

Section - A (Biology : Zoology)**151.**

Which of the following statements are true for spermatogenesis but do not hold true for Oogenesis?

- (a) It results in the formation of haploid gametes
- (b) Differentiation of gamete occurs after the completion of meiosis ✓
- (c) Meiosis occurs continuously in a mitotically dividing stem cell population
- (d) It is controlled by the Luteinising hormone (LH) and Follicle Stimulating Hormone (FSH) secreted by the anterior pituitary
- (e) It is initiated at puberty ✓

Choose the most appropriate answer from the options given below :

- ~~(1)~~ (b), (d) and (e) only
- (2) (b), (c) and (e) only
- (3) (c) and (e) only
- (4) (b) and (c) only

Reso Answer: 3

152.

Given below are two statements :

Statement I:

Fatty acids and glycerols cannot be absorbed into the blood.

Statement II:

Specialized lymphatic capillaries called lacteals carry chylomicrons into lymphatic vessels and ultimately into the blood.

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

Reso Answer: 3

153.

Breeding crops with higher levels of vitamins and minerals or higher proteins and healthier fats is called :

- ☒ (1) Bio-fortification
- ☐ (2) Bio-accumulation
- ☐ (3) Bio-magnification
- ☐ (4) Bio-remediation

Reso Answer: 1

154.

In an *E.coli* strain *i* gene gets mutated and its product can not bind the inducer molecule. If growth medium is provided with lactose, what will be the outcome?

- (1) ~~z, y, a genes will not be translated~~
- (2) RNA polymerase will bind the promoter region
- (3) Only *z* gene will get transcribed
- (4) *z, y, a* genes will be transcribed

Reso Answer: 1

155.

Which of the following is present between the adjacent bones of the vertebral column ?

- (1) Areolar tissue
- (2) Smooth muscle
- ~~(3)~~ Intercalated discs
- (4) Cartilage

Reso Answer: 4

156.

Given below are two statements :

Statement I :

Autoimmune disorder is a condition where body defense mechanism recognizes its own cells as foreign bodies.

Statement II :

Rheumatoid arthritis is a condition where body does not attack self cells.

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

Reso Answer: 1

157.

At which stage of life the oogenesis process is initiated ?

- (1) Birth
- (2) Adult
- (3) Puberty
- (4) Embryonic development stage

Reso Answer: 4

158.

Select the **incorrect** statement with reference to mitosis :

- (1) Chromosomes decondense at telophase.
- (2) Splitting of centromere occurs at anaphase.
- (3) All the chromosomes lie at the equator at metaphase.
- (4) Spindle fibres attach to centromere of chromosomes.

Reso Answer: 4

159.

- In-situ* conservation refers to :
- (1) Conserve only endangered species
 - (2) Conserve only extinct species
 - (3) Protect and conserve the whole ecosystem
 - ~~(4)~~ Conserve only high risk species

Reso Answer: 4

160.

- Which of the following functions is not performed by secretions from salivary glands ?
- (1) Lubrication of oral cavity
 - (2) Digestion of disaccharides
 - (3) Control bacterial population in mouth
 - ☒ (4) Digestion of complex carbohydrates

Reso Answer: 2

161.

Given below are two statements : one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) :

Osteoporosis is characterised by decreased bone mass and increased chances of fractures.

Reason (R) :

Common cause of osteoporosis is increased levels of estrogen.

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

- (1) (A) is correct but (R) is not correct
- (2) (A) is not correct but (R) is correct
- (3) Both (A) and (R) are correct and (R) is the correct explanation of (A)
- (4) Both (A) and (R) are correct but (R) is not the correct explanation of (A)

Reso Answer: 1

162.

Given below are two statements :

Statement I :

The coagulum is formed of network of threads called thrombins.

Statement II :

Spleen is the graveyard of erythrocytes. ✓

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

Reso Answer: 2

163.

Given below are two statements :

Statement I :

Mycoplasma can pass through less than 1 micron filter size.

Statement II :

Mycoplasma are bacteria with cell wall

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

Reso Answer: 1

164.

Tegmina in cockroach, arises from :

- (1) Metathorax
- (2) Prothorax and Mesothorax
- (3) Prothorax
- (4) Mesothorax

Reso Answer: 4

165.

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) :

All vertebrates are chordates but all chordates are not vertebrates.

Reason (R) :

Notochord is replaced by vertebral column in the adult vertebrates.

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

- (1) (A) is correct but (R) is not correct
- (2) (A) is not correct but (R) is correct
- (3) Both (A) and (R) are correct and (R) is the correct explanation of (A)
- (4) Both (A) and (R) are correct but (R) is not the correct explanation of (A)

Reso Answer: 4

166.

Nitrogenous waste is excreted in the form of pellet or paste by :

- (1) *Hippocampus*
- (2) *Pavo*
- (3) *Ornithorhynchus*
- (4) *Salamandra*

Reso Answer: 2

168. Regarding Meiosis, which of the statements is incorrect ?

- (1) Pairing of homologous chromosomes and recombination occurs in Meiosis-I ✓
- (2) Four haploid cells are formed at the end of Meiosis-II
- (3) There are two stages in Meiosis, Meiosis-I and II ✓
- (4) DNA replication occurs in S phase of Meiosis-II

Reso Answer: 4

169. Under normal physiological conditions in human being every 100 ml of oxygenated blood can deliver _____ ml of O_2 to the tissues.

- ~~(1)~~ 4 ml
- (2) 10 ml
- (3) 2 ml
- ~~(4)~~ 5 ml

Reso Answer: 4

170. Given below are two statements :

Statement I :

The release of sperms into the seminiferous tubules is called spermiation.

Statement II :

Spermiogenesis is the process of formation of sperms from spermatogonia.

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

Reso Answer: 3

171. In the taxonomic categories which hierarchical arrangement in ascending order is correct in case of animals ?

- (1) Kingdom, Order, Class, Phylum, Family, Genus, Species
- (2) Kingdom, Order, Phylum, Class, Family, Genus, Species
- ✓ (3) Kingdom, Phylum, Class, Order, Family, Genus, Species ✓
- (4) Kingdom, Class, Phylum, Family, Order, Genus, Species

Reso Answer: 3

172. Identify the microorganism which is responsible for the production of an immunosuppressive molecule cyclosporin A :

- (1) *Aspergillus niger*
- (2) *Streptococcus cerevisiae*
- ✓ (3) *Trichoderma polysporum*
- (4) *Clostridium butylicum*

Reso Answer: 3

173. Lippe's loop is a type of contraceptive used as :
- ☒ (1) Non-Medicated IUD
 - ☐ (2) Copper releasing IUD
 - ☐ (3) Cervical barrier
 - ☐ (4) Vault barrier

Reso Answer: 1

174. If the length of a DNA molecule is 1.1 metres, what will be the approximate number of base pairs?

- (1) 3.3×10^6 bp
- (2) 6.6×10^6 bp
- (3) 3.3×10^9 bp
- (4) 6.6×10^9 bp

Handwritten calculation:
$$\frac{1.1 \times 10^3}{3.4 \times 10^{-3}} = 3.3 \times 10^5$$

Reso Answer: 3

175. Detritivores breakdown detritus into smaller particles. This process is called :

- (1) Humification
- ✓ (2) Decomposition
- (3) Catabolism
- (4) Fragmentation

Reso Answer: 4