

Objective

1. Hepatitis C is caused by virus:
 (A) RNA non enveloped (B) DNA enveloped
 (C) DNA- non enveloped (D) RNA enveloped

2. Genus for corn plant is:
 (A) Solanum (B) Zea (C) Cassia (D) Allium

3. The major cell infected by HIV is:
 (A) Neutrophils (B) Basophils
 (C) B-lymphocytes (D) Helper T-Lymphocytes

4. Solanum tuberosum is the scientific name of:
 (A) Tomato (B) Potato (C) Onion (D) Garlic

5. Amoeba belongs to kingdom:
 (A) Fungi (B) Protista (C) Plantae (D) Animalia

6. Small pox is caused by:
 (A) Protozoan (B) Bacteria (C) Virus (D) Fungi

7. An elongated, pyramidal, hexagonal, prism shaped structure of bacteriophage is:
 (A) Trunk (B) Neck (C) Tail (D) Head

8. Scientific name for potato is:
 (A) Cassia Fistula (B) Solanum melangena
 (C) Solanum tuberosum (D) Allium cepa

9. An Hepatitis is inflammation of:
 (A) Lungs (B) Liver (C) Heart (D) Kidney

10. Family include related:
 (A) Class (B) Order (C) Genera (D) Species

11. Absorptive mode of nutrition is found in:
 (A) Animals (B) Fungi (C) Lipase (D) Algae

12. Enzyme released from the tail of bacteriophage which dissolves cell wall:
 (A) Lipase (B) amylase (C) Pepsin (D) Lysozyme

13. Which is an insect?
 (A) Jelly fish (B) Sliver fish (C) Star fish (D) Cray fish

14. A disease, which is highly contagious is:
 (A) AIDS (B) Herpes (C) Mumps (D) Measles

15. The known species of plants are over:
 (A) 17.6 million (B) 0.5 million (C) 1 million (D) 1.5 million

16. Orders include related:

- (A) Classes (B) Species **(C) Families** (D) Genera
17. How many species of animals are known?
(A) One million (B) Two million (C) Half million **(D) One and a half million**
18. A set of related genera would be grouped into:
(A) A species (B) A class **(C) A family** (D) An order
19. Species is the basic unit of:
(A) Ecology **(B) Classification** (C) Genetics (D) Evolution
20. Binomial system of nomenclature was devised by:
(A) Robert Whittaker (B) Ernst Hackle **(C) Carlous Linnaeus** (D) E-Chatton
21. The Common name for solanum melangena is:
(A) Amaltas (B) Potato (C) Onion **(D) Brinjal**
22. In the binomial system of taxonomy , developed during the 18th century by C. Linnaeus , the first word of an organism's name is its:
(A) Family (B) Race (C) Species **(D) Genus**
23. The common name of Allium cepa is:
(A) Amaltas **(B) Piyaz** (C) Chana (D) Bathu
24. Linnaeus published the list of names of plants in:
(A) 1753 (B) 1743 (C) 1733 (D) 1723
25. Linnaeus published his list of animals in:
(A) 1753 **(B) 1758** (C) 1748 (D) 1747
26. In the scientific name of onion, Allium cepa , the Allium belongs to its:
(A) Species (B) Family **(C) Genus** (D) Group
27. Cassia fistula is the scientific name for:
(A) Kikar (B) Argvad (C) Golden shower **(D) Amaltas**
28. Carlous Linnaeus took the scientific name from:
(A) Arabic word (B) Urdu word **(C) Latin word** (D) Greek word
29. Initially , the classification was based on:
(A) Cytology **(B) Morphology** (C) Genetic features (D) Physiology
30. Organelle of symbiotic origin is:
(A) Cell membrane (B) Vacuole **(C) Mitochondria** (D) Cell wall
31. In five kingdom system , Eukaryotic multicellular reducers are placed in kingdom:
(A) Animalia **(B) Fungi** (C) Protista (D) Monera
32. The basic unit of classification is:
(A) Phylum (B) Class **(C) Species** (D) Genus
33. In the five - kingdom system of classification developed by Robert Whittaker , member of the kingdom Plantae are autotrophic, eukaryotic and:
(A) Motile (B) Have sexual reproduction

- Multicellular Either unicellular or multicellular
34. Five kingdom system of classification proposed by Margulis and Schwartz is not based on:
 Cellular organization Genetics Nucleic Acid Mode of nutrition
35. In 1969, the five kingdom system was proposed by:
 Robert Hooke Robert Brown
 Robert Whittaker Robert Koch
36. A third Kingdom protista was proposed to accommodate Euglena like organisms and bacteria, in 1866 by:
 Aristotle Linnaeus Carlous Ernst Hackel E-Chatton
37. The system of classification associated with three principal modes of nutrition Photosynthesis, absorption and ingestion was proposed by:
 Carlous Linnaeus Margulis & Schawartz
 Robert Whittaker Ernst Hackel
38. Kingdom Animalia include eukaryotic multicellular:
 Producers Decomposers Consumers Reducers
39. Venome meaning:
 Virus Viral fluid None of these Poisonous fluid
40. first vaccinated 8 year old boy:
 Kobert Koch Edward jenner D'Herelle Pasteur
41. Bacteriophage meaning:
 Bacteria killer Bacteria spreading Bacteria Eater None of these
42. The size of Parvovirus is:
 250 nm 75 nm 100 nm 20 nm
43. Viruses range in size from 250 (nm) of poxviruses to the 20 nm of:
 Protovirus Parvoviruses Retrovirus Provirus
44. Viruses are extremely small infectious agents, which can only be seen under:
 Telescope Dissecting microscope
 Electron microscope Compound microscope
45. Viruses are 10 to 1000 times than most:
 Euglena Bacteria Cyanobacteria Yeast
46. Viruses can reproduce only in living host are known as
 Facultative extracellular parasites Obligate extracellular parasites
 Obligate intracellular parasites Facultative intracellular parasites
47. Viruses lack metabolic machinery for the synthesis of their own:
 Amino acid & protein Fatty acid & protein
 Nucleic acid & protein RNA & protein
48. Prions are made up of:
 Lipids Proteins Nucleic Acid None of these
49. The member of capsomere present in herpes virus is:

- A 162 capsomere B 252 capsomere C 100 capsomere D 152 capsomere
50. Icosahedral virus have nearly:
 A 40 faces B 30 faces C 20 faces D 10 faces
51. Mad cow infection and mysterious brain infection in man are caused by:
 A Fungus B Viron C Bacteria D Prions
52. The capsomere present in the capsid of:
 A 352 B 200 C 252 D 162
53. The viral genome is surrounded by a protein coat, the:
 A Capsomeres B Envelope C Capsule D Capsid
54. The nucleic acid and capsid is collectively called:
 A Chromatin body B Nucleocapsid C Capsonucleiod D Nucleoid
55. Independent evolutionary unit is:
 A Family B Population C Species D Genus
56. The basic unit of classification is:
 A Class B Species C Phylum D Genus
57. Orders include related:
 A Classes B Genera C Family D Species
58. The enzyme involved in viral replication are synthesized:
 A By the host cell B On the interior surface of viral coat
 C On the interior surface of viral membrane D On the viral ribosomes
59. A virion is a:
 A Viral gene B Viral protein C Viral lysozyme D Virus
60. AIDS is caused by:
 A Algae B Bacteria C Virus D Fungi
61. Cells in system can also be infected by HIV.
 A Respiratory B Circulatory C Digestive D Central nervous
62. Hepatitis A is transmitted by contact with from infected individuals.
 A Spit B Faeces C Blood D Water
63. About 60 % of adults are immune to:
 A Small pox B Cow pox C Mumps D Measles
64. The AIDS was reported by some physicians in early:
 A 2000's B 1960's C 1980's D 1940's
65. Genetically engineered vaccine is not available for:
 A Serum hepatitis B HAV C HBV D HCV
66. By adopting hygienic measures, with routine vaccination and screening of blood / organ / tissue of the donor we can control:

- (A) Herpes simplex **(B) Hepatitis** (C) Measles (D) AIDS

67. Common cold is caused by:

- (A) Parvoviruses (B) Paramyxoviruses **(C) Adenoviruses** (D) Poxviruses

68. Hepatitis C is also called:

- (A) Delta hepatitis (B) Infectious hepatitis (C) Serum hepatitis **(D) Infusion hepatitis**

Fill in the blanks

- Q1: Whittaker's five kingdom system of classification recognizes two basic types of cells and
- Q2: In five kingdom system of classification proposed by Margulis and Schwartz organelles of symbiotic origin such as and were also considered.
- Q3: A bacteriophage reproduces by using the metabolic machinery and
- Q4: The protein coat that encloses the viral genome is called It is made up of
- Q5: Retroviruses are viruses which have specific enzymes by which they convert RNA to DNA.
- Q6: HIV infects and the defects in these cells lead to failure in system.
- Q7: Hepatitis is caused by
- Q8: The most common system of classification used today, developed in 1969 by Robert Whittaker of Cornell University, uses five kingdoms and

Answers

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|--------------------------------------|---|
| 1. Eukaryotes , Prokaryotes | 2. Mitochondria , chloroplast |
| 3. DNA , cytoplasm | 4. Capsid , capsomers |
| 5. RNA tumor , reverse transcriptase | 6. T-lymphocyte , immune |
| 7. Viral infection | 8. Monera , protista , fungi , plantae , animalia |

Chapter : 05

Variety of Life

Subjective

Q1: **What is vaccine?**

Ans: A harmless variant or derivative of a pathogen that stimulates host's immune system to mount defenses against the pathogen.

Q2: **Which are the kinds of the hepatitis caused by virus yet unidentified?**

Ans: There are hepatitis F and hepatitis G.

Q3: **What is virology?**

Ans: The study of viruses is known as virology.

Q4: **What is the origin of the word virus?**

Ans: The word virus is derived from a Latin word venome which means poisonous fluid.

Q5: **Define the term species?**

Ans: Species is a group of individual which resemble with one another and can freely breed among themselves in nature to produce fertile off spring.

Q6: **Who isolated the virus from the host tobacco cells in and when?**

Ans: Stanley isolated viruses from the host tobacco cells in 1935.

Q7: **When did small pox occur as epidemic in China?**

Ans: In 12th Century B.C.

Q8: **Name the organism which shares the characters of both the plants as well as animals.**

Ans: The organism is Euglena.

Q9: **How do antibodies like penicillin and streptomycin etc. Affect the pathogenic viruses?**

Ans: The viruses are generally resistant to antibodies.

Q10: **What is the nature of nucleic acid in phages?**

Ans: The nucleic acid in phages is the DNA.

Q11: **What is autotrophy?**

Ans: An organism which can prepare its own food from simple inorganic material is called an autotrophic and this phenomenon is called autotrophy.

Q12: **What us HAV abbreviation for?**

Ans: HAV is abbreviation for Hepatitis A virus.

Q13: **How is HIV transmitted?**

Ans: It is transmitted by intimate sexual contact, use of common syringes, contact with blood and breast feeding etc.

Q14: **What does bacteriophage mean?**

Ans: Bacteriophage means "bacteria eater".

Q15: **List the divisions of the biological classification system of animals.**

Ans: These are the phylum, class, order, family, genus, and species.

Q16: **Is silver fish really a fish?**

Ans: Not it is an insect.

Q17: **Name the five kingdoms of Whittaker.**

Ans: These are Monera, Protista, Plantae, Fungi and Animalia.

Q18: **What is an obligate parasite?**

Ans: An organisms which can live only as parasite in the body of the host is called as obligate parasite.

Q19: **Write down the cause and symptoms of hepatitis B.**

Ans: Hepatitis B is caused by hepatitis virus HGV. Its symptoms are fatigue, loss of appetite and Jaundice.

Q20: **When was AIDS virus named and what?**

Ans: AIDS virus was named in 1986 as human immunodeficiency virus (HIV).

Q21: **Define obligate parasite.**

Ans: A parasite which reproduces or multiplies only in the host cell is called obligate parasite.

Q22: **Who introduced the technique of vaccination and when?**

Ans: Edward Jenner introduced the technique of vaccination in 1796.

Q23: **Write down the phylum and class of zea mays.**

Ans: These are anthophyta (Tracheophyta) and Monocodyledonae respectively.

Q24: **How do viruses range in size?**

Ans: The viruses range in size is from 20 nm of parvoviruses to 250 nm of pox viruses.

Q25: **What is temperature phage?**

Ans: The phage which causes lysogen is called temperature (lysogenic) phage.

Q26: **What is the role of capsid?**

Ans: Capsid is a protein shell that encloses the virol genome. It gives definite shape to virion.

Q27: **What is the Swedish botanist, Carolus Linnaeus famous for?**

Ans: Carolus Linnaeus devised a system for giving scientific names to plants and animals in 1753.

Q28: **What term did Chatton use in 1937 to describe bacteria?**

Ans: The term used was procariotique.

Chapter : 05

Variety of Life



Imp.Long Questions

Q1: Describe Linnaeus system of Binomial nomenclature in detail.

Q2: Two to five Kingdom system of classification.

Q3: Discuss five kingdom system of classification.

Q4: Describe structure of viruses.

Q5: What are viruses? Give their functions.

Q6: Explain structure of virus.

Q7: Explain the structure of bacteriophages.

Q8: Explain lytic cycle of bacteriophages with diagram.

Q9: Illustrate the life cycle of Bacteriophages diagrammatically.

Q10: Write a note on any two viral diseases.

Q11: Describe some viral diseases, which are common in Pakistan.

Q12: Write a note on reteroviruses.

Q13: How HIV is transmitted?

Q14: Draw life cycle of HIV.

Q15: Describe the symptoms, causes, mode of transmission and prevention of AIDS.

Q16: Write a note on Acquired Immune Deficiency Syndrome.

Q17: Give an account of AIDS.

Q18: Write a detailed note on AIDS.

Q19: Write a detailed note on hepatitis

Q20: What is hepatitis? Give its symptoms and discuss its three common.