

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

1-800-522-0139

**kh@acnet.net
Copyright 2010**

***** EXAMINATION *****

MASONRY STRUCTURAL DESIGN FOR BUILDINGS

1. **Masonry is a field-assembled product that requires**
 - a) an excess of water
 - b) exacting construction control
 - c) an excess of mortar
 - d) None of the above

2. **Unreinforced masonry construction is permitted only in:**
 - a) seismic zone 0
 - b) seismic zone 1
 - c) seismic zone 2
 - d) seismic zone 3

3. **The last major item in the design or construction process is**
 - a) hiring the right contractor
 - b) preparation of materials
 - c) drawing plans
 - d) checking by designer visits to the field

4. **A major item in the design engineers role is:**
 - a) approaches to masonry design/detailing
 - b) minimum contract drawing details requirements
 - c) instructions to the field
 - d) all of the above

5. **The extent of detailing needed on the contract drawings is:**
 - a) different for every contractor
 - b) different for every designer
 - c) different for every building
 - d) none of the above

6. **Grout slump must be in the range specified:**
 - a) usually 8-10 inches
 - b) usually 10-12 inches
 - c) usually 12-14 inches
 - d) usually 14-16 inches

7. **Brick expansion joints must be kept free of:**
 - a) mortar only
 - b) water only
 - c) dirt only
 - d) all material

8. **Most clays are composed mainly of:**
 - a) silica
 - b) alumina
 - c) mud
 - d) both a and b

9. **The width of solid clay units normally ranges from:**
 - a) from 2 to 3 inches
 - b) from 3 to 4 inches
 - c) from 4 to 5 inches
 - d) from 5 to 6 inches

10. **Flexural strength of a masonry unit is determined in:**
 - a) accordance with ASTM C 67
 - b) accordance with ASTM C 68
 - c) accordance with ASTM C 69
 - d) accordance with ASTM C 70

11. **The advantages of lightweight units include:**
 - a) ease of handling
 - b) increased productivity
 - c) reduced dead loads
 - d) all of the above

12. **The total amount of water that a dry unit will absorb:**
 - a) shrinking potential
 - b) moisture content
 - c) absorption
 - d) compressive strength

13. **Can be used in mortar to improve water retentivity:**
 - a) orange
 - b) lime
 - c) coal
 - d) water

14. **A mortar property is:**
 - a) retentivity
 - b) surface texture
 - c) suction
 - d) time

15. **Masonry is reinforced with steel bars or:**
- a) 2x4 lumber
 - b) logs
 - c) joint reinforcement
 - d) none of the above
16. **A fine, white, powdery deposit of water-soluble salts:**
- a) dust
 - b) efflorescence
 - c) florescence
 - d) salt-water residue
17. **Control joints are either:**
- a) flush
 - b) raked
 - c) raked and sealed
 - d) all of the above
18. **Recommended horizontal BEJ joint locations are:**
- a) under shelf angles
 - b) at each floor level
 - c) at points of stress
 - d) all of the above
19. **It is recommended in all masonry construction that:**
- a) cut-end units be used
 - b) closed-end units be used
 - c) open-end units be used
 - d) none of the above
20. **The 1st step in the design of reinforced rectangular sections:**
- a) is to locate the neutral axis
 - b) is to locate the right axis
 - c) is to locate the left axis
 - d) is to locate the mid axis

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 *** U453 MASONRY STRUCTURAL DESIGN FOR BUILDINGS	<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				

I hereby certify that I studied the course materials, and the above answers are my own. No one 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**

(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 the 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) + Professional 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.

