

Time allowed: 3 Hrs

Biology (Part - II)
Fresh / Reappear

Flc. No.....

Code-A

Marks: 85

Note: There are three sections of the paper, A, B & C. Attempt Section - A on the same paper and return it to the Superintendent within the given time. Mobile phone etc. are not allowed in the examination hall.

Time: 20 Mins

Section "A"

Marks: 18

- Q.1 Write the correct option i.e. A, B, C or D in the empty box provided opposite to each part. No marks will be awarded for cutting, erasing or over writing:
- i. Who developed vaccine for the first time?

A. John Mendel	B. Edward Jenner	C. Charles Darwin	D. Louis Pasteur
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 - ii. Which of the following parts is common to both digestive and respiratory system?

A. Nose	B. Pharynx	C. Larynx	D. Oesophagus
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 - iii. Inflammation of the middle ear is called

A. Sinusitis	B. Otitis media	C. Emphysema	D. Pneumonia
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 - iv. Animals that rely on heat derived from the environment than metabolic heat to raise their body temperature are called

A. Poikilotherms	B. Homeotherms	C. Ectotherms	D. Endotherms
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 - v. Mature bone cells are called

A. Osteocytes	B. Chondrocytes	C. Osteoblasts	D. Osteoclasts
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 - vi. Neurons carrying impulses from receptors to the central Nervous system are called:

A. Associated Neurons	B. Motor Neurons	C. Sensory Neurons	D. None of them
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 - vii. Largest part of human's brain is

A. Thalamus	B. Hypothalamus	C. Cerebellum	D. Cerebrum
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 - viii. Calcitonin is a hormone being secreted by

A. Thyroid gland	B. Parathyroid gland	C. Pituitary gland	D. Adrenal gland
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 - ix. Innate behavior will always be

A. Heritable	B. Intrinsic	C. Stereotypic	D. All of them
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 - x. The inner spongy lining of uterine cavity is called

A. Perimetrium	B. Myometrium	C. Endometrium	D. Periosteum
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 - xi. The type of internal fertilization that is carried out outside the body of female is called:

A. Internal fertilization	B. External fertilization	C. in vitro fertilization	D. Double fertilization
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 - xii. During development, nervous system and skin epidermis is developed by

A. Ectoderm	B. Mesoderm	C. Endoderm	D. Periderm
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 - xiii. The phenomenon in which the effect caused by the gene at one locus interferes with or hides the effect caused by another gene at another locus is called

A. Epistasis	B. Apoptosis	C. Necrosis	D. Synopsi
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 - xiv. The regulatory region located on the 5' end of coding strand of a gene is called

A. Terminator	B. Promoter	C. Intron	D. Operon
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 - xv. The study of birds is called

A. Ichthyology	B. Herpetology	C. Ornithology	D. Entomology
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 - xvi. The amount of energy left after plants have met their respiratory needs is net primary production, which shows up as plants

A. Food reserve	B. Biomass	C. Respiration rate	D. Photosynthesis rate
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 - xvii. Cell suspension culture of *Cinchona ledgeriana* produces

A. Quinine	B. Digitoxin	C. Polludrin	D. Antitoxin
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 - xviii. Complete set of chromosomal and extrachromosomal genes of an organism is known as

A. Gene bank	B. Gene pool	C. Gene library	D. Genome
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Section "B"

Marks: 40

Q.2 Attempt any TEN parts. All parts carry equal marks.

- i. Write short note on Hamburger's Phenomenon.
- ii. What is meant by Anhydrobiosis? Briefly describe it in terrestrial animals.
- iii. What are Muscles? Briefly describe their types.
- iv. What is Spinal Cord? Briefly describe its functions.
- v. Write short note on thyroid gland.
- vi. Write short note on Operant Learning.
- vii. What is Spermatogenesis? Briefly describe it in humans.
- viii. Write short note on the importance of Cytoplasm in development.
- ix. What are Multiple Alleles? Briefly describe them with the help of a suitable examples.
- x. Write short note on Replication of DNA.
- xi. What is Speciation? Differentiate between Sympatric and Allopatric Speciation.
- xii. What are Biological Vectors? Give their any two examples.
- xiii. What are Vaccine? Briefly describe their historical back ground.

Section "C"

Marks: 27

Note: Attempt any THREE questions. All questions carry equal marks.

- Q.3 What is Brain? Name its parts and describe their functions.
- Q.4 Describe in detail the pattern of sex-Determination in different organism.
- Q.5 Write a detail note on Transport of carbon dioxide.
- Q.6 Write a detail note on Nitrogen Cycle. Also draw its neat and label diagram.