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**PG (NEW) CBCS**  
**M.Sc. Semester-IV Examination, 2020**  
**BOTANY**  
**PAPER: BOT 403A**  
**(MOLECULAR SYSTEMATICS)**

**Full Marks: 40**

**Time: 2 Hours**

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**Answer any one question from your allotted special paper: (400 words)      40X1=40**

1. Describe the concept of cladogram with reference to principle of parsimony.
2. Describe the role of ITS and ISSRs as molecular markers in angiosperm phylogeny.
3. What is numerical systematics? Write down its principles and applications.
4. Write a note on cluster analysis as a tool in numerical systematics.
5. Write down the distribution and phylogeny of insectivorous plants.
6. Define mangroves. Mention their adaptive features.
7. Write a note on adulteration of medicinal herbs.
8. Write a note on digital herbarium highlighting its merits and demerits.
9. Write down the role of DNA barcoding in identification of medicinal plants.
10. Mention different marker genes of cp DNA. Describe one use of rbcL gene in solving nomenclatural dispute in Angiosperm taxonomy.
11. What are RFLP and RAPD? Mention their roles.
12. Write down the botanical names, parts used and general uses of different dye yielding plants.

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