

**GEOGRAPHIC INFORMATION SYSTEMS
GEOGRAPHIC INFORMATION CENTER
PO BOX 5839
MC ALLEN, TEXAS 78502-5839**

1-800-522-0139

**kh@acnet.net
Copyright 2012**

***** EXAMINATION *****

PHOTOGRAMMETRIC MAPPING

1. **Minimum experience for flying precise photogrammetry is:**
 - a) 25 hours
 - b) 50 hours
 - c) 200 hours
 - d) 400 hours

2. **Minimum experience is required for the:**
 - a) chief photogrammetrist.
 - b) cameraman
 - c) stereoplotter operator
 - d) None of the above.

3. **The camera and its mount shall be checked:**
 - a) each mission.
 - b) once a week.
 - c) once a month.
 - d) one every three months.

4. **Inspection prints not meeting specifications should be marked:**
 - a) with a red pencil.
 - b) with a grease pencil.
 - c) with a scribing machine.
 - d) None of the above.

5. **Minimum blank exposures used at the start of each line is:**
 - a) one
 - b) two
 - c) three
 - d) four

6. **The camera lens systems shall be free of:**
 - a) windows
 - b) exhaust gases
 - c) engine oil
 - d) All of the above.

7. **The most important requirement of substitute photography is:**
 - a) flight speed
 - b) camera shutter speed
 - c) complete coverage
 - d) altitude

8. **The flight log should include:**
 - a) date, crew member names, and project cost.
 - b) date, crew member names, and fuel requirements.
 - c) date, aircraft used, and project name.
 - d) None of the above.

9. **Each flight line shall include:**
 - a) altitude
 - b) fuel expended
 - c) stereoplotter operator
 - d) None of the above

10. **Negatives shall not depart from the specified scale more than:**
 - a) 2%
 - b) 5%
 - c) 10%
 - d) 15%

11. **Each strip of photographs shall extend over the project boundary:**
 - a) 5% or more
 - b) 10% or more
 - c) 15% or more
 - d) 20% or more

12. **Each strip of photographs shall overlap the width by:**
 - a) 5%
 - b) 15%
 - c) 20%
 - d) 55%

13. **Strips along a shoreline shall overlap by at least:**
 - a) 5%
 - b) 10%
 - c) 15%
 - d) 20%

14. **Aerial photography shall be taken between the hours of:**
 - a) 10 A.M. and 2 P.M.
 - b) 9 A.M. and 4 P.M.
 - c) 9 A.M. and sunset
 - d) 8 A.M. and 2 P.M.

15. **The sun angle of the photography is:**
- a) 10 degrees or greater.
 - b) 20 degrees or greater.
 - c) 30 degrees or greater.
 - d) 40 degrees or greater.
16. **Photographs must not contain:**
- a) clouds
 - b) haze
 - c) smoke
 - d) All of the above.
17. **Any two consecutive photographs may not exceed a crab angle of:**
- a) 2 degrees
 - b) 5 degrees
 - c) 7 degrees
 - d) 10 degrees
18. **The tilt angles of any exposure shall not exceed:**
- a) 1 degree
 - b) 2 degrees
 - c) 3 degrees
 - d) 4 degrees
19. **The preferred type of camera lens is**
- a) single
 - b) dual
 - c) single-inverted
 - d) dual inverted
20. **AWAR refers to:**
- a) Average weighted area resolution
 - b) Area weighted average resolution
 - c) Actuated white area resolution
 - d) Actuated white area reference
21. **The two types of control for photogrammetric mapping are:**
- a) basic and photo
 - b) analytical and photo
 - c) basic and analytical
 - d) None of the above
22. **The reference framework consisting of monuments and benchmarks**
- a) is the analytical control
 - b) is the basic control
 - c) is the photo control
 - d) None of the above

23. **Photo control points are:**
- a) the marks in the camera for registration
 - b) actual points appearing in the photos
 - c) computer-generated points from the photos
 - d) None of the above
24. **The accuracy of the basic control is generally:**
- a) of higher order than subsequent photo control surveys
 - b) of lower order than subsequent photo control surveys
 - c) at least first order
 - d) at least second order
25. **Project-related surveys may include:**
- a) property surveys
 - b) photo control surveys
 - c) design surveys
 - d) All of the above
26. **Horizontal basic control may be:**
- a) cross-sections
 - b) profiles
 - c) traverse lines
 - d) All of the above
27. **Vertical basic control may be:**
- a) tide gauges
 - b) elevation bench marks
 - c) a survey of level routes
 - d) All of the above
28. **Basic control may be located by:**
- a) a closed traverse
 - b) side shots
 - c) open traverses
 - d) All of the above
29. **Basic control in remote areas has been established by:**
- a) the Bureau of Land Management
 - b) the National Geodetic Survey
 - c) the US Department of Agriculture
 - d) the US Fish and Wildlife Service
30. **The horizontal control accurately fixes:**
- a) the scale and azimuth of the photography
 - b) the location of critical elevation points
 - c) the location of the summits
 - d) the location of the lowest depressions

31. **The surveyor may examine the photo control point in the**
- a) field using an analygraph
 - b) field using a camera
 - c) field using a small pocket stereoscope
 - d) Any of the above
32. **A brief description of each photo identifiable point**
- a) should be made on the reverse side of the photograph
 - b) should be made in the survey field notes
 - c) should be made on the compiled mosaic
 - d) should be made with a video camera
33. **Control points should not be located at the image format's edge**
- a) because making mosaics becomes difficult
 - b) because vertical resolution is poor
 - c) because horizontal resolution is poor
 - d) because there is poor image resolution and image distortion
34. **Photo control points are rejected when they fall in the outside:**
- a) 5 to 10 per cent
 - b) 10 to 15 per cent
 - c) 15 to 20 per cent
 - d) 20 to 25 per cent
35. **Vertical control points are best located on:**
- a) buildings
 - b) any type of road intersection
 - c) small, flat, or slightly crowned areas
 - d) All of the above
36. **The most demanding requirements for photo control are**
- a) encountered when spatially resecting a photo
 - b) encountered when scaling a stereomodel
 - c) encountered when leveling a stereomodel
 - d) All of the above
37. **The absolute geometric minimum of photo control for compilation**
- a) is three vertical and two horizontal control points
 - b) is four vertical and two horizontal control points
 - c) is three vertical and three horizontal control points
 - d) is three vertical and four horizontal control points
38. **Horizontal control points should be:**
- a) closely spaced
 - b) widely spaced
 - c) at least 500 feet apart
 - d) at least 1000 feet apart

39. **In the neat model, horizontal control points should be:**
- a) at the lower corners of the photo
 - b) at the upper corners of the photo
 - c) at opposite diagonal corners of the photo
 - d) depends on the scale of the photo
40. **The minimum horizontal control points for a rectified photo is:**
- a) one per photo
 - b) two per photo
 - c) three per photo
 - d) four per photo
41. **The minimum horizontal control points for orthophoto mapping is:**
- a) one per stereomodel
 - b) two per stereomodel
 - c) three per stereomodel
 - d) four per stereomodel
42. **The minimum vertical control points for orthophoto mapping is:**
- a) one per stereomodel
 - b) two per stereomodel
 - c) three per stereomodel
 - d) four per stereomodel
43. **The minimum horizontal control points for topographic mapping is:**
- a) one per stereomodel
 - b) two per stereomodel
 - c) three per stereomodel
 - d) four per stereomodel
44. **The minimum vertical control points for topographic mapping is:**
- a) one per stereomodel
 - b) two per stereomodel
 - c) three per stereomodel
 - d) four per stereomodel
45. **The optimum location for photo control points is:**
- a) in the triple overlap area
 - b) in the center of the photo
 - c) in the upper left corner of the photo
 - d) in the upper right corner of the photo
46. **Pre-marked control is difficult to locate in the triple overlap area**
- a) because of existing photo distortion
 - b) because of difficulty in controlling the flight path of the camera
 - c) because the area may change on some stereoplotters
 - d) because of the focal length of the camera

47. **Aerial targets should be:**
- a) flat
 - b) inclined
 - c) dome-shaped
 - d) triangular-shaped
48. **The image size of a target should be:**
- a) 0.02 mm
 - b) 0.05 mm
 - c) 0.07 mm
 - d) 0.09 mm
49. **As soon as feasible after photography has been taken, each target:**
- a) should be covered
 - b) should be inspected
 - c) should be removed
 - d) should be rotated
50. **One of advantage of postmarking photo control points is:**
- a) the control location can be chosen in the triple overlap area
 - b) that distortion is reduced
 - c) scale is controlled more efficiently
 - d) None of the above
51. **Standards for control networks are published by:**
- a) the Department of Interior
 - b) FGCC
 - c) USGS
 - d) the BLM
52. **Procedural specifications are available for:**
- a) trilateration
 - b) traversing
 - c) global positioning systems
 - d) All of the above
53. **The minimum distance accuracy for first-order surveys is:**
- a) 1:10,000
 - b) 1:20,000
 - c) 1:50,000
 - d) 1:100,000
54. **The minimum distance accuracy for second-order, class 1**
- a) surveys is 1:10,000
 - b) surveys is 1:20,000
 - c) surveys is 1:50,000
 - d) surveys is 1:100,000

55. **The minimum distance accuracy for second-order, class II surveys is:**
- a) 1:10,000
 - b) 1:20,000
 - c) 1:50,000
 - d) 1:100,000
56. **The minimum distance accuracy for third-order, class I surveys is:**
- a) 1:10,000
 - b) 1:20,000
 - c) 1:50,000
 - d) 1:100,000
57. **The maximum elevation difference for first-order, class I survey is:**
- a) 0.5 mm/km
 - b) 0.7 mm/km
 - c) 1.0 mm/km
 - d) 1.3 mm/km
58. **The maximum elevation difference for second-order, class I survey is:**
- a) 0.5 mm/km
 - b) 0.7 mm/km
 - c) 1.0 mm/km
 - d) 1.3 mm/km
59. **The maximum elevation difference for first-order, class II survey is:**
- a) 0.5 mm/km
 - b) 0.7 mm/km
 - c) 1.0 mm/km
 - d) 1.3 mm/km
60. **The maximum elevation difference for second-order, class II survey is:**
- a) 0.5 mm/km
 - b) 0.7 mm/km
 - c) 1.0 mm/km
 - d) 1.3 mm/km

**GEOGRAPHIC INFORMATION SYSTEMS
 GEOGRAPHIC INFORMATION CENTER
 PO BOX 5839
 MC ALLEN, TEXAS 78502-5839**

**1-800-522-0139
 kh@acnet.net
 Copyright 2012**

*** ANSWER SHEET *** U5 PHOTOGRAMMETRIC MAPPING	STATE BOARD	COURSE NO.	VALUE
	NJ LS	cc100132	8 PDH
	TX RPLS	482-086	8 PDH
	TN LS	CER-464-10-R	8 PDH
Office Use Only			

FILL IN ONE BOX FOR EACH ANSWER.

	A	B	C	D
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

	A	B	C	D
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

	A	B	C	D
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				

I hereby certify that I studied the course materials, and the above answers are my own. No other person has helped me to complete this exam.

 Signature

 Date

 Printed or typed name

 Seal or Number

**GEOGRAPHIC INFORMATION SYSTEMS
GEOGRAPHIC INFORMATION CENTER
PO BOX 5839
MC ALLEN, TEXAS 78502-5839**

1-800-522-0139

**kh@acnet.net
Copyright 2012**

Name _____

Company _____

Address _____

City _____ **State** _____ **Zip** _____

Telephone _____ **E-Mail** _____

Fax _____ () **24-Hour Fax**

() **Yes** () **No** **If fax and telephone are the same number, shall we call first?**

Mail certificates to above address _____ **check address** _____ **envelope address** _____

State + Specialty + PE Registration number (i.e. TX EE 12389) _____

State + Professional Land Surveying registration number _____

NC (North Carolina) + Specialty + PE Registration number _____

NC (North Carolina) + Land Surveying Registration Number _____

Professional Affiliations _____

Return this page with your answer sheet and a check or money order for \$100 per course. Use one check for each registrant (in your company) taking one or more courses. We accept company checks (if they are your employer's). We do not accept third-party checks or checks outside of your city of residence. Using third-party checks that do not include your name or company name may invalidate your professional development hours being reviewed by an audit process. Add \$5 for same day processing and priority shipping.

Make checks or money orders payable to Geographic Information Systems.

