

NEET UG-2023

[PAPER WITH ANSWER KEY]

HELD ON SUNDAY 07 MAY 2023

ZOOLOGY

SECTION-A

[Q.151] Match List I with List II

List I	List II
A. Heroin	I. Effect on cardiovascular system
B. Marijuana	II. Slow down body function
C. Cocaine	III. Painkiller
D. Morphine	IV. Interfere with transport of dopamine

Choose the correct answer from the options given below:

- [1] A-IV, B-III, C-II, D-I
- [2] A-III, B-IV, C-I, D-II
- [3] A-II, B-I, C-IV, D-III
- [4] A-I, B-II, C-III, D-IV

[ANS] 3

[Q.152] Given below are two statements :

Statement I: RNA mutates at a faster rate.

Statement II: Viruses having RAN genome and shorter life span mutate and evolve faster.

In the light of the above statements, choose the correct answer from the options given below:

- [1] Statement I is true but Statement II is false.
- [2] Statement I false but Statement II is true
- [3] Both Statement I and Statement II are true
- [4] Both Statement I and Statement II are false.

[ANS] 3

[Q.153] Give below are two statements :

Statement I : Vas deferens receives a duct from seminal vesicle and opens into urethra as the ejaculatory duct

Statement II : The cavity of the cervix is called cervical canal which along with vagina forms birth canal

In the light of the above statements, choose the correct answer from the options given below:

- [1] Statement I is correct but Statement II is false
- [2] Statement I incorrect but Statement II is true.
- [3] Both Statement I and Statement II are true
- [4] Both Statement I and Statement II are false.

[ANS] 3

[Q.154] Which of the following functions is carried out by cytoskeleton in a cell?

- [1] Motility
- [2] Transportation
- [3] Nuclear division
- [4] Protein synthesis

[ANS] 1

[Q.155] Which of the following statements are correct regarding female reproductive cycle?

- A. In non-primate mammals cyclical changes during reproduction are called oestrus cycle.
- B. First menstrual cycle begins at puberty and is called menopause.
- C. Lack of menstruation may be indicative of pregnancy.
- D. Cyclic menstruation extends between menarche and menopause.

Choose the **most appropriate** answer from the options given below :

- [1] A, B and C only
- [2] A, C and D only
- [3] A and D only
- [4] A and B only

[ANS] 2

[Q.156] Match List-I with List-II

List-I

- A. Vasectomy
- B. Coitus interruptus
- C. Cervical caps
- D. Saheli

List-II

- I. Oral method
- II. Barrier method
- III. Surgical method
- IV. Natural method

Choose the correct answer from the options given below :

- [1] A-II, B-III, C-I, D-IV
- [2] A-IV, B-II, C-I, D-III
- [3] A-III, B-I, C-IV, D-II
- [4] A-III, B-IV, C-II, D-I

[ANS] 4

[Q.157] Which one of the following symbols represents mating between relatives in human pedigree analysis?

:



[ANS] 4

[Q.158] Which of the following are NOT considered as the part of endomembrane system?

- A. Mitochondira B. Endoplasmic Reticulum
C. Chloroplasts D. Golgi complex
E. Peroxisomes

Choose the most appropriate answer from the options given below:

- : [1] A and D only
[2] A, D and E only
[3] B and D only
[4] A, C and E only

[ANS] 4

[Q.159] Match List I with List II with respect to human eye.

- | List I | List II |
|---------------|--|
| A. Fovea. | I. Visible coloured portion of eye that regulates diameter of pupil. |
| B,. Iris | II. External layer of eye formed of eye formed of dense connective tissue. |
| C. Blind spot | III. Point of greatest visual acuity or resolution. |
| D. Sclera | IV. Point where optic nerve leaves the eyeball and photoreceptor cells are absent. |

Choose the correct answer from the options given below.

- [1] A – I, B – IV , C – III, D - II [2] A – II, B – I, C – III, D – IV
[3] A – III, B – I, C – IV, D – II [4] A – IV, B – III,, C – IV, D - I

[ANS] 3

[Q.160] Match List I with List II

- | List I | List II |
|----------------|----------------------------------|
| A. P – wave | I. Beginning of systole |
| B. Q – wave | II. Repolarisation of ventricles |
| C. QRS complex | III. Depolarisation of atria |
| D. T – wave | IV. Depolarisation of ventrieles |

Choose the correct answer from the options given below.

- [1] A – II, B – IV , C – I, D - III [2] A – I, B – II, C – III, D – IV
[3] A – III, B – I, C – IV, D – II [4] A – IV, B – III, C – II, D - I

[ANS] 3

[Q.161] Match **List I** with **List II**.

List I

- A. CCK
- B. GIP
- C. ANF
- D. ADH

List II

- I. Kidney
- II. Heart
- III. Gastric gland
- IV. Pancreas

Choose the **correct** answer from the option given below :

- [1] A-II, B-IV, C-I, D-III
- [2] A-IV, B-II, C-III, D-I
- [3] A-IV, B-II, C-II, D-I
- [4] A-III, B-II, C-IV, D-I3

[ANS] 3

[Q.162] Match **List I** with **List II**.

List I

- A. Gene 'a'
- B. Gene 'y'
- C. Gener 'i'
- D. Gene 'z'

List II

- I. β - galactosidase
- II. Transacetylase
- III. permease
- IV. Repressor protein

Choose the **correct** answer from the option given below :

- [1] A-III, B-IV, C-I, D-II
- [2] A-III, B-I, C-IV, D-II
- [3] A-II, B-I, C-IV, D-III
- [4] A-II, B-III, C-IV, D-I

[ANS] 4

[Q.163] Vital capacity of lung is_____.

- [1] $IRV + ERV + TV - RV$
- [2] $IRV + ERV + TV$
- [3] $IRV + ERV$
- [4] $IRV + ERV + TV + RV$

[ANS] 2

[Q.164] Select the correct group set of Australian Marsupials exhibiting adaptive radiation.

- [1] Mole, Flying squirrel, Tasmanian tiger cat
- [2] Lemur, Anteater, Wolf
- [3] Tasmanian wolf, Bobcat, Marsupial mole
- [4] Numbat, Spotted cuscus, Flying phalanger

[ANS] 4

[Q.165] Match List I with List II

- | List I | List II |
|---------------|---------------------------|
| A. Ringworm | I. Haemophilus influenzae |
| B. Filariasis | II. Trichophyton |
| C. Malaria | III. Wuchereria bancrofti |
| D. Pneumonia | IV. Plasmodium vivax |

Choose the correct answer from the options given below :

- [1] A-III, B-II, C-I, D-IV
- [2] A-III, B-II, C-IV, D-I
- [3] A-II, B-III, C-IV, D-I
- [4] A-II, B-III, C-I, D-IV

[ANS] 3

[Q.166] Match List I with List II.

- | List I
(Type of Joint) | List II
(Found between) |
|---------------------------|--|
| A. Cartilaginous joint | I. Between flat skull bones |
| B. Ball and Socket Joint | II. Between adjacent vertebrae in vertebral column |
| C. Fibrous Joint | III. Between carpal and metacarpal of thumb |
| D. Saddle Joint | IV. Between Humerus and Pectoral girdle |

Choose the correct answer from the options given below :

- [1] A-I, B-IV, C-III, D-II
- [2] A-II, B-IV, C-III, D-I
- [3] A-III, B-I, C-II, D-IV
- [4] A-II, B-IV, C-I, D-III

[ANS] 4

[Q.167] Given below are statements: one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A : Nephrons are of two types :

Cortical & Juxta medullary, based on their relative position in cortex medulla.

Reason R : Juxta medullary nephrons have short loop of Henle whereas, cortical nephrons have longer loop of Henle.

In the light of the above statements, choose the correct answer from the options given below :

- [1] A is true but R is false
- [2] A is false but R is true
- [3] Both A and R are true and R is the correct explanation of A.
- [4] Both A and R are true but R is NOT the correct explanation

[ANS] 1

[Q.168] Which one of the following techniques does not serve the purpose of early diagnosis of a disease for its early treatment?

- [1] Polymerase Chain Reaction (PCR) technique
- [2] Enzyme Linked Immuno-Sorbent Assay (ELISA) technique
- [3] Recombinant DNA Technology
- [4] Serum and Urine analysis

[ANS] 4

[Q.169] Which one of the following common sexually transmitted diseases is completely curable when detected early and treated properly ?

- [1] Hepatitis-B
- [2] HIV Infection
- [3] Genital herpes
- [4] Gonorrhoea

[ANS] 4

[Q.170] Given below are two statements :

Statement-I : Electrostatic precipitator is most widely used in thermal power plant.

Statement-II : Electrostatic precipitator in thermal power plant removes ionizing radiations.

In the light of the above statements, choose the most appropriate answer from the options given below :

- [1] Statement-I is correct but Statement-II is incorrect.
- [2] Statement-I incorrect but Statement-II is correct.
- [3] Both Statement-I and Statement-II are correct.
- [4] Both Statement-I and Statement-II are incorrect.

[ANS] 1

[Q.171] Which of the following is not a cloning vector?

- [1] pBR322
- [2] Probe
- [3] BAC
- [4] YAC

[ANS] 2

[Q.172] Radial symmetry is NOT found in adults of phylum_____

- [1] Coelenterata
- [2] Echinodermata
- [3] Ctenophora
- [4] Hemichordata

[ANS] 4

[Q.173] Match List I with List II

List (Cells)	List II (Secretion)
A. Peptic cells	I. Mucus
B,. Goblet cells	II. Bile juice
C. Oxyntic cells	III. Proenzyme pepsinogen
D. Hepatic cells	IV. HCL and intrinsic factor for absorption of vitamin B ₁₂

Choose the correct answer from the options given below.

- [1] A – III, B – I , C – IV, D - II
- [2] A – II, B – IV, C – I, D - III
- [3] A – IV, B – III, C – II, D - I
- [4] A – II, B – I, C – III, D - IV

[ANS] 1

[Q.174] Once the undigested and unabsorbed substances enter the caecum, their backflow is prevented by -

- [1] Gastro – oesophageal sphincter
- [2] Pyloric - sphincter
- [3] Sphincter of Oddi
- [4] Ileo – caecal valve

[ANS] 4

[Q.175] Given below are two statement:

Statement I : In prokaryotes, the positively charged DNA is held with some negatively charged proteins in a region called nucleoid.

Statement II: In eukaryotes, the negatively charged DNA is wrapped around the positively charged histone octamer to form nucleosome.

In the light of the above statements, choose the **correct** answer from the options given below:

- [1] **Statement I** is correct but **Statement II** is false.
- [2] **Statement I** incorrect but **Statement II** are true.
- [3] Both **Statement I** and **Statement II** are true.
- [4] Both **Statement I** and **Statement II** are false.

[ANS] 2

[Q.176] Given below are two statements:

Statement I : Ligaments are dense irregular tissue.

Statement II: Cartilage is dense regular tissue.

In the light of the above statements, choose the **correct** answer from the options given below:

- [1] **Statement I** is true but **Statement II** is false.
- [2] **Statement I** is false but **Statement II** is true.
- [3] Both **Statement I** and **Statement II** are true
- [4] Both **Statement I** and **Statement II** are false.

[ANS] 4

[Q.177] Given below are two statements :

Statement I : Low temperature preserves the enzyme in a temporarily inactive state whereas high temperature destroys enzymatic activity because proteins are denatured by heat.

Statement II : When the inhibitor closely resembles the substrate in its molecular structure and inhibits the activity of the enzyme, it is known as competitive inhibitor.

In the light of the above statements, choose the **correct** answer from the options given below:

- [1] Statement I is true but Statement II is false
- [2] Statement I is false but Statement II is true
- [3] Both Statement I and Statement II are true.
- [4] Both Statement I and Statement II are false.

[ANS] 3

[Q.178] Which of the following statements is correct ?

- [1] Presence of large amount of nutrients in water restricts 'Algal Bloom'
- [2] Algal Bloom decreases fish mortality
- [3] Eutrophication refers to increase in domestic sewage and waste water in lakes.
- [4] Biomagnification refers to increase in concentration of the toxicant at successive trophic levels.

[ANS] 4

[Q.179] Given below are two statements:

Statement I: A protein is imagined as a line, the left end represented by first amino acid (C-terminal) and the right end represented by last amino acid (N-terminal)

Statement II: Adult human haemoglobin, consists of 4 subunits (two subunits of α type and two subunits of β type.)

In the light of the above statements, choose the **correct** answer from the options given below:

- [1] **Statement I** is true but **Statement II** is false
- [2] **Statement I** is false but **Statement II** is true
- [3] Both **Statement I** and **Statement II** are true.
- [4] Both **Statement I** and **Statement II** are false.

[ANS] 2

[Q.180] In which blood corpuscles, the HIV undergoes replication and produces progeny viruses ?

- [1] Basophils
- [2] Eosinophils
- [3] T_H cells
- [4] B-lymphocytes

[ANS] 3

[Q.181] Given below are two statements one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A : Endometrium is necessary for implantation of blastocyst.

Reason R : In the absence of fertilization, the corpus luteum degenerates that causes disintegration of endometrium.

In the light of the above statements, choose the correct answer from the options given below:

- [1] A is true but R is false
- [2] A is false but R is true
- [3] Both A and R are true and R is the correct explanation of A.
- [4] Both A and R are true but R is NOT the correct explanation of A.4

[ANS] 4

[Q.182] Match List I with List II

List I	List II
A. Taenia	I. Nephridia
B. Paramoecium	II. Contractile vacuole
C. Periplaneta	III. Flame cells
D. Pheretima	IV. Urecose gland

Choose the correct answer from the options given below:

- [1] A-III, B-II, C-IV, D-I
- [2] A-II, B-I, C-IV, D-III
- [3] A-I, B-II, C-III, D-IV
- [4] A-I, B-II, C-IV, D-III

[ANS] 1

[Q.183] Match List-I with List-II.

List-I	List-II
A. A Leopard and a Lion in a forest/grassland	I. Competition
B. A Cuckoo laying egg in a Crow's nest	II. Brood parasitism
C. Fungi and root of a higher plant in Mycorrhizae	III. Mutualism
D. A cattle egret and a Cattle in a field	IV. Commensalism

Choose the correct answer from the options given below :

- [1] A-III, B-IV, C-I, D-II
- [2] A-II, B-III, C-I, D-IV
- [3] A-I, B-II, C-III, D-IV
- [4] A-I, B-II, C-IV, D-III

[ANS] 3

[Q.184] Given below are two statements : one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A : Amniocentesis for sex determination is one of the strategies of Reproductive and Child Health Care Programme.

Reason R : Ban on amniocentesis checks increasing menace of female foeticide.

In the light of the above statements, choose the **correct** answer from the options given below

- [1] **A** is true but **R** is false.
- [2] **A** is false but **R** is true.
- [3] Both **A** and **R** are true and **R** is the correct explanation of **A**.
- [4] Both **A** and **R** are true and **R** is NOT the correct explanation of **A**.

[ANS] 2

[Q.185] Broad palm with single palm crease is visible in a person suffering from

- [1] Klinefelter's syndrome
- [2] Thalassemia
- [3] Down's syndrome
- [4] Turner's syndrome

[ANS] 3

SECTION-B

[Q.186] Select the correct statements with reference to chordates

- A. Presence of a mid-dorsal, solid and double nerve cord.
- B. Presence of closed circulatory system
- C. Presence of paired pharyngeal gillslits
- D. Presence of dorsal heart
- E. Triploblastic pseudocoelomate animals

Choose the correct answer from the options given below

- [1] B, D and E only
- [2] C, D and E only
- [3] A, C and D only
- [4] B and C only

[ANS] 4

[Q.187] Which one of the following is the sequence on corresponding coding strand, if the sequence on mRNA formed is as follows

5' AUCGAUCGAUCGAUCGAUCG AUCG AUCG3 '?

- [1] 5' ATCGATCGATCGATCGATCG ATCGATCG 3'
- [2] 3' ATCGATCGATCGATCGATCG ATCGATCG 5'
- [3] 5' UAGCUAGCUAGCUAGCUAGCUA GCUAGC UAGC 3'
- [4] 3' UAGCUAGCUAGCUAGCUA GCUAGCUAGC 5'

[ANS] 1

[Q.188] The parts of human brain that helps in regulation of sexual behaviour, expression of excitement, pleasure, rage, fear etc. are:

- [1] Brain stem & epithalamus
- [2] Corpus callosum and thalamus
- [3] Limbic system & hypothalamus
- [4] Corpora quadrigemina & hippocampus

[ANS] 3

[Q.189] Which of the following statements are correct ?

- A. An excessive loss of body fluid from the body switches off osmoreceptors,
- B. ADH facilitates water reabsorption to prevent diuresis.
- C. ANF causes vasodilation.
- D. ADH causes increase in blood pressure
- E. ADH is responsible for decrease in GFR.

Choose the **correct** answer from the options given below:

- [1] A, B and E only
- [2] C, D and E only
- [3] A and B only
- [4] B, C and D only

[ANS] 4

[Q.190] Which of the following statements are correct ?

- A. basophils are most abundant cells of the total WBCs
- B. basophils secrete histamine, serotonin and heparin
- C. Basophils are involved in inflammatory response
- D. Basophils have kidney shaped nucleus
- E. Basophils are agranulocytes

Choose the **correct** answer from the options given below:

- | | |
|------------------|------------------|
| [1] B and C only | [2] A and B only |
| [3] D and E only | [4] C and E only |

[ANS] 1

[Q.191] Which of the following are NOT under the control of thyroid hormone ?

- [A] Maintenance of water and electrolyte balance
- [B] Regulation of basal metabolic rate
- [C] Normal rhythm of sleep-wake cycle
- [D] Development of immune system
- [E] Support the process of R.B.Cs formation

Choose the **correct** answer from the options given below :

- [1] C and D only
- [2] D and E only
- [3] A and D only
- [4] B and C only

[ANS] 1

[Q.192] Which of the following is characteristic feature of cockroach regarding sexual dimorphism ?

- [1] Presence of sclerites
- [2] Presence of anal cerci
- [3] Dark brown body colour and anal cerci
- [4] Presence of anal styles

[ANS] 4

[Q.193] Which one of the following is NOT an advantage of inbreeding ?

- [1] Elimination of less desirable genes and accumulation of superior genes takes place due to it.
- [2] It decreases the productivity of inbred population, after continuous inbreeding.
- [3] It decreases homozygosity.
- [4] It exposes harmful recessive genes that are eliminated by selection.

[ANS] 2

[Q.194] The unique mammalian characteristics are :

- [1] hairs, pinna and indirect development
- [2] pinna, monocondylic skull and mammary glands
- [3] hairs, tympanic membrane and mammary glands
- [4] hairs, pinna and mammary glands

[ANS] 4

[Q.195] Select the correct statements.

- A. Tetrad formation is seen during Leptotene.
- B. During Anaphase, the centromeres split and chromatids separate.
- C. Terminalization takes place during Pachytene.
- D. Nucleolus, Golgi complex and ER are reformed during Telophase
- E. Crossing over takes place between sister chromatids of homologous chromosome.

Choose the correct answer from the options given below :

- [1] A, C and E only
- [2] B and E only
- [3] A and C only
- [4] B and D only

[ANS] 4

[Q.196] Given below the two statements:

Statement I : During G_0 phase of cell cycle, the cell is metabolically inactive.

Statement II : The centrosome undergoes duplication during S phase of interphase

In the light of the above statements, choose the most appropriate answer from the options given below.

[1] Statement I is correct but Statement II is incorrect.

[2] Statement I is incorrect but Statement II is correct.

[3] Both Statement I and Statement II are correct.

[4] Both Statement I and Statement II are incorrect

[ANS] 2

[Q.197] Which of the following statements are correct regarding skeletal muscle ?

A. Muscle bundles are held together by collagenous connective tissue layer called fascicle.

B. Sarcoplasmic reticulum of muscle fibre is a store house of calcium ions.

C. Striated appearance of skeletal muscle fibre is due to distribution pattern of actin and myosin proteins.

D. M line is considered as functional unit of contraction called sarcomere.

Choose the **most appropriate** answer from the options given below :

[1] A, C and D only

[2] C and D only

[3] A, B and C only

[4] B and C only

[ANS] 4

[Q.198] Match List-I with List-II.

List-I

A. Logistic growth

B. Exponential growth

C. Expanding age pyramid

D. Stable age pyramid

List-II

I. Unlimited resource availability condition

II. Limited resource availability condition

III. The percent individuals of pre-reproductive age is largest followed by reproductive and post reproductive age groups

IV. The percent individuals of pre-reproductives and reproductive age group are same

Choose the correct answer from the options given below :

[1] A-II, B-IV, C-I, D-III

[2] A-II, B-IV, C-III, D-I

[3] A-II, B-I, C-III, D-IV

[4] A-II, B-III, C-I, D-IV

[ANS] 3

[Q.199] Match List I and with List II

List I

- A. Mast cells
- B. Inner surface of bronchiole
- C. Blood
- D. Tubular parts of nephron

List II

- I. Ciliated epithelium
- II. Areolar connective tissue
- III. Cuboidal epithelium
- IV. specialised connective tissue

Choose correct answer from the options given below:

- [1] A-II, B-I, C-IV, D-III
- [2] A-III, B-IV, C-II, D-I
- [3] A-I, B-II, C-IV, D-III
- [4] A-II, B-III, C-I, D-IV

[ANS] 1

[Q.200] In cockroach, excretion is brought about by

- A. Phallic gland
- B. Urecoase gland
- C. Nephrocytes
- D. Fat body
- E. Collateral glands

Choose the correct answer from the options given below:

- [1] B, C and D only
- [2] B and D only
- [3] A and E only
- [4] A, B and E only

[ANS] 1