

VI Semester B.Sc. Examination, May/June 2018 (CBCS) (F+R) (2016-17 and Onwards) ZOOLOGY - VIII 1 to 2 to a line gust a vi Genetics and Biotechnology and self and side (c

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Time: 3 Hours of the last of t

Instructions: 1) Draw labelled diagrams wherever necessary.

2) Answers should be completely in Kannada or English.

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I. Answer any five of the following:

 $(5 \times 3 = 15)$

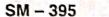
- 1) Write a note on norm of reaction.
- 2) Define:
 - a) Rh factor
 - 3) What is an auguston and account of one august of she and account of one august of the account of one august of the account of the account
 - c) Polygenes.
- 3) List any three applications of blood groups. The second state of the second state o
- 4) Write a note on biological mutagens.
- 5) Mention the names of components of rDNA technology regarded as
 - a) Molecular scissors
 - 5) Define transgenesis, Explain knock out and knock in pulpaloM (d
 - c) Molecular vector.
- 6) Give an account of bioreactors.
- 7) List the applications of stem cells.

PART - B

II. Answer any five of the following:

 $(5 \times 5 = 25)$

- 1) State the law of segregation. Explain it with a suitable example.
- 2) Write notes on:
 - a) Y-linked inheritance
 - b) Criss-cross inheritance.





- 3) Describe cytoplasmic inheritance of coiling of shells in snail.
- 4) Explain CIB method of detection of mutations.
- 5) Define eugenics. Explain any two aspects of negative eugenics.
- 6) Mention the benefits and limitations of embryo transfer.
- 7) What is gene therapy? Explain any two approaches of gene therapy.

PART - C

III. Answer any three of the following:

 $(3 \times 10 = 30)$

the year any five of the following

- With reference to the inheritance of comb shape in fowls, work out the following:
 - A) Homozygous rose comb is crossed with single comb.
 - B) Homozygous pea comb is crossed with single comb.
 - C) Conduct a cross between F₁ of A and B, find the offsprings.
- 2) What is an euploidy? Give an account of one autosomal and one allosomal an euploidy.
- 3) Explain inducible operon concept with a suitable example.
- 4) Write notes on:
 - a) Genic balance theory of AVO: to strenggmook seman entropy and account of
 - b) Sickle cell anaemia.
- 5) Define transgenesis. Explain knock-out and knock-in transgenesis technology in mice.
- 6) Write notes on:
 - a) Hybridoma technology
 - b) DNA fingerprinting.



VI Semester B.Sc. Examination, May/June 2018 (CBCS) (Fresh+Repeaters) (2016 – 17 and Onwards) ZOOLOGY - VIII Animal Physiology and Techniques in Biology

Time: 3 Hours

Max. Marks: 70

- Instructions: 1) Draw labelled diagrams wherever necessary.
 - Answer should be completely either in Kannada or English.

PART – A

I. Answer any five of the following:

 $(5 \times 3 = 15)$

- 1) Write a note on Haldane effect.
- 2) Define ureotelism with an example.
- 3) Write a short note on electrical synapse.
- 4) List any three functions of thyroxine.
- 5) Briefly explain the causes of obesity.
- 6) Mention the significance of fixative in microtechnique.
- 7) Give any three applications of electrophoresis.

PART - B

Answer any five of the following:

(5×5=25)

- 1) Explain the hormonal control of digestive glandular secretions.
- 2) Define oxygen dissociation curve and discuss the effect of carbon dioxide on the same.
- 3) Explain physiology of vision.
- 4) Briefly explain the hormonal control of metamorphosis in insects.
- . 5) Explain the mechanism of osmoregulation in anadromous fish.
 - 6) Give an account of electron microscopy.
 - 7) Write notes on principle and applications of auto radiography.



PART - C

III. Answer any three of the following:

 $(3 \times 10 = 30)$

- 1) Explain carbon dioxide transport.
- 2) Describe the sliding filament theory of muscle contraction.
- 3) Write notes on:
 - a) Neurotransmitters of appropriate This republished in think
 - b) Methods of heat loss in homeotherms.
- 4) With reference to homeostasis explain positive feed back mechanism.

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- 5) List any five hormones of adenohypophysis with one functions each.
- 6) Write explanatory notes on:
 - a) Diabetes mellitus
 - b) Immunoassay.