

CUET UG 2023
Previous Year Question

1. Parthenogenesis does not occur in

- (1) Rotifers
- (2) Honeybees
- (3) Lizards
- (4) Mammals

2. Out of the following which one is not a hermaphrodite?

- (1) Sponge
- (2) Earthworm
- (3) Leech
- (4) Cockroach

3. Match List-I with List-II

List-I

- (A) Polyembryony
- (B) Parthenocarp
- (C) False fruit
- (D) Embryo sac

List-II

- (I) Apple
- (II) Female gametophyte
- (III) Orange
- (IV) Banana

Choose the correct answer:

- (1) A-III, B-I, C-II, D-IV
- (2) A-III, B-IV, C-I, D-II
- (3) A-I, B-IV, C-III, D-II
- (4) A-III, B-IV, C-II, D-I

4. Arrange the stages of development of a dicot embryo in correct order:

- (A) Formation of heart-shaped embryo
- (B) Formation of typical dicot embryo
- (C) Formation of zygote
- (D) Formation of globular embryo

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

5. Select the hormone which is not secreted by human placenta:

- (1) Estrogen
 - (2) Progesterone
 - (3) Human chorionic gonadotropin
 - (4) Luteinising hormone
-

6. Select the correct statements regarding menstrual cycle in human female:

- (A) The first menstruation begins at puberty and is called menarche.
- (B) Ovulation takes place in the middle of the cycle (about 14th day).
- (C) In absence of fertilisation, corpus luteum degenerates leading to menstruation.
- (D) Menstrual cycle ceases around 50 years of age.

- (1) A and B only
 - (2) B and D only
 - (3) A and C only
 - (4) C and D only
-

7. Identify the terminal method used to prevent pregnancy:

- (1) Lactational amenorrhea
 - (2) Sterilisation
 - (3) Intra-uterine device
 - (4) Periodic abstinence
-

8. Match List-I with List-II

List-I

- (A) Lippes loop
- (B) Vaults
- (C) Periodic abstinence
- (D) Progestasert

List-II

- (I) Barrier
- (II) Hormone releasing device
- (III) Non-medicated IUD
- (IV) Natural method

Choose correct answer:

- (1) A-I, B-III, C-IV, D-II
 - (2) A-III, B-I, C-IV, D-II
 - (3) A-III, B-I, C-IV, D-II
 - (4) A-III, B-I, C-II, D-IV
-

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9. Arrange the steps of Griffith's experiment in correct order:

- (A) S strain injected → mice died
- (B) Heat-killed S strain injected → mice lived
- (C) R strain injected → mice lived
- (D) Heat-killed S strain + R strain injected → mice died

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

10. Which of the following is not a Mendelian disorder?

- (1) Haemophilia
- (2) Sickle-cell anaemia
- (3) Down's syndrome
- (4) Phenylketonuria

11. Match List-I with List-II

List-I

- (A) Metabolic disorder
- (B) Pedigree analysis
- (C) Thalassemia
- (D) Trisomy of 21st chromosome

List-II

- (I) Family tree over generations
- (II) Blood disease
- (III) Phenylketonuria
- (IV) Down's syndrome

- (1) A-III, B-IV, C-III, D-I
- (2) A-I, B-III, C-II, D-IV
- (3) A-III, B-I, C-II, D-IV
- (4) A-III, B-II, C-IV, D-I

12. Identify the statements true for RNA:

- (A) RNA acts as genetic material for some viruses.
- (B) RNA functions as adaptor molecule.
- (C) RNA has hexose sugar backbone.
- (D) RNA acts as catalyst in some cases.

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

13. Match List-I with List-II

List-I

- (A) Ribosome
- (B) Histone
- (C) DNA polymerase
- (D) RNA polymerase

List-II

- (I) Replication
- (II) Transcription
- (III) Translation
- (IV) Nucleosome

- (1) A-IV, B-III, C-II, D-IV
- (2) A-III, B-I, C-II, D-IV
- (3) A-I, B-III, C-IV, D-II
- (4) A-III, B-IV, C-I, D-II

14. In DNA, N-glycosidic linkage is present between:

- (1) Pentose sugar and phosphate group
- (2) Nitrogenous base and pentose sugar
- (3) Two nitrogenous bases
- (4) Two pentose sugars

15. Identify the factor which does not affect Hardy-Weinberg equilibrium:

- (1) Genetic drift
- (2) Natural selection
- (3) Genetic recombination
- (4) Genetic equilibrium

16. Single step large mutation leading to speciation is called:

- (1) Founder effect
- (2) Saltation
- (3) Branching descent
- (4) Natural selection

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17. Paleontological evidence for evolution refers to:

- (1) Development of embryo
 - (2) Homologous organs
 - (3) Fossils
 - (4) Analogous organs
-

(III) Common cold

(IV) Malaria

(1) A-I, B-II, C-III, D-IV

(2) A-III, B-I, C-IV, D-II

(3) A-II, B-III, C-IV, D-I

(4) A-IV, B-III, C-I, D-II

18. Match List-I with List-II

List-I

- (A) Lymphoid organ
- (B) Cancer
- (C) HIV
- (D) Typhoid

List-II

- (I) ELISA
- (II) Widal test
- (III) Bone marrow and thymus
- (IV) Carcinogens

(1) A-IV, B-II, C-I, D-III

(2) A-III, B-IV, C-I, D-II

(3) A-II, B-III, C-IV, D-I

(4) A-I, B-III, C-II, D-IV

19. The statements not true for allergy are:

- (A) Allergy is due to chemicals like histamine and serotonin.
- (B) Allergens are substances which cause allergy.
- (C) Antibodies produced are IgA type.
- (D) Adrenaline and steroids quickly enhance symptoms.

(1) C and D only

(2) A and C only

(3) A and B only

(4) B and D only

20. Match causal agent with disease

- (A) Salmonella typhi
- (B) Streptococcus pneumoniae
- (C) Rhino virus
- (D) Plasmodium

(I) Typhoid

(II) Pneumonia

21. Which crop was made resistant to yellow mosaic virus and powdery mildew by mutation breeding?

(1) Cowpea

(2) Flat bean

(3) Mung bean

(4) Brassica

22. Match List-I with List-II

List-I

(A) Sterilized plant part

(B) Genetically similar plants

(C) Meristem

(D) Somatic hybrids

List-II

(I) Tomato

(II) Virus free culture

(III) Somaclones

(IV) Explants

23. Sonalika and Ratna are HYV varieties of:

(1) Wheat and Rice

(2) Rice and Wheat

(3) Maize and Rice

(4) Wheat and Millet

24. Which of the following is not a nitrogen-fixing microorganism?

(1) Azotobacter

(2) Oscillatoria

(3) Acetobacter

(4) Nostoc

25. The large holes in Swiss cheese are due to:

(1) Production of oxygen

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- (2) Citric acid
 - (3) Production of carbon dioxide
 - (4) Ethyl alcohol
-

26. Which of the following is not a cyanobacteria?

- (1) Nostoc
 - (2) Glomus
 - (3) Anabaena
 - (4) Oscillatoria
-

27. Agarose used in gel electrophoresis is extracted from:

- (1) Soybean
 - (2) Sea weeds
 - (3) Sea anemone
 - (4) Sea corals
-

28. First instance of artificial recombinant DNA molecule construction was carried out on plasmid of:

- (1) Bacillus thuringiensis
 - (2) Escherichia coli
 - (3) Agrobacterium tumefaciens
 - (4) Salmonella typhimurium
-

29. Antibiotic resistance gene in vector helps in selection of:

- (1) Recombinant cells
 - (2) Transformed cells
 - (3) Competent cells
 - (4) Totipotent cells
-

30. Identify the gene which is not effective against cotton bollworms:

- (1) cryIAc
 - (2) cryIAb
 - (3) cryIIAb
 - (4) Both (2) and (3)
-

31. RNA interference in tobacco plant was used to develop resistance against:

- (1) Viruses
 - (2) Fungi
 - (3) Nematodes
 - (4) Insects
-

32. Unauthorized use of bio-resources without compensation is called:

- (1) Bioinformatics
 - (2) Biopiracy
 - (3) Biopatenting
 - (4) Biological theft
-

33. Out of the following plants, which is not browsed by cattle?

- (1) Wheat
 - (2) Cowpea
 - (3) Sugarcane
 - (4) Calotropis
-

34. Fresh water animals cannot live long in sea water because of:

- (1) Temperature variations
 - (2) Tidal waves
 - (3) Predators
 - (4) Osmotic problems
-

35. Natural interconnections of food chain is:

- (1) GFC
 - (2) DFC
 - (3) Food web
 - (4) Biomass
-

36. Correct statements regarding food chain:

- (A) Primary carnivores are tertiary consumers.
- (B) Energy flow from sun → producers → consumers is unidirectional.
- (C) Death of organism initiates detritus food chain.
- (D) Plants are primary consumers.

- (1) A and B only
 - (2) A and D only
-

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- (3) B and C only
(4) C and D only

37. The historic convention on Biological Diversity held in Rio de Janeiro in 1992 is called:

- (1) World Summit
(2) MAB Programme
(3) Earth Summit
(4) G-16 Summit

38. Which area is one of India's biodiversity hotspots?

- (1) Eastern Ghats
(2) Indo-Burma Plains
(3) Aravali Hills
(4) Indo-Gangetic Plains

39. Dobson Units (DU) are used to measure:

- (1) Biodiversity index
(2) Thickness of ozone layer
(3) Sustainability index
(4) Canopy thickness

40. Which of the following is NOT a category of waste generated in hospitals?

- (1) Radioactive waste
(2) Biodegradable waste
(3) Plastic waste
(4) Non-biodegradable waste

Section-2: Comprehension Passage

1. Complex life cycle of parasites mean:

- (1) Having only one intermediate host
(2) Having special adaptations to cling on the host
(3) Having many hosts
(4) Having one or two intermediate hosts to facilitate parasitisation of its primary host

2. Parasites harm the host by:

- (1) Reducing its size

- (2) Improving its growth and reproduction
(3) Reducing its survival, growth, reproduction and population density
(4) Improving its survival, growth and reproduction

3. Parasitic adaptations include:

- (1) Loss of unnecessary organs
(2) Development of hooks and suckers
(3) Thick cuticle
(4) All of the above

4. Match List-I with List-II

List-I

- (A) Cuckoo and Crow
(B) Copepods
(C) Plasmodium
(D) Orchids and Mango tree

List-II

- (I) Ectoparasite
(II) Commensal organism
(III) Brood parasitism
(IV) Endoparasite

Choose the correct answer:

- (1) A-III, B-I, C-IV, D-II
(2) A-III, B-II, C-IV, D-I
(3) A-I, B-III, C-II, D-IV
(4) A-IV, B-III, C-I, D-II

5. Identify the statements which are NOT true with respect to host-parasite relationship.

- (A) Host and parasite tend to co-evolve.
(B) Parasites have evolved elaborate nervous system for survival.
(C) If the host evolves to reject the parasite, the parasite also evolves mechanisms to counter them.
(D) If host evolves mechanisms for rejecting parasite, parasite evolves to be successful in another host species.

Choose the correct answer:

- (1) A and B only
(2) C and D only

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- (3) B and D only
(4) A and C only
-

- (3) Earth Summit
(4) G-16 Summit
-

6. What are the intermediate hosts for human liver fluke?

- (1) Snail and fish
(2) Snail and freshwater mussel
(3) Fish and man
(4) Snail and man
-

55. Which of the following area is one of India's biodiversity hotspots?

- (1) Eastern Ghats
(2) Indo-Burma region
(3) Aravali Hills
(4) Indo-Gangetic plains
-

51. Fresh water animals cannot survive for long in sea water because they face:

- (1) Temperature variations
(2) Tidal waves
(3) Predators
(4) Osmotic problems
-

56. Dobson Units (DU) are used to measure:

- (1) Biodiversity index
(2) Thickness of ozone layer
(3) Sustainability index
(4) Thickness of canopy in rainforest
-

52. The natural interconnections of food chains is known as:

- (1) Grazing food chain
(2) Detritus food chain
(3) Food web
(4) Biomass pyramid
-

57. Which of the following is NOT a category of waste generated by human beings in daily practice?

- (1) Radioactive waste
(2) Biodegradable waste
(3) Plastic waste
(4) Non-biodegradable waste
-

53. Which of the following statements are correct regarding food chain?

- (A) Primary carnivores are tertiary consumers
(B) Energy flow from sun to producers and then to consumers is unidirectional
(C) Death of an organism initiates detritus food chain
(D) Plants are primary consumers

Choose the correct answer:

- (1) A and B only
(2) A and D only
(3) B and C only
(4) C and D only
-

58. Read the given paragraph and answer the question

Parasitism has evolved in many taxonomic groups from plants to higher vertebrates. Many parasites have evolved to be host-specific in such a way that both host and parasite tend to co-evolve. In accordance with their life styles, parasites evolve special adaptations and complex life cycles.

Complex life cycle of parasites means:

- (1) Having only one intermediate host
(2) Having special adaptations to cling on the host
(3) Having many hosts
(4) Having one or two intermediate hosts to facilitate parasitisation of its primary host
-

54. The historic convention on Biological Diversity held in Rio de Janeiro in 1992 is also called:

- (1) World Summit
(2) MAB Programme
-

59. Parasites harm the host by:

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- (1) Reducing its size
 - (2) Improving its growth and reproduction
 - (3) Reducing its survival, growth, reproduction and population density
 - (4) Improving its survival and reproduction
-

60. Parasitic organisms may show adaptations such as:

- (1) Loss of unnecessary organs
 - (2) Hooks and suckers for attachment
 - (3) Thick cuticle
 - (4) All of the above
-

61. Match List-I with List-II

List-I

- (A) Cuckoo and Crow
- (B) Copepods
- (C) Plasmodium
- (D) Orchids and Mango tree

List-II

- (I) Ectoparasite
- (II) Commensal organism
- (III) Brood parasitism
- (IV) Endoparasite

Choose the correct answer:

- (1) A-III, B-I, C-IV, D-II
 - (2) A-III, B-II, C-IV, D-I
 - (3) A-I, B-III, C-II, D-IV
 - (4) A-IV, B-III, C-I, D-II
-

62. Identify the statements which are NOT true regarding host-parasite relationship:

- (A) Host and parasite tend to co-evolve
- (B) Parasites evolve elaborate nervous system for survival
- (C) If host evolves mechanisms to reject parasite, parasite evolves mechanisms to counter them
- (D) Parasites evolve adaptations to live in host

Choose correct answer:

- (1) A and B only
 - (2) C and D only
-

- (3) B and D only
 - (4) A and C only
-

63. What are the intermediate hosts for human liver fluke?

- (1) Snail and fish
 - (2) Snail and freshwater mussel
 - (3) Fish and man
 - (4) Snail and man
-

64. The following organism is an ectoparasite:

- (1) Louse
 - (2) Tapeworm
 - (3) Plasmodium
 - (4) Ascaris
-

65. Which of the following is an example of brood parasitism?

- (1) Cuckoo laying eggs in crow's nest
 - (2) Orchid growing on mango tree
 - (3) Louse on human body
 - (4) Tapeworm in intestine
-

66. In parasitic plants, the absorbing organ that penetrates host tissue is called:

- (1) Haustorium
 - (2) Rhizome
 - (3) Tendril
 - (4) Stolon
-

67. The relationship between orchid and mango tree is:

- (1) Parasitism
 - (2) Mutualism
 - (3) Commensalism
 - (4) Predation
-

68. The parasite that lives inside the body of host is called:

- (1) Endoparasite
 - (2) Ectoparasite
-

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- (3) Predator
(4) Commensal
-

69. The parasite that lives on the external surface of host is called:

- (1) Endoparasite
(2) Ectoparasite
(3) Symbiont
(4) Predator
-

70. Parasitic adaptations include:

- (1) Loss of digestive system
(2) Development of hooks and suckers
(3) High reproductive capacity
(4) All of the above
-

71. Which parasite causes malaria?

- (1) Plasmodium
(2) Trypanosoma
(3) Leishmania
(4) Entamoeba
-

72. The vector of malaria parasite is:

- (1) Male Anopheles mosquito
(2) Female Anopheles mosquito
(3) Housefly
(4) Tsetse fly
-

73. Tapeworm belongs to the phylum:

- (1) Platyhelminthes
(2) Nematoda
(3) Annelida
(4) Arthropoda
-

74. Ascaris belongs to the phylum:

- (1) Nematoda
(2) Platyhelminthes
(3) Annelida
(4) Arthropoda
-

75. The disease caused by Wuchereria bancrofti is:

- (1) Filariasis
(2) Malaria
(3) Dengue
(4) Typhoid
-

76. The vector of filariasis is:

- (1) Female Culex mosquito
(2) Female Anopheles mosquito
(3) Aedes mosquito
(4) Housefly
-

77. Dengue fever is transmitted by:

- (1) Anopheles mosquito
(2) Aedes mosquito
(3) Culex mosquito
(4) Housefly
-

78. AIDS is caused by:

- (1) Bacteria
(2) Virus
(3) Fungus
(4) Protozoa
-

79. HIV attacks mainly:

- (1) RBCs
(2) WBCs (helper T-cells)
(3) Platelets
(4) Neurons
-

80. ELISA test is used for detection of:

- (1) HIV infection
(2) Malaria
(3) Typhoid
(4) Tuberculosis
-

81. Antibiotics are effective against:

- (1) Viruses
(2) Bacteria
(3) Fungi
(4) Protozoa
-

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82. Penicillin is produced by:

- (1) Penicillium notatum
- (2) Aspergillus
- (3) Rhizopus
- (4) Saccharomyces

83. The bacterium used in production of curd is:

- (1) Lactobacillus
- (2) Rhizobium
- (3) Streptococcus
- (4) Nitrosomonas

84. Biogas is produced mainly by:

- (1) Methanogens
- (2) Cyanobacteria
- (3) Nitrogen-fixing bacteria
- (4) Fungi

85. Methanogens belong to:

- (1) Archaeobacteria
- (2) Eubacteria
- (3) Cyanobacteria
- (4) Fungi

86. Sewage treatment involves:

- (1) Primary treatment
- (2) Secondary treatment
- (3) Tertiary treatment
- (4) All of the above

87. The activated sludge process occurs during:

- (1) Primary treatment
- (2) Secondary treatment
- (3) Tertiary treatment
- (4) None

88. Bioreactors are used in:

- (1) Industrial fermentation
- (2) Sewage treatment

- (3) Production of antibiotics
- (4) All of the above

89. The process of producing identical copies of DNA is called:

- (1) Replication
- (2) Transcription
- (3) Translation
- (4) Mutation

90. Transcription produces:

- (1) DNA
- (2) RNA
- (3) Protein
- (4) Lipids

91. Translation occurs in:

- (1) Nucleus
- (2) Cytoplasm
- (3) Mitochondria
- (4) Golgi body

92. The genetic code is:

- (1) Overlapping
- (2) Degenerate
- (3) Universal
- (4) Both (2) and (3)

93. Start codon in genetic code is:

- (1) AUG
- (2) UAA
- (3) UAG
- (4) UGA

94. Stop codons are:

- (1) AUG, UAA
- (2) UAA, UAG, UGA
- (3) AUG, UAG
- (4) UGA only

95. Ribosome is composed of:

- (1) DNA and protein
 - (2) RNA and protein
 - (3) DNA and RNA
 - (4) Lipids and protein
-

96. Central dogma of molecular biology was proposed by:

- (1) Watson
 - (2) Crick
 - (3) Mendel
 - (4) Darwin
-

97. Genetic engineering involves:

- (1) Recombinant DNA technology
 - (2) Cloning
 - (3) Gene transfer
 - (4) All of the above
-

98. PCR technique was developed by:

- (1) Kary Mullis
 - (2) Watson
 - (3) Crick
 - (4) Chargaff
-



99. The enzyme used in PCR is:

- (1) DNA polymerase
 - (2) RNA polymerase
 - (3) Ligase
 - (4) Amylase
-

100. The bacterium commonly used in recombinant DNA technology is:

- (1) Bacillus
 - (2) Escherichia coli
 - (3) Lactobacillus
 - (4) Rhizobium
-