3RD TERM SECOND C.A.T

JSS2 BASIC SCIENCE

1. Which of the following is not a petrochemical? A. Nylon B. benzene C. plastics D. water
2. The refined crude oil product used as aviation fuel is A. bitumen B. kerosene C. petroleum ether D. ethane
3. Crude oil is a mixture of A. silt B. clay C. hydrocarbon D. sediments
4. The following are importance of crude oil except A. provision of employment B. distillation C. industrialization D. provision of energy
5. The major source of hydrocarbon A. crude oil B. kerosene C. rock D. nylon
6. An example of a liquid fossil fuel is A. petrochemicals B. kerosene C. water D. crude oil
7. Which of the following is not a chemical substance? A. stone B. gold C. paint D. sugar
8. A chemical substance can exist in the form of I. Solid II. Liquid III. Gas A. I only B. I and II only C. I, II and III only D. III only
9. Which of these is an agrochemical? A. perfumes B. fertilizers C. drugs D. body cream
10. Each class of hazardous chemical has a warning pictorial symbol known as A. trade mark B. trade symbol C. danger symbol D. chemical symbol

THEORY

1. Define Chemical (b) List the classification of chemical and state one example each
2. What are safety measure? (b) state 4 safety measures to be taken when using chemicals

SSS1 PHYSICS

1. Young’s modulus of elasticity is the ratio of stress to strain, provided the load does not exceed the A. stress limit B. elastic limit C. yield point D. breaking point.
2. A car starts from rest and accelerates uniformly for 2 seconds to cover a distance of 3m. Calculate the acceleration of the car. A. 9m/s-2 B. 3 m/s-2 C. 1.5 m/s-2 D. 0.8 m/s-2
3. A spring stretched by 0.1m when a force of 20N is applied to it. Calculate the elastic potential energy of the spring. A. 1J B. 0.1J C. 2J D. 20J
4. Materials that can be stretched and still return to their original forms when stressed are removed are said to be A. elastic B. elastomer C. plastic D. thermoplastic
5. A stone of mass 0.8kg is thrown upward with a velocity of 60m/s. calculate the potential energy attained at the maximum height (g = 10m/s2) A. 2450J B. 1000J C. 1440J D. 4440J
6. A boat accelerate uniformly from rest at 10m/s2, what distance will it cover in 10s? A. 1000m B. 10m C. 100m D. 500m
7. Which of the following does the working of a blotting paper depend on? A. diffusion B. viscosity C. osmosis D. capillarity
8. Which of the following is NOT a disadvantage of friction? A. it enables vehicles to stop B. it causes unwanted heat in machines C. it reduces efficiency of a machine D. it opposes motion
9. Calculate the energy stored in a stretched spring of spring constant 1 x 104N/m when a force of 200N is applied to its end. A. 2000J B. 200J C. 0.2J D. 2.0J
10. Which of the following prevents loss of heat by radiation in a thermo flask? A. vacuum B. cork stopper C. cork supports below the flask D. silvered walls

THEORY

1. What is capillarity (ii) Why does water wet glass and mercury does not (iii) State 2 application of capillarity
2. A spiral spring of natural length 20cm has a scale pan hanging freely in its lower end. When an object of mass of 40g is placed in the pan, its length becomes 21.80cm. when another object of mass 60g is placed in the pan, the length becomes 22.05cm. calculate the mass of the scale pan

SS2 PHYSICS

1. A vapor whose molecules are in dynamic equilibrium with those of its own liquid is said to be A. unsaturated B. gaseous C. saturated D. diffused
2. A rainbow is formed when sunlight is incident on water droplet suspended in the air due to A. diffraction B. refraction C. dispersion D. interference
3. Which of the following statements about the 3rd overtone of a vibrating air column of an open pipe is correct? It has A. 4 nodes B. 5 nodes C. 3 antinodes D. 4 antinodes
4. Consider the wave equation: y = 10 sin 7 (x -50t). what does the number 10 in the equation represent? A. Acceleration B. speed C. Amplitude D. Wavelength.
5. Plane waves passing through a narrow gap emerge as circular waves. This phenomenon is known as A. interference B. dispersion C. refraction D. diffraction
6. Two tuning forks of frequencies 256Hz and 260Hz are sounded close to each other. What is the frequency of the beats produced? A. 2Hz B. 4Hz C. 8Hz D. 258Hz
7. The absolute refractive indexes of glass and water are and respectively. The refractive index at the interface when a ray travel from water to glass is A. B. C. D.
8. A uniform metre rule balance horizontally on a knife edge at the 25cm mark, when a mass of 30g is hung at the 10cm mark. Calculate the mass of the ruler. A. 30g B. 18g C. 12g D. 6g
9. Which of the following is an example of a body in an unstable equilibrium A. Ball in a bowl B. cone resting on its side C. cylinder lying on its side D. egg on an inverted spherical bowl.
10. A spring stretched by 0.1m when a force of 20N is applied to it. Calculate the elastic potential energy of the spring. A. 1J B. 0.1J C. 2J D. 20J

THEORY

1. A sound pulse sent vertically downwards into the earth is reflected from two different layers of earth such that the echoes are heard after 1.2s and 1.4s. Assuming the speed of the pulse is 2000m/s, calculate the distance between layers.
2. Describe with the aid of a diagram using a triangular prism how dispersion occur (b) Differentiate among primary, secondary and complementary colour