

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

1-800-522-0139

**kh@acnet.net
Copyright 2010**

***** EXAMINATION *****

THE ELECTRONIC DIGITAL LEVEL

1. **Electronic digital levels use**
 - a) radar
 - b) a sensor system
 - c) reflectors similar to prisms
 - d) All of the above

2. **Electronic digital levels process bar code patterns**
 - a) based on correlation methods
 - b) based on lidar
 - c) based on stereoscopic methods
 - d) None of the above

3. **The first digital level was introduced in**
 - a) 1980
 - b) 1985
 - c) 1990
 - d) 1995

4. **An alternative to determining elevations by electronic digital levels is**
 - a) using differential GPS methods
 - b) using subtense bars
 - c) using gyrotheodolites
 - d) None of the above

5. **Electronic digital levels generally use**
 - a) car batteries
 - b) camcorder batteries
 - c) generators
 - d) Any of the above

6. **Electronic digital levels use**
 - a) a neon light display
 - b) 60-watt light bulbs
 - c) incandescent lights
 - d) a LCD display

7. **Elevation data is stored on**
- a) a PCMCIA card
 - b) an external hard drive
 - c) an internal hard drive
 - d) Any of the above
8. **Positioning the measure button on the center of the level**
- a) reduces the impact on the level when pressing the button
 - b) increases the impact on the level when pressing the button
 - c) allows ease of turning the level
 - d) None of the above
9. **The compensator in an electronic digital level is**
- a) magnetically charged
 - b) magnetically influenced
 - c) magnetically damped
 - d) None of the above
10. **The compensator is affected by**
- a) magnetic fields on the earth
 - b) radioactive fields on the earth
 - c) both a and b
 - d) None of the above
11. **The stability of the circular level is affected by**
- a) light
 - b) temperature
 - c) magnetism
 - d) All of the above
12. **The staff image is captured by a**
- a) high sensitivity CCD linear sensor
 - b) photograph
 - c) low sensitivity CCD linear sensor
 - d) None of the above
13. **Electronic measurement uses**
- a) the spectral range
 - b) the vector range
 - c) the invisible range
 - d) Any of the above
14. **In dark conditions, the staff is illuminated by**
- a) incandescent lamps
 - b) halogen lamps
 - c) either a or b
 - d) Neither a nor b

15. **The process of single measurement consists of**
- a) waiting
 - b) exposure
 - c) coarse and fine correlation
 - d) All of the above
16. **The waiting time for measuring is about**
- a) one second
 - b) three seconds
 - c) five seconds
 - d) seven seconds
17. **The total exposure time for measuring is**
- a) 0.5 seconds to 1 second
 - b) 1 second to 2 seconds
 - c) 2 seconds to 3 seconds
 - d) 3 seconds to 4 seconds
18. **During the exposure, up to**
- a) 12 scans are performed
 - b) 24 scans are performed
 - c) 36 scans are performed
 - d) 48 scans are performed
19. **The typical time for coarse and fine correlation is**
- a) about 0.5 second
 - b) about 1.0 second
 - c) about 1.5 seconds
 - d) about 2.0 seconds
20. **The total typical time for measurement is**
- a) 2 seconds
 - b) 3 seconds
 - c) 4 seconds
 - d) 5 seconds
21. **Repeated measurements are less than the first measurements**
- a) because the exposure time is skipped
 - b) because the waiting time for the compensator is skipped
 - c) because the correlation time is skipped
 - d) All of the above
22. **For distances up to fifty meters, coarse correlation requires**
- a) a full field of view of 2 degrees
 - b) a full field of view of 4 degrees
 - c) a full field of view of 6 degrees
 - d) a full field of view of 8 degrees

23. **For fine correlation, a typical field of view angle of**
- a) 0.8 degree
 - b) 1.1 degrees
 - c) 1.4 degrees
 - d) 1.7 degrees
24. **Measurement modes include**
- a) single measurement
 - b) the mean or median mode
 - c) the mean mode with predefined standard deviation
 - d) All of the above
25. **Measurement data is stored in**
- a) ASCII format
 - b) binary format
 - c) both a and b
 - d) neither a nor b
26. **The data is displayed in**
- a) ASCII format
 - b) binary format
 - c) both a and b
 - d) neither a nor b
27. **Coarse and fine correlation algorithms are tested by**
- a) visual examination
 - b) electronic examination
 - c) software
 - d) Any of the above
28. **Data formats should be**
- a) flexible
 - b) fixed
 - c) random
 - d) None of the above

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

1-800-522-0139
 kh@acnet.net
 Copyright 2010

*** ANSWER SHEET *** U374 THE ELECTRONIC DIGITAL LEVEL	<u>STATE BOARD</u>	<u>COURSE NO.</u>	<u>VALUE</u>
			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				

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 2010**

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.

