158) Given below is the diagrammatic representation of lymphatic system.



Label A, B and C.

(a) A-Lymph nodes, B-Thymus, C-Lymphatic vessels

(b) A-Lymphatic vessels, B-Thyroid, C-Lymph nodes

(c) A-Tonsils, B-Peyer's patches, C-Lymphatic vessels (d) A-Tonsils, B-Thymus, C-Peyer's patches

159) MALT constitutes about _____ per cent of lymphoid tissue in human body.

(a) 50% (b) 10% (c) 70% (d) 20%

160) Drug called 'heroin' issynthesised by

(a) nitration of morphine (b) glycosylation of morphine (c) methylation of morphine

(d) acetylation of morphine

161) Which statement is true about psychotropic drug?

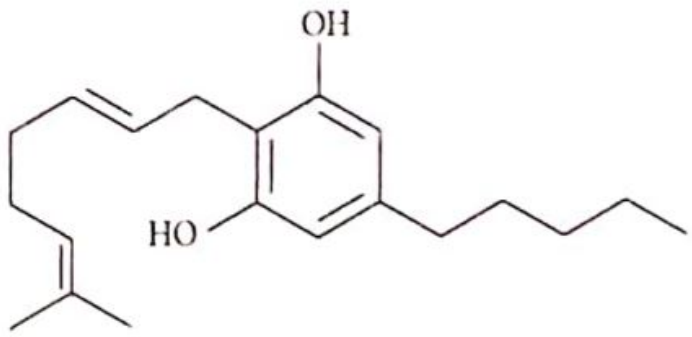
(a) Opium triggers central nervous system and causes hallucination

(b) Barbiturates causes temporary euphoria and relaxation

(c) Morphine leads to delusions and disturbed emotions

(d) Hashish causes after though perceptions and hallucination

162) Refer to the structure of a drug given below.



Select the correct option accordingly.

(a)

	Group of drug	Modes of consumption	Affected organs
(a)	Hllucinogens	Inhalation or oral ingestion	Cardiovascular system

(b)

	Group of drug	Modes of consumption	Affected organs
(a)	Cannabinoids	Injection	Nervous system

(c)

	Group of drug	Modes of consumption	Affected organs
(a)	Cannabinoids	Inhalation or oral ingestion	Cardiovascular system

(d)

	Group of drug	Modes of consumption	Affected organs
(a)	Opioids	Injection	Nervous system

163) In which of the following conditions/diseases is there a substantial increase in the activity of mast cells observed in the human body?

(a) Typhoid (b) Allergy (c) Ascariasis (d) AIDS

164) Interferons are proteins secreted by

(a) RBC (b) WBC (c) Bacteria infected cell (d) Virus infected cell

Fill up / 1 Marks 13 x 1 = 13

165) Given below are pairs of pathogens and diseases caused by them.Which of these is not a matching pair and why?

(a)	Virus	Common Cold
(b)	Salmonella	Typhoid
(c)	Microsporum	Filariasis
(d)	Plasmodium	Malaria

166) Expand
(i)SCID
(ii)AIDS
(iii)HIV.

167) World AIDS day falls on_____ .

168) _____ mosquitoes are the vectors of dengue and chikungunya.

169) _____barriers protect the non-infected cells from further viral infections.

170) Cell-mediated immunity is provided by _____.

171) Among non-infectious diseases,_____ is the major cause of death.

172) _____ test is performed to confirm typhoid.

173) Plasmodium enters the human body as _____.

174) _____ is the toxin released by the rupture of RBCs into the blood in a malaria-infected person.

175) _____ is the filarial worm.

176) _____ are the physical, chemical and biological agents that cause cancer.

177) Heroin is obtained by _____ of morphine.

True or False 5 x 1 = 5

178) Humoral immunity is responsible for rejection of organ transplants

(a) True (b) False

179) α-interferon activates the immune system and help to destroy the tumour cells.

(a) True (b) False

180) Cannabinoids affect the digestive system.

(a) True (b) False

181) Nicotine, the alkaloid in tobacco causes the hallucinogenic effect.

(a) True (b) False

182) Colostrum contains antibody IgA and provides passive immunity.

(a) True (b) False

1 Marks 237 x 1 = 237

183) Why is sharing of injection needles between two individuals not recommended?

184) When do the human beings elicit an anamnestic response?

185) State the function of mast cells in allergy response

186) How does smoking tobacco in human lead to oxygen deficiency in their body?

187) How do interferons protect us?

188) Some allergens trigger sneezing and wheezing in human beings.What causes this type of response by the body?

189) Mention the useful as well as the harmful drug obtained from the latex of poppy plant.

190) Malaria, typhoid, pneumonia and amoebiasis are some of the human infectious diseases. Which of these are transmitted through mechanical carriers?

191) What is it that prevents a child to suffer from a disease he/she is vaccinated against?Give one reason.

192) A boy of ten years had chicken pox.He is not expected to have the same disease for the rest of his life.Mention how it is possible.

193) Name the type of cells the AIDS virus enters into,after getting into the human body.

194) What type of virus causes AIDS? Name its genetic material.

195) Where are muscosal associated lymphoid tissues present in the human body and why?

196) What role do macrophages play in providing immunity to humans?

197) Recently chikungunya cases were reported from various parts if the country.Name the vector responsible.

198) What causes swelling of the lower limbs in patients suffering from filariasis?

199) Name the two types of cells in which the HIV multiplies after gaining entry into the human body.

200) Given below are some of the organs. Identify one primary and secondary lymphoid organs: Liver,Thymus,Stomach,Thyroid,Tonsils

201) How do neutrophils act as a cellular barrier to pathogens in humans?

202) In what way are monocytes a barrier in immunity?

203) High ferver,loss of appetite,stomach pain and constipation are some of the symptoms seen in a patient, How would the doctor confirm that the patient is suffering from typhoid and not amoebiasis?

204) Give the scientific name of the pathogen causing malignant malaria in humans.

205) How do virus-infected cells provide innate immunity to healthy cells?

206) If a patient is advised Anti-retroviral theraphy, which infection is he suffering from?Name the causative organism.

207) Define disease.

208) Name one infectious and one non-infectious disease that is the major cause of mortality.

209) Name two diseases that spread by droplet infection.

210) Name two viral diseases spread by Aedes mosquito.

211) What is the genome of alpha virus that causes chikungunya,made of?

212) Name one respiratory disease that infects the lungs and one that does not infect lungs.

213) Give two examples of disease caused by protozoans.

214) Name the most common infectious fungal disease.

215) Name a fish that helps in eradication of mosquito larvae.

216) Name the vector of dengue fever.

217) Expand PMNL

218) How does saliva act in body defence?

219) Name the two limbs of acquired immunity .

220) Why is the antibody-mediated immunity called humoral immunity?

221) Which kind of cells are responsible for rejecting organ transplants?

222) Give two examples of passive immunity.

223) Which category of adaptive immunity is provided by vaccination? Why?

224) Name the organisms where antigenic polypeptides are produced by recombinant DNA technology.

225) Give an example of as vaccine produced by recombinant DNA technology.

226) Which type of antibody is produced during allergic reaction?

227) Which is the main lymphoid organ of our body?

228) Where is thymus located in a human body?

229) What is meant by syndrome?

230) Why does an AIDS patient suffer from many other infections?

231) Name two such organisms which AIDS patients become infected with.

232) What are protooncogenes?

233) What is heroin chemically?

234) Where is morphine obtained from?

235) Name two plants other than coca plant that have hallucinogenic properties.

236) What is meant by drug abuse?

237) Why do blood pressure and heart rate increase by tobacco consumption?

238) Define adolescence.

239) What is addiction with reference to drugs?

240) Where are B-cells and T-cells formed?how do they differ from each other?

241) List advantages of good health.

242) Name an infectious disease which is fatal?

243) What is the significance of 'Typhoid Mary'?

244) Name the most infectious human common ailment and write its causative agent.

245) Out of four species of malaria which is most serious?

246) Name the vector of malaria.

247) Write the causative agent of (i)amoebiasis and (ii) ascariasis.

248) Name the disease caused by wuchereria bancrofti

249) List three fungal genera which cause ringworm?

250) List two symptoms of ring worm.

251) Name two recently incidence of wide spread disease caused by Aedes mosquitoes.

252) Define immunology.

253) List any two adaptive features evolved in parasites enabling them to live successfully on their hosts.

254) When are monocytes converted in macrophages?

255) Name two chemicals which provide alarm signals to initiate inflammatory response.

256) How many kinds of comple- meet system proteins are present?

257) Can we apply Koch's postulate for viral diseses?

258) Who is considered to be the father of medicine?

259) Who laid the foundation of epidemiology?

260) What are the factors on which degree of virulence depend?

261) Define the term invasiveness.

262) Name the types of lymphocytes that are critical for immune reactions.

263) What are the two main body's defence mechanisms?

264) Define autoimmunity.

265) How do WBC accumulate at the site of wound?

266) Name the technique that promises cure for diseases like jaundice and liver cancer.

267) Name the vaccine having no toxicity but with antigenic property.

268) List the specific symptoms of amoebiasis.Name the causative organisms.

269) Why is secondary immune response more intense than the primary immune response in human?

270) Name the two intermediate hosts which the human liver fluke depends on to complete its life cycle so as to facilitate parasitization of its primary host.

271) Name the term WHO prefers instead of addiction

272) What is social disease?

273) Give the source of opium

274) What is smack?

275) What is sedative?

276) What are narcotics?

277) Name three narcotics derived from different sources

278) What are stimulants?

279) What is the source cocaine?

280) Name any stimulant

281) Mention the drinks that contain caffeine

282) Which hallucinogen is extracted from a cactus?

283) Which hallucinogen is derived from a fungus?

284) Give the role of anabolic steroids

285) Is alcohol a food?

286) Alcohol is considered a stimulant. Is it correct?

287) Name three important diseases caused by alcohol?

288) Name the microorganism and its enzyme involved in the production of alcohol.

289) Which drug is used to control the withdrawal symptoms of alcohol

290) Give the chemical name and formula for the alcohol used for drinking.

291) Mention one undistilled and one distilled alcohol.

292) Expand the abbreviation FAS.

293) Name the addiction-causing component of tobacco smoke

294) Mention one carcinogenic chemical present in tobacco smoke

295) Which is the World No Tobacco Day?

296) Give three diseases caused by smoking?

297) What is commercial tobacco?

298) Mention the effect of CO present in tobacco smoke

299) Give the role of the gene P 53.

300) Give the meaning of diapedesis

301) What is the role of suppressor cells?

302) Is the skin surface acidic or alkaline?

303) can the skin be grown in a culture?

304) Give an alternative term for wandering macrophages.

305) What is the role of complement system?

306) Mention the source of perforin

307) Which antimicrobial enzyme is present in tears and saliva?

308) Name the bacteria that normally inhabit vagina.

309) Which protein occurs in the stratum corneum of epidermis?

310) What is mucosal associated lymphoid tissue?

311) What is agglutination?

312) What is LSD?

313) Give the name of one causative organism of the filariasis disease.

314) What is the sources of LSD?

315) (Name the disease) - 'It is a disorder of cell-mediated immune system of body.

316) (Name the disease) - 'It is associated with weakness, anaemia, impairs digestion, nausea and serve colic pain.

317) Write the name of the plant from which morphine is obtained.

318) Name the drugs obtained from Hemp plant

319) Give the name of plant from which we get cocaine.

320) In what way is monocyte a cellular barrier with reference to immunity?

321) Name any two types of cells that act as 'cellular barriers' to provide innate immunity in humans.

322) How does tobacco smoking lead to oxygen deficiency in human body?

323) Virus infected cells provide innate immunity to others cells. Explain how.

324) When does the human beings elicit an anamnestic response?

325) Why do pollen grains of some flower trigger sneezing in some people?

326) What would happen to immune system, if thymus gland is removed from the body of a person?

327) Certain pathogens are tissue/organ specific.Justify the statement with suitable example.

328) Retro viruses have no DNA. However, the DNA of the infected host cell does possess viral DNA. How is it possible?

329) Name the toxin responsible for the appearance of symptoms of malaria in human. Why do these symptoms occurs periodically?

330) The immune system of a person is suppressed. In the ELISA test, he was found positive to a pathogen.
(i) Name the disease the patient is suffering from.
(ii) What is the causative organism?
(iii) Which cells of body are affected by the pathogen?

331) Where does the sexual reproductions of malarial parasite takes place?

332) How does haemozoin affect the human body when released in blood during malarial infection?

333) How does the pathogen of ringworm spread?

334) Indiscriminate diagnostic practices using X - rays, etc., should be avoided. Give one reason.

335) Suggest a molecular diagnostic procedure that detects HIV in a suspected AIDS patient.

336) How do cytokine barriers help in evading viral injections?

337) Thymus of a new born child was degenerating right from birth due to a genetic disorder. Predict its two impacts on the health of the child.

338) Name two types of cells which act as 'cellular barriers' to provide innate immunity in humans.

339) What is an autoimmune disease?

340) Why is Gambusia introduced into drains and ponds?

341) State two different roles of the spleen in the human body.

342) How does malaria differ from chikungunia with reference to their vectors.

343) A person is physical fit, exercises, eats balanced diet but his neighborhood was always noisy which disturbed his sleep. How can this situation affect the health of the person? Does this situation fit into the definition of health?

344) 'Child who had some watery boils on skin. The doctor diagnosed it to be chickenpox .When the same child reported to the school for final exams. The teacher did not allow the child to sit with the other students.' What is your opinion about the decision taken by the teacher Did the teacher do any injustice with the child or with the school administrative rulings?

345) How do you think microorganisms are a foe to humans? What medical terminology has been suggested for such organisms?

346) Mary Mallon, a cook along with her delicious food was also spreading Typhoid to many people. How could she do that without suffering or even knowing about it ? What was she nicknamed as? Also name the test conducted for the confirmation of the above disease.?

347) 'Rahul was suffering from common cold and was severely coughing and sneezing in the class. His science teacher asked him to use his handkerchief and also explained the reason to do so.' What could have been the reason behind the decision taken by the teacher?

348) The doctor on examining a particular patient found that his lips and fingernails had turned gray and the patient was also feeling un-healthy. What diagnosis did the doctor made ? What other symptoms could he have observed in the patient?

349) A doctor was explaining to his students about a particular disease vector that booms particularly during the rainy season (warm and humid). He also explained that one of the type of this disease can show shivering effect and may be fatal. Name the type and its causative agent. Also explain the reason for the other symptoms of the disease?

350) A person was found to be affecetd by uni-lateral swelling of the lower extremity. On getting the history of swelling, it was noticed that it started with numbness of the feet and then spred upwards mainly due to fluid retention. Is there any problematic situation. Justify your reasoning. Can it be transmitted?

351) 'Breast feeding a baby is recommended by the doctors, particularly for first few days after birth .' Why and what makes it the best food source?

352) The property of "Memory" is observed in computers. Can you relate the same property to vaccination and immune system?

353) Talking of defenses of a country, we know that there are barriers which prevent the entry of foreign agents into our country. Correlate this data with the defenses of the body and name some of the barriers of our body and what term is given for such defense / immunity?

354) On encountering a pathogen for the first time the response is generally low, but on second exposure to the same pathogen a highly intensified response is shown by the body .Give justification for this observation?

355) Simran after coming from the garden found that she had running nose, sneezing and Watery eyes .What was the reason her specialist must have told her and what drugs must he have prescribed?

356) Body has a large reservoir of erythrocytes. Is it a passive or active store house? Validate your answer?

357) Rahul was suffering from the malfunctions of kidneys and need a replacement. His friend comes forward to donate him a kidney but after through examination the doctors refused to accept the kidney. Why he was refused to donate and what is it that the doctors check?

358) Shoib Akthar is very much particular about his performance. Recently he was medically unfit and was not allowed to play the match. What went wrong and what do the sportspersons do to enhance their performance?

359) Raju was curious to experiment a new brand of cigarette. Later on he found that he was unable to quit smoking. Can this lead to addiction and what other problems can crop up?

360) It was diagnosed by a specialist that the immune system of a patient has been suppressed. A special test was done for confirmation. Name the test as well as the disease the patient was suffering? Also give its causative agent?

361) On examining a patient ,he had a mass of proliferating cells damaging the neighboring tissues also. The doctor explained the disease to the patient. Name the disease and its property?

362) Madame Curie discovered Radium for the treatment of cancer. But she herself died of cancer. What can be the reasons? Can virus and genes also cause cancer? Give some examples.

363) Name the organ of our body that acts as a filter of blood & trap the blood born microbes.

364) Cancer causing genes are called _____.

365) Which antibodies present in colostrum.

366) Name the proteins secreted by virus infected cells which protects non-infected cells from further viral infection

367) Expand MALT.

368) Cancer cells are more easily damaged by radiations than normal cells ,Why?

369) Name the medicine very effective sedative, pain killed & is very useful in patients who have undergone surgery.

370) The chronic use of drugs & alcohol damages nervous system and liver, this is known as _____.

371) What do you mean by withdrawal syndrome?

372) What c-onc or proto-onc genes?

373) Name the scientist who discovered the life cycle of malarial parasite.

374) which type of organisms cause ringworm.

375) Name the disease caused due to abnormal increase in lymphocytes of blood.

376) Against which diseases does the MMR vaccine give protection?

377) Give the most accurate definition of health.

378) Which chemical test is used for diagnosis of typhoid?

379) How is chikungunya transmitted?

380) Suggest a method to ensure an anamnestic response in humans.

381) What type of antibodies present in colostrum protect the newborn from certain diseases?

382) Vaccination provides a category of adaptive immunity. Name it

383) Which gland is large sized at birth but reduces in size with age?

384) Name the drug obtained form the latex of Papaver somniferum?

385) What are psychedelic drug?

386) A fish is used for eradication of a vector. Name the fish and the vector.

387) All respiratory diseases do not infect the lungs. ls it true?

388) Name the substance produced by a cell in viral infection that can protect other cells from further infection.

389) A drug is used by patients who underwent surgery. Name the drug and cause of its use.

390) Why are sports persons tested strictly before an event?

391) When is a tumour called malignant?

392) What are pathogens?

393) Name the disease caused by Trichophyton in humans.

394) Where do (a) T-lymphocytes and (b) B-lymphocytes become differentiated ?

395) Diseases are broadly classified as infectious and noninfectious diseases. Pick out the non-infectioius diseases from the following list:
Cancer, Measles, Diphtheria, Allergy.

396) Who discovered blood circulation in humans?

397) Name two diseases whose spread can be controlled by the eradication of Aedes mosquitoes.

398) Name two viral diseases transmitted by Aedes mosquito.

399) Name the stage of Plasmodium that gains entry into the human, when bitten by an infected female Anopheles.

400) Trace the route of Sporozoite of Plasmodium, when it enters the human body through the bite of female Anopheles, till its entry into RBCs.

401) Name the host where fertilisation occurs in the life cycle of Plasmodium.

402) How do monocytes act as a cellular barrier in humans to provide innate immunity?

403) How do cytokine barriers provide innate immunity in humans?

404) Name any two secretions in the body that act as 'physiological barriers' of innate immunity.

405) Name the kind..of barrier of innate immunity, where some cells secrete interferons when infected.

406) When does a human body elicit an anamnestic response?

407) Name the condition in vertebrates, where the body attacks self-cells.

408) Name the category of disease in which' Rheumatoid arthritis' in human, put under.

409) Name the category of the disease, rheumatoid arthritis.

410) (a) Where are cannabinoid receptors present in a human body?
(b) Name the body system affected by cannabinoids.

411) Why do the doses of drugs keep on increasing or lead to greater intake and addiction ?

412) How does drug abuse lead to stunted growth?

413) Lifecycle of malarial parasite requires two hosts. Where does the sexual reproduction of malarial parasite take place?

414) Life cycle of malarial parasite requires two hosts. Where does the sexual reproduction of malarial parasite take place?

415) Enumerate the factors that affect health.

416) Name the toxin released in man during malaria that causes fever and chills?

417) Name the mosquito larvae eating fish?

418) Name the response triggered by the T-lymphocytes.

419) Name the gene of a cancer causing virus responsible for transformation.

Find the odd one 4 x 1 = 4

420) Saliva in the mouth, Mucus coating in respiratory tract, Tear in the eyes, Acid in the stomach.

421) Thymus, spleen, appendix, tonsil.

422) Charas, Heroin, Marijuana, Hashish.

423) Typhoid, Pneumonia, Diphtheria, Malaria.

Assertion and reason 36 x 1 = 36

424) **Assertion :** Skin forms the first line of defence.
Reason: It is a non-specific defence.
Codes:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

425) **Assertion :** Some diseases that attack in childhood do not attack again.
Reason: Memory cells plays an important role.
Codes:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

426) **Assertion:** Immunoglobulin functions as antibody.

Reason: Different immunoglobulins molecules have different antigen binding properties.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

427) **Assertion:** Inflammatory response is produced in the body after some infections.

Reason: This is one type of defence mechanism.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

428) **Assertion:** Spleen can be thought of as an immunologic conference centre.

Reason: Spleen helps only in digestion.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

429) **Assertion:** Dendritic cells originate in the bone marrow.

Reason: Dendritic cells are found in neuron.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

430) **Assertion:** Immunity means all capacity of human body to resist almost all types of organisms or toxins that tend to damage the tissues and organs.

Reason: Spleen is the only organ involved in immunity.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

431) **Assertion:** SCID is the first genetic disorder to be combated with gene therapy.

Reason: SCID is a type of allergy.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

432) **Assertion:** Passive immunity is of short life span.

Reason: Passive immunization is promptly available.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

433) **Assertion:** Allergy is an immunity disorder.

Reason: Allergy is confined to a person only.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false

434) **Assertion:** Psychotropic drugs affect behaviour and mental activities.

Reason: Tranquilizer, a psychotropic drug decrease tension and anxiety.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

435) **Assertion:** Cancer patients are given chemotherapeutic treatments.

Reason: Chemotherapeutic agents are used to destroy malignant cells.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

436) **Assertion:** Tranquilizers are used to treat schizophrenia.

Reason: Tranquilizers are antipsychosis drugs.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

437) **Assertion :** Brown sugar is morphine-derivative.

Reason: Morphine is the principal opium alkaloid.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

438) **Assertion:** Smack is a by-product of heroin synthesis.

Reason: Heroin is an opium alkaloid.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

439) **Assertion :** A cholera patient is given glucose, electrolytes and water.

Reason: These plasmolyse the disease causing germs.

Codes:

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

440) **Assertion:** It is considered advantageous to give the polio vaccine orally.
Reason: The oral polio vaccine prevents reinfection by causing intestinal immunity.
Codes:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

441) **Assertion:** There is no chance of transmission of malaria to man on the bite of a male Anopheles mosquito.
Reason: It carries a non-virulent strain of Plasmodium.
Codes:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

442) **Assertion:** Interferons are a type of antibodies produced by body cells infected by bacteria.
Reason: Interferons interfere with viral replication at the site of injury.
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

443) **Assertion :** Smoking causes oxygen deficiency in the body.
Reason: Carbon monoxide when inhaled while smoking, combines with haemoglobin to form chemically stable compound.
Codes:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

444) **Assertion:** Streptococcus pneumoniae and Haemophilus influenzae are responsible for causing infectious disease in human beings.
Reason: A healthy person acquires the infection by inhaling the droplets/aerosols released by an infected person.
Codes:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

445) **Assertion:** Mucous membrane immobilises the micro-organisms in the body.
Reason: Microorganisms and dust particles entering the respiratory tract are trapped in the mucus.
Codes:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

446) **Assertion:** Subsequent encounter with the same pathogen elicits a highly intensified anamnestic response.
Reason: This'is based on the fact that our body appears to have memory of the first encounter.
Codes:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

447) **Assertion:** Cornea is considered as an immunologically privileged site.
Reason: A transplanted cornea is rarely rejected.
Codes:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

448) **Assertion:** Proto-oncogenes are cellular genes required for normal growth.
Reason: Under normal conditions they could lead to the oncogenic transformation of the cell.
Codes:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both assertion and reason are false.

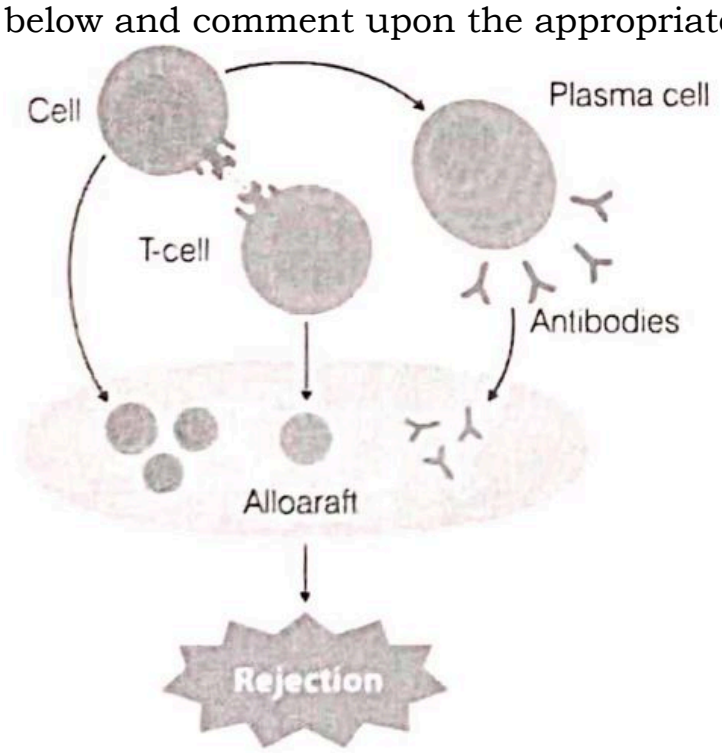
449) **Assertion (A)** Escherichia coli, Shigella sp. and Salmonella sp. are responsible for diarrhoeal diseases.
Reason (R) Dehydration is common to all types of diarrhoeal diseases and adequate supply of fluids and electrolytes should be ensured.
(a) If both A and R are true and R is the correct explanation of A
(b) If both A and R are true, but R is not the correct explanation of A
(c) If A is true, but R is false
(d) If A is false, but R is true

450) **Assertion (A)** Filarial worms is transmitted to human by Culex mosquito.
Reason (R) Culex prefers to breed in freshwater.
(a) If both A and R are true and R is the correct explanation of A
(b) If both A and R are true, but R is not the correct explanation of A
(c) If A is true, but R is false
(d) If A is false, but R is true

451) **Assertion (A)** Antibody mediated imnmune response is provided by B-cells.
Reason (R) B-cells work chiefly by secreting substances called antibodies into the body fluids.
(a) If both A and R are true and R is the correct explanation of A
(b) If both A and R are true, but R is not the correct explanation of A
(c) If A is true, but R is false
(d) If A is false, but R is true

452) **Assertion (A)** Artificially acquired passive immunity results when lymphocytes or antibodies produced outside the host are introduced into a host.
Reason (R) A bone marrow transplant given to a patient with genetic immunodeficiency is an example of artificially acquired passive immunity.
(a) If both A and R are true and R is the correct explanation of A
(b) If both A and R are true, but R is not the correct explanation of A
(c) If A is true, but R is false
(d) If A is false, but R is true

453) Given below is the schematic representation of transplant rejection. When a person receives an organ from someone else, his body may recognise this foreign organ and attacks them. Study the figure given below and comment upon the appropriateness of the Assertion and Reason.

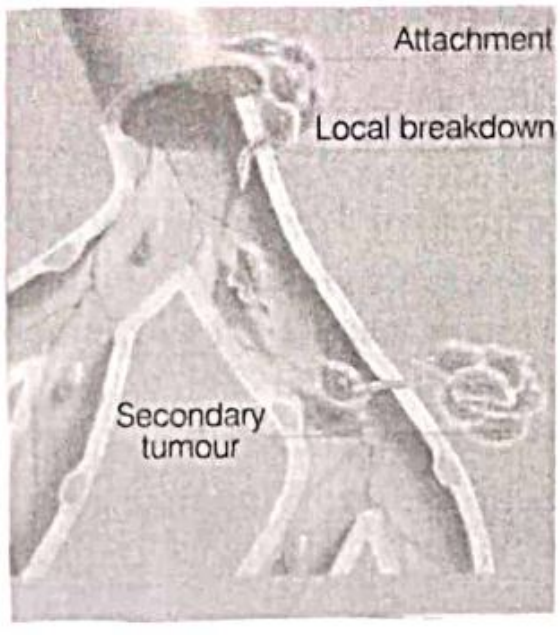


Assertion (A) In organ transplantation, donor and recipient should be genetically as close as possible.
Reason (R) Cell-mediated immune response is responsible for such graft rejection.
(a) If both A and R are true and R is the correct explanation of A
(b) If both A and R are true, but R is not the correct explanation of A
(c) If A is true, but R is false
(d) If A is false, but R is true

454) **Assertion (A)** Mast cells in the humans release excessive amount of chemicals like histamine, which cause allergy.
Reason (R) Allergens in the environmnent on reaching human body stimulate mast cells.
(a) If both A and R are true and R is the correct explanation of A
(b) If both A and R are true, but R is not the correct explanation of A
(c) If A is true, but R is false
(d) If A is false, but R is true

455) **Assertion (A)** Histamine is related to allergic and inflammatory reactions.
Reason (R) Histamine is a vasodilator.
(a) If both A and R are true and R is the correct explanation of A
(b) If both A and R are true, but R is not the correct explanation of A
(c) If A is true, but R is false
(d) If A is false, but R is true

456) The figure shown below is showing the cancer cells which are breaking off from the tumour where they originated, travelling through the blood stream and getting lodged in other area. Study this figure and comment upon the appropriateness of the Assertion and Reason.



Assertion (A) The cancer shown above is more serious.
Reason (R) This spreads from one organ to other body organs and there is increased interference with metabolic functioning.
(a) If both A and R are true and R is the correct explanation of A
(b) If both A and R are true, but R is not the correct explanation of A
(c) If A is true, but R is false
(d) If A is false, but R is true

457) **Assertion (A)** Marijuana and LSD are clinically used as analgesics.
Reason (R) Both these drugs suppress brain function.
(a) If both A and R are true and R is the correct explanation of A
(b) If both A and R are true, but R is not the correct explanation of A
(c) If A is true, but R is false
(d) If A is false, but R is true

458) **Assertion (A)** Dope test is used to estimate the level of alcohol by analysing the breath of alcohol drinking perso.
Reason (R) Athletes undergo dope test before major tournaments or a match.
(a) If both A and R are true and R is the correct explanation of A
(b) If both A and R are true, but R is not the correct explanation of A
(c) If A is true, but R is false
(d) If A is false, but R is true

459) **Assertion (A)** AIDS is a syndrome caused by HIV.
Reason (R) HIV is a virus that damages the immune system with DNA as its genetic material.
(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
(b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A),
(c) Assertion (A) is true, but Reason (R) is false
(d) Assertion (A) is false, but Reason (R) is true

2 Marks 248 x 2 = 496

460) Identify A,B,C and D in the following table:

Scientific name of the source plant	**Drug**	**Harmful effects/Human body part affected**
1.Papaver sominiferum	A	Depressant/slows body functions
2. Cannabis sativa	Cannabinoids	B
3. Erythoxylon coca	C	D

461) Differenciate between benign and malignant tumours.

462) The barriers in the innate immunity are given in the following table.Identify a,b,c and d.

Type of Barrier	Barrier
(a) Physical	(i) Skin ,a
(b) Physiological	(ii) b, in the eye
(c) c	(iii) Interferon
(d) Cellular	(iv) WBC, d

463) Name the blank spaces a,b,c and d in the table given below:

Name of the drug	Plant source	Organ system affected
(i)a	Poppy plant	b
(ii) Marijuana	c	d

464) What are the various public health measures, which you would suggest as safeguard us against infectious diseases?

465) In which way has the study of biology helped us to control infectious diseases?

466) How does the transmission of each of the following diseases take place?
(a) Amoebiasis
(b) Malaria
(c) Ascariasis
(d) Pneumonia

467) What measure would you take to prevent water-borne diseases?

468) Explain what is meant by metastasis.

469) Do you think that friends can influence one to take alcohol/drugs? If yes,how may one protect himself/herself from such an influence?

470) Give the full form of CT and MRI.How are they dhygieneifferent from each other? where are they used?

471) What is cancer? How is a cancer cell different from the normal cell?How do normal cells attain cancerous nature?

472) Name the primary and secondary lymphoid organs.

473) A student on a school trip started sneezing and wheezing soon after reaching the hill station for no explained reasons,But on return to the plains,the symtoms disappeared.What is such a response called?How does the body produce it?

474) Write the events that take place when a vaccine for any disease is introduced into the human body.

475) How does a vaccine for a particular disease immunise the human body against that disease?

476) Name and explain the type of immunity that is provided by injecting microbes deliberately during immunisation into the human body.

477) Explain the response initiated when a does of vaccine is introduced into the human body.

478) Why is a person with cuts and brusis following an accident administered tetanus antitoxin?Given reasons.

479) Why does a doctor administer tetanus antitoxoid and not a tetanus vaccine to a child injured in a roadside accident with a bleeding wound?Explain.

480) A patient showed symptoms of sustained high fever,stomach pain and constipation,but no blood clot in stools.Name the disease and its pathogen.How does the disease.How does the disease get transmitted?

481) A patient showed symptoms of constipation,abdominal pain and stools with excess mucus and blood clots.Name the disease and its pathogen.Where do these pathogens live in the victim's body?Name the mechanical carrier that transmits this pathogen.

482) Name the different types of cells that are responsible for producing the acquired immune response in a human body.How do these cells respond when a pathogen enters the body?

483) Name the two special types of lymphocytes in humans.How do they differ in their roles in immune response?

484) (a) Highlight the role of thymus as a lymphoid organ.
(b) Name the cells that are released from the above mentioned gland.
Mention how they help in immunity.

485) Name the plant source of the drug popularly called 'smack'.How does it affect the body of the abuser?

486) Name an opioid drug and its source plant.How does the drug affect the human body?

487) Name one plant and the addictive drug extracted from its latex.How does this drug affect the human body?

488) Name the plant source of ganja.How does it affect the body of the abuser?

489) (a) Name the group of viruses responsible for causing AIDS in humans,Why are these viruses so named?
(b) List any two ways of transmission of HIV infection in humans other than sexual contact.

490) Name and explain the two types of immune response in humans.

491) Describe the role of lymph nodes in providing immunity.

492) Name the plant source of cocaine.How does it affect the human body?

493) Name the different types of cells providing cellular barrier responsible for innate immunity in humans.

494) Name the two types of immunity in a human body.Why are cell-mediated and humoral immunities so called?

495) Write the scientific names of the casual organisms of elephantiasis and ringworm in humans.Mention the body parts affected by them.

496) How do cellular barriers and cytokine barriers provide innate immunity in humans?

497) State the fuctions of primary and secondary lymphoid organs in humans.

498) List any two emergent circumstances when a medical doctor would recommend injection of a pre-formed antibody into the body of a patient and why?

499) Name the host and the site where the following occur in the life cycle of a malarial parasite:
(a) Formation of gametocytes
(b) Fusion of gametocytes

500) Identify a,b,c,and d in the following table:

NAME OF THE HUMAN DISEASE	**NAME OF THE CASUAL BACTERIA/VIRUS**	**SPECIFIC ORGAN OR ITS PART AFFECTED**
1. Typhoid	Salmonella typhi	a
2. Common cold	b	c
3. Pneumonia	Streptococcus pneumoniae	d

501) Explain the fuction of spleen.

502) How does spleen act as a lymphoid organ?Explain.

503) Why are the tumour cells dangerous?

504) How do macrophages in the human body act as 'HIV factory'?

505) State the effect of carcinogens on human body.Name the carcinogenic ionising and non-ionising radiations.Mention their carcinogenic effect.

506) Explain metastasis.Why is it fatal?

507) (a) Name the lymphoid organ in human,where all the blood cells are produced.
(b) Where do the lymphocytes produced by the lymphoid organ mentioned above,migrate and how do they effect immunity?

508) List the specific symptoms of pneumonia.Name the causative organism.

509) What is colostrum? Why is it important to be given to the newborn infants?

510) (a) Explain the property that prevents normal cells from becoming cancerous.
(b) All normal cells have inherent characteristic of becoming cancerous.Explain.

511) Explain why using tobacco in any form is injurious to health.

512) Why do sports person often fall a victim to cocaine addiction?

513) List four reasons to justify the ban on intake of cannabinoids by sports persons.

514) Due to peer pressure, a group of adolescents started using opioids intra-venously. What are the serious problems they might face in future?

515) How do normal cells get transformed into cancerous neoplastic cells? Elaborate giving three examples of inducing agent.

516) Many microbial pathogens enter the gut of humans along with food.What are the preventive barriers to protect the body from such pathogens?What type of immunity do you observe in this case?

517) What is 'Typhoid Mary'?

518) Mention any four characteristic symptoms of dengue fever.

519) Name the different species of malarial parasite.Which of these does cause malignant malaria?

520) Give the scientific names of two helminths,that are pathogenic to man.

521) Enumerate the prevention/control measures of malaria.

522) Name four diseases that have been controlled by vaccination.

523) Define immunity.What are its two broad categories?

524) Mention the two corollaries that have to be understood about memory based acquired immunity.

525) Describe the cell-mediated immunity.

526) Mention the components of our immune system.

527) Mention the symptoms of AIDS.

528) What is a tumour?Mention its two types.

529) What is contact inhibition?How does this phenomenon operate in cancer cells?

530) How is molecular biology helpful in preventing cancer?

531) Name any four groups of drugs that are abused.

532) Bring out the effects of alcohol on our body.

533) The immune system of a person is suppressed.In then ELISA test, the person was found to be positive to a pathogen.
(a) Name the disease the patient is suffering from.
(b) What is the causative organism?
(c) Which cells of the body are affected by the pathogen?

534) Differentiate between Benign tumour and Malignant Tumour

535) Explain any three preventive measures to control microbial infections.

536) Drugs and alcohol give short-term 'high' and long-term 'damages'.Discuss.

537) What are lifestyle diseases? How are they caused? Name any two such diseases?

538) Diseases like dysentary, cholera, typhoid,etc. are more common in overcrowded human settlements.Why?

539) In the metropolitan cities of India, many children are suffering from allergy/asthma.What are the main causes of this problem.Give some symptoms of allergic reactions.

540) What is the basic principle of vaccination?How do vaccines prevent microbial infections? Name the organism from which hepatitis B vaccine is produced.

541) A person shows strong unusual hypersensitive reactions when exposed to certain substances present in the air, .identify the condition.Name the cells responsible for such reactions.What precaution should be taken to avoid such reactions.

542) If a regular dose of drugs or alcohol is not provided to an addicted person, he shows some withdrawal symptoms.List any four such withdrawal symptoms.

543) For an organ transplant, it is advantageous to have an identical twin.why?

544) If there are two pathogen viruses one with DNA and other with RNA ,which would mutate faster and why?

545) What are disease and health?

546) List Robert Koch's postulates.

547) How are diseses transmitted from the reserviour of infection to a healthy person?

548) List the factors on which virulence depends.

549) Write a note on common gold.

550) Write a note on Typhoid.

551) Write name of causative agent of pneumonia.List symptoms and modes of transmission.

552) (a)Name the infective stage of Plasmodium which Anopheles mosquito take along with the blood meal from an infected human.
(b)Why does the infection cause fever in humans?
(c)Give a flow chart of the part of the life-cycle of this parasite passed in the insect.

553) Write name of pathogen, incubation period,mode of transmission and signs and symptoms of chikungunya.

554) What is dengue fever?

555) What are the mode of transmission and incubation period of dengue fever?

556) What are the preventive measures of dengue fever?Is there any vaccine available?

557) What are body's two lines of defence in a non-specific defence mechanism?

558) How does skin act as a first line of defence? Give reason.

559) What is the role of tears and saliva in the body's fight against micro-organisms?

560) What is Immune system?Mention the two types of immune system.

561) Briefly, describe the cells of the immune system.

562) Distinguish between (a)antigens and antibodies,

563) Give functions of four classes of immunoglobulin

564) Define the following terms:
(a)Haematopoiesis
(b)Antigenic determinant
(c) Primary immune response
(d) Secondary immune response

565) Explain the role of innate immunity in the protection from infectious agents.

566) Briefly, explain the various types of disorders arising from improper function of the immune system

567) Briefly, explain the functions of the following with reference to immunity:
(a)Antibodies
(b)T-helper cells
(c)HLA proteins
(d)B-cells
(e) Complement proteins

568) How does vaccination protect a person from a disease?

569) Differentiate antibodies and interferons

570) What is autoimmunity?Explain.

571) List two main disorders of immuno-deficiency and mention their cause.

572) Give full name of human diseases in which body loses its general immunity towards infections.How is this disease transmitted?

573) Differentiate immunodeficiency and autoimmune diseases.

574) What are symptoms of allergic reactions?

575) How many kinds of antigens can be displayed by blood cells.Write the preference of order for organ for organ transplantation.

576) Name the causative organism of AIDS and classify.

577) Name the sites from which HIV can be isolated

578) List a few features that characterise AIDS

579) What are the two serological tests for anti HIV antibodies

580) Give a brief account of ELISA test.

581) Explain the following terms:
(i)Benign tumour (ii)Cancerous tumour

582) What is sarcoma?

583) Define the following
(i) Cancer or malignancy
(ii)Carcinogenic

584) In which group does cancer develop?

585) Name the various groups of viruses which act as carcinogenic factors.

586) Why is the chewing of pan and tobacco not considered good for health?

587) Why is there greater frequency of abdominal skin cancer among Kashmiris?

588) Name the types of cancers.

589) Briefly give an account of various hypothesis to explain how a normal cell changes into a cancer cell.

590) On what basis diagnosis of cancer is made?

591) How cancer can be treated.

592) List at least five symptoms of mental illness

593) What are causes of mental illness?

594) How does neurosis differ from psychosis?

595) Briefly, state the five common problems of adolescence

596) Write short note on obsessive-compulsive disorders.

597) What is Cannabis?List its main derivatives.

598) Name some hallucinogens.What are their effects on human body?

599) From which plant are Cannabinoids obtained?Name any two Cannabinoids.Which part of the body is effected by consuming these substances?

600) Can a drug addict be made to lead normal life? Suggest the various steps.

601) Tobacco addiction is due to nicotine present in it.Mention any four effects of nicotine on human body.

602) List the harmful effects produced on a result of interaction of alcohol and drugs.

603) List a few preventive and control measures of use of alcohol/drugs.

604) Prior a sports event blood and urine samples of sports persons are collected for drug tests.
(a) Why is there a need to conduct such tests?
(b) Name the drugs the authorities usually look for.
(c) Write the generic names of two plants from which these drugs are obtained

605) Name the cells HIV(Human Immuno Deficiency Virus) gains entry into after infecting the human body.Explain the events that occur in these cells.

606) Answer the following
(a) Highlight the role of thymus as a lymphoid organ.
(b) Give the name of the cells that are released from the above mentioned gland.Mention how they help in immunity.

607) Why is an antibody molecule represented as H_2L_2 ?

608) Name the two components of immune system

609) What is the rate of production of antibodies by B-cell?

610) What is the function of killer T-cells?

611) What si the function of helper T-cells?

612) What is the function of suppressor T-cells?

613) Name the two main classes of general drugs. Give their source and one example of each.

614) What is morphine? Give its use and abuse.

615) Why do some addicts use combination of drugs? How is it harmful?

616) What are distilled and undistilled alcohol? Give one or two examples of each.

617) Give three reasons for which alcoholics start drinking.

618) Alcohol is absorbed rapidly. Why?

619) In which part of the gastrointestinal tract is the alcohol absorbed?

620) How is the alcohol disposed of by the body?

621) How does Co interfere with O_2 transport in the blood?

622) Name four organs that suffer most with smoking

623) Give the effect of smoking mother on the developing baby

624) Smoking mars personality, comment on this statement.

625) In what different forms is the tobacco used? Name is addicting component

626) How do nonspecific defence mechanism resist infection?

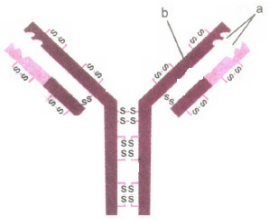
627) Which acids are present in the sweat and sebum? How do they help?

628) What is the role of large intestine in natural defence of body?

629) List the fluids which contain lysozyme.

630) What do the abbreviation AMIS and CMIS denote?

631) Study the given diagram and answer the following:
(i) What does the above diagram illustrate?
(ii) Name the labelled 'a' and 'b'
(iii) Name the type of cells that produce this molecule.



632) List the specific symptoms of typhoid. Name its causative agent.

633) Define the term 'health'. Mention any two ways of maintaining it.

634) Match the items listed in column I with suitable items from column II.

Column I	**Column II**
(i) Prevent sleep	(i) Ergot gungus
(ii) Induce sleep	(ii) Papaver somniferum
(iii) Lung cancer	(iii) Cannabis indica
(iv) Ganja	(iv) Smoking
(v) Codeine	(v) Barbiturates
(vi) LSD	(vi) Amphetamines
(vii) Quinine	(vii) Health hazard
(viii) Tobacco	(viii) Natural Drug

635) Name of the plant from which following drugs are obtained:
(i) Opium and its derivatives
(ii) Chars
(ii) Marijuana
(iv) Caffeine
(v) Cocaine
(vi) LSD

636) Name the drug yielding part of plant from which following drugs are obtained:
(i) Bhang
(ii) Caffeine
(iii) LSD
(iv) Marijuana
(v) Opium and its derivatives
(vi) Cocaine.

637) What are interferons? How do interferons check infection of new cells?

638) Write the scientific names of plants from which morphine and cocaine are obtained.

639) Name three diseases caused by alcohol

640) How are morphine and heroin-related?Mention the effect each one of them has on the human body?

641) Write the scientific name of the source plant of the drugs-marijuana and hashish and mention their effect on human body.

642) Why cannabinoids are banned in sports and games?

643) What are lifestyle diseases? How are they caused? Name any two such diseases.

644) Name the types of barrier of innate immune system, which involves
(i) HCI of stomach
(ii) macrophages.

645) What does the term 'memory of the immune system' mean?

646) Why is mother's milk considered the most appropriate food for a new born infant?

647) Why is colostrum a boon to the new born baby?

648) List the symptoms of ascariasis. How does a healthy person acquire this infection?

649) Name any two secondary lymphoid organs in a human body and state the function of any of them.

650) How are oncogenic viruses different from proto-oncogenes?

651) (i) Which organ of the human body is initially affected when bitten by an infected female Anopheles? Name the stage of the parasite that infects this organ.
(ii) Explain the events that are responsible for chill and high fever in the patient.

652) Name the parasite that causes filariasis in humans. Mention its two diagnostic symptoms. How is this disease transmitted to others?

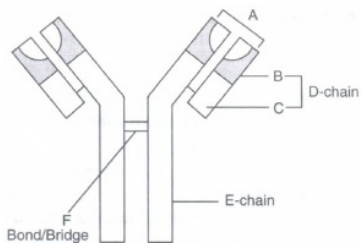
653) Name any two organisms that are responsible for ringworms in humans. Mention two diagnostic symptoms. Name the specific parts of the human body where these organisms thrive and explain why?
(i) Name any two causative organisms responsible for ringworm.
(ii) State any two symptoms of the disease.

654) Name the cells that act as HIV factory in humans when infected by HIV Explain events that occur in the infected cell.

655) Name the bacterium that causes typhoid. Mention two diagnostic symptoms. How is this disease transmitted to others?

656) How is an allergic reaction caused by an allergen?
Name a drug that can reduce the symptoms of allergy.

657) Identify A, D, E and F in the diagram of an antibody molecule given below:



658) Why are adolescents especially advised not to smoke ? How does smoking affect the functioning of the body?

659) Name two drugs obtained from poppy plant. "These drugs are medically useful but are often abused". Taking the mentioned examples justify by giving reasons

660) What happens to an individual when a regular dose of drugs/alcohol is abruptly discontinued? What characteristics, manifest in the individual under such a situation?

661) Some international sports persons failed in dope tests& not allowed to participate in Olympics as they were drug abusers
i) Name the drugs that would have been taken by them.
ii) Why did they use such drugs?

662) Some human diseases are transmitted only when the blood of a patient comes in contact with the blood of a healthy person. In one of such disease, there is a progressive decrease in the number of lymphocytes of the patient.
i) Name the disease & its causative agent
ii) Name the type of lymphocytes affected due to this infection.

663) Health is the basic to life, and is essential for the good results in any sphere of life. A factory owner cannot expect the optimum output, if he does not employ healthy workers. A farmer cannot get optimum yield in his fields, if he is not healthy What does health actually mean? How is it related to our personal life & professional efficiency?

664) Diseases are broadly classified into infectious and non-infectious diseases. In the list given below, identify the infectious diseases.
I. Cancer
II. Influenza
III. Allergy
IV. Smallpox

665) Mention any four characteristic features of dengue fever.

666) Classify the following diseases under the headings 'transmissible' and 'non-transmissible'. Lung cancer, whooping cough, rickets, arthritis, appendicitis, food poisoning, tuberculosis, measles, diabetes, anaemia, syphilis, influenza, AIDS, coronary heart disease and haemophilia.

667) (i) List any two situations, when a medical doctor would recommend injection of preformed antibodies into the body of a patient. Name this kind of immunisation and mention its advantages.
(ii) Name the kind of immunity attained when instead of antibodies, weakened antigens are introduced into the body.

668) Mention one application for each of the following:
(i) Passive immunisation
(ii) Antihistamine
(iii) Colostrum
(iv) Cytokininbarrier

669) Name the blank spaces A, B, C and D in the table given below

Name of the drug	Plant source	Organ system affected
A	Poppy plant	B
Marijuana	C	D

670) Intake of cannabinoids should be banned. Justify giving reasons.

671) List any four withdrawal symptoms, if the regular dose of drug is not provided to a drug addict.

672) What is the mode of action of heroin in the body?

673) How do we define health?

674) Everyday, we are exposed to a large number of infectious agents. However, only a few of these exposures result in disease. Why?

675) Why is it that the organs cannot be taken from just anybody for transplantation? What is it that the doctors check?

676) Name the following:
(a) The vector of dengue fever.
(b) A vaccine produced by recombinant DNA technology.
(c) The type of immunity that is present at the time of birth.
(d) A fish that helps in eradication of mosquito larvae.

677) Mention the property of our immune system that is
(a) responsible for the rejection of grafts.
(b) the basis for vaccination.

678) Mention the characteristic symptoms of chikungunya.

679) (a) Name any two helminths, which are known to be pathogenic to humans.
(b) List two symptoms of the disease caused by any one of them .

680) (a) ame any two causative organisms responsible for ringworm.
(b) State any two symptoms of the disease.

681) Name and explain two physical barriers that provide innate immunity in humans.

682) The barriers in the innate immunity are given in the following table. Identify a, b, c and d.

Type of Barrier	Barrier
(a) Physical	(i) Skin, a
(b) Physiological	(ii) b, in the eye
(c) c	(iii) Interferon
(d) Cellular	(iv) WBC,d

683) Why is the structure of an antibody molecule represented as H_2L_2. Name any two types of antibodies produced in a human body.

684) State the role of T lymphocytes and B lymphocytes in developing acquired immunity against certain diseases.

685) Principle of vaccination is based on the property of 'memory' ofthe immune system. Taking one suitable example, justify the statement.

686) Differentiate between the roles of B-lymphocytes and T-lymphocytes in generating immune response.

687) What is a vaccine? How do they act to provide long term immunity to an individual, who is vaccinated?

688) Name the type of immunity the colostrum provides to a newborn baby. Write giving an example where this type of immunity should be provided to a person.

689) Name the type of immunity a baby is born with. How is it different from the one he gets from the mother's milk after birth?

690) Name an allergen and write the response of the human body when exposed to it.

691) How is an autoimmune disease caused? Mention one such disease in humans.

692) Mention the important functions or roles played by our immune system.

693) Explain the functions of spleen.

694) Name the group of cells, the HIV enters after getting into a human body. What happens in these cells and what are these cells subsequently referred to as? Name the next group of cells, the HIV attacks from there.

695) (a) Name the source plant of heroin drug. How is it obtained from the plant?
(b) Write the effects of heroin on the human body.

696) Ideptify A, B, C and D in the following table:

Scientific name of the source plant	Drug	Harmful effects Human body part affected
1. Papaver somniferum	A	Depressant/slows body functions
2. Cannabis sativa	Cannabinoids	B
3.Erythroxylon coca	C	D

697) Name the four forms in which cannabinoids are consumed by the abusers.

698) Name any four drugs that are used as medicines to help patients cope with mental illness.

699) Why is tobacco smoking associated with rise in blood pressure and emphysema (Oxygen deficiency in the body)? Explain.

700) What is 'withdrawal syndrome'? List any two symptoms it is characterised by.

701) Name the types of acquired immune responses and the special types of lymphocytes involved in providing them.

702) Explain giving two reasons, how immune response by 'vaccine' is different from that by 'antitoxin' in humans.

703) Name the primary and secondary lymphoid organs

704) Give the full form of CT and MRI. How are they different from each other? Where are they used?

705) Diseases can be avoided by following a healthy lifestyle. Comment.

706) Medically it is advised to all young mothers that breast-feeding is the best for their newborn babies. Do you agree? Give reasons in support of your answer.

707) Humans have innate immunity for protection against pathogens that may enter the gut along with food. What are the two barriers that protect the body from such pathogens?

3 Marks 150 x 3 = 450

708) Differenciate between the following and give examples of each:active and passive immunity.

709) How is a cancerous cell different from a normal cell?

710) The following table shows certain diseases, their causative organisms and symptoms.Fill the gaps a,b,c,d,e,f.

Name of the disease	**Causative organism**	**Symptoms**
Ascariasis	Ascaris	a
b	Trochophyton	Appearance of dry scaly lesions on various parts of the body.
Typhoid	c	High fever,weakness,headache,stomach pain,constipation
Pneumonia	Streptococcus pneumoniae	d
e	Rhino virus	Nasal congesion and discharge, sore throat, cough, headache.
Filariasis	f	Inflammation in lower limbs.

711) Discuss with your teacher what does a 'suitable gene" means, in the context of DNA vaccines.

712) What are the various routes by which the transmission of human immunodeficiency virus (HIV) takes place?

713) Why is that once a person starts taking alcohol or drugs,it is difficult to get rid of this habit? Discuss it with your teacher.

714) Answer the questions according to instruction given:
(a) Diphtheria: Pathogen name, mode of transmission and incubation period.
(b)Barbiturates: Types of drugs, clinical use.

715) How is a cancerous cell different from a normal cell?

716) The following are some well known abbreviations, which have been used in this chapter. Expand each one to its full form.
(i) MALT
(ii) CMI
(iii) AIDS
(iv) NACO
(v) HIV

717) Differentiate the following and give examples of each.
(i) Innate and acquired immunity.
(ii) Active and passive immunity.

718) Draw a well-labelled diagram of an antibody molecule.

719) (a) Name the agent that causes amoebiasis and the human body organ that it infects.
(b) Write the symptoms and the mode of transmission of the disease.

720) Mention the name of the causal organism,symptoms and the mode of transmission of the disease,Amoebiasis.

721) A person is suffering from amoebiasis,Mention the pathogen that causes it and mention the pathogen that causes it and one organ of the body that gets affected.Give three symptoms and one mode of its transmission.

722) Name the pathogen that causes amoebiasis in humans.Give the symptoms and the mode of transmission of the disease.

723) Write the scientific name of the pathogen that causes amoebic dysentery.Enumerate four symptoms of the disease.How is the disease transmitted?

724) Name the cells HIV attacks first when it gains entry into a human body.How does this virus replicate further to cause immunodeficiency in the body?

725) Trace the events that occur in human body to cause immunodeficiency,when HIV gains entry into the body.

726) Name the type of human cell HIV attacks on its entry into the body.Explain the events that occur in the cell which further lesd to cause immunodeficiency syndrome.

727) A woman has tested positive for AIDS.Name the pathogen weaken her immune system?Explain.

728) (a) Name the virus that causes AIDS in humans.
(b) Explain the sequence of events that follows,when this virus attacks to cause immune deficiency in humans.

729) Trace the life cycle of malarial parasite in the human body,when bitten by an infected female Anopheles.

730) Give the scientific name of the parasite that causes malignant malaria in humans.At what stage does this parasite enter the human body?Trace its life cycle is human body?

731) (i) How and at what stage does Plasmodium enter into a human body?
(ii) With the help of a flow chart only,show the stages of asexual reproduction in the life cycle of the parasite in the infected human.
(iii) Why does the victim show symptoms of high fever?

732) Name the malarial parasite.Where do gametocytes of this parasite develop?Give a flow chart of its life cycle in this host.

733) 'Prevention is better than cure' is an apt slogan to safeguard adolescents from drug abuse .List any six steps that could be taken in this regard.

734) (a) What causes some viruses cause cancer in humans?
(b) How do benign tumours turn malignant?How does the latter harm the human body?

735) Why are lymph nodes and bone marrow called lymphoid organs? Explain the functions of each of them.

736) (a) Name the stage of Plasmodium that gains entry into the human body.
(b) Trace the stages of Plasmodium in the body of female Anopheles after its entry.
(c) Explain the cause of periodic recurrence of chill and high fever during malarial attack in humans.

737) (i) Write the scientific names of the two species of filarial worms causing filariasis.
(ii) How do they affect the body of infected persons?
(iii) How does the disease spread?

738) (a) Name the causative agent of typhoid in humans.
(b) Name the test administered to confirm the disease.
(c) How does the pathogen gain entry into the human body?Write the diagnostic symptoms and mention the body organ that gets affected in severe cases.

739) Explain the role of the following in providing defence against infection in human body:
(i) Histamine
(ii) Interferons
(iii) B-cells

740) (a) Name a drug used:
(i) as an effective sedative and pain killer,
(ii) for helping patients to cope with mental illnesses like depression,but often misused.
(b) How does the moderate and high dosage of cocaine affected the human body?

741) An antibody molecule is represented as H_2 L_2 Explain.

742) (a) Name the respective forms in which the malarial parasite gains entry into
(i) human body and
(ii) body of female Anopheles.
(b) Name the hosts where the sexual and asexual reproduction of malarial parasite occur,respectively.
(c) Name the toxin responsible for the appearance of symptoms of malaria in humans.Why do these symptoms occur periodically?

743) (a) Why do the symptoms of malaria not appear immediately after the entry of sporozoites into the human body,when bitten by female Anopheles? Explain.
(b) Give the scientific name of the malarial parasite that causes malignant malaria in humans .

744) A person is suffering from Ascariasis Mention the pathogen causing the disease and an organ of the body affected,three symptoms and one mode of transmission of the disease.

745) A person is suffering from ringworm disease.Mention the pathogen and the part of the human body affected.Give two symptoms of the disease along with two modes of transmission

746) Name the type of immunity that is present at the time of birth in humans.Explain any two ways by which it is accomplished.

747) Define health.Why should people be healthy?

748) Mention any six factors that are important/necessary to achieve good health.

749) How can diseases be broadly classified?Differentiate between them.

750) Enumerate the symptoms of common cold.Name the category of the organism causing it.

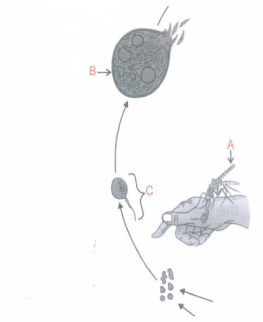
751) Name two diseases each,which are transmitted in the following ways:
(i) Through contaminated food and water.
(ii) Through insect vectors.
(iii) Through the air/droplet inhaled.

752) What are allergens?Name any four examples.

753) Enumerate the steps taken by WHO to control AIDS.

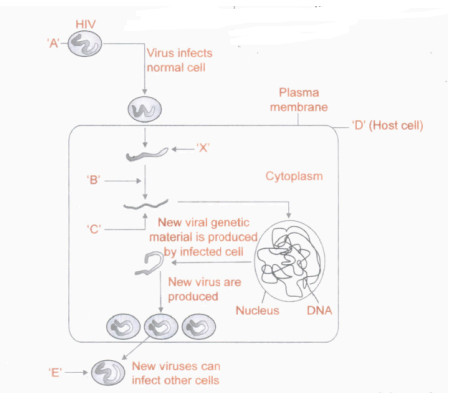
754) What is meant by withdrawal syndrome? What are its characteristic features?

755) Study a part of the life cycle of malarial parasite given below. Answer the questions that follows:



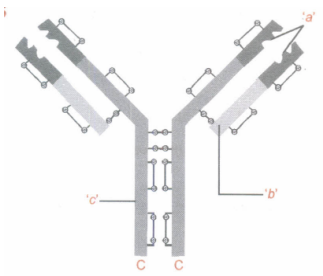
(a) Mention the roles of 'A' in the life cycle of the malarial parasite.
(b) Name the event 'c' and the organ where the event occurs.
(c) Identify the organ 'B' and name the cells being released from it.

756)



Study the diagram showing replication of HIV in humans and answer the following questions accordingly:
(i) Write the chemical nature of the coat 'A'.
(ii) Name the enzyme 'B' acting on 'X' to produce molecule 'C' Name 'C'.
(iii) Mention the name of the host cell 'D' the HIV attacks first when it enters into the human body.
(iv) Name the two different cells the new viruses 'E' subsequently attack.

757)



Identify a, b and c in the schematic diagram of an antibody given and answer the questions.
(i) Write the chemical nature of an antibody.
(ii) Name the cells that produce antibodies in humans.
(iii) Mention the type of immune response provided by an antibody.

758) Enlist the various harmful effects which alcohol/drug abuse may have on adolescents.

759) Do you Consider passive smoking is more dangerous than active smoking?why?

760) Many secondary metabolites of plants have medical properties.It is their misuse that creates problems.Justify the statement with an example.

761) In your locality, if a person is addicted to alcohol,what kind of behavioural changes do you observe in that person? Suggest measures to overcome the problem.

762) Why Sharing of injection needles between two individuals is not recommended?

763) Virus(L.poison) is a nucleoprotein entity which able to utilize the synthetic machinery of a living cell of another organism for its multiplication which does not involve growth and division.Mosaic disease of tobacco was found to be caused by a filterable agent present in the extract of disease tobacco plant.Later, it was observed that the infectous agents were too small to be visible even under microscope and unlike bacteria could not be growth in cell free-media.They came to be known as 'filterable viruses' Read the passage and answer the questions.
(i)Name the two diseases caused by viruses.
(ii)List any three measures to avoid a dread sexually transmitted viral disease.

764) Joginder participated in a group discussion in his school on "The ill-effects of tobacco on human health". In the evening he goes with his family for dinner and insists on sitting in the 'Non smoking Area' to which his father (who is a heavy smoker) objects.
(a)In this situation who wins your support_____Aditya's concern for health and environment on his father's objection? Justify giving two reasons.
(b)Suggest any two effective propaganda campaigns for anti-tobacco awarness.

765) How do the tranquillizers differ from the sedatives?

766) Fill in the blanks :
(i)_____is the principal constituent and the intoxicating principle of wines.
(ii) Alcohol is made synthetically from_____or acetylene by hydration.
(iii) Wines are said to be_____ when some sugar remains unfermented and_____when entire sugar has been formed.
(iv) Breath test of an alcoholic is done with an instrument called _____to know his/her blood alcohol concentration.
(v) Drawing of tobacco smoke into the mouth or lungs and exhale it via mouth, nostrils or both is called _____
(vi) Commercial tobacco is got from_____of young branches of Nicotiana tabacum and N. rustica an annual herb belonging to family _____
(vii) Inhaling powered tobacco via nose is termed_____

767) Fill in the blanks:
(i) External defence also called _____and internal defence also called _____.are the types of non-specific defence mechanism of the human body against microbes.
(ii) _____and_____are called the soldiers and scavengers of the body.
(iii) An antiviral protein called_____is released by the_____infected cells. The latter makes nearby uninfected cells more resistent to infection.
(iv) The immune system comprises_____cells and _____cells.
(v) Tears are secreted by _____glands and contain an enzyme_____to fight eye infection.

768) Match the items in column I with appropriate items (one or more) in column II.

Column I	**Column II**
(i) AIDS	(a) Antibody production
(ii) Lysozyme	(b) Activation of B-cells
(iii) B-cells	(c) Agglutinin
(iv) T-helper cells	(d) Tears
(v) Antibody	(e) Killing of bacteria
	(f) Immunodeficiency

769) Think what two measures should be taken for prevention and control of alcohol and drug abuse among adolescents

770) Fill in the blanks in the different columns of the table given below:

Disease	**Causative organism**	**Medium of transfer**	**Symptoms**
Filariasis	Wuchereria	(a)	Lymphatic vessels of lower limbs affected
(b)	Trichophyton	Using towels of infected person	Dry, scaly leisons on body
Common cold	(c)	Droplets from sneezing of infected persons	Affect nose, and respiratory passage, sore throat
Ascariasis	Ascaris	Through contaminated water, vegetables and fruits	(d)

771) In which parts of the body of the hosts do the following events in the life cycle of Plasmodium take place? Name both the body part and the host.
(a) Fertilization (b) Development of gametocytes (c) Release of sporozoites (d) Asexual reproduction.

772) Given below are pairs of disease and causative organism. Which out of these is not these is not a matching pair and why?
Filariasis : Wuchereria
Ringworm : Ascaris
AIDS : Human Immunodeficiency virus
Malaria : Plasmodium

773) A thalasemic child needed repeated blood transfusions, got infected by HIV.
(i) use a rough diagramatic sketch and arrows to show how the virus increased in number.
(ii) Why did the increased number of HIV viruses deteriorate the child's immunity?
(iii) Which diagnostic test showed that the infective virus was HIV?

774) Give Reasons for the following statements:
(a) Neutrophils and macrophages are called soldiers and scavengers of the animal body.
(b) After consuming alcohol, one should avoid driving.
(c) Persistent use of corticosteroids is harmful.

775) List the causative organism and carrier of the following diseases.
(i) Dengue fever
(ii) Chikungunya

776) Write the source and effect of the following drugs:
(i) Morphine
(ii)Cocaine
(iii)marijuana

777) A team of students are preparing to participate in the interschool sports meet.During a practices session you find some vials with labels of certain cannabinoids.
(i) Will you report to the authorities?Why?
(ii) Name a plant from which such chemicals are obtained
(ii) Write the effect of these chemicals on the human body.

778) Do you support 'Dope test' being conducted on sports persons participating in a prestigious athletic meet? Give three reasons in support of your answer.

779) Many microbial pathogens enter the gut of humans along with food. What are the preventive barriers to protect the body from such pathogens?

780) 'Prevention is better than cure'. Comment.

781) Why is it that during changing weather, one is advised to avoid closed, crowded and air conditioned places like cinema halls, etc?

782) Differentiate between benign tumour and malignant tumour.

783) Plasmodium falciparum is the causative agent of the most severe form of malaria. It is distributed throughout the tropics. Explain why malaria is restricted to the tropics.

784) (a) What is the functional difference between B and T-cells?
(b) Name the source used to produce hepatitis-B vaccine using rDNA technology.

785) A heavily bleeding and bruised road accident victim was brought to a nursing home. The doctor immediately gave him an injection to protect him against a deadly disease.
(i) What did the doctor inject into the patient's body?
(ii) how do you think this injection would protect the patient against the disease?
(iii) Name the disease against which this injection was given and the kind of immunity it provides.

786) At what stages does Plasmodium gain entry in to human body? Write the different stages of its life cycle in the human body.

787) Autoimmune diseases are different from immuno deficiency diseases. How? Give one example of each in human.

788) How does the HIV breakdown the immune system of the AIDS patient?

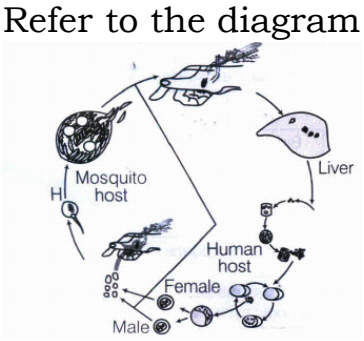
789) How does the transmission of each of the following takes place? amoebiasis, Malaria, Ascariasis, Pneumonia

790) Community service department of your school plans a visit to a slum area near the school with an objective to educate the slum dwellers with respect health and hygiene.
(i) Why is there a need to organise such visits?
(ii) Write the steps you will highlight as a member of this department, in your interactions with them to enable them to lead a healthy life.

791) How is cancerous cell different from a normal cell?

792) The harmful allele of sickle-cell anaemia has not been eliminated from human population. Such afflicted people derive some other benefit?Discuss.

793) Refer to the diagram given below and answer the question that follow.



(i) The parasite reproduce in human host by which method?
(ii) The sexual stages of parasite are referred to as?
(iii) Where does the fertilisation and development of parasite takes place in mosquito body?
(iv) What are sporozotites?
(v) What is the cause of cycles of fever during malaria?

794) During a school trip to 'Rohtang Pass', one of your classmate suddenly developed 'altitude sickness'. But, she recovered after sometime.
(a) Mention one symptom to diagnose the sickness.
(b) What caused the sickness?
(c) How could she recover by herself after sometime?

795) Certain attributes of innate immunity are given in the table below. Identify A, B, C, D, E and F respectively in it.

	Types of barriers	**Examples of the barrier**	**Functions**
(i)	A	B	Prevent microbial growth
(ii)	C	Polymorpho nuclear leucocytes	D
(iii)	Cytokine	E	F

796) Why is molecular diagnosis preferred over conventional methods? Name any two techniques giving one use of each.

797) State the three characterisics of Acquired Immunity. List the different ways by which it can be attained by humans.

798) How are primary and secondary immune responses carried out in the human body? Explain

799) What are interferons? State their role in the treatment of cancer.

800) Why is breast recommended during the initial period of an infant's growth ? Given reasons.

801) A patient is down with Amoebiasis. List the symptoms that confirm this infection. Name the causative pathogen

802) What is the functional difference between B and T cells?
(b) Name the source used to produce hepatitis B vaccine using r-DNA technology

803) (a) State what happens in the human body when malarial parasites infected RBCs burst to release the parasites in the blood.
(b) Mention the specific sites in the host body where production of
(i) Sporozoites and
(ii) Gemetocytes take place in the life cycle of the malarial parasites.

804) Mention any two human diseases caused by roundworms. Name their causative agents and their mode of transmission into human body

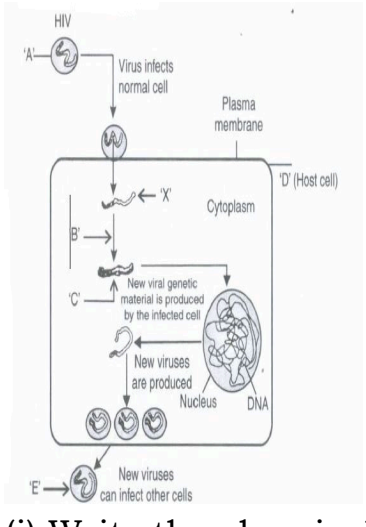
805) (a) Name and explain giving reasons the type of immunity provided to the new born by colostrum and vaccinations.
(b) Name the type of antibody
(i) Present in colostrum
(ii) Produced in response to allergens in human body

806) Name the form of Plasmodium that gains entry into the human body. Explain the different stages of its life-cycle in the human body.

807) Name the stage of Plasmodium that is transmitted to human body by the vector. Describe the life cycle of the parasite in humans

808) Trace the life cycle of Plasmodium in humans from the stage of entry until it is picked up by the female Anopheles.

809) Study the diagram showing replication of HIV in humans and answer the following questions accordingly



(i) Write the chemical nature of the coat' A
(ii) Name the enzyme 'B' acting on 'X' to produce molecule 'C'. Name 'C'.
(iii) Mention the name of the host cell 'D' the HIV attacks first when it enters into the human body.
(iv) Name the two different cells the new viruses 'E' subsequently attack.

810) Explain the mechanism of replication of a retrovirus in a human cell with the help of a diagram only.

811) When you go for a trip to any high altitude places you are advised to take it easy and rest for first two days. Comment giving reasons

812) Why do tribes who live in high attitude of himalayas experience discomfort in respiration? How do they get adapted to servive in such a situation?

813) A young boy when brought a pet dog home started to complain of watery eyes and running nose. The symptoms disappeared when the boy was kept away from the pet.
(i) Name the type of antibody and chemicals responsible for such a response in the boy
(ii) Mention the name of anyone drug that could be given to the boy for immediate relief from such a response

814) HIV and Hepatitis-B are STDs, Mention the two other ways by which they can be transmitted to a healthy person
(b) Why is early detection of STD essential? What can it it lead to otherwise? Explain

815) Your classmate complains of headache and cough. The doctor confirms that he is suffering from Pneumonia and not common cold, on the basis of certain symptoms. List these symptoms. Mention any two precautions to be followed to prevent the spread of this disease

816) A doctor prescribed morphine as a sedative and pain killer to your cousin who had undergone surgery. Even after recovery, he craved for the prescribed medicine. What do you conclude about his condition, had he continued with the same medication? After appraising yourself, what measures will you suggest to him to overcome this problem? Briefly explain any two.

817) Name a human disease, its causal organism, symptoms (any three) and vector spread by intake of water and food contaminated by human faecal matter.

818) (i) It is generally observed that the children who had suffered from chickenpox in their childhood may not contract the same disease in their adulthood. Explain giving reasons the basis of such an immunity in an individual. Name this kind of immunity.
(ii) What are interferons? Mention their role.

819) Draw a labelled diagram of antibody molecule.

820) (i) What precaution(s) would you recommend to a patient requiring repeated blood transfusion?
(ii) If the advise is not followed by the patient there is an apprehension that the patient might contract a disease that would destroy the immune system of his/her body. Explain with the help of schematic diagram only how the immune system would get affected and destroyed.

821) (i) Why is there a fear amongst the guardians that their adolescent wards may get trapped in drug/alcohol abuse?
(ii) Explain 'addiction' and 'dependence' in respect of drug/ alcohol abuse in youth.

822) Transplantation to save certain patients often fails due eto rejection by the patient. What is transplantation? Which type of immune response is responsible for such rejections?

823) Rohan and his friends emptied all the overhead tanks, which were not in use for last few months. Some people did not like this. Rohan and his friends explained and convinced them about the hygienic benefits of their act.
(i) What was the objective behind their act?
(ii) Explain in brief the stages of life cycle of a malarial parasite in human body.
(iii) Which pathogen is responsible for malaria?
(iv) What values did Rahul and his friends promote?

824) Ankit attended a blood donation camp to donate blood and came to know that he was HIV positive. He lost interest in studies knowing that. He remained absent from school for a long time. The biology teacher visited his house and talked to him. Ankit started coming to school again and showed interest in studies.
(i) Aperson detected to be HIV positive should be isolated by the society. Do you agree? Why/why not?
(ii) Write the processes through which, AIDS does not spread.
(iii) Who are at higher risk of encountering AIDS?
(iv) What sense of responsibility did the biology teacher exhibit?

825) It is commonly observed that parents feel embarrassed to discuss freely with their adolescent children about sexuality and reproduction. The result of this parental inhibition is that the children go astray sometimes.
(i) Explain the reasons that you feel are behind such embarrassment amongst some parents to freely discuss such issues with their growing children.
(ii) By taking one example of a local plant and animal, how would you help these parents to overcome such inhibitions about reproduction and sexuality?

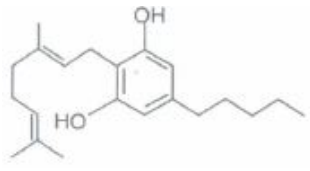
826) (i) Which agents cause allergy?
(ii) How does the human body respond to allergens?

827) Which causative organisms are responsible for ringworm? List any two symptoms of the disease.

828) How do cancerous cells harm the normal cells? Explain the phenomenon.

829) Nikhil goes with his family for dinner and insists on sitting in the non-smoking area to which his father (who is a heavy smoker) objects.
(i) In this situation, who wins your support, Nikhil's concern for health and environment or his father's objection? Justify giving two reasons.
(ii) Whyis smoking dangerous?
(iii) What is passive smoking?
(iv) Suggest any three effective propaganda campaigns for anti-tobacco awareness.

830) The outline structure of a drug is given below:



(a) Which group of drugs does this represent?
(b) What are the modes of consumption of these drugs?
(c) Name the organ of the body which is affected by consumption of these drugs?

831) Given below are the pairs of pathogens and the diseases caused by them. Which out of these is not a matching pair and why?
(a) Virus - Common cold
(b) Salmonella - Typhoid.
(c) Microsporum - Filariasis
(d) Plasmodium - Malaria.

832) Mention the characteristic symptoms of Dengue fever. How is the disease transmitted to others?

833) (a) Name the causative agent of amoebiasis and mention its symptoms.
(b) Write how it spreads.

834) Write the causative agent of filariasis in humans. Mention its mode of transmission and symptoms of the disease.

835) (a) What is an allergic reaction?
(b) Name any two drugs used to quickly reduce the symptoms of allergy.
(c) Why do more and more children in metro cities of India suffer from allergies and asthma?

836) A group of youth were having a 'rave party' in an isolated area and was raided by police. Pockets of 'smack' and syringes with needles were found littered around.
(a) Why is taking 'smack' considered an abuse?
(b) Write the chemical name of 'smack' and the name of its source plant.
(c) Syringes and needles used by the youth for taking the drug could prove to be very fatal. Why?

837) Mention six causes of drug abuse.

838) Explain the following with reference to drug/alcohol abuse:
(a) Addiction,
(b) Dependence and
(c) Withdrawal symptoms

839) When someone buys packets of cigarettes, cannot miss the statutory warning that is present on the packing which warns against smoking and says how it is injurious to health. Yet, smoking is very prevalent in our society, both among young and old. Advise the adolescents about the importance of avoiding smoking. (Mention any six points)

840) We all must work towards maintaining good health because 'health is wealth'. Enlist any six ways of achieving good health.

841) The following table shows certain diseases, their causative organisms and symptoms. Fill in the gaps.

Diseases	**Causative organisms**	**Symptoms**
Ascariasis	Ascaris	(a)
(b)	Trichophyton	Appearance of dry, scaly lesions on various parts of the body
Typhoid	(c)	High fever, weakness, headache, stomach pain and constipation.
Pneumonia	Streptococcus pneumoniae	(d)
(c)	Rhino viruses	Nasal congestion and discharge, sore throat, cough,headache.
Filariasis	(f)	Inflammation in lower limbs.

842) Compare the symptoms of ascariasis, amoebiasis and elephantiasis.

843) A patient complains of suffering frorn constipation, stomach ache, stool with blood clots and excess mucus. The physician diagnosed it as amoebiasis, after stool test.
(i) Write the scientific name of the microbe identified in the stool sample.
(ii) How do you think, the patient must have contracted it?
(iii) Write your suggestions to the patient to avoid infection in future.

844) A person is suffering from a high-grade fever. Which symptoms will help to identify if he / she is suffering from typhoid, pneumonia or malaria?

845) Plasmodium protozoan needs both a mosquito and a human host for its continuity. Explain.

846) Recognition of an antigenic protein of a pathogen or exposure to a pathogen occurs during many types of immune responses, including active immunity and induced active immunity and induced active immunity. Specify the types of responses elicited when human beings get encountered by a pathogen.

847) 'Epithelial lining of our intestine is considered as secondary lymphoid organ'. Justify the statement.

848) (i) Explain the roles of (a) primary and (b) secondary lymphoid organs that are responsible for developing defence to combat the action of pathogens/foreign antigens which enter our body.
(ii) Doctors generally advise not to undergo surgery of tonsils. Why?

849) A boy developed some allergic reactions when he straight entered into his air conditioned room after a game of football outside his house. Write any two symptoms that could be noticed in such condition. How does our body combat such conditions?

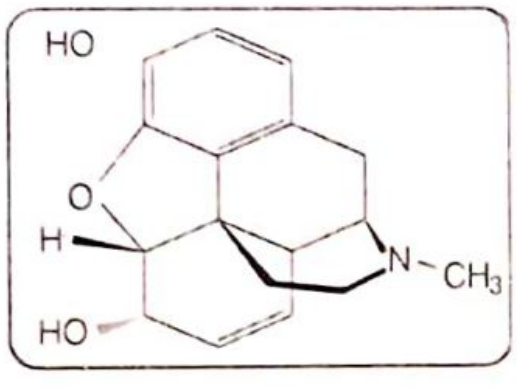
850) How does human immunodeficiency virus cause immunodeficiency in the human body?

851) Name the type of cells attacked by AIDS virus in the human body. Also, explain the events in sequence undertaken by virus to increase its progeny.

852) (i) Write the complete name of the diagnostic test for AIDS. Explain the principle it works on.
(ii) Name the type of genetic material present in AIDS causing pathogen.

853) (i) Explain the property of contact inhibition and its effect on normal human cells and cancerous cells.
(ii) Why are biological modifiers like α-interferon required for cancer treatment? How do they act to treat the disease?

854) ldentify the compound chemical structure as shown below. State any three of its physical properties.



855) What is the source of hallucinogens? Why are they called as psychedelic drugs?

856) Drugs and alcohol give short-term 'relief' and long term 'damages'. Discuss.

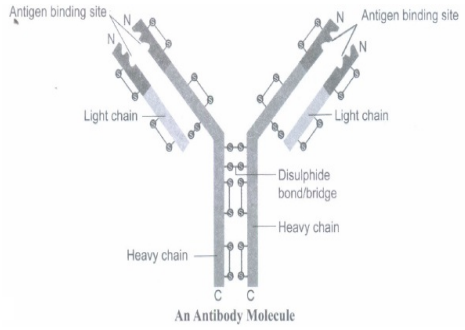
857) Identify A, B, C, D, E and F in the table given below

Name of human disease	**Causative organism**	**Symptoms**
Pneumonia	Streptococcus	A
Typhoid	B	High fever, weakness headache, stormach pain
Comnon cold	Rhino virus	C
Ringworm	D	Dry scaly lesions on body parts, redness, itching
Ascariasis	Ascaris	E
F	Entamoeba histolytica	Constipation, cramps, stools with mucus and blood clots

Case Study Questions 30 x 4 = 120

858) Your classmate complains of cough and headache to the doctor. The doctor confirms that he is suffering from pneumonia and not just common cold.
(a) How did the doctor arrive at this conclusion?
(b) Write the binomials of the causative organisms of pneumonia.
(c) What is common about the transmission of the two diseases, common cold and pneumonia?

859) The structure of an antibody molecule is given below. Answer the questions that follow:



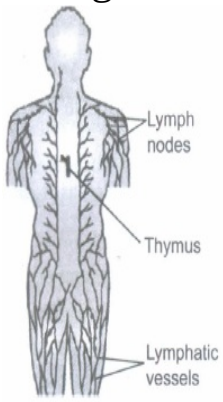
An Antibody Molecule

(a) Why are they said to show humoral immune response?
(b) Name any four types of antibodies produced in our body.

860) A youth in his twenties met with an accident and succumbed to the injuries. His parents agreed to donate his organs. Answer the following questions:
(a) List any two essential clinical steps to be undertaken before any organ transplant.
(b) Why is the organ transplant rejected sometimes? Name the kind of immunity responsible for this.

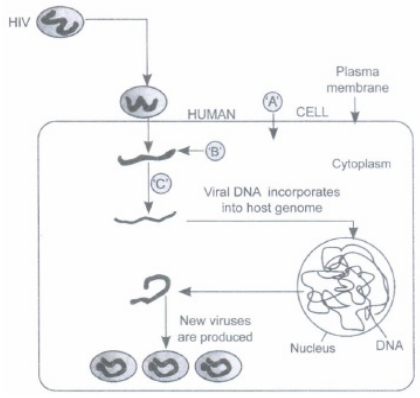
861) Following a road accident, four injured persons were brought to a nearby clinic. The doctor immediately injected them with tetanus antitoxin,
(a) What is tetanus antitoxin?
(b) Why were the injured immediately injected with this antitoxin?
(c) Name the kind of immunity this injection provided.

862) A diagrammatic representation of the lymph vessels, lymph nodes and thymus is shown below.



(a) Identity (I) a primary and (it) a secondary lymphoid organ from the diagram.
(b) Mention the function of each of them.

863) Study the diagram showing the entry of HIV into the human body and the processes that are followed:



(a) Name the human cell 'A' HIV enters into.

(b) Mention the genetic material 'B' HIV releases into the cell.

(c) Identify enzyme 'C'

864)

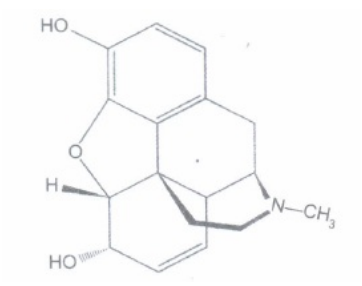
Opium poppy

The picture given above shows an opium poppy plant, which is the source of opioid drugs.

(a) Name the two drugs obtained from this plant.

(b) Mention the use/effect of each of them on human body.

865)

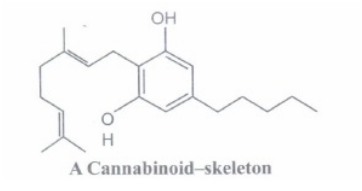


(a) Identify the drug, whose molecular structure is given above.

(b) Write the scientific name of its source plant.

(c) Where are its receptors present in the human body?

866)



A Cannabinoid–skeleton

The skeletal structure of a cannabinoid molecule is given above. Answer the following questions.

(a) What are the modes of its consumption by humans?

(b) Name the four different forms in which cannabinoids are produced.

867) Prior to a sports event, blood and urine samples are collected for drug tests.

(a) Name the drugs the authorities usually look for.

(b) Write the scientific names of the plants from which these drugs are obtained.

(c) Name two other plants which have hallucinogenic properties too.

868) When someone buys a packet of cigarette, he cannot miss the statutory warning given on the packing, which warns against smoking and tells it is injurious to health. Yet, smoking is very much prevalent in our society, both among youth and old. Mention six ill-effects of smoking to advise the adolescents to avoid smoking.

869) Read the following and answer any four questions from (i) to (v) given below :

Riya studies in II standard in a government schooL She belongs to a backward family and her parents did not get her properly vaccinated according to immunisation programme. Once while playing in school playground she fell down due to weakness and developed high fever, headache and stiffness in her neck. Identify the illness she could be suffering from and answer the following questions.

(i) The microbe responsible for Riyas illness could be

(a) Vibrio cholerae **(b) Enterovirus** **(c) Plasmodium** **(d) Mycobacterium.**

(ii) Which vaccine, if administered earlier, would have saved Riya from the illness she unfortunately contracted?

(a) Salk vaccine **(b) MMR vaccine** **(c) BCG vaccine** **(d) Varicella vaccine**

(iii) The disease that Riya has contracted spreads through

(a) bite of an infected mosquito **(b) bite of an infected dog** **(c) faecal oral route** **(d) direct contact with the infected person.**

(iv) Riya can spread her illness to other children through

(a) her faeces **(b) direct contact** **(c) coughing and sneezing in open** **(d) vectors**.

(v) **Assertion:** Polio produces inflammation of the nervous system.

Reason: Stiffness of the neck, paralysis of particular skeletal muscle is an important symptom of polio.

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but rea the correct explanation of assertion.

(c) Assertion is true but reason is false

(d) Both assertion and reason are false.

870) **Read the following and answer any four questions from (i) to (v) given below :**

X and Yare communicable diseases whereas Wand Z are non-communicable diseases. X is transmitted through vectors whereas Y is transmitted through droplet infection. W is caused due to a hormone deficiency whereas Z is a degenerative disease.

Based on the above information, answer the following questions.

(i) Identify W, X, Y and Z.

	W	X	Y	Z
(a)	**Coronary artery disease .**	**Cholera**	**Chikungunya**	**Hypertension**
(b)	**Diabetes**	**Malaria**	**Rhinitis**	**Alzheimer's disease**
(c)	**Arthritis**	**AIDS**	**Shigella**	**Plague**
(d)	**Gonorrhea**	**Diphtheria**	**Pertussis**	**Anthrax**

(ii) Select the correct statement.

(a) If X is sleeping sickness then its vector is Leishmania

(b) If Y is diphtheria then it is caused by Bacillus anthracis

(c) If W is hypothyroidism then it is caused by deficiency of thyroxine hormone.

(d) If Z is myocardial infarction then patient develops acute rheumatic fever, joint pain and throat infection

(iii) If X and Y both are usual diseases then which of the following holds true?

(a) X could be dengue caused by flavivirus and Y could be AIDS caused by HIV.

(b) X could be.chikungunya whereas Y could be rhinitis.

(c) X could be hepatitis whereas Y could be rabies.

(d) X could be chicken pox caused by Varicella zoster virus whereas Y could be yellow fever caused by flavivirus.

(iv) If X and Y both are bacterial diseases then select the correct match from the following.

(a) X- Bubonic plague - Yersinia pestis

(b) Y - Leprosy - Mycobacterium leprae

(c) X - Whooping cough - Bordetella pertussis

(d) Y - Botulism - Clostridium botulinum

(v) **Assertion:** Communicable diseases could be contagious or non-contagious.

Reason: Diseases that spread through vectors are non-contagious disease.

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but rea the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

871) **Read the following and answer any four questions from (i) to (v) given below:**

Rajesh, Ravi and Rohit are roommates. They are doing their graduation. Few months back Ravi fell ill. It took him around 3 weeks to recover. Both his friends were absolutely healthy at that time. After sometime Rajesh also fell ill from some other disease. This time Ravi and Rohit both contracted the same illness. Based on the above information, answer the following questions.

(i) Which of the following holds true for Ravi's illness?

(a) Ravi was suffering from a communicable disease that is transmitted through vector.

(b) Ravi was suffering from a communicable disease that is transmitted through faecal oral route.

(c) Ravi was suffering from a non-com'municable disease like anaemia.

(d) Ravi was suffering from a non-communicable disease like Down's syndrome.

(ii) Select the correct statement.

(a) Ravi contracted a disease caused by air borne microbes.

(b) Ravi could have suffered a nutritional disorder.

(c) Ravi suffered a non-contagious disease.

(d) Both (b) and (c)

(iii) Which could be correctly said for Rajesh's illness?

(a) Rajeshs illness was due to a microbial infection

(b) Rajesh's illness could be contagious or non-contagious.

(c) Rajesh's illness could be cured by antibiotics.

(d) All of these

(iv) Which of the following may depicts Ravi's and Rajeshs illness?

Ravi	**Rajesh**
(a) Sickle cell anaemia	**Myocardial infection**
(b) Whooping cough	**Tetanus**
(c) Gastritis	**Rhinitis**
(d) Hypertension	**Thyroid**

(v) Assertion: Diabetes mellitus is a non-communicable disease which can be completely cured.

Reason: Diabetes mellitus is caused by deficiency of aldosterone hormone.

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

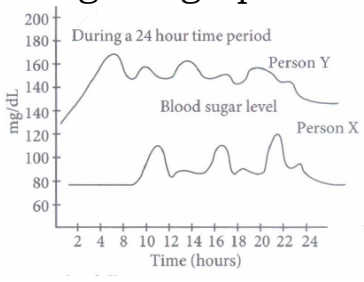
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false

872) **Read the following and answer any four questions from (i) to (v) given below:**

The given graphs show fluctuations in blood sugar of person X and Y during a 24 hour time period.



Based on the above information, answer the following questions.

(i) Which of the following holds true for person X?

(a) Person X is suffering from type I diabetes.

(b) Person X shows severe insulin deficiency and beta cell depletion.

(c) Person X is normal and shows good control of blood sugar level.

(d) Person X is subjected to excessive urination and abnormal thrust.

(ii) The given graph indicates that person Y is suffering from

(a) diabetes **(b) hypertension** **(c) atherosclerosis** **(d) rheumatic heart disease.**

(iii) Which of the following conditions are common in person Y?

(a) Excretion of glucose in urine and excessive urination

(b) Polydipsia and mild beta cell depletion

(c) Progressive erosion of articular cartilage at synovial joint

(d) Both (a) and (b)

(iv) A person suffering from diabetes mellitus becomes weak because

(a) the cells are unable to utilise glucose and other carbohydrates for energy production

(b) degradation of fat increases production of toxic ketone bodies

(c) cells utilize proteins for obtaining energy

(d) all of these.

(v) **Assertion:** Type I diabetes involves failure of insulin to facilitate the movement of glucose into cells.

Reason: Type II diabetes is caused by failure of beta cells to produce adequate amount of insulin due to beta cell depletion.

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

873) **Read the following and answer any four questions from (i) to (v) given below**:

Priya was 4 years old when she contracted chicken pox. It took her around 15 days to recover completely. Now Priya is 5 years old so her mother got her vaccinated few days back for DPT (5th dose) as per immunisation program. Recently she was playing with her friend in the park when her friend accidently fell on iron pipe and badly bruised her knee. She was taken to the hospital where doctor gave her ATS injection and painkillers. Based on the above information, answer the following questions.

(i) Select the correct statement.

(a) Priya has developed natural active immunity against chicken pox.

(b) Priya has developed artificial active immunity against DPT.

(c) Priyas friend has developed artificial passive immunity against tetanus.

(d) All of these

(ii) Which of the following do you think is an example of natural passive immunity?

(a) Administration of AGS (anti gas gangrene serum) in a person

(b) Transfer of IgA antibodies from mother to baby through mother's milk

(c) A person recovered from viral infection

(d) A child vaccinated for polio

(iii) Which of the following is true for active immunity?

(a) It provides immediate relief.

(b) It is temporary, not long lasting.

(c) It has no side effects

(d) None of these

(iv) Select the incorrect match.

(a) Passive immunity - IgG antibodies crossing placental barrier to reach fetus

(b) Active immunity - Vaccination against corona virus

(c) Active immunity - Administration of antidiphtheria serum in patient

(d) Passive immunity - Fetus having mother's milk

(v) **Assertion:** A person recovered from measles develops an active immunity against this infection.

Reason: In active immunity, person's own cells develop antibodies in response to infection.

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

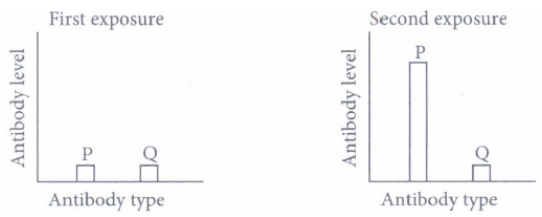
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

874) **Read the following and answer any four questions from (i) to (v) given below:**

In a study to test a new vaccine against a viral disease, mouse model testing is done. In this process, mice are vaccinated and their blood samples were tested. Mice developed mild disease symptom. After few days those mice were again infected with the virus. This time they do not show any disease symptoms. Their blood samples were tested. Two graphs show antibody concentration for the first and second infection in mice blood.



Based on the above information, answer the following questions.

(i) P and-Q in the given graphs indicate

(a) IgM and IgG respectively **(b) IgG and IgM respectively** **(c) IgG and IgE respectively** **(d) IgM and IgA respectively**

(ii) Which form of pathogen is used in vaccination?

(a) Activated and strong pathogenic antigens **(b) Inactivated and weakened pathogenic antigens** **(c) Hyperactive and strong pathogen** **(d) Preformed antibodies**

(iii) Which of the following is incorrect for P?

(a) It is the most abundant class of Ig. **(b) It is found in blood, lymph and intestine.** **(c) It is unable to cross the placental barrier** **(d) It is a monomer.**

(iv) How does vaccination work?

(a) The immune system produces antibodies which stay in the blood.

(b) Memory lymphocytes remain in the body to fight off any future infection with the same pathogen.

(c) The dead pathogen stays in the body and constantly stimulates the immune system

(d) All of these.

(v) Assertion: Mice do not show any disease symptoms during second exposure to the pathogenic virus.

Reason: The antibody production is accelerated and more intense during secondary immune response.

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

875) **Read the following and answer any four questions from (i) to (v) given below:**

Aditya went to his hometown located in countryside along with his parents during his summer vacations. His grand parents' house is surrounded by farmland from all sides. Lots of crops were growing nearby and Aditya was very excited to visit the crop fields. He seeked permission from his mother to play in farmland along with his friends and then went to play in the fields. On returning back he had running nose, watering eyes and continuous sneezing which was very frequent. The symptoms worsened with time. Based on the above information, answer the following questions.

(i) What could be the possible reason for Adityas condition?

(a) Allergy(b) Infection(c) Malnutrition(d) Genetic disorder

(ii) How can allergy be diagnosed in a person?

(a) Presence of large amount of IgE antibodies in the blood

(b) Presence of large number of bacteria in the blood

(c) Presence of bilirubin and bilirubin pigments in the stool

(d) Presence of sickle shaped RBCs in the blood

(iii) The symptoms which Aditya developed on account of being allergic are consequence of

(a) inflammation of membrane lining the nose and conjunctiva

(b) swelling up of tissue surrounding bronchioles of lungs

(c) dilation of all arteries so that large amount of fluid passes from blood to tissues.

(d) all of these

(iv) Name the type of allergy that Aditya developed.

(a) Allergy (b) Anaphylaxis (c) Hay fever (d) Urticaria

(v) **Assertion:** Hay fever is the form of allergy due to pollens of grasses and other plants.

Reason : Hay fever symptoms are due to release of histamines and often respond well to treatment with antihistamines.

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

876) **Read the following and answer any four questions from (i) to (v) given below:**

Reema, Jai and Ankit are suffering from autoimmune diseases of adrenal cortex, joints and thyroid gland, respectively. Their immune system failed to recognise self and non-self and started destroying their body's own proteins. They are seeking proper medical help for their conditions but their condition cannot be cured completely.

Based on the above information, answer the following questions.

(i) Select the option that correctly identifies autoimmune diseases of Reema, Jai and Ankit

	Reema	Jai	Ankit
(a)	**Diabetes**	**Grave's disease**	**Rheumatic fever**
(b)	**Pernicious anaemia**	**Multiple sclerosis**	**Myasthenia gravis**
(c)	**Addison's disease**	**Rheumatoid arthritis**	**Hashismotos thyroiditis**
(d)	**Systemic lupus erythematosus**	**Severe combined immunodeficiency disease**	**AIDS**

(ii) Reema's autoimmune condition is characterised by

(a) undersecretion of insulin

(b) destruction of RBCs and low RBC count

(c) undersecretion of adrenal cortex hormones

(d) low production of intrinsic factor required for absorption of B_{12}.

(iii) What do you think is the major cause of Iai's condition?

(a) Deterioration of myelin sheath around nerve cells leading to loss of precise muscle control.

(b) Destruction of heart cells leading to weakening of wall.

(c) Destruction of beta cells leading to undersecretion of insulin.

(d) Deposition of immune complexes of IgM, IgG and c in joints thereby inflaming joints, destroying articula and fusing bones.

(iv) How do you think Ankit's condition got diagnosed?

(a) Low level of thyroid hormone and elevated levels of TSH in Ankit's blood.

(b) Presence of antibodies against thyroid (TPO antibodies) in Ankit's blood.

(c) Elevated erythrocyte sedimentation rate (ESR), reduced C-reactive protein (CRP) in Ankit.

(d) Both'(a) and (b)

(v) **Assertion:** Immunosuppressive drugs often reduce the severity of autoimmune disorders.

Reason: Monoclonal antibodies have been successfully used in the treatment of autoimmune disease.

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but rea the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

877) **Read the following and answer any four questions from (i) to (v) given below:**

Siddharth is a chain smoker. He got into this habit in early adolescence due to peer pressure and gradually got addicted to this habit. Its now almost 20 years he is into the habit of smoking. Since few months he is experiencing pain in chest, shortness of breath, wheezing and chronic cough with phlegm. He seeked advice of a medical practitioner who diagnosed him with lung cancer. Based on the above information, answer the following questions.

(i) What do you think is the possible carcinogen responsible for Siddharth's lung cancer?

(a) Nitrosamines **(b) Benzo(a)pyrene** **(c) Hydrazine** **(d) All of these**

(ii) How is lung cancer diagnosed?

(a) Computerised tomography scan **(b) sputum cytology** **(c) Biopsy oflung tissue** **(d) All of these**

(iii) From which of the following type of cancer is Siddharth suffering from?

(a) Sarcoma **(b) Carcinoma** **(c) Lymphoma** **(d) Leukemia**

(iv) Select the correct statement.

(a) Surgery, radiotherapy and chemotherapy can be used to treat lung cancer.

(b) Chemotherapy involves the exposure of cancerous parts to X rays which destroy rapidly growing cancer cells.

(c) Surgical removal oflung cancer tissue is suggested at advanced stage 4.

(d) Monoclonal antibodies can effectively treat lung cancer and can cure it completely.

(v) Assertion: Lung cancer if not treated at an early stage can spread to other initial organs of the body.

Reason: Cancer cell have uncontrolled proliferation and ability to invade new sites (metastasis).

(a) Both assertion and reason are true and reason is the correct explanation of assertion.

(b) Both assertion and reason are true but reason is not the correct explanation of assertion.

(c) Assertion is true but reason is false.

(d) Both assertion and reason are false.

878) **Read the following and answer any four questions from (i) to (v) given below:**

A group of teenagers was involved in drug abuse. They used syringes and needles to inject drugs. They indulged in this habit when they became adults. Administration of drug through needles became a piece of cake for them. Raj was the most active drug abuser amongst them and used to take drugs in high profile parties. In a span of time he started losing weight and suffered persistent diarrhoea. He developed constant low grade fever and used to catch opportunistic infection. When he consulted a doctor, he got himself tested for HIV in his blood and finally diagnosed with AIDS.

Based on the above information, answer the following questions.

(i) Select the incorrect statement.

(a) AIDS is a disorder of cell mediated immune system of the body.

(b) AIDS is caused by Human Immunodeficiency virus.

(c) AIDS infections were detected in India for the first time in prostitutes ofChennai, Tamil Nadu in 1986.

(d) December 10 is recalled as Worl AIDS Day.

(ii) How do you think Raj got AIDS infection?

(a) Through transfusion of HIV infected blood

(b) Sexual intercourse with an infected partner

(c) Sharing towel with infected friend

(d) Use of contaminated needles and syringes to inject drugs

(iii) How AIDS can be diagnosed?

(a) ELISA test

(b) Ames test

(c) Pap's test

(d) Widal test

(iv) How can AIDS be prevented?

(a) Blood tests of blood donor before transfusion to check for the presence of AIDS virus.

(b) Use of disposable needles and syringes for injecting medicines and vaccination

(c) Having protected sex by use of condoms

(d) All of these

(v) Select the correct statement for AIDS virus.

(a) It is rhomboid in shape with a diameter of 10-15 cm.

(b) Its genome consists of ds DNA.

(c) It consists ofreverse transcriptase enzyme.

(d) Its envelope-consists oflipid bilayer and three protein coats.

879) Immunity is the capability of multicellular organisms to resist harmful microorganisms. It involves both specific and non-specific components acting as barriers or eliminators of a wide range of pathogens irrespective of their antigenic makeup. Other components of the immune system adapt themselves to each new disease encountered and can generate pathogen-specific immunity. Immunity is a complex biological system that can recognize and tolerate whatever belongs to self and to recognize and reject what is foreign. The immune system has innate and adaptive immunity. Innate immunity, also known as native immunity, is a semi-specific and widely distributed form of immunity. It is defined as the first line of defense against or pathogens. Adaptive acquired immunity is the active component of the host immune response, mediated by antigen-specific lymphocytes. Adaptive immunity can be acquired either 'naturally' (by infection) or 'artificially' (through deliberate actions such as vaccination). Adaptive immunity can also be classified as 'active' or 'passive'.

(i) Often patients are immune to diseases like chicken pox once infected. This immunity is an example of

(a) Naturally acquired active immunity

(b) Artificially acquired active immunity

(c) Naturally acquired passive immunity

(d) Artificially acquired passive immunity

(ii) Which of the following immune mechanism is responsible for protecting us from diseases of other species?

(a) Active immunity	**(b) Passive immunity**
(c) Innate immunity	**(d) Adaptive immunity**

(iii) Which of the following conveys the longest-lasting immunity to an infectious agent?

(a) Naturally acquired active immunity

(b) Artificially acquired active immunity

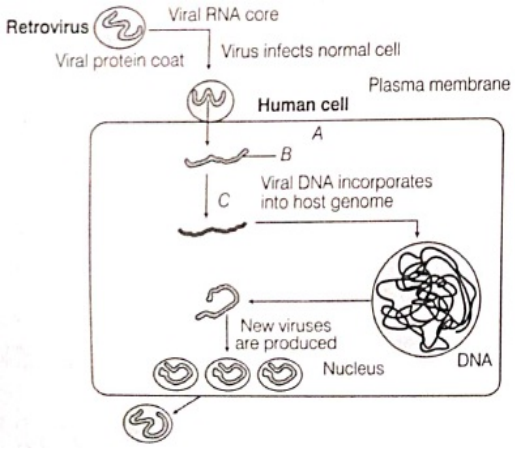
(c) Naturally acquired passive immunity

(d) Artificially acquired passive immunity

(iv) If interferon is being produced in the body of a sick person, the person is most likely to be suffering from

(a) typhoid	**(b) malaria**
(c) measles	**(d) tetanus**

880) Study the diagram showing the entry of HIV into the human body and answer the following questions.



(i) The retrovirus shown above affects which of the following cells?

(a) Helper-T cells **(b) Suppressor cells**

(c) M-N cells **(d) Cytotoxic T-cell**

(ii) The retrovirus has

(a) single-stranded RNA **(b) double-stranded RNA**

(c) single-stranded DNA **(d) double-stranded DNA**

(iii) Choose the incorrect statement about AIDS.

(a) Viral RNA genome is converted into copy DNA by reverse transcriptase

(b) It is caused by enveloped retrovirus

(c) It is an immunodeficiency disease

(d) It selectively infects and kills B-lymphocytes

(iv) At which stage of HIV infection does one usually show symptoms of AIDS?

(a) Within 15 days of sexual contact with an infected person

(b) When the infected retrovirus enters the host cell

(c) When HIV damages large number of helper T-cell

(d) When the viral DNA is produced by reverse transcriptase

881) Observe the type of plant shown below and answer the questions that follows.

(i) A type of drug is obtained from the plant whose one flowering branch is shown above. Choose the correct statement(s) regarding the figure.

I. It is a hallucinogen.