

SL No of QP :9333

UPC: 2164001205

Name of the Paper: Viewing and Capturing Diversity in Nature

Paper category: GE-II

Semester II

Time: 2 Hours

Maximum marks-60

Instructions: Write your Roll No. on the top immediately. Attempt any **four questions** in all including question number 1, which is compulsory. All questions carry equal marks. All the parts of a question must be attempted together. Draw well-labelled diagrams and write botanical names wherever necessary.

Q.1 (a) Define the following terms (**any five**) 1x5=5 marks

- (I) Image resolution
- (ii) Analog camera
- (III) Megapixel
- (IV) Succulents
- (V) Estuary
- (VI) Dissection microscope
- (VII) Mutualism

(b) Fill in the blanks (**any five**) 1x5=5 marks

- (I) A..... is the smallest dot that makes up an image on the digital screen.
- (II) The difference between the light pixels and dark pixel is called.....of the image.
- (III) A Camera produces film instead of digital images when taking pictures.
- (IV) The Daguerreotype camera used a plate to process photograph.
- (V)is the ability of plants to alter their morphology in response to the light condition.
- (VI) The ecological interaction in which one species is benefited and other is harmed is called.....
- (VII) are the structures that have the potential to fix nitrogen in *Nostoc*.

(c) Write the full form of the following terms (**any five**) 1x5=5 marks

- (I) TEM
- (II) GIF
- (III) PPI
- (IV) DPI
- (V) DSLR
- (VI) MP
- (VII) CMOS

Q.2 Differentiate between the following (**any three**) 5x3=15 marks

- (I) Working of a smart phone camera and analog camera
- (II) Adaptation and acclimatization
- (III) Macro photography and micro photography
- (IV) Parasitism and mutualism
- (V) SEM and compound microscope

Q.3 Write short notes (**any three**) 5x3=15 marks

- (I) Role of plant pigments in aesthetic appeal
- (II) Working principle of a compound microscope
- (III) Biodiversity sensitization
- (IV) Adaptation in plants adapted to aquatic habitat
- (V) Construction of SLR camera

Q. 4. (a) Comment on the role of digital photography in biodiversity sensitization? 7.5 marks

(b) Draw a well-labelled ray diagram of compound microscope? 7.5 marks

Q.5. (a) Describe the various types of staining techniques used in microscopy and their application. 9 marks

(b) Write the applications of different types of microscopes? 6 marks