



K16U 0142



Reg. No. :

Name :

VI Semester B.Sc. Degree (CCSS – Reg./Supple./Improve.)
Examination, May 2016
CORE COURSE IN BOTANY/PLANT SCIENCE
6B13 BOT/PLS : Evolution, Bioinformatics, Paleontology and Plant
Breeding
(2012 Admn. Onwards)

Time : 3 Hours

Max. Weightage : 30

SECTION – A	
i) Choose the correct answer.	
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ii) Theory of natural selection was proposed by	
iii) Keeping introduced material in isolation to prevent diseases	
iv) Evidence of pre historic life	

Answer all. (Questions in bunches of four : Each bunch carries a weightage of 1).

1. Choose the **correct** answer.
 - i) Application of Bioinformatics
 - a) Comparative modeling
 - b) Structure prediction
 - c) Computer aided drug design
 - d) All of these
 - ii) Theory of natural selection was proposed by
 - a) Charles Darwin
 - b) Lamarck
 - c) De Vries
 - d) Giard
 - iii) Keeping introduced material in isolation to prevent diseases
 - a) Emasculation
 - b) Hybridization
 - c) Quarantine
 - d) Introduction
 - iv) Evidence of pre historic life
 - a) Rocks
 - b) Fossils
 - c) Sediments
 - d) None of these

2. Write **true** or **false**.

- i) Sometimes fossilized materials are converted into stones.
- ii) Centers of origin has minimum diversity of species.

P.T.O.



- iii) Hybridization is possible between any sexually reproducing species.
iv) Accession number is same for all sequences.

3. Fill in the blanks.

- i) Science of changing and improving the heredity of plants is _____
ii) Organs that are similar in their structural plan and embryonic development are called _____
iii) Mutation theory was proposed by _____
iv) DDBJ is a database for _____

4. Match the following :

	A	B	C
i	Mesozoic	Premian	Very simple organisms
ii	Cenozoic	Jurassic period	Rise of reptiles
iii	Archeozoic	Quaternary period	Rise of angiosperms
iv	Paleozoic	20,00,000,000 years ago	Civilized man

5. Answer in **one** sentence.

- i) Metabolomics.
ii) CLUSTAL X
iii) Industrial melanism
iv) Mutation.

(5×1=5)

SECTION – B

Answer **any four**. (Differentiate the following. **Each** question carries a weightage of 1).

6. Convergent and divergent evolution.
7. Allopathic and sympatric speciation.
8. Genetic variation and Genetic polymorphism.
9. BLAST and FASTA.
10. Phylogeny and polyploidy.
11. Selection and migration.

(4×1=4)



SECTION – C

Answer **any five**. (Short answer question. **Each** question carries a weightage of 1).

12. Name two fossil pteridophytes.
13. What is PHYLIP ?
14. What is genetic drift ?
15. Explain heterosis.
16. Write about radio carbon dating.
17. Give an account of Macro and Micro evolution.
18. Write about microarray.

(5×1=5)

SECTION – D

Answer **any six**. (Short answer question. **Each** question carries a weightage of 2).

19. Explain molecular phylogenetics.
20. Explain Geological time scale.
21. Give a note on objectives of plant breeding.
22. Explain proteomics and Genomics.
23. Write an account on types of fossils.
24. Write a note on theories about origin of life.
25. Explain Hardy Weinberg Law.
26. Write a note on plant introduction and acclimatization.

(6×2=12)

SECTION – E

Answer **any one**. (Essay type question. **Each** question carries a weightage of 4).

27. Write about major nuclear and protein databases.
28. Give an account on methods of breeding.
29. Explain Natural selection. Write about Neodarwinism.

(1×1=4)