

SR - ZOOLOGY

UNIT - I

2006

01. A sanguivorous, ectoparasitic anadromous animal is :
 1) Eel 2) Salmon 3) Slime eel 4) Lamprey

02. Match the following :

Set-I

- a) Ductus botalli
 b) Ductus carotians
 c) Neoteny
 d) Anadromous
 e) Amazon

Set-II

1. Oikopleura
 2. Lepidosiren
 3. Lamprey
 4. Lacertilia
 5. Uraeotyphlus

Corrected set is :

- 1) a - 5, b - 4, c - 1, d - 3, e - 2 2) a - 5, b - 1, c - 4, d - 2, e - 3
 3) a - 5, b - 1, c - 4, d - 3, e - 2 4) a - 4, b - 1, c - 4, d - 2, e - 3

2007

03. Which of the following vertebrates show the formation of middle ear (eustachian recess) for the first time ?

- 1) Exocoetus 2) Rana 3) Echis 4) Hippocampus

2008

04. Study the following features of a fish

- A. It is a crossopterygian fish B. It is found in the river chalumnae
 C. It does not exhibit aestivation D. It is an urecotelic animal

Which of the above are true to "Neoceratodus" ?

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

2009

05. The pair of Amphibians found in Indian Peninsula is :

- 1) Amphiuma 2) Tylotriton and Ichthyophis
 3) Hyla and Ambystoma 4) Psittacus and Apteryx

06. Ovoviviparity is seen in this caecilian :

- 1) Wuchereria 2) Typhlonectus 3) Ichthyophis 4) Uraeotyphlus

UNIT - II

2006

07. A snake is identified to be having large hexagonal vertebrals and the dorsal surface bluish with narrow white streaks, it is :

- 1) Echis carinata 2) Bungarus coeruleus 3) Vipera russelli 4) Hemibungarus

08. Identify the correct pair of birds with a raft-like keel and lacking preen gland and syrinx :

- 1) Tinamus and Apteryx 2) Rhea and Dromaius
 3) Casuarius and Struthio 4) Kiwi and Rhea

2007

09. Mammals evolved from therapsid reptiles in Triassic period. The type of skull in these reptiles is

- 1) Anapsid skull 2) Parapsid skull 3) Synapsid skull 4) Diapsid skull

2008

10. Which of the following are true to the prototherians ?

- A. Pectoral girdle is associated with 'T' shaped interclavicle.
 B. Mammary glands are modified as sebaceous glands.
 C. Pelvic girdle possesses epipubic bones D. Vertebrae are with epiphyses

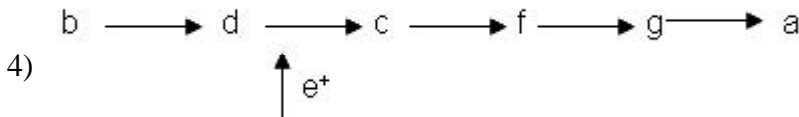
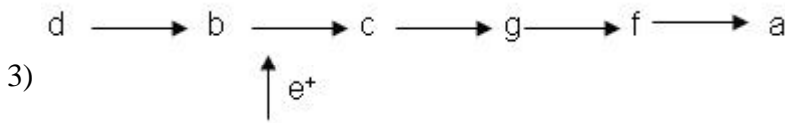
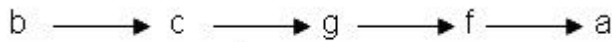
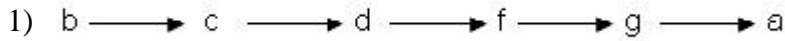
The correct statements are

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

20. In mammals the secondary palate is formed by the union of
 1) Premaxilla, Pterygoid and squamosal bones 2) Maxilla, Quadrate and Palatine bones
 3) Premaxilla, Maxilla and Palatine bones 4) Premaxilla, Quadrate and squamosal bones
21. The macromineral essential for the formation of insulin is
 1) Magnesium 2) Chlorine 3) Sulphur 4) Iodine
22. In rabbit, the two fibro-elastic strands of the larynx extend between the
 1) Thyroid and arytenoid cartilages 2) Thyroid and cricoid cartilages
 3) Santorini and thyroid cartilaginous rings 4) Cricoid and tracheal cartilaginous rings
23. The artery which supplies blood to the pericardium is
 1) Brachial artery 2) Coronary artery 3) Vertebral artery 4) Internal mammary artery

2009

24. A hormone secreted by the endocrinal cells of duodenal mucosa which influences the release of pancreatic juice is:
 1) Relaxin 2) Cholecystokinin 3) Gastrin 4) Progesteron
25. With the help of the below given, identify the correct sequence that leads to the formation of blood clot:
 a) Blood clot b) Injury c) Factor II d) Factor III
 e) Factor IV f) Fibrinogen g) Thrombin



26. Left shift of oxyhaemoglobin curve is noticed under:
 1) Normal temperature and pH 2) Low temperature and high pH
 3) Low pH and high temperature 4) Low pH and low temperature
27. Hypochromic microcytic anaemia and Leucopenia are caused by the deficiency of ——— respectively
 1. Pyridoxine and Riboflavin 2) Pyridoxine and Folacin
 3. Biotin and Folacin 4) Biotin and Cyanocobalamin

UNIT - IV

2007

28. Match the following :

Set - I

- (a) Inguinal canal
 (b) Rete testis
 (c) Leydig cells
 (d) Prepuce
 (e) Corpora cavernosa

Set - II

1. Net work of semeniferous tubules
 2. Secondary sexual characters
 3. For descending of testis
 4. Dorsal bundles of muscles
 5. Terminal skin of Penis

The correct match is

- 1) a-1 b-2 c-3 d-5 e-4 2) a-3 b-1 c-4 d-2 e-5
 3) a-3 b-1 c-2 d-5 c-4 4) a-2 b-4 c-3 d-5 c-1

29. When does glomerular filtration occurs in Bowman's capsule ?
 1) When Hydrostatic pressure of blood in the glomerulus is 70 mm Hg and net filtrate pressure is - 25 mm Hg.
 2) When hydrostatic pressure of blood in the glomerulus is 70 mm Hg and net filtrate pressure is 10 mm Hg.
 3) When hydrostatic pressure of blood in the glomerulus is 70 mm Hg and net filtrate pressure is 10 mm Hg.
 4) When hydrostatic pressure of blood in the glomerulus is 70 mm Hg and net filtrate pressure is - 70mm Hg.
30. This joint allows restricted movement in different planes.
 1) Arthrodia 2) Enarthroses 3) Ginglymi 4) Rotatori
31. In Rabbit, Placenta is formed by
 1) chorio allantoic membrane and yolk sac. 2) amnion, chorion and yolk sac.
 3) chorio allantoic membrane and endometrium 4) allantois and endometrium

2008

32. The renal fluid isotonic to the cortical fluid and blood is found in
 1) the collecting duct and ascending limb.
 2) the distal convoluted tubule and ascending limb
 3) the proximal convoluted tubule and distal convoluted
 4) the ascending limb and descending limb
33. Study the following
 A. The accumulation of pyruvic acid in the muscle causes fatigue
 B. ATP is resynthesized in the muscle by the phosphorylation of ADP by a phosphagen
 C. Cori and Cori cycle occurs in the muscles.
 D. The phosphagen in the vertebrate muscle is arginine phosphate
 The correct set of answers for muscle contraction is
 1) A and D 2) B and D 3) C and D 4) B and C
34. Study the following
 A. Testosterone influences the male secondary sexual characters
 B. Gestation period in rabbit is approximately 276 days.
 C. Bulbourethral glands secrete a vaginal lubricant D. Placenta secretes oestrogen
 The correct answer is
 1) A and D 2) B and C 3) C and D 4) A and B

2009

35. Which of the below given bones divide olfactory capsules in rabbit into left and right halves:
 1) nasals 2) premaxillae 3) maxillae 4) mesethmoid
36. The glycoprotein layer between oocytes and cuboidal cells in ovary of rabbit is
 1) Membrana granulosa 2) Zona pellucida
 3) Corpus luteum 4) Zona reticulate
37. During the muscle contraction which zone decreases :
 1) I Zone 2) Z zone 3) H Zone 4) M Zone
38. Note the following :
 a) Skin b) Phagocytes c) B-cells
 d) Inflammation e) Antibodies f) T-cells
 g) Fever h) Antimicrobial proteins i) NK-cells
 j) Secretions
 Identify the factors involved in 2nd line of defence
 1) b,d,g and i 2) b,c,e and i 3) d,f,h and j 4) c,e,g and h
39. The urine is :
 1) Hypotonic to blood and Isotonic to medullary fluid
 2) Hypertonic to blood and Isotonic to medullary fluid
 3) Isotonic to blood and hypotonic to medullary fluid
 4) Isotonic to blood and Hypertonic to medullary fluid

UNIT- V

2006

40. Hormones have the following features :

- I. Adenohypophysis produces gonadotropins.
 II. Besides sex cells, hormones are also produced by testis and ovary
 III. Testosterone is produced by Leydig cells. IV. Estrogen is produced by ovary.

Which of the above factors influence secondary sexual characters ?

- 1) III and IV 2) II, III and IV 3) II and IV 4) All

2007

41. The hypo-secretion of which hormones leads to loss of sodium and water through urine, low blood pressure and hypo-tension ?

- 1) Thyrotropic hormones 2) Hormones of Adrenal cortex
 3) Hormones of Adrenal medulla 4) Luteotrophic hormones.

2008

42. Read the statements :

A. Preganglionic nerve fibres of III, VII, IX and X cranial nerves are a part of the parasympathetic nervous system

B.V, VII, IX and X cranial nerves are mixed nerves

C.Trochlear nerves are the largest cranial nerves

D.Abducens nerves are motor and originate from the gasserian ganglia

Which of the above statements are correct ?

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

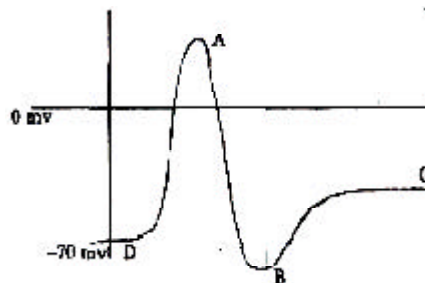
43. Study the following table

	Endocrine gland	Hormone	Deficiency disorder
A.	Neurohypophysis	Vasopressin	Diabetes insipidus
B.	Adrenal cortex	Corticosteroids	Addison's disease
C.	Parathyroid glands	Parathormone	Myxoedema
D.	Thyroid gland	Calcitonin	Acromegaly

The correct set is

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

2009

44. Identify the region where all Na^+ channels are reactivated but closed and all K^+ channels are closed

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

UNIT - VI

2007

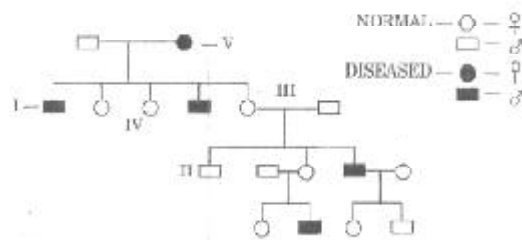
45. When a cow is crossed to a bull and the female progeny is yielding more milk than its mother. From this it is inferred
- 1) More number of genes for high yielding milk are inherited only from the female parent.
 - 2) More number of genes for high yielding milk are inherited only from the male parent.
 - 3) More number of genes for high yielding milk are inherited from both the parents.
 - 4) The progeny through mutation achieved more number of genes for high yielding milk.
46. When a cross is conducted between black feathered hen and a white feathered cock, blue feathered fowls are formed. When these fowls are allowed for interbreeding, in F_2 generation, there are 20 blue fowls. What would be the number of black and white fowls ?
- 1) Black 20, white 10
 - 2) Black 20, white 20
 - 3) Black 10, white 10
 - 4) Black 10, white 20
47. In man four phenotypes of blood groups are due to the presence of antigen 'A' and antigen 'B' on the RBC. The chromosome that the gene to control these antigens is
- 1) X-chromosome
 - 2) 21st chromosome
 - 3) 9th chromosome
 - 4) 7th chromosome
48. Intron transcripts in heterogenous nuclear RNA (hn RNA) are removed and exon transcripts are joined together under the direction of protein complexes. These complexes are
- 1) Ploysomes
 - 2) cdk complex
 - 3) Spliceosomes
 - 4) Endopeptidases

2008

49. In guinea pigs black short hair (BBSS) is dominant over white long hair (bbss). During a dihybrid cross, the F_2 generation individuals with the genotypes, BBSS; BbSS, BBSs and BbSs are in the ratio of
- 1) 9 : 3 : 3 : 1
 - 2) 4 : 2 : 1 : 2
 - 3) 1 : 2 : 1 : 4
 - 4) 1 : 2 : 2 : 4
50. In heterozygous condition, the individual expression of both the alleles in the phenotype is exemplified by
- 1) Colour blindness
 - 2) AB blood type
 - 3) Rh factor
 - 4) A and B blood types
51. Crossing of unrelated pure breeding animals of different traits within the same breed is called
- 1) Cross breeding
 - 2) Out crossing
 - 3) Close breeding
 - 4) Species hybridisation
52. The strand of DNA acting as template for m-RNA transcription is
- A. Coding strand
 - B. Non-coding strand
 - C. Sense strand
 - D. Anti-sense strand
- The correct answer is
- 1) A and C
 - 2) A and D
 - 3) B and D
 - 4) B and C

2009

53. In the above given pedigree, assume that no outsider marrying in carry a diseases write the genotypes of II and III.



1. All X^dY
- 2) X^DY and X^DX^d
- 3) X^dX^d and X^dY
- 4) X^DX^d and X^dY

54. Match the following :

List - I

- A) XX-XO, method of sex determination
- B) 1.5 X/A ratio
- C) Karyotype 45
- D) ZW- ZZ method of sex determination

- | | A | B | C | D |
|----|----|----|----|-----|
| 1) | I | IV | II | III |
| 3) | IV | I | II | III |

List - II

- I) Female heterogametic
- II) Turner's Syndrome
- III) Hemiptera
- IV) Metafemale

- | | A | B | C | D |
|----|-----|----|----|-----|
| 2) | III | IV | II | I |
| 4) | I | IV | II | III |

55. A woman with blood group 'O' has a child with blood group 'O' she claims that a man with blood group 'A' as the father of her child. What would be the genotype of the father, if her claim is right?
 1) $I^O I^O$ 2) $I^A I^B$ 3) $I^A I^O$ 4) $I^B I^O$
56. A specific nucleotide sequence to which RNA polymerase attaches to initiate transcription of mRNA from a gene:
 1) Promoter gene 2) Structural gene 3) Operon 4) Regulator gene
57. The sequence of Nitrogen Bases (Triplet) on t-RNA is :
 1) Anticodon 2) Terminating codon 3) Degenerate codon 4) Initiating codon

UNIT- VII

2006

58. The natural selection that acts against change in the form and keeps the population constant through the time is :
 1) Directional 2) Disruptive 3) Not acting 4) Stabilizing
59. In a population of 278, if observed number of 'MM' 'MN' blood groups is 78, 138 and 62 respectively, what would be the frequency of 'M' ?
 1) 0.532 2) 0.499 3) 0.468 4) 0.283

2007

60. Match the following :

Set - I

- (a) T.R. Malthus
 (b) Sir Charles Lyell
 (c) Weismann
 (d) Lamarck
 (e) Alfred Russel Wallace

Set - II

1. On the tendency of varieties to depart from original types
 2. Philosophie Zoologique
 3. On the Principles of Populations
 4. Principles of Geology
 5. Germinal selection

The correct match is

- (1) a-3 b-2 c-5 d-4 e-1 (2) a-3 v-4 c-5 d-2 e-1
 (3) a-3 b-4 c-2 d-5 e-1 (4) a-3 b-5 c-4 d-1 e-2
61. Myrmecobius and Myrmecophaga are closely related and have similar adaptations for the same habitat. This phenomenon is
 (1) Divergent evolution (2) Homoplasy
 (3) Convergent evolution (4) Parallel evolution

2008

62. The peculiar primitive animals found in Madagascar but absent in Africa are
 (1) Elephants (2) Penguins (3) Lemurs (4) Echidnas
63. "A brief reduction in size of a population due to natural calamities usually leads to random genetic drift". For this statement, identify the correct example from the following.
 (1) Human population of Pitcairn Island (2) Polydactylic dwarfs in Amish population
 (3) Long necked giraffe (4) Industrial melanism

2009

64. A selection that acts to eliminate one extreme from an array of phenotypes is
 1) Disruptive 2) Directional 3) Stabilizing 4) Coevolution

UNIT - VIII

2006

65. The enzyme employed for amplification of DNA during PCR is commercially obtained from :
 1) Streptococcus pyogenes 2) Bacillus licheniformis
 3) Trichoderma reesi 4) Thermus aquaticus

66. Match the following :

Set-I

- a) Scylla tranquibarica
b) Oidium albicans
c) Gracellaria
d) Ancona
e) Hypophthalmichthys molitrix

Set-II

- 1) Silver carp
2) Agar
3) Green crab
4) Thrush
5) Mediterranean bird

The correct match is :

- 1) a - 3, b - 4, c - 2, d - 1, e - 5
2) a - 4, b - 3, c - 2, d - 5, e - 1
3) a - 3, b - 5, c - 2, d - 4, e - 1
4) a - 3, b - 4, c - 2, d - 5, e - 1

67. The anaphase promoting complex is activated by :

- 1) M cdk cyclin 2) G₁ cdk cyclin 3) S cdk cyclin 4) Transcription factor

2007

68. Identify the Hepatitis virus, which cannot survive independently and it requires another hepatitis virus for its multiplication.

- (1) Hepatitis 'A' Virus (2) Hepatitis 'B' Virus (3) Hepatitis 'C' Virus (4) Hepatitis 'D' Virus

69. Statement (S) : The phenomenon where tumour cells detach and migrate to other parts of the body where they give rise to secondary tumours is called Metastasis.

Reason (R) : Abnormal Antigens on the surface of cell and unusual number of chromosomes cause Metastasis.

The correct answer is

- (1) Both (S) and (R) are true and (R) explains (S).
(2) Both (S) and (R) are true but (R) cannot explain (S).
(3) Only (S) is correct but not (R) (4) Both (S) and (R) are wrong.

70. In poultry birds nasal and eye discharges with foul smell, acute respiratory problem and inflamed and swollen eyes are the symptoms of

- (1) Chronic Respiratory disease (2) Infectious coryza
(3) Brooder Pneumonia disease (4) Marek's disease

2008

71. Study the following

- A. The cells of malignant tumours divide erratically
B. They are malignant tumours of epithelial cells.
C. They are malignant tumours of organs that originate from mesoderm
D. These tumours are found in organs such as spleen and lymph nodes.

Which of the above are true for angio-sarcoma ?

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

72. Study the following pathogens

- A. Yersinia pestis B. Borrelia sp. C. Oidium albicans
D. Microbacterium leprae E. Haemophilus gallinarium

Which of the above cause damage to poultry industry ?

- 1) A and D 2) C and E 3) B and D 4) D and E

2009

73. In poultry first Deworming is usually done around this age

- 1) 4 weeks 2) 8 weeks 3) 12 weeks 4) 16 weeks

74. Match the following :

List - I

- A) Sandwich ELISA
B) QRS complex
C) Allograft
D) CT Scan

List- II

- I) Three dimensional image
II) Substrate linked antibody
III) Ventricular depolarisation
IV) Transplantation between genetically non-identical Individuals

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