

## PHOTOGRAMMETRIC QUIZ

*Contributed by Gordon B. Willey, Committee on Technical Information*

UNDERScored NUMBER IS PAGE REFERENCE TO THE SOCIETY'S MANUAL OF PHOTOGRAMMETRY WHICH FULLY ANSWERS THE QUESTION. THE CORRECT SELECTIONS OF THE ALTERNATIVES ARE GIVEN ON PAGE 123.

1. The angle at a triangulation station from a reference mark to a substitute station (picture point) is recorded ten minutes of arc in error. If the substitute station is 100 meters from the station, about how great is its error in position? (a) 0.10 meter. (b) 0.30 meter. (c) 0.65 meter. (d) 1.00 meter. 12

2. The Resolving Power of a lens is defined as: (a) A mathematical expression of lens definition, usually the number of lines per millimeter that can be seen clearly enough to count. (b) The ratio of a linear quantity in the image to a corresponding linear quantity in the object. (c) The ratio of the angle subtended at the eye by the image formed by an optical device, to the angle subtended by the object at the naked eye. (d) a measure of the lens distortion. 805

3. In determining latitude and longitude with the prismatic astrolabe an error of one second in time measurement is made. How great an error in longitude results? (a) 5 sec. (b) 10 sec. (c) 15 sec. (d) 25 sec. 8

4. From what point on a tilted photograph taken over mountainous territory are the displacements radial? (a) Nadir. (b) Isocenter. (c) Principal point. (d) No one point. 362

5. About how many hours a day at latitude 25° north, in the winter, is aerial photography for mapping possible without encountering excessive shadows? (a) 2.5 hours. (b) 4 hours. (c) 6 hours. (d) 7.5 hours. 154

6. On what projection are the rectangular coordinate systems for states such as Vermont and Mississippi? (a) Polyconic (b) Transverse mercator (c) Lambert conformal (d) Mercator (e) Stereographic (f) Orthographic (g) Gnomonic. 4, 36

7. The scale at the principal point of an oblique photograph tilted 30° from the vertical and taken with a 6-inch focal length camera is about 1:10,000. What was the approximate (1) flying height and (2) ground distance between the principal point and the nadir point? 257

- (a) 2500 feet.
- (b) 3200 feet.
- (c) 4300 feet.
- (d) 4800 feet.

8. The Rectoblique Plotter is (a) an instrument used in plotting horizontal control, (b) a small portable instrument used for the transfer of planimetric detail from an oblique photograph to the manuscript, (c) an instrument designed to measure horizontal and vertical angles directly on an oblique photograph, or (d) a mechanical adaptation of a graphical method for obtaining true horizontal angles from an oblique photograph. 678

9. Which one of the following is NOT an essential of the stereocomparagraph? (a) stereoscope. (b) measuring device. (c) drawing attachment. (d) parallel motion mechanism. (e) pantograph. 465

10. Complete the following map accuracy specifications as written by the Army Map Service:

All control points which have been utilized in the radial control layout

shall be located within (1) — inches of their true geographic position. At least (2) —% of all identifiable picture points and photographic images of any features which can be identified by examination on the ground and the pictures will appear within (3) — inches of their true geographic position and no identifiable picture points shall be in error by more than (4) — inches.

- |             |           |             |             |
|-------------|-----------|-------------|-------------|
| 1. (a) 0.01 | 2. (a) 75 | 3. (a) 0.02 | 4. (a) 0.05 |
| (b) 0.015   | (b) 80    | (b) 0.05    | (b) 0.10    |
| (c) 0.02    | (c) 85    | (c) 0.07    | (c) 0.15    |
| (d) 0.025   | (d) 90    | (d) 0.09    | (d) 0.20    |
|             |           |             | <u>437</u>  |

### ERRATA

Vol. XI, No. 4, p. 272; The first sentence of the third paragraph should read ". . . group of symbols in the *form* of a map. . . ."

Vol. XI, No. 4, p. 323; The caption for Figure 10 is "The *tilt* parallelogram in operation."

Vol. XI, No. 4, p. 332; The name of *Mr. E. W. Magruder* was omitted from the list of members consulting with Mr. Tewinkel on standard symbols.

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