

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

TEST BOOKLET
AP (CC) ZOOLOGY—2018


Time Allowed : 2 Hours]

[Maximum Marks : 100

All questions carry equal marks.

INSTRUCTIONS

1. Immediately after the commencement of the examination, you should check that test booklet does not have any unprinted or torn or missing pages or items, etc. If so, get it replaced by a complete test booklet.
2. Write your Roll Number only in the box provided alongside.
Do not write anything else on the Test Booklet.
3. This Test Booklet contains 100 items (questions). Each item comprises four responses (answers). Choose only one response for each item which you consider the best.
4. After the candidate has read each item in the Test Booklet and decided which of the given responses is correct or the best, he has to mark the circle containing the letter of the selected response by blackening it completely with Black or Blue ball pen. In the following example, response "C" is so marked :


5. Do the encoding carefully as given in the illustrations. While encoding your particulars or marking the answers on answer sheet, you should blacken the circle corresponding to the choice in full and no part of the circle should be left unfilled. After the response has been marked in the ANSWER SHEET, no erasing/fluid is allowed.
6. You have to mark all your responses ONLY on the ANSWER SHEET separately given according to 'INSTRUCTIONS FOR CANDIDATES' already supplied to you. Responses marked on the Test Booklet or in any paper other than the answer sheet shall not be examined.
7. All items carry equal marks. Attempt all items. Your total marks will depend only on the number of correct responses marked by you in the Answer Sheet. There will be negative marking and 1/4 (0.25) of the marks will be deducted as penalty for wrong answers.
8. Before you proceed to mark responses in the Answer Sheet fill in the particulars in the front portion of the Answer Sheet as per the instructions sent to you.
9. If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers happens to be correct.
10. After you have completed the test, hand over the Answer Sheet only, to the Invigilator.

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1. Oral contraceptive pill contains :
(A) FSH and LH (B) Progesterone
(C) Progesterone and Estrogen (D) Estrogen
2. RNA molecule that also functions in immune response is :
(A) Ribozyme (B) Abzymes
(C) Agzymes (D) Exozymes
3. In India the first clone produced in NDRI Karnal was of :
(A) Sheep (B) Cow
(C) Goat (D) Buffalo
4. Parthenogenesis occurs in :
(A) Frog (B) Man
(C) Honeybee (D) House gecko
5. The most abundant six elements found in living organisms are :
(A) C,H,O,N,P,S (B) C,H,O,N,P,K
(C) C,H,P,O,Na,Cl (D) C,O,P,S,N,Ca

6. Hardness of bones is due to the presence of :
- (A) Calcium carbonates
 - (B) Calcium sulphates
 - (C) Calcium phosphates
 - (D) Calcium oxalate
7. 20-Carbon, unsaturated, open chain, fatty acids which act as local messengers are :
- (A) Prostaglandins
 - (B) Steroids
 - (C) Polyterpenes
 - (D) Nucleotides
8. Which ecological pyramid can never be inverted ?
- (A) Pyramid of number
 - (B) Pyramid of size
 - (C) Pyramid of energy
 - (D) Pyramid of biomass
9. Allosteric enzymes act as :
- (A) Catalysts
 - (B) Inhibitors
 - (C) Activators
 - (D) Catalysts and regulators

10. The 'Chipko' movement was started by :
- (A) Salim Ali (B) S. Bahuguna
(C) Mehta (D) Indira Gandhi
11. The simplest type of amino acid is :
- (A) Alanine (B) Lysine
(C) Tyrosine (D) Glycine
12. The most effective antibiotic against *Mycoplasma pneumoniae* is :
- (A) Tetracycline (B) Penicillin
(C) Streptomycin (D) Nystatin
13. Which one of the following is a *correct* set of endangered species of India ?
- (A) Great Indian bustard, Musk deer, Asiatic lion
(B) Kashmir stag, Cheetal, Great Indian bustard
(C) Snow leopard, Rhesus monkey, Hanuman Langur
(D) Lion-tailed macaque, Hanuman Langur, Cheetal

14. Theory of chemical origin of life was postulated by :
- (A) Miller and Fox (B) Watson and Miller
(C) Oprain and Haldane (D) Pasteur
15. Genetic drift is a result of :
- (A) Variations (B) Mutation
(C) Increase in population (D) Decrease in population
16. Which group of organisms serves as the best indicator of pollution in a water body ?
- (A) Plankton (B) Nekton
(C) Benthos (D) Neuston
17. In India, the lion-tailed macaque is found only in :
- (A) Guindy National Park
(B) Eastern Ghats
(C) Bandipur Biosphere Reserve
(D) Western Ghats

18. VNTR is employed in :
- (A) DNA fingerprinting (B) Cloning
(C) Splicing (D) Probe
19. When was Darwin's "Origin of Species" published ?
- (A) July 1858 (B) July 1859
(C) November 1859 (D) December 1859
20. Where First Biosphere Reserve of India is located ?
- (A) Nilgiri (B) Nanda Devi
(C) Sunderban (D) Great Nicobar
21. In adult mammals the haemoglobin consists of :
- (A) 1 α -chain and 1 β -chain
(B) 2 α -chains and 2 β -chains
(C) 3 α -chains and 1 β -chain
(D) 1 α -chain and 3 β -chains

22. Edward Jenner discovered :
- (A) Antiseptic surgery (B) Smallpox Vaccine
(C) Insulin (D) Malaria parasite
23. Which Indian National Park is famous for *Rhinoceros* population ?
- (A) Ranthambor (B) Jim Corbett
(C) Kaziranga (D) Chilka
24. Which antibiotic inhibits peptide bond formation in prokaryotes ?
- (A) Streptomycin (B) Tetracycline
(C) Chloramphenicol (D) Neomycin
25. Which organization publishes the 'Red Data Book' ?
- (A) IUCN (B) UNEP
(C) WWF (D) GEF
26. In meiosis, exchange of genes occurs in :
- (A) Zygotene (B) Pachytene
(C) Diplotene (D) Diakinesis

27. Cori cycle occurs in between :
- (A) Liver and kidney (B) Liver and muscle
(C) Kidney and gonad (D) Muscle and bone
28. A mule is obtained by crossing :
- (A) Jack and Jennet (B) Stallion and mare
(C) Jack and Mare (D) Stallion and Jennet
29. A sequence of DNA that has the ability to change its position is :
- (A) Cistron (B) Transposon
(C) Exon (D) Intron
30. Biogeographical regions are also called :
- (A) Zones (B) Realms
(C) Epoch (D) Era
31. Alpha and beta chains of insulin contain :
- (A) 51 amino acids (B) 55 amino acids
(C) 41 amino acids (D) 61 amino acids

32. Two species occupying same or overlapping area are :
- (A) Allopatric (B) Sympatric
(C) Parapatric (D) Peripatric
33. Which of the following glands is both endocrine and exocrine ?
- (A) Adrenal (B) Pituitary
(C) Pancreas (D) Pineal
34. A sequence of DNA which is transcribed but not translated :
- (A) Axon (B) Intron
(C) Cistron (D) Codon
35. Cell theory was proposed by :
- (A) Mendel and Morgan (B) Wallace and Darwin
(C) Watson and Crick (D) Schleiden and Schwann
36. What is the method used for establishing linear relationship between two variables ?
- (A) ANOVA (B) *t*-Test
(C) Chi-square test (D) Regression analysis

37. In human beings; A,B,O blood groups are example of :
- (A) Linkage
 - (B) Partial Dominance
 - (C) Gene Interaction
 - (D) Multiple allelism
38. In gynandromorph *Drosophila* one part of the body has XX chromosomes the other part has chromosomes :
- (A) XY
 - (B) X0
 - (C) XXY
 - (D) Y0
39. Nitrogenous base is linked to deoxyribose through :
- (A) O-glycosidic bond
 - (B) N-glycosidic bond
 - (C) H-Bond
 - (D) Phosphodiester bond
40. The nurse cells in testis of mammals are :
- (A) Leydig cells
 - (B) Sertoli cells
 - (C) Myoid cells
 - (D) Interstitial cells

41. 'Venus Flower Basket' belongs to order :
- (A) Oligochaeta (B) Polychaeta
(C) Hexactinellida (D) Archiannelida
42. Nervous tissue originates from :
- (A) Ectoderm (B) Endoderm
(C) Mesoderm (D) Ecto-mesoderm
43. The centromere divide during meiosis at :
- (A) Prophase-1 (B) Anaphase-1
(C) Metaphase-1 (D) Anaphase-II
44. Mammary glands do *not* bear teats in :
- (A) Eutheria (B) Prototheria
(C) Metatheria (D) Theria
45. Reporter gene commonly used in expression vector is :
- (A) TAC (B) GAT
(C) CAT (D) TAG

46. The shell in molluscs is secreted by :
- (A) Pericardium (B) Foot
(C) Ctenidium (D) Mantle
47. Name the group of animals which do *not* live in salt water :
- (A) Fishes (B) Amphibians
(C) Mammals (D) Reptiles
48. In human, jaw suspension is of which type ?
- (A) Monimostylic (B) Hyostylic
(C) Craniostylic (D) Streptostylic
49. DNA formed from RNA is :
- (A) A DNA (B) B DNA
(C) c DNA (D) Z DNA
50. Axis is absent in :
- (A) Frog (B) Lizard
(C) Snake (D) Rat

51. During meiosis, the lampbrush chromosomes are seen at :
- (A) Metaphase (B) Interphase
(C) Diplotene (D) Zygotene
52. Human population growth curve at present is at which phase ?
- (A) Stationary (B) Lag
(C) Exponential (D) All of these
53. Scientist Ian Wilmut is known for :
- (A) DNA Fingerprinting (B) Dolly
(C) Andi (D) Copy cat
54. Overlapping region between two ecosystems is :
- (A) Edge effect (B) Ecotone
(C) Niche (D) Interacting Zone
55. Two or more codons coding for one amino acid :
- (A) Non-overlapping codon
(B) Non-ambiguous
(C) Degeneracy of codon
(D) Non-sense codon

56. The eighth vertebrae in frog is :
- (A) Procoelous (B) Acoelous
(C) Amphicoelous (D) Heterocoelus
57. Tadpole larva of frog respire through :
- (A) Lungs (B) Skin
(C) Bucco-pharyngeal cavity (D) External gills
58. In frog, the cavity of olfactory lobes is called :
- (A) Rhinocoel (B) Olfactocoel
(C) Rhambocoel (D) Hydrocoel
59. Chikungunya is transmitted by :
- (A) *Aedes* (B) *Culex*
(C) *Anopheles* (D) *Culiseta*
60. In brain grey matter is present :
- (A) Inside (B) Outside
(C) Posterior side (D) Anterior side

61. In mammals, Wolffian duct gives rise to :
- (A) Mullerian duct (B) Oviduct duct
(C) Epididymis (D) Labia major
62. Which blood protein maintains normal blood pressure ?
- (A) Albumin (B) Fibrinogen
(C) Globulin (D) Collagen
63. Transfer of DNA bands from agarose gel to mtrocellulose or nylon membrane is :
- (A) Southern blotting (B) Western blotting
(C) Northern blotting (D) Eastern blotting
64. Down's syndrome is due to :
- (A) Duplication (B) Non-disjunction
(C) Linkage (D) Crossing over
65. The Chordate which does *not* possess notochord in its adult life :
- (A) *Balanoglossus* (B) *Amphioxus*
(C) *Herdmania* (D) *Myxine*

66. Which gland is active during childhood but atrophies in adult ?
- (A) Adrenal (B) Thyroid
(C) Thymus (D) Pancreas
67. Neurolemocytes are also known as :
- (A) Schwann cells (B) Schneider cells
(C) Muller cells (D) Jacobson cells
68. Which hormone maintains normal blood pressure by regulating excretion of water ?
- (A) Renin (B) Angiotensinogen
(C) Angiotensin (D) Aldosterone
69. Which Phylum belongs to Deuterostomia ?
- (A) Mollusca (B) Arthropoda
(C) Annelida (D) Echinodermata
70. The life on earth emerged in which era ?
- (A) Mesozoic (B) Proterozoic
(C) Archeozoic (D) Paleozoic

71. *Plasmodium* completes its sexual cycle in :

- (A) Blood of man
- (B) Gut of Mosquito
- (C) Salivary glands of Mosquito
- (D) Body cavity of Mosquito

72. The fluid that lubricates joints is :

- (A) Haemolymph
- (B) Synovial fluid
- (C) Plasma
- (D) Serum

73. Pyruvic acid before combining with oxaloacetic acid in TCA cycle is converted into :

- (A) Cis-aconitic acid
- (B) Acetyl CoA
- (C) Lactic acid
- (D) Acetoacetic acid

74. Mantoux test is for :

- (A) Diphtheria
- (B) Scarlet fever
- (C) Tuberculosis
- (D) Rheumatoid fever

75. Biramous appendages are present in :
- (A) Cockroach (B) Prawn
(C) Onchophora (D) Spider
76. The histone octamer complexed with DNA is called as :
- (A) Endosome (B) Nucleosome
(C) Chromocentre (D) Hertone
77. Sperm head contains modified :
- (A) Lysosome (B) Mitochondria
(C) Golgi body (D) Centrosome
78. The function of embryonic membrane, allantois is :
- (A) Excretion (B) Protection from shocks
(C) Nutrition and Excretion (D) Respiration and Excretion
79. The hexose monophosphate pathway is associated with production of :
- (A) ATP (B) NADH_2
(C) NADPH_2 (D) FADH_2

80. The cocoon of earthworm contains fertilized eggs :
- (A) One (B) Two
(C) Many (D) Four
81. "India : The Crucial Years" book is written by :
- (A) M.L. Fotedar (B) T.V. Rajeswar
(C) Mark Tully (D) Chetan Bhagat
82. What is the capital of Zambia ?
- (A) Harare (B) Djibouti
(C) Lusaka (D) Aman
83. PEPSU stands for :
- (A) Patiala and Provincial States Union
(B) Patiala and East Punjab States Union
(C) Punjab and East Provinces States Union
(D) Phagwara and East Punjab States Union
84. When did Shimla become the summer capital of Govt. of India ?
- (A) 1870 (B) 1864
(C) 1872 (D) 1815

85. Identify the *correct* chronological order of the founding of the following princely states ?
- (A) Mandi—Kullu—Suket
 - (B) Kullu—Suket—Mandi
 - (C) Suket—Kullu—Mandi
 - (D) Suket—Mandi—Kullu
86. Killar hydel project is on the :
- (A) Chenab basin
 - (B) Beas basin
 - (C) Ravi basin
 - (D) Satluj basin
87. Who is the author of “Gandhi : A Study In Revolution” ?
- (A) Geoffrey Ashe
 - (B) B.R. Nanda
 - (C) Carl Heath
 - (D) Joseph Parker
88. In which country did Rohingyas genocide take place ?
- (A) Bhutan
 - (B) Pakistan
 - (C) Rwanda
 - (D) Mynamar

89. Which river is called Bengal's sorrow ?
- (A) Damodar (B) Mahanadi
(C) Tapti (D) Saryu
90. Where is Kugti wildlife sanctuary ?
- (A) Kinnaur (B) Lahaul-Spiti
(C) Shimla (D) Chamba
91. Who was the Mandi ruler during 1857 Mutiny ?
- (A) Bijai Sen (B) Balbir Sen
(C) Surma Sen (D) Ishwari Sen
92. Which of the following temples of Chamba is similar to Shakti Devi temple at (Chatrari) ?
- (A) Lakshana Devi Temple (Bharmaur)
(B) Lakshmi Narayan Temple (Chamba)
(C) Bansi Gopal Temple (Chamba)
(D) Gauri Shankar Temple (Chamba)

93. When was Kumharsain principality founded ?
- (A) 1000 A.D. (B) 1416 A.D.
(C) 1606 A.D. (D) 1379 A.D.
94. From which constituency in 2017 Assembly election, the victory margin of the candidate was lowest ?
- (A) Pachhad (B) Kinnaur
(C) Kulehr (D) Sujanpur
95. Which was the original capital of Nurpur state ?
- (A) Pathankot (B) Basholi
(C) Jaswan (D) Siba
96. Who among the following was the earliest visitor to Kangra ?
- (A) Thomas Coryat (B) Mr. Vegne
(C) Captain Herry (D) Captain Kennedy

97. When was United Bank of India started by some of the house proprietors in Simla, in opposition to the old Simla Bank ?

(A) 1865 (B) 1885

(C) 1845 (D) 1875

98. Identify the *wrong/incorrect* statement :

(A) Two non-salute states of PEPSU were Kalsia and Nalagarh

(B) PEPSU state was created between 1948-1956

(C) PEPSU states were created by uniting eight princely states

(D) All the above statements are correct

99. Kamrau and Sataun in Sirmaur district are famous for :

(A) Limestones

(B) Iron ore

(C) Distinct cultural identity

(D) Apple production

100. Bilaspur district became a part of H.P in 1954 as :

(A) 6th district (B) 4th district

(C) 5th district (D) 9th district