



## V.M.G.R.R SRI SARADA SAKTHI MAT. HR. SEC. SCHOOL

STD: XII

## BIOLOGY

## BIO-ZOOLOGY

- In which type of parthenogenesis are only males produced?
  - Arrhenotoky
  - Thelytoky
  - Amphitoky
  - Both a and b
- The mode of reproduction in bacteria is by
  - Formation of gametes
  - Endospore formation
  - Conjugation
  - Zoospore formation
- In which mode of reproduction variations are seen
  - Asexual
  - Parthenogenesis
  - Sexual
  - Both a and b
- Assertion: In bee society, all the members are diploid except drones.  
Reason: Drones are produced by parthenogenesis.
  - If both A and R are true and R is correct explanation for A
  - If both A and R are true but R is not the correct explanation for A
  - If A is true but R is false
  - If both A and R are false.
- Assertion: Offsprings produced by asexual reproduction are genetically identical to the parent.  
Reason: Asexual reproduction involves only mitosis and no meiosis.
  - If both A and R are true and R is correct explanation for A
  - If both A and R are true but R is not the correct explanation for A
  - If A is true but R is false
  - If both A and R are false.
- The mature sperms are stored in the
  - Seminiferous tubules
  - Vas deferens
  - Epididymis
  - Seminal vesicle
- The male sex hormone testosterone is secreted from
  - Sertoli cells
  - Leydig cell
  - Epididymis
  - Prostate gland
- The glandular accessory organ which produces the largest proportion of semen is
  - Seminal vesicle
  - Bulbourethral gland
  - Prostate gland
  - Mucous gland
- The male homologue of the female clitoris is
  - Scrotum
  - Penis
  - Urethra
  - Testis
- The site of embryo implantation is the
  - Uterus
  - Peritoneal cavity
  - Vagina
  - Fallopian tube
- The foetal membrane that forms the basis of the umbilical cord is
  - Allantois
  - Amnion
  - Chorion
  - Yolk sac
- The most important hormone in initiating and maintaining lactation after birth is
  - Oestrogen
  - FSH
  - Prolactin
  - Oxytocin



- (a) Chlamydia is a viral disease.  
 (b) Gonorrhoea is caused by a spirochaete bacterium, *Treponema palladium*.  
 (c) The incubation period for syphilis is 2 to 14 days in males and 7 to 21 days in females.  
 (d) Both syphilis and gonorrhoea are easily cured with antibiotics.

25. A contraceptive pill prevents ovulation by

- (a) blocking fallopian tube (b) inhibiting release of FSH and LH  
 (c) stimulating release of FSH and LH (d) causing immediate degeneration of released ovum.

26. The approach which does not give the defined action of contraceptive is

- |     |                        |  |
|-----|------------------------|--|
| (a) | Hormonal contraceptive | Prevents entry of sperms, prevent ovulation and fertilization                                  |
| (b) | Vasectomy              | Prevents spermatogenesis   |
| (c) | Barrier method         | Prevents fertilization   |
| (d) | Intra uterine device   | Increases phagocytosis of sperms, suppresses sperm motility and fertilizing capacity of sperms |

27. Read the given statements and select the correct option.

Statement 1: Diaphragms, cervical caps and vaults are made of rubber and are inserted into the female reproductive tract to cover the cervix before coitus.

Statement 2: They are chemical barriers of conception and are reusable.

- (a) Both statements 1 and 2 are correct and statement 2 is the correct explanation of statement 1.  
 (b) Both statements 1 and 2 are correct but statement 2 is not the correct explanation of statement 1.  
 (c) Statement 1 is correct but statement 2 is incorrect.  
 (d) Both statements 1 and 2 are incorrect.

28. Match column I with column II and select the correct option from the codes given below.

- | Column I                 | Column II            |
|--------------------------|----------------------|
| A. Copper releasing IUD  | (i) LNG-20           |
| B. Hormone releasing IUD | (ii) Lippes loop IUD |
| C. Non medicated IUD     | (iii) Saheli         |
| D. Mini pills            | (iv) Multiload-375   |
- (a) A-(iv), B-(ii), C-(i), D-(iii) (b) A-(iv), B-(i), C-(iii), D-(ii)  
 (c) A-(i), B-(iv), C-(ii), D-(iii) (d) A-(iv), B-(i), C-(ii), D-(iii)

29. Select the incorrect action of hormonal contraceptive pills from the following

- (a) Inhibition of spermatogenesis. (b) Inhibition of ovulation.  
 (c) Changes in cervical mucus impairing its ability to allow passage and transport of sperms.  
 (d) Alteration in uterine endometrium to make it unsuitable for implantation.

30. Haemophilia is more common in males because it is a

- a) Recessive character carried by Y-chromosome (b) Dominant character carried by Y-chromosome  
 c) Dominant trait carried by X-chromosome (d) Recessive trait carried by X-chromosome

31. ABO blood group in man is controlled by

- a) Multiple alleles (b) Lethal genes (c) Sex linked genes (d) Y-linked genes

32. Three children of a family have blood groups A, AB and B. What could be the genotypes of their parents?  
 a)  $I_A I_B$  and  $ii$                       b)  $I_A I_O$  and  $I_B I_O$                       c)  $I_B I_B$  and  $I_A I_A$                       d)  $I_A I_A$  and  $ii$
33. Which of the following is not correct?  
 a) Three or more alleles of a trait in the population are called multiple alleles.  
 b) A normal gene undergoes mutations to form many alleles  
 c) Multiple alleles map at different loci of a chromosome  
 d) A diploid organism has only two alleles out of many in the population
34. Which of the following phenotypes in the progeny are possible from the parental combination  $A \times B$ ?  
 a) A and B only    b) A, B and AB only    c) AB only    d) A, B, AB and O
35. Which of the following phenotypes is not possible in the progeny of the parental genotypic combination  $I_A I_O \times I_A I_B$ ?  
 a) AB                      b) O                      c) A                      d) B
36. Which of the following is true about Rh factor in the offspring of a parental combination  $Dd \times Dd$  (both Rh positive)?  
 a) All will be Rh-positive                      b) Half will be Rh positive  
 c) About  $\frac{3}{4}$  will be Rh negative                      d) About one fourth will be Rh negative
37. What can be the blood group of offspring when both parents have AB blood group?  
 a) AB only                      b) A, B and AB                      c) A, B, AB and O                      d) A and B only
38. If the child's blood group is 'O' and father's blood group is 'A' and mother's blood group is 'B' the genotype of the parents will be  
 a)  $I_A I_A$  and  $I_B I_O$                       b)  $I_A I_O$  and  $I_B I_O$                       c)  $I_A I_O$  and  $I_O I_O$                       d)  $I_O I_O$  and  $I_B I_B$
39. XO type of sex determination and XY type of sex determination are examples of  
 a) Male heterogamety                      b) Female heterogamety                      c) Male homogamety    d) Both (b) and (c)
40. In an accident there is great loss of blood and there is no time to analyse the blood group which blood can be safely transferred?  
 a) 'O' and Rh negative                      b) 'O' and Rh positive    c) 'B' and Rh negative    d) 'AB' and Rh positive
41. Father of a child is colourblind and mother is carrier for colourblindness, the probability of the child being colourblind is  
 a) 25%                      b) 50%                      c) 100%                      d) 75%
42. A marriage between a colourblind man and a normal woman produces  
 a) All carrier daughters and normal sons                      b) 50% carrier daughters, 50% normal daughters  
 c) 50% colourblind sons, 50% normal sons                      d) All carrier offsprings
43. Mangelism is a genetic disorder which is caused by the presence of an extra chromosome number  
 a) 20                      b) 21                      c) 4                      d) 23
44. Klinefelters' syndrome is characterized by a karyotype of  
 a) XYY                      b) XO                      c) XXX                      d) XXY
45. Females with Turners' syndrome have  
 a) Small uterus                      b) Rudimentary ovaries    c) Underdeveloped breasts    d) All of these
46. Patau's syndrome is also referred to as  
 a) 13-Trisomy                      b) 18-Trisomy                      c) 21-Trisomy                      d) None of these
47. "Universal Donor" and "Universal Recipients" blood group are \_\_\_\_\_ and \_\_\_\_\_ respectively  
 a) AB, O                      b) O, AB                      c) A, B                      d) B, A



63. Ribosomes are composed of two subunits; the smaller subunit of a ribosome has a binding site for \_\_\_\_\_ and the larger subunit has two binding sites for two \_\_\_\_\_ .
64. An operon is a:
- (a) Protein that suppresses gene expression (b) Protein that accelerates gene expression  
(c) Cluster of structural genes with related function (d) Gene that switched other genes on or off
65. When lactose is present in the culture medium:
- (a) Transcription of *lac y*, *lac z*, *lac a* genes occurs. (b) Repressor is unable to bind to the operator.  
(c) Repressor is able to bind to the operator. (d) Both (a) and (b) are correct.
66. The first life on earth originated
- a) in air b) on land c) in water d) on mountain
67. Who published the book “Origin of species by Natural Selection” in 1859?
- a) Charles Darwin b) Lamarck c) Weismann d) Hugo de Vries
68. Which of the following was the contribution of Hugo de Vries?
- a) Theory of mutation b) Theory of natural Selection  
c) Theory of inheritance of acquired characters d) Germplasm theory
69. The wings of birds and butterflies is an example of
- a) Adaptive radiation b) convergent evolution c) divergent evolution d) variation
70. The phenomenon of “ Industrial Melanism” demonstrates
- a) Natural selection b) induced mutation c) reproductive isolation d) geographical isolation
71. Darwin’s finches are an excellent example of
- a) connecting links b) seasonal migration c) adaptive radiation d) parasitism
72. Who proposed the Germplasm theory?
- a) Darwin b) August Weismann c) Lamarck d) Alfred Wallace
73. The age of fossils can be determined by
- a) electron microscope b) weighing the fossils c) carbon dating d) analysis of bones
74. Fossils are generally found in
- a) igneous rocks b) metamorphic rocks c) volcanic rocks d) sedimentary rocks
75. Evolutionary history of an organism is called
- a) ancestry b) ontogeny c) phylogeny d) paleontology
76. The golden age of reptiles was
- a) Mesozoic era b) Cenozoic era c) Paleozoic era d) Proterozoic era
77. Which period was called “Age of fishes”?
- a) Permian b) Triassic c) Devonian d) Ordovician
78. Modern man belongs to which period?
- a) Quaternary b) Cretaceous c) Silurian d) Cambrian
79. The Neanderthal man had the brain capacity of
- a) 650 – 800cc b) 1200cc c) 900cc d) 1400cc
80. A 30 year old woman has bloody diarrhoea for the past 14 hours, which one of the following organisms is likely to cause this illness?
- a) *Streptococcus pyogenes* b) *Clostridium difficile* c) *Shigella dysenteriae* d) *Salmonella enteritidis*
81. Exo-erythrocytic schizogony of *Plasmodium* takes place in -----
- a) RBC b) Leucocytes c) Stomach d) Liver
82. The sporozoites of *Plasmodium vivax* are formed from -----

- a) Gametocytes                      b) Sporoblasts                      c) Oocysts                      d) Spores
83. Amphetamines are stimulants of the CNS, whereas barbiturates are ----  
 a) CNS stimulant                      b) both a and b                      c) hallucinogenic                      d) CNS depressants
84. Choose the correctly match pair.  
 a) Amphetamines - Stimulant                      b) LSD - Narcotic  
 c) Heroin - Psychotropic                      d) Benzodiazepine - Pain killer
85. The Athlete's foot disease in human is caused by-----  
 a) Bacteria                      b) Fungi                      c) Virus                      d) Protozoan
86. Cirrhosis of liver is caused by chronic intake of -----  
 a) Opium                      b) Alcohol                      c) Tobacco                      d) Cocaine
87. The sporozoite of the malarial parasite is present in ----  
 a) saliva of infected female *Anopheles* mosquito                      b) RBC of human suffering from malaria.  
 c) Spleen of infected humans                      d) Gut of female *Anopheles* mosquito.
88. Where do the following events in the life cycle of *Plasmodium* takes place?  
 a) Fertilization - \_\_\_\_\_                      b) Development of gametocytes - \_\_\_\_  
 c) Release of sporozoites - \_\_\_\_\_                      d) Schizogony - \_\_\_\_\_
89. Paratope is an  
 a) Antibody binding site on variable regions                      b) Antibody binding site on heavy regions  
 c) Antigen binding site on variable regions                      d) Antigen binding site on heavy regions
90. Allergy involves  
 a) IgE                      b) IgG                      c) IgA                      d) IgM
91. Spread of cancerous cells to distant sites is termed as  
 a) Metastasis                      b) Oncogenes                      c) Proto-oncogenes                      d) Malignant neoplasm
92. AIDS virus has  
 a) Single stranded RNA                      b) Double stranded RNA  
 c) Single stranded DNA                      d) Double stranded DNA
93. B cells that produce and release large amounts of antibody are called  
 a) Memory cells                      b) Basophils                      c) Plasma cells                      d) killer cells
94. Which of the following microorganism is used for production of citric acid in industries?  
 a) *Lactobacillus bulgaris*                      b) *Penicillium citrinum*                      c) *Aspergillus niger*                      d) *Rhizopus nigricans*
95. Which of the following pair is correctly matched for the product produced by them?  
 a) *Acetobacter aceti* - Antibiotics                      b) *Methanobacterium* - Lactic acid  
 c) *Penicillium notatum* - Acetic acid                      d) *Saccharomyces cerevisiae* - Ethanol
96. The most common substrate used in distilleries for the production of ethanol is \_\_\_\_\_  
 a) Soyameal                      b) Groundgram                      c) Molasses                      d) Corn meal
97. Cry toxins obtained from *Bacillus thuringiensis* are effective against for \_\_\_\_\_  
 a) Mosquitoes                      b) Flies                      c) Nematodes                      d) Bollworms
98. Cyclosporin – A is an immunosuppressive drug produced from \_\_\_\_\_  
 a) *Aspergillus niger*                      b) *Manascus purpureus*                      c) *Penicillium notatum*                      d) *Trichoderma polysporum*
99. Which of the following bacteria is used extensively as a bio-pesticide?  
 a) *Bacillus thuringiensis*                      b) *Bacillus subtilis*                      c) *Lactobacillus acidophilus*                      d) *Streptococcus lactis*

100. Which of the following is not involved in nitrogen fixation?  
 a) *Pseudomonas*                      b) *Azotobacter*                      c) *Anabaena*                      d) *Nostoc*
101. CO<sub>2</sub> is not released during  
 a) Alcoholic fermentation                      b) Lactate fermentation  
 c) Aerobic respiration in animals                      d) Aerobic respiration in plants
102. The purpose of biological treatment of waste water is to \_\_\_\_\_  
 a) Reduce BOD                      b) Increase BOD                      c) Reduce sedimentation                      d) Increase sedimentation
103. The gases produced in anaerobic sludge digesters are  
 a) Methane, oxygen and hydrogen sulphide.                      b) Hydrogen sulphide, methane and sulphur dioxide.  
 c) Hydrogen sulphide, nitrogen and methane.                      d) Methane, hydrogen sulphide and CO<sub>2</sub>.
104. The first clinical gene therapy was done for the treatment of  
 a) AIDS                      b) Cancer                      c) Cystic fibrosis                      d) SCID
105. Dolly, the sheep was obtained by a technique known as  
 a) Cloning by gene transfer                      b) Cloning without the help of gametes  
 c) Cloning by tissue culture of somatic cells                      d) Cloning by nuclear transfer.
106. The genetic defect adenosine deaminase deficiency may be cured permanently by  
 a) Enzyme replacement therapy                      b) periodic infusion of genetically engineered lymphocytes having ADA cDNA  
 c) administering adenosine deaminase activators                      d) introducing bone marrow cells producing ADA into embryo at an early stage of development.
107. How many amino acids are arranged in the two chains of Insulin?  
 a) Chain A has 12 and Chain B has 13                      b) Chain A has 21 and Chain B has 30 amino acids  
 c) Chain A has 20 and chain B has 30 amino acids                      d) Chain A has 12 and chain B has 20 amino acids.
108. PCR proceeds in three distinct steps governed by temperature, they are in order of  
 a) Denaturation, Annealing, Synthesis                      b) Synthesis, Annealing, Denaturation  
 c) Annealing, Synthesis, Denaturation                      d) Denaturation, Synthesis, Annealing
109. Which one of the following statements is true regarding DNA polymerase used in PCR?  
 a) It is used to ligate introduced DNA in recipient cells                      b) It serves as a selectable marker  
 c) It is isolated from a Virus                      d) It remains active at a high temperature.
110. ELISA is mainly used for  
 a) Detection of mutations                      b) Detection of pathogens  
 c) Selecting animals having desired traits                      d) Selecting plants having desired traits
111. Transgenic animals are those which have  
 a) Foreign DNA in some of their cells                      b) Foreign DNA in all their cells  
 c) Foreign RNA in some of their cells                      d) Foreign RNA in all their cells
112. Recombinant Factor VIII is produced in the ----- cells of the Chinese Hamster  
 a) Liver cells                      b) blood cells                      c) ovarian cells                      d) brain cells.
113. Vaccines that use components of a pathogenic organism rather than the whole organism are called  
 a) Subunit recombinant vaccines                      b) attenuated recombinant vaccines  
 c) DNA vaccines                      d) conventional vaccines.
114. All populations in a given physical area are defined as  
 a) Biome                      b) Ecosystem                      c) Territory                      d) Biotic factors
115. Organisms which can survive a wide range of temperature are called  
 a) Ectotherms                      b) Eurytherms                      c) Endotherms                      d) Stenotherms

116. The interaction in nature, where one gets benefit on the expense of other is...

- a) Predation                      b) Mutualism                      c) Amensalism                      d) Commensalism

117. Predation and parasitism are which type of interactions?

- a) (+, +)                      b) (+, 0)                      c) (--, --)                      d) (+, --)

118. Competition between species leads to

- a) Extinction                      b) Mutation                      c) Amensalism                      d) Symbiosis

119. Which of the following is an r-species

- a) Human                      b) Insects                      c) Rhinoceros                      d) Whale

120. Match the following and choose the correct combination from the options given below.

Column I

Column II

A. Mutualism

1. Lion and deer

B. Commensalism

2. Round worm and man

C. Parasitism

3. Birds compete with squirrels for nuts

D. Competition

4. Sea anemone on hermit crab

E. Predation

5. Barnacles attached to Whales.

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

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

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

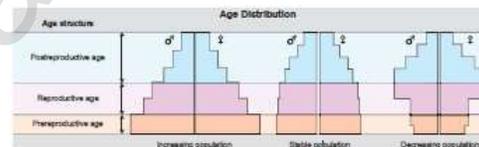
d) A- 5, B-4, C-2, D - 3, E-1

121. The relationship between sucker fish and shark is.....

- a) Competition                      b) Commensalism                      c) Predation                      d) Parasitism.

122. What type of human population is represented by the following age pyramid?

- a) Vanishing population  
b) Stable population  
c) Declining population  
d) Expanding population



123. Which of the following is correct for r-selected species

- a) Large number of progeny with small size                      b) large number of progeny with large size  
c) small number of progeny with small size                      d) small number of progeny with large size

124. Animals that can move from fresh water to sea called as....

- a) Stenothermal                      b) Eurythermal                      c) Catadromous                      d) Anadromous

125. Some organisms are able to maintain homeostasis by physical means ..

- a) Conform                      b) Regulate                      c) Migrate                      d) Suspend

126. Which of the following region has maximum biodiversity

- a) Taiga                      b) Tropical forest                      c) Temperate rain forest                      d) Mangroves

127. Conservation of biodiversity within their natural habitat is

- a) *In situ* conservation                      b) *Ex situ* conservation                      c) In vivo conservation                      d) In vitro conservation

128. Which one of the following is not coming under insitu conservation

- a) Sanctuaries                      b) Natural parks                      c) Zoological park                      d) Biosphere reserve

129. Which of the following is considered a hotspots of biodiversity in India

- a) Western ghats                      b) Indo-gangetic plain                      c) Eastern Himalayas                      d) A and C

130. The organization which published the red list of species is

- a) WWF                      b) IUCN                      c) ZSI                      d) UNEP

131. Who introduced the term biodiversity?

- a) Edward Wilson                      b) Walter Rosen                      c) Norman Myers                      d) Alice Norman

132. Which of the following forests is known as the lungs of the planet earth?

- a) Tundra forest                      b) Rain forest of north east India                      c) Taiga forest                      d) Amazon rain forest

133. Which one of the following are at high risk extinction due to habitat destruction

- a) Mammals                      b) Birds                      c) Amphibians                      d) Echinoderms

134. Assertion: The Environmental conditions of the tropics are favourable for speciation and diversity of organisms.

Reason: The climate seasons, temperature, humidity and photoperiod are more or less stable and congenial.

- a) Both Assertion and Reason are true and Reason explains Assertion correctly.  
 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

135. Right to Clean Water is a fundamental right, under the Indian Constitution

- a) Article 12                      b) Article 21                      c) Article 31                      d) Article 41

136. With which of the following, the Agenda 21' of Rio Summit, 1992 is related to?

- a) Sustainable development                      b) Combating the consequences of population  
 c) Mitigation norms of Green House Gases (GHGs) emission.  
 d) Technology transfer mechanism to developing countries for 'clean-energy' production.

137. Which among the following awards instituted by the Government of India for individuals or communities from rural areas that have shown extraordinary courage and dedication in protecting Wildlife?

- a) Indira Gandhi Paryavaran Puraskar                      b) Medini Puruskar Yojana  
 c) Amrita Devi Bishnoi Award                      d) Pitambar Pant National Award

138. The 'thickness' of Stratospheric Ozone layer is measured in/on:

- a) Sieverts units                      b) Dobson units                      c) Melson units                      d) Beaufort Scale

139. Which among the following is the most abundant Green-House-Gas (GHG) in the earth's atmosphere?

- a) Carbon dioxide                      b) Water Vapour                      c) Sulphur Dioxide                      d) Tropospheric Ozone

140. As per 2017 statistics, the highest per capita emitter of Carbon dioxide in the world is

- a) USA                      b) China                      c) Qatar                      d) Saudi Arabia

141. The use of microorganism metabolism to remove pollutants such as oil spills in the water bodies is known as

- a) Biomagnification                      b) Bioremediation                      c) Biomethanation                      d) Bioreduction

142. The Ozone Day is observed every year on September 16 as on this day in 1987 the \_\_\_\_\_ was signed for launching efforts to arrest the depletion of the fragile ozone layer in the stratosphere that prevents the harmful ultra-violet rays of the sun from reaching the earth. Fill the correct word in blank.

- a) Montreal Protocol                      b) Geneva Protocol                      c) Kyoto Protocol                      d) Nagoya Protocol

143. Which among the following always decreases in a Food chain across tropic levels?

- a) Number                      b) Accumulated chemicals                      c) Energy                      d) Force

144. In the E-waste generated by the Mobile Phones, which among the following metal is most abundant?

- a) Copper                      b) Silver                      c) Palladium                      d) Gold

145. The Hydrochlorofluorocarbons (HCFCs) are the compounds which have the following molecules:

- a) Hydrogen                      b) Carbon                      c) Chlorine                      d) Fluorine

146. SMOG is derived from :

- a) Smoke                      b) Fog                      c) Both A and B                      d) Only A

147. Excess of fluoride in drinking water causes:

a) Lung disease

b) Intestinal infection

c) Fluorosis

d) None of the above

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