

***** EXAMINATION *****

**CHARACTERIZING POSTIVE PRESSURE VENTILATION
USING COMPUTATIONAL FLUID DYNAMICS**

1. **The process in fire fighting to blow smoke out of a**
 - a) structure is room air distribution
 - b) structure is demand-controlled ventilation
 - c) structure is local exhaust ventilation
 - d) structure is positive pressure ventilation

2. **A branch of fluid mechanics that uses numerical methods and**
 - a) algorithms is direct numerical simulation
 - b) algorithms is detached eddy simulation
 - c) algorithms is computational fluid dynamics
 - d) algorithms is smoothed particle hydrodynamics

3. **Inputs required by a fire dynamics simulator in order to**
 - a) model PPV fans include computational cell size
 - b) model PPV fans include velocity measurement points
 - c) model PPV fans include simulation duration
 - d) All of the above

4. **A rotor inside a tube or conduit to increase the pressure**
 - a) and flow of a fluid is an impeller
 - b) and flow of a fluid is a propeller
 - c) and flow of a fluid is an agitator
 - d) and flow of a fluid is an injector

5. **The scientific visualization program that was developed to**
 - a) display a fire dynamic simulator is heat flux
 - b) display a fire dynamic simulator is smokeview
 - c) display a fire dynamic simulator is multiblocking
 - d) display a fire dynamic simulator is flame suppression

6. **A protective covering or a guard for a piece of machinery**
 - a) is a frame
 - b) is a reservoir
 - c) is a shroud
 - d) is a cabinetry

7. **The small opening that allows fresh air, gas, or smoke to**
 - a) enter or to escape is vent
 - b) enter or to escape is exhaust
 - c) enter or to escape is shroud
 - d) enter or to escape is window

8. **The technique used to solve partial differential equations**
 - a) governing turbulent fluid flow is role play simulation
 - b) governing turbulent fluid flow is merger simulation
 - c) governing turbulent fluid flow is web based simulation
 - d) governing turbulent fluid flow is large eddy simulation

9. **A fire dynamics simulator utilizes material properties of**
 - a) the furnishings
 - b) the walls and floors
 - c) the ceilings
 - d) All of the above

10. **The rapid display of a sequence of images or model**
 - a) model positions is simulation
 - b) model positions is animation
 - c) model positions is replay motion
 - d) model positions is sequencing

11. **The vents are prescribed to the interior dimensions of the**
 - a) shroud
 - b) frame
 - c) exhaust
 - d) window

12. **The slices files are put in the center of the fan at**
 - a) horizontal and vertical directions to visualize velocity
 - b) horizontal and vertical directions to visualize density
 - c) horizontal and vertical directions to visualize flow pattern
 - d) horizontal and vertical directions to visualize flow speed

13. **The secondary motion within a moving fluid is**
 - a) a turbulence
 - b) a vortex
 - c) a downdrafts
 - d) an oscillon

14. **The construction of a square with an area equal to that of a**
 - a) specified surface is curvature
 - b) specified surface is quadrature
 - c) specified surface is trapezoidal
 - d) specified surface is convergence

15. **Having a straight sides, circular ends of equal ends of size**
- a) and a constant circular cross section is dialogical
 - b) and a constant circular cross section is trapezoidal
 - c) and a constant circular cross section is conidial
 - d) and a constant circular cross section is cylindrical
16. **A coordinate used with others to locate a point in space and**
- a) time is horizon
 - b) time is correlation
 - c) time is dimension
 - d) time is coordinate
17. **The NIST fire dynamics simulator is used to simulate**
- a) flame spread resulting from a compartment fire
 - b) temperatures resulting from a compartment fire
 - c) gas floes resulting from a compartment fire
 - d) All of the above
18. **The vents placed to the rear or middle of the shroud, the**
- a) flow pattern will appear horizontal and realistic
 - b) flow pattern will appear linear and unrealistic
 - c) flow pattern will appear vertical and realistic
 - d) flow pattern will appear bilinear and unrealistic
19. **Numerous velocities are examined within FDS and the velocity**
- a) that provided the best result was 17.89 m/s
 - b) that provided the best result was 27.89 m/s
 - c) that provided the best result was 37.89 m/s
 - d) that provided the best result was 47.89 m/s
20. **The smallest unit of an organism and often called the**
- a) building block of life are the cells
 - b) building block of life are the tissue
 - c) building block of life are the fungus
 - d) building block of life are the viruses

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 *** U598 CHARACTERIZING POSTIVE PRESSURE VENTILATION USING COMPUTATIONAL FLUID DYNAMICS	STATE BOARD	COURSE NO.	VALUE
			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 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 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.

