

M.Phil 1st Semester Examination, 2019

LIFE SCIENCE

*(Biodiversity, Conservation and
Application of RS GIS)*

PAPER –LSC-115

Full Marks : 40

Time : 2 hours

Answer all questions

The figures in the right-hand margin indicate marks

*Candidates are required to give their answers in their
own words as far as practicable*

GROUP – A

1. Answer any *four* questions : 2 × 4
- (a) Distinguish between Allopatric Speciation
and Sympatric Speciation.

- (b) Comment on 'slash-and-burn deforestation'.
- (c) Enlist different threats on Biodiversity.
- (d) Mention the names of the biodiversity hotspots of India.
- (e) What do you mean by geoinformatics ?
- (f) What is anthropotechnology ?

GROUP – B

2. Answer any *four* questions : 4 × 4
- (a) What do you mean by CCPI ? What are the sources of GHG emissions ? 2 + 2
 - (b) Highlight the percentage of species extinction for different animal groups as per IUCN Red list. 4
 - (c) Explain Levin's model of metapopulation dynamic mentioning its limitations. 4
 - (d) Enlist different contributory factors for causing perturbation in marine ecosystems and its biodiversity. 4

- (e) Add a note on causes and consequences of tropical deforestation. 4
- (f) What do you mean by species interaction? Cite one example of each – positive, negative and neutral species interaction. 4

GROUP – C

3. Answer any *two* questions : 8 × 2
- (a) (i) Explain the spectral reflectance and emittance properties of materials encountered in remote sensing.
- (ii) What does MODIS stand for? Write down its specific applications and mode of access. 4 + 4
- (b) Explain why India is designated as a Mega-diversity nation. What does novel environment mean? 6 + 2
- (c) State the reasons and effects of global climate change. What should be the strategy to conserve the biological species under such circumstances? 6 + 2
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