

Roll Number
In Figures: _____
In Words: _____

**PR XII (01) '16
BIOLOGY (New)
Inter Part-II
(Fresh/Reappear)**

Superintendent
Signature / Stamp:

Fic. No. _____
(For Board's Office use only)

**BIOLOGY (New)
Inter Part-II
(Fresh/Reappear)**

Fic. No. _____
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Time Allowed: 3 Hours

Marks: 85

Note: There are THREE sections in this paper i.e. Section A, B and C.

Attempt Section-A on the same paper and return it to the Superintendent within the given time.

No marks will be awarded for Cutting, Erasing or Overwriting. Marks of Identification will lead to UFM case, Mobile Phone etc are not allowed in the examination hall.

Time Allowed: 20 minutes

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.

- | | | | | | |
|---|-----------------------------|------------------------------|----------------------------|--------------------------------|----------|
| i. Ozone layer is situated in..... | A. Hydrosphere | B. Atmosphere | C. Lithosphere | D. Stratosphere | D |
| ii. Anther culture is also called..... culture. | A. Meristem | B. Pollen | C. Protoplast | D. Callus | B |
| iii. Succession which start on a dry land is..... | A. Hydrosere | B. Psammosere | C. Lithosere | D. None of these | D |
| iv. Innate behaviour is all but | A. Flexible | B. Stereotypic | C. Intrinsic | D. Heritable | B |
| v. An erythroblast is the immediate precursor of a normal..... | A. Fibroblast | B. Chondrocyte | C. Erythrocyte | D. Leucocyte | C |
| vi. Acrosome contains hydrolytic enzymethat enables the sperm to penetrate and enter in egg. | A. Lipase | B. Amylase | C. Hyaluronidase | D. Invertase | C |
| vii. Nicotine is an alkaloid mainly found in.....leaves, also found in other plants of family Solanaceae. | A. Poppy | B. Cannabis | C. Tobacco | D. Pea plant | C |
| viii. Blunt ends are produced by..... Restriction enzymes. | A. E. CoR 1 | B. Bam H1 | C. Kpn 1 | D. Sma 1 | D |
| ix. The cells of bone that help to eat away old bone is..... | A. Osteoblasts | B. Osteoclasts | C. Osteocytes | D. None of these | B |
| x. Inheritance of skin colour in man is controlled by eight pairs of genes which are | A. Co-dominant | B. Linked | C. Assorting independently | D. Multiple alleles | D |
| xi. Sprain is an injury of the | A. Ligament | B. Bone | C. Muscles | D. Joint | A |
| xii. Standard temperature for primer annealing in PCR is | A. 94 °C | B. 54 °C | C. 72 °C | D. All of these | B |
| xiii. Hyperpolarization is caused due to | A. Efflux of K ⁺ | B. Influx of Cl ⁻ | C. Both A and B | D. None of these | A |
| xiv. The bone disorder that lead to loss of normal spinal function and structure is | A. Sclatica | B. Arthritis | C. Cramp | D. Spondylosis | D |
| xv. Kidney health is described in terms of | A. Blood clot | B. Water retention | C. Rate of filtration | D. The number of kidney stones | C |
| xvi. Learning behaviour is all except | A. Non heritable | B. Extrinsic | C. Progressive | D. Stereotypic | D |
| xvii. Embryo implants in theof the uterus. | A. Perimetrium | B. Myometrium | C. Endometrium | D. Cervix | C |
| xviii. The diameter of myofibrils is about | A. 10 - 100 μm | B. 2 - 10 μm | C. 1 - 2 μm | D. 1 - 2 cm | C |

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Note: Time allowed for Section – B and Section – C is 2 Hours and 40 minutes.

Section – B

Marks: 40

Q-II Answer any TEN parts. Each part carries FOUR marks.

1. Write down the signs and symptoms of Aging.
2. Write a short note on Sinusitis.
3. Describe the mechanism of Ultrafiltration.
4. Write down a brief note on Thermogenesis.
5. How transport of CO₂ takes place in the form of Carboxyhaemoglobin?
6. Where do genes reside? Explain.
7. What is Spina? Explain.
8. How do post transcriptional modifications of mRNA occur?
9. Write down about the four types of Aneuploidy?
10. What are the disadvantages of Bottle feeding?
11. Write down a note on Sympatric Speciation.
12. What are the causes of Natural Resources Depletion?
13. Briefly describe Recombinant DNA technology.

Section – C

Marks: 27

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

- Q-III** Write a detailed note on structure of Chromosome.
- Q-IV** Write a detailed note on Gene Expression in Eukaryotes.
- Q-V** Explain Mendel's Law of segregation of gametes.
- Q-VI** Write note on any two of the following.
- (i) Klinefelter's Syndrome.
 - (ii) Turner's Syndrome.
 - (iii) Meningitis.