MGIS-06

Photogrammetry

Master of Geographic Information System (MGIS-11/16)

Second Year Examination, 2019 (June)

Time : 3 Hours]   **Max. Marks : 80**

Note : This paper is of Eighty (80) marks divided into three (03) sections A, B and C. Attempt the questions contained in these sections according to the detailed instructions given there in.

SECTION–A

(Long Answer Type Questions)

Note : Section 'A' contains four (04) long answer type questions of Nineteen (19) marks each. Learners are required to answer any two (02) questions only.

(2×19=38)

1. Briefly explain about image parallax and its importance in photogrammetry?

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2. What is relative and absolute orientation?Draw suitable diagram for both the terms ?

3. Explain briefly the interior and exterior orientation in photogrammetry. List out the paramenters involved in these process.

4. Briefly explain the importance of projection system in photogrammetry? Write a brief note of orthogonal projection system.

SECTION–B
(Short Answer Type Questions)

Note : Section 'B' contains eight (08) short answer type questions of eight (08) marks each. Learners are required to answer any four (04) questions only.　　(4×8=32)

1. What is the difference between principal distance and focal length of camera?

2. Differentiate between a photo and a map.

3. A camera with a 152 mm focal length takes an aerial photograph from a flying height of 2780m above sea level and the average elevation of the terrain above sea level is 500m. what is the scale of the photograph?

4. What is photo scale?

5. Explain importance of Root Mean Square Error (RMSE) in aerial photogrammetry?

6. Describe the importance of association and pattern in image interpretaion.

7. What Is an ortho-photo?

8. Draw a flow chart to generate an DEM from a stereo pair images.

SECTION–C
(Objective Type Questions)

Note : Section 'C' contains ten (10) objective type questions of one (01) mark each. All the questions of this section are compulsory.   (10×1=10)

Pick up the incorrect statement from the following:

1. High oblique photograph

    (a)   may not include the image of the horizon

    (b)   may have tilt up to 30°

    (c)   may include the image of the horizon

    (d)   None of these.

2. Which of the following is not a key element of visual photo interpretation ?

(a) Tone

(b) Texture

(c) Pattern

(d) Radiometry.

3. What is the fundamental principle of photogrammerty?

(a) Interference

(b) Resection principle

(c) Triangulation

(d) Intersection principle.

4. Accuracy is a term which indicates the degree of conformity of a measurement to its

(a) most probable value

(b) mean value

(c) true value

(d) standard error.

5. The point on the celestial sphere vertically below the observer's position, is called

    (a)   Celestial point

    (b)   Nadir

    (c)   Zenith

    (d)   Pole.

6. The principal line is the line joining the principal point and

    (a)   Nadir

    (b)   Isocenter

    (c)   Perspective centre

    (d)   None of these.

7. Which of the following is not a parameter of interior orientation ?

    (a)   Principal point

    (b)   Fiducial mark coordinates

(c) Focal length

(d) None of these.

8. The parallax of a point on the photograph is due to

(a) length of air base

(b) flying hight

(c) focal length of the camera

(d) All of the above.

9. The flying height of the camera is 1,000m above mean ground level, the distance of the top of a minar from nadir point is 10 cm and the relief displacement of minar is 7.2 mm. the height of the minar is

(a) 82 m

(b) 72 m

(c) 52 m

(d) 62 m

10. An aerial photograph may be assumed as

    (a)   Orthogonal projection

    (b)   Parallel projection

    (c)   None of these

    (d)   Central projection

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