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M.Sc. (IIIrd Semester) Examination, 2020

BOTANY

(Evolutionary Biology)

Time Allowed : Three Hours

Maximum Marks : 70

Minimum Pass Marks : 25

SECTION - A

Note : Attempt any ten questions. Each question carries one mark. **1×10=10**

Q. 1. Objective type :

Fill in the blanks :

- (i) The major source of variations are _____.
- (ii) Best method to conserve genetic material of wildlife is _____.
- (iii) Now a day's biological reserves are commonly destroyed by _____.

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(2)

- (iv) Mutation theory of de vries explain some of the objections raised against _____ theory.
- (v) One gene - one enzyme hypothesis was proposed by _____.

Multiple choice type :

- (vi) Red Data Books are produced by :
 - (a) IUCN
 - (b) WWF
 - (c) IBWL
 - (d) None of these
- (vii) The Ranthambore National Park is located in :
 - (a) Rajasthan
 - (b) Gujarat
 - (c) U.P.
 - (d) C.G.

(3)

(viii) Best method to conserve genetic material of

wildlife is :

- (a) Cold storage
- (b) Tissue culture
- (c) Seed storage
- (d) Growing in natural habitat

(ix) The national bird of India is :

- (a) Horn bill
- (b) Black swan
- (c) Sparrow
- (d) Peacock

(x) De-vries attributed evolution to :

- (a) Mutation
- (b) Mutagen

(4)

(c) Discontinuous variation

(d) Polygenes

(xi) Sudden change in structure and activity of

gene :

(a) Variation

(b) Mutation

(c) Evolution

(d) None of above

(xii) Kanha National Park is famous for :

(a) Birds

(b) Tigers

(c) Crocodiles

(d) Whale

(5)

SECTION - B

Note : Attempt any five questions. Each question carries
2 marks. **5×2=10**

Q. 2. Very Short Answer Type (25-30 words) :

- (i) What do you mean by in-situ conservation of biodiversity ?
- (ii) Who was the discoverer of mutations ?
- (iii) Explain genetic variation.
- (iv) Give name two endangered species.
- (v) What is alpha diversity ?
- (vi) What is population ?
- (vii) What do you understand by the modern
“Synthetic theory” of evolution ?

(6)

SECTION - C

Note : Attempt any five questions. Each question carries
4 marks. **5×4=20**

Q. 3. Short Answer Type (250 words) :

- (i) Explain the future of biodiversity.
- (ii) Give the name any four endangered species.
- (iii) Explain the major events in evolution.
- (iv) Describe genetic induced variation.
- (v) Describe gene mutation.
- (vi) What are the patterns of biodiversity ?
- (vii) Explain the genetical theory of natural
selection.

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(7)

SECTION - D

Note : Attempt any three questions. Each question carries

10 marks.

3×10=30

Q. 4. Essay Type (more than 500 words) :

- (i) What are the three major threat categories of species ? Describe with examples.
- (ii) Describe the Neo-Darwinisms.
- (iii) Describe the geography of life.
- (iv) Explain the geological fundamentals.

