

***** EXAMINATION *****

**IMPROVEMENT IN PREDICTING SMOKE MOVEMENT
IN COMPARTMENTED STRUCTURES**

1. **One thousand femtoseconds is equal to**
 - a) one nanosecond
 - b) one picosecond
 - c) one millisecond
 - d) one second

2. **The model used to calculate complex structures and**
 - a) mechanical systems is a finite element model
 - b) mechanical systems is a statistical model
 - c) mechanical systems is a geocentric model
 - d) mechanical systems is a geologic model

3. **The branch of theory of computation that focuses on classifying**
 - a) computational problems is asymptotic computational complex
 - b) computational problems is descriptive complexity theory
 - c) computational problems is computational complexity theory
 - d) computational problems is quantum complexity theory

4. **The approach to multivariable calculus that is independent of**
 - a) coordinates is two form
 - b) coordinates is volume form
 - c) coordinates is solder form
 - d) coordinates is differential form

5. **The evidence used to deduce a conclusion which does not**
 - a) follow from it is anecdotal evidence
 - b) follow from it is false dilemma
 - c) follow from it is pathetic fallacy
 - d) follow from it is false attribution

6. **The relation that contains functions of only one independent**
 - a) variable is an implicit equation
 - b) variable is an ordinary differential equation
 - c) variable is a Lin-Tsien equation
 - d) variable is a differential algebraic equation

7. **The total amount of energy in a closed system that remains**
- a) constant is the law of conservation of momentum
 - b) constant is the law of conservation of mass
 - c) constant is the law of conservation of energy
 - d) constant is the law of conservation of radiance
8. **The rotation of a rigid body in a frame of reference fixed**
- a) in the rotating body is describe by Boltzmann equation
 - b) in the rotating body is describe by Cauchy equation
 - c) in the rotating body is describe by Hammett equation
 - d) in the rotating body is describe by Euler equation
9. **The waves generated in a fluid medium or at the interface**
- a) between two media are sine waves
 - b) between two media are shape waves
 - c) between two media are transverse waves
 - d) between two media are gravity waves
10. **The equation of state of a hypothetical ideal is**
- a) the ideal gas law
 - b) the ideal gas distribution
 - c) the ideal gas pressure
 - d) the ideal gas fluctuation
11. **The three-dimensional figure formed by six parallelograms**
- a) is a heptahedron
 - b) is a parallelepiped
 - c) is an isohedral
 - d) is a decagonal
12. **The sum of all forms of energy of a system is**
- a) integral energy
 - b) differential energy
 - c) internal energy
 - d) anisotropy energy
13. **Heat transferred between bodies by electromagnetic**
- a) radiation is a convective heat transfer
 - b) radiation is a hydraulic heat transfer
 - c) radiation is a natural heat transfer
 - d) radiation is a radiative heat transfer
14. **The mechanism of heat transfer occurring because of bulk**
- a) motion of fluids is convective heat transfer
 - b) motion of fluids is hydraulic heat transfer
 - c) motion of fluids is natural heat transfer
 - d) motion of fluids is radiative heat transfer

15. **The mass of a closed system remain constant over time regardless**
- a) of the processes is the law of conservation of momentum
 - b) of the processes is the law of conservation of mass
 - c) of the processes is the law of conservation of energy
 - d) of the processes is the law of conservation of radiance
16. **The relative measure of its efficiency at allowing fluid flow**
- a) is the complex fluid of a device
 - b) is the fluid parcel of a device
 - c) is the flow coefficient of a device
 - d) is the fluid pressure of a device
17. **The use of powered equipment such as fans and blowers to**
- a) move air is called natural ventilation
 - b) move air is called infiltration ventilation
 - c) move air is called seasonal ventilation
 - d) move air is called mechanical ventilation
18. **The adjective referring to the arranging of layers is**
- a) stratified
 - b) partitioned
 - c) divided
 - d) spatial
19. **Mechanical ventilation systems typically involve pressures**
- a) about 1-100 Pa
 - b) about 100-1000 Pa
 - c) about 1000-10000 Pa
 - d) about 10000-100000 Pa
20. **The instability of an interface between two fluids of**
- a) different densities is the Crow instability
 - b) different densities is the Rayleigh-Taylor instability
 - c) different densities is the Weibel instability
 - d) different densities is the Taylor-Coutte instability

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