

Class: 12

Register
Number

WELL DONE MATRIC. HR. SEC. SCHOOL, T. T. PURAM.

BIO - ZOOLOGY

Marks: 80

Book Back One Mark Questions (Chapter 1-6)

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

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 $I^O I^O$ 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 $I^O I^O$
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 AxB?
 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 DdxDd (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 and 50% normal daughters
 c) 50% colourblind sons and 50% normal sons d) All carrier offsprings
43. Down's syndrome 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
48. ZW-ZZ system of sex determination occurs in
a) Fishes b) Reptiles c) Birds d) All of these
49. Co-dominant blood group is
a) A b) AB c) B d) O
50. Which of the following is incorrect regarding ZW-ZZ type of sex determination?
a) It occurs in birds and some reptiles
b) Females are homogametic and males are heterogametic
c) Males produce one types of gamete d) It occurs in gypsy moth
51. Hershey and Chase experiment with bacteriophage showed that
a) Protein gets into the bacterial cells b) DNA is the genetic material
c) DNA contains radioactive Sulphur d) Viruses undergo transformation
52. DNA and RNA are similar with respect to
a) Thymine as a nitrogen base b) A single-stranded helix shape
c) Nucleotide containing sugars, nitrogen bases and phosphates
d) The same sequence of nucleotides for the amino acid phenyl alanine
53. A mRNA molecule is produced by
a) Replication b) Transcription c) Duplication d) Translation
54. The total number of nitrogenous bases in human genome is estimated to be about
a) 3.5 million b) 35000 c) 35 million d) 3.1 billion
55. *E. coli* cell grown on ^{15}N medium are transferred to ^{14}N medium and allowed to grow for two generations. DNA extracted from these cells is ultra-centrifuged in a cesium chloride density gradient. What density distribution of DNA would you expect in this experiment?
a) One high and one low density band. b) One intermediate density band.
c) One high and one intermediate density band d) One low and one intermediate density band.
56. What is the basis for the difference in the synthesis of the leading and lagging strand of DNA molecules?
a) Origin of replication occurs only at the 5' end of the molecules.
b) DNA ligase works only in the 3' → 5' direction.
c) DNA polymerase can join new nucleotides only to the 3' end of the growing stand.
d) Helicases and single-strand binding proteins that work at the 5' end.

57. Which of the following is the correct sequence of event with reference to the central dogma?
a) Transcription, Translation, Replication b) Transcription, Replication, Translation
c) Duplication, Translation, Transcription d) Replication, Transcription, Translation
58. Which of the following statements about DNA replication is not correct?
a) Unwinding of DNA molecule occurs as hydrogen bonds break.
b) Replication occurs as each base is paired with another exactly like it.
c) Process is known as semi conservative replication because one old strand is conserved in the new molecule.
d) Complementary base pairs are held together with hydrogen bonds.
59. Which of the following statements is not true about DNA replication in eukaryotes?
a) Replication begins at a single origin of replication.
b) Replication is bidirectional from the origins.
c) Replication occurs at about 1 million base pairs per minute.
d) There are numerous different bacterial chromosomes, with replication occurring in each at the same time.
60. The first codon to be deciphered was _____ which codes for _____.
a) AAA, proline b) GGG, alanine c) UUU, Phenylalanine d) TTT, arginine
61. Meselson and Stahl's experiment proved
a) Transduction b) Transformation c) DNA is the genetic material
d) Semi-conservative nature of DNA replication
62. 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 _____.
a) mRNA / tRNA b) tRNA / mRNA c) rRNA / tRNA d) rRNA / mRAN
63. 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
64. 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.
65. The first life on earth originated
a) in air b) on land c) in water d) on mountain
66. Who published the book "Origin of species by Natural Selection" in 1859?
a) Charles Darwin b) Lamarck c) Weismann d) Hugo de Vries
67. 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
68. The wings of birds and butterflies is an example of
a) Adaptive radiation b) Convergent evolution d) Divergent evolution d) Variation

69. The phenomenon of "Industrial Melanism" demonstrates
- a) Natural selection
 - b) Induced mutation
 - c) Reproductive isolation
 - d) Geographical isolation
70. Darwin's finches are an excellent example of
- a) connecting links
 - b) seasonal migration
 - c) adaptive radiation
 - d) parasitism
71. Who proposed the Germplasm theory?
- a) Darwin
 - b) August Weismann
 - c) Lamarck
 - d) Alfred Wallace
72. The age of fossils can be determined by
- a) Electron microscope
 - b) Weighing the fossils
 - c) Carbon dating
 - d) Analysis of bones
73. Fossils are generally found in
- a) Igneous rocks
 - b) Metamorphic rocks
 - c) Volcanic rocks
 - d) Sedimentary rocks
74. Evolutionary history of an organism is called
- a) Ancestry
 - b) ontogeny
 - c) phylogeny
 - d) paleontology
75. The golden age of reptiles was
- a) Mesozoic era
 - b) Cenozoic era
 - c) Paleozoic era
 - d) Proterozoic era
76. Which period was called "Age of fishes"?
- a) Permian
 - b) Triassic
 - c) Devonian
 - d) Ordovician
77. Modern man belongs to which period?
- a) Quaternary
 - b) Cretaceous
 - c) Silurian
 - d) Cambrian
78. The Neanderthal man had the brain capacity of
- a) 650 -800 cc
 - b) 1200 cc
 - c) 900 cc
 - d) 1400 cc
79. According to Darwin, the organic evolution is due to
- a) Intraspecific competition
 - b) Interspecific competition
 - c) Competition within closely related species.
 - d) Reduced feeding efficiency in one species due to the presence of interfering species.
80. A population will not exist in Hardy-Weinberg equilibrium if
- a) Individuals mate selectively
 - b) There are no mutations
 - c) There is no migration
 - d) The population is large

ALL THE BEST

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