

***** EXAMINATION *****

COMBUSTION OF OIL ON WATER

1. **An alkane with one or more rings of carbon atoms in**
 - a) its chemical structure is a cycloalkanes
 - b) its chemical structure is a cyclopropanes
 - c) its chemical structure is a cyclopentanes
 - d) its chemical structure is a cyclobutanes

2. **The requirements for equal velocities in gas**
 - a) sampling is called isotope
 - b) sampling is called isokinetic
 - c) sampling is called isolder
 - d) sampling is called isoleucine

3. **The pressure measurement instrument used to measure fluid**
 - a) flow velocity is a radiometer
 - b) flow velocity is a barometer
 - c) flow velocity is a pitot tube
 - d) flow velocity is a photometer

4. **The device for measuring the radiant flux of**
 - a) electromagnetic radiation is radiometer
 - b) electromagnetic radiation is barometer
 - c) electromagnetic radiation is pitot tube
 - d) electromagnetic radiation is photometer

5. **An instrument for measuring light intensity or optical**
 - a) properties of solutions or surfaces is a radiometer
 - b) properties of solutions or surfaces is a barometer
 - c) properties of solutions or surfaces is a pitot tube
 - d) properties of solutions or surfaces is a photometer

6. **The filter that reduces light of all wavelengths or colors**
 - a) equally is an atomic line filter
 - b) equally is an interference filter
 - c) equally is a neutral density filter
 - d) equally is a machine vision optical filter

7. **The molecular substances that are found in crude oil along with**
- a) resins, aromatic hydrocarbons and alkanes are connate fluids
 - b) resins, aromatic hydrocarbons and alkanes are asphaltenes
 - c) resins, aromatic hydrocarbons and alkanes are bitumens
 - d) resins, aromatic hydrocarbons and alkanes are Louann salts
8. **A geometric mean described by how spread out are a set of numbers**
- a) having a preferred average is a geometric standard deviation
 - b) having a preferred average is a median absolute deviation
 - c) having a preferred average is a relative standard deviation
 - d) having a preferred average is a root mean square deviation
9. **The isotopologue of chloroform whose hydrogen atom was**
- a) replaced with deuterium isotope is deuteromethanol
 - b) replaced with deuterium isotope is deutorochloroform
 - c) replaced with deuterium isotope is deutoroacetone
 - d) replaced with deuterium isotope is deutorobenzene
10. **The science of fluids at rest and is a sub-field within fluid**
- a) mechanics is hydrodynamics
 - b) mechanics is hydrologic
 - c) mechanics is hydrostatics
 - d) mechanics is hydraulics
11. **An operator that measures the magnitude of a vector fields sink**
- a) or source at a given point is the gradient
 - b) or source at a given point is the laplacian
 - c) or source at a given point is the convergence
 - d) or source at a given point is the divergence
12. **A concept used in fluid dynamics is**
- a) vorticity
 - b) velocity
 - c) density
 - d) conductivity
13. **The composite velocity near water level is calculated on a**
- a) uniform 10 x 10 grid within the spill area
 - b) uniform 50 x 50 grid within the spill area
 - c) uniform 70 x 70 grid within the spill area
 - d) uniform 100 x 100 grid within the spill area
14. **One thousand watts is equal to**
- a) one gigawatt
 - b) one kilowatt
 - c) one megawatt
 - d) one terawatt

15. **One million watts is equal to**
- a) one gigawatt
 - b) one kilowatt
 - c) one megawatt
 - d) one terawatt
16. **The radiation of heat and light in the form of rays or waves**
- a) is thermal radiation
 - b) is thermal conduction
 - c) is thermal diffusion
 - d) is thermal emission
17. **A type of small gas laser often used in laboratory**
- a) demonstration of optics is a carbon dioxide laser
 - b) demonstration of optics is a helium-neon laser
 - c) demonstration of optics is a nitrogen laser
 - d) demonstration of optics is an ion laser
18. **The thermomigration or Ludwig-Soret effect is also called**
- a) thermoelectric
 - b) thermodynamic
 - c) thermophoresis
 - d) thermolysis
19. **The property that an object or a thing has of itself is**
- a) a static property
 - b) a forensic property
 - c) an extrinsic property
 - d) an intrinsic property
20. **The imaginary part of the complex index of refraction that**
- a) relates to light absorption is an extinction coefficient
 - b) relates to light absorption is a ballistic coefficient
 - c) relates to light absorption is a transmission coefficient
 - d) relates to light absorption is a partition coefficient

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