b) Write short notes on the following: 3x2=6

i) Blackbody radiation

ii) Radar.

UNIT-V

9. a) Define photogrammetry. Write in detail the planning and execution of aerial photography in flat terrain. 1+7=8

b) Write short notes on the following. 2x3=6

i) Vertical and oblique aerial photographs.

ii) Parallactic angle

iii) Pixels.

10.a) Discuss in detail the scale of aerial photography in mountain regions with suitable diagrams. 5

b) Write briefly on the following: 3x3=9

i) Relief displacement

ii) Stereoscopic view

iii) Elements of photo interpretation in aerial photographs.

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PG ODD SEMESTER EXAMINATION, 2022
held in MARCH, 2023

EARTH SCIENCE

1st Semester

COURSE NO. ESCC - 502

(Palacontology and Remote Sensing)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer any five questions, taking one from each unit

UNIT-I

1. a) What is the significance of pallial sinus? Write about the morphologival modification of 'Byssally attached Bivalve'. 3+4=7

b) What are the different measures taken by gastropoda to strengthen its shell. What is aptyche. 5+2=7

2. a) How the buoyancy of cephalopoda is maintained? Write about different morphology marking the sexual diamorphism in cephalopoda. 5+4=9

b) Write a short note on the 'Oculo-genital system' of echinoids. 5

UNIT-II

3. a) Give examples for the following 1x4=4

i) Calcareous wall microfossil

ii) Siliceous wall microfossil

iii) Phosphate wall microfossil

iv) Organic wall microfossil

b) Write a note on the sampling technique of micropalaeontology. 6

c) Write about different wall microstructure of foraminiferce. 4

4. a) Write an explanatory note on the effect of temperature on foraminiferce. 4

b) How does different types of substrate affect the carapace of ostracoda. 5

c) Write an explanatory note on the tabulation of different plates of Dinoflaggellates. 5

UNIT-III

5. a) Why did plant take so much of time to invade land? 5

b) Write a note on the evolutionary trend of Homo Sapiens. 5

c) Why evolutionary change from fish to amphibian happened? 4

6. a) Write a descriptive note on the 'Gondwana flora'. 7

b) What are the different steps taken by the vertebrate to mark the evolutionary change from land to air. 7

UNIT-IV

7 a) What is electromagnetic radiation? Add a brief note on scattering effects of electromagnetic radiation in atmosphere. 1+4=5

b) Write short notes on the following: 3x3=9

i) Atmosphare Window

ii) Spatial and Spectral resolution

iii) Rayleigh criteria for smooth and rough surfaces in radar image.

8. a) Discuss in detail the special signatures of soil and vegetation in remote sensing. 8

(Turn Over)