



UNIVERSITY OF UYO, UYO
POST-UTME SCREENING EXERCISE 2006/2007 SESSION
PHYSICS 2006-2007

1. Which of the following devices are used to measure pressure? I Aneroid barometer, II hydrometer, II hygrometer, IV manometer (a) I and III (b) II and III (c) III and IV (d) I and IV
2. A piece of wood of mass 40g and uniform cross sectional area of 2cm^2 floats upright in water. The length of the wood increased is (a) 8cm (b) 40cm (c) 20cm (D) 2cm
3. The pressure on the gas of a constant gas thermometer at the ice point is 325mm of mercury and at the steam point 875mm of mercury. Find the temperature when the pressure of the gas is 190mm of mercury (A) 30k (b) 243k (c) 300k (d) 303k
4. A column of air of 10cm long is trapped in a tube at 27°C . what is the length of the column at 100°C (a) 12.4cm (b) 13.7cm (c) 18.5cm (d) 37.0cm
5. A mass of gas at 70°C and 70cm of mercury has a volume of 1200cm^3 . Determine its volume at 270°C and pressure of 75cm of mercury (a) 1200cm^3 (b) 1378cm^3 (c) 4329cm^3 (d) 4625cm^3
6. An electric heater is used to melt a block of ice of mass 1.5kg. If the heater is powered by a 12v battery and a current of 20A flows through the coil, calculate the time taken to melt the block of ice. (Specific latent heat of fusion of ice = $336 \times 10^3 \text{ J/kg}$) (a) 76.0min (c) 35.0min (c) 21.0min (d) 2.9min
7. From the kinetic theory of gases temperature is a (a) form of energy and is proportional to the total kinetic energy of the molecules (b) form of energy and is proportional to the average kinetic energy of the molecules (c) Physical property and is proportional to the average kinetic energy of the molecules.
8. Light of wavelength $5000 \times 10^{-8} \text{ m}$ travels in free space with a velocity of $3 \times 10^8 \text{ ms}^{-1}$. What is its wave length in a glass of refractive index 1.5? (a) $3333 \times 10^{-8} \text{ cm}$ (b) $500 \times 10^8 \text{ cm}$ (c) 666×10^8 (d) 75000×10^8 .
9. an object is placed $5.6 \times 10^2 \text{ cm}$ in front of a converging lens of focal length 1.0×10^{-1} , the image formed is (a) real, erect, and magnified (b) Virtual, erect and magnified (c) real, inverted and magnified (d) virtual, erect and diminished.
10. The magnification of the image of an object placed in front of a convex mirror is $1/3$, if the radius of curvature of the mirror is 24cm, what is the

- distance between the object and its image? (a) 8cm (b) 16cm (c) 24cm (d) 32cm.
11. The plane mirrors in a kaleidoscope are usually placed (a) at an angle of 60° (b) parallel to one another (c) perpendicular to one another (d) at an angle of 45°
12. A far-sighted person cannot see objects that are less than 100cm away. If this person wants to read a book at 25cm, what type and focal length of lens does he need? (a) convex, 20cm (b) concave, 20cm (c) convex, 33cm (d) concave, 33cm.
13. When a yellow card is observed through a blue glass, the card would appear (a) black (b) green (c) red (d) white
14. Dispersion of light by a glass prism is due to the (a) different hidden colours of the glass (b) different speeds of the various colours in glass (c) defects in the glass (d) high density of glass.
15. Which of the following pairs is NOT part of the electromagnetic spectrum?
I. radio waves II. Beta rays III. Gamma rays IV. Alpha rays (a) I and III (d) II and IV.
16. The insulated charged spheres of different sizes and carrying opposite charges are connected together by a metallic conductor. Current will flow from one sphere to the other until both spheres (a) carry the same magnitude and sign of charge (b) are at the same potential (c) are at the same temperature (d) are of the same size.
17. When a number of identical small magnets are arranged in a line, the strength of the resultant magnet (a) is a largest when they are arranged end to end (b) is greatest when they are arranged parallel with like poles adjacent to each other (c) depends only on the number of magnets provided they are parallel (d) is greater when the magnets are arranged on a wooden surface than on a metal surface.
18. A bar magnet is most effectively demagnetized by (a) placing it in a N-S position and hitting it with a hammer (b) subjecting it to an electric current from a battery (c) bringing its north pole in contact with the north pole of a very strong magnet (d) heating the magnet.
19. The resistance of a 5cm uniform wire of cross-sectional area $0.2 \times 10^{-6} \text{m}^2$ is 0.425Ω . What is the resistivity of the material of the wire? (a) $1.10 \times 10^{-6} \Omega \text{m}$ (b) $4.25 \times 10^{-6} \Omega \text{m}$ (c) $2.40 \times 10^{-6} \Omega \text{m}$ (d) $1.70 \times 10^{-6} \Omega \text{m}$.
20. Three resistors with resistance 250Ω and $1 \text{k}\Omega$ are connected in series. A 6V battery is connected to either end of the combination. Calculate the potential difference between the ends of the 250Ω resistor (a) 0.20V (b) 0.86V (c) 1.71V (d) 3.34V

21. In a sound wave in air, If the adjacent rarefactions and compressions are separate by a distance of 17cm. If the velocity of the sound wave is 340ms^{-1} , determine the frequency (a) 10HZ (B) 20HZ (C) 1000HZ (D) 5780HZ.
22. Which of the following is a set of vectors? (a) Force, mass and moment (b) acceleration, velocity and moment (c) mass, weight and density (d) mass, weight and density
23. The magnitude of the resultant of two mutually perpendicular forces, F_1 and F_2 is 13N. The magnitude of F_1 is 5N, what is the magnitude of F_2 ? (a) 2.6N (b) 8.0N (c) 12.0N (d) 18.0N
24. Two points on a velocity have co-ordinates 95s, 10ms^{-1} and 10s Calculate the mean acceleration between two points (a) 0.67ms^{-2} (b) 0.83ms^{-2} (c)
25. A block and tackle system is used to lift a load of 20N through a vertical height of 10m. If the efficiency of the system is 40%, how much work is done against friction? (a) 80J (b) 120J (c) 300J (d) 500J

ANSWERS TO 2006/2007-PHYSICS

**1D 2C 3C 4A 5C 6B 7D 8D 9B 10D 11A 12A 13A 15D 16B 17B 18D 19D 20B 21C
22B 23C 24A 25B**



**UNIVERSITY OF UYO, UYO
POST-UTME SCREENING EXERCISE 200/72008 SESSION
PHYSICS 2007/2008**

1. The saturated vapour pressure of a liquid increases as the (a) Volume of the liquid increases (b) volume of the liquid decreases (c) temperature of the liquid increases (d) temperature of the liquid decrease.
2. The absolute temperature of a perfect gas is proportional to the average (a) potential energy of the molecules (b) separation between the molecules (c) kinetic energy of the molecule (d) velocity of the molecules
3. A room is heated by means of charcoal fire. All occupants of the room standing away from the fires is warmed mainly by (a) convection (b) radiation (c) conduction (d) reflection

4. A boy timed 30 oscillations of a certain pendulum thrice and obtained 1 min. 10s 1min, 10s min 12s and 1min 7s respectively. The mean period of the pendulum is (a) 0.14s (b) 0.43 (c) 2.35 (d) 6.97s
5. Which of the following is TRUE of light and sound waves? (a) They both transmit energy (b) they both need a medium for propagation (c) they are both transverse wave (d) their viscosity in air are equal
6. The image in a pin-hole camera is (a) erect and formed by refraction through a lens (a) erect and formed by refraction through means (b) virtual and formed by dispersion (c) erect and gets sharper as the hole becomes larger (d) inverted and formed by the light from each point traveling in a straight line.
7. When a plane mirror at which a ray of incident is rotated through an angle, the reflected ray will be rotated through (a) $\frac{1}{2}\theta$ (b) θ (c) 2θ (d) 3θ
8. a trough 12.0cm deep is filled with water of refractive index $\frac{4}{3}$. By how much would a coin at the bottom of the trough appear to be displaced when viewed vertically from above the water surface? (a) 3.0cm (b) 6.0cm (c) 9.0cm (d) 16.0cm
9. In a ray diagram for a thin converging lens, a ray that is not parallel to the optic axis but passes through the optic centre will (a) Pass through un deviated (b) pass through the centre of curvature after refraction (c) emerge parallel to the principal axis (d) pass through the principal focus after refraction.
10. Which of the following correctly describes the image of an object , 4cm from a diverging lens of focal length 12cm? (a) the image is virtual, 3cm in front of the lens (b) the image is real, 6cm in front of the lens (d) the image is real, 3cm in front of the lens.
11. Two tuning forks of frequencies 256HZ are sounded close to each other. What is the frequency of the beats produced? (a) 2HZ (b) 4Hz (c) 8Hz (d) 258Hz.
12. A man hears his echo from a nearby hill 2s after he shouted, if the frequency of his voice is 260HZ and the wavelength is 1.29m, how far is the hill/ (a) 330.0m (b) 335.5m (c) 660.0m (d) 670.8m.
13. When the bottom tip of vibrating tuning fork is held in contact with a wooden box, a louder sound is heard. This phenomenon is known as (a) beats (b)echoing (c) resonance (d) reverberation.
14. Which of the following statement is CORRECT about the earth's magnetic field? (a) the angle of the dip is the angle which freely suspended magnet makes with the vertical (b) the angle declination is the angle between magnetic meridian and the geographic meridian (c) the angle of declination is the angle which is magnetic compass makes with the magnetic meridian (d) The angle of inclination the difference between the angle of declination.

15. An insulated rod when rubbed with a material acquires (a) negative charge if it is made of glass and rubbed with silk (b) no charge if its is made of glass and rubbed with fur (c) no charge if it is made of copper and rubbed with the silk (d) a positive charge if it is made of cooper and rubbed with fur.
16. Which of the following is Obeys Ohm's Law? (a) glass (b) diode (c) all electrolytes (d) all metals
17. Am equipment whose power is 1500w and resistance is 375 ohms would draw a current of (a) 0.10A (b) 2.00A (c) 4.00A (d) 77.5.5A
18. To convert an alternating current dynamo into a direct current dynamo, the (a) number of turns in the coil is increased (b) strength of the field magnet is increased (c) slip rings are replaced with a split commuter (d) coil is wound on a soft iron armature.
19. If current carrying coil is mounted on a metal frame, the back e.m.f. induced in the coil causes (a) inductance (b) eddy currents (c) electromagnetism (d) dipole moment
20. The electrochemical equivalent of platinum is $5.0 \times 10^{-7} \text{kgC}^{-1}$ To place put 1.0kg of platinum, a current of 100A must be passed through an appropriate vessel for (a) 5.6 hours (b) 56 hours (c) 1.4×10^4 hours (d) 2.0×10^4 hours.
21. Which of the following statements are TRUE of isotopes? I. isotopes of an element have the same chemical properties because they have the same chemical properties because they have the same number of electrons. II Isotopes of elements are normally separated using [physical properties III. Isotopes of an elements have the same number of protons in their nuclei (a) I and II only (b) I and III only (c) II and III (d) I II and III
22. When an atom loss or gains a charge it becomes (a) an electron (b) an ion (c) a neutron (d) a proton
23. 4g of radioactive radiation half –life 10 days is spilled on a laboratory flood. How long would it take to disintegrate 3.5g of materials (a) 11/14 days (b) 83/4 days (c) 30 days (d) 80 days
24. Which of the following are TRUE for decay I. mass number decreases by four II. Atomic number decreases by too II mass number does not change (a) I and II only (b) II and only (c) and II only (d) I, II and III.
25. which of the following phenomena is called photoelectric effect (a) High energy electrons impinge on a metallic anode which then emits protons (b) a high energy proton emits protons as it is slowed down (a) a metal absorbs quanta of light and then emits electrons (d) two electrons are created from a quantum of light.

ANSWERS TO 2007/2008-PHYSICS

1C 2C 3B 4C 5A 6D 7C 8A 9A 10B 11C 12 B 13C 14B 15B 16C 17B 18C 19B 20A
21B 2B 23C 24A 25C



UNIVERSITY OF UYO, UYO

**POST-UTME SCREENING EXERCISE 2008/2009 SESSION
PHYSICS 2008/2009**

1. Which of the following materials is a conductor? (a) plastic (b) Sodium (c) wax (d) Glass
2. The charge carries in gases are (a) ions only (b) electrons and holes (c) electrons only (d) electrons and ions
3. The time it will take a certain radioactive materials with a half-life of 50 days to reduce to $1/32$ of its original numbers is (a) 300days (b) 150 days (c) 20days 250days.
4. The amount of energy released when 0.3kg of ranium burnt completely is: (a) $4.5 \times 10^{16} \text{J}$ (b) 1.5V 1016 (c) $1.5 \times 10^{16} \text{J}$ (d) $4.5 \times 10^6 \text{J}$
5. The current in a reverse-biased junctions due to (a) electrons (b) majority carriers (c) holes (d) Minority carriers .
6. If two inductors of inductance 1 and 6H are arranged in series, the total inductance is: (a) 18.0H (b) 9.0H (c) 2.0H (d) 0.5H
7. The north pole of a magnet can never be separated from the south pole because of a property known as (a) magnetic dipole (b) magnetic octopole (c) magnetic monopole (d) magnetic quadrupole
8. A force of 200N acts between two objects at a certain distance apart. The value of the force when the distance is halved is (a) 100N (b) 200N (c) 800N. (d) 400N
9. A converging lens has a power of 4.0 dioptres. Determine its focal length (a) 0.25m (b) 0.03m (c) 5.00m (d) 2.5m
10. The process whereby a liquid turns spontaneously into vapour is called (a) evaporation (b) repulsion (c) boiling (d) sublimation
11. A stone of mass m kg is held h meters above the floor for 50s. the work done is joules over this period is: (a) $m \cdot h$ (b) mgh (c) mg/h (d) 0
12. An inclined plane which makes an angle of 30° with the horizontal has a velocity ratio of: (a) 0 (b) 1 (c) 0.866 (d) 0.50

13. A wave disturbance traveling in and enters a medium in which its velocity is less than that in air. Which of the following statements is true about the wave in the medium? (a) both the frequency of the wave and the wavelength and decreased (b) the frequency of the wave is decreased while the wavelength is increased (c) the frequency of the wave is unaltered while the wavelength decreased (d) the frequency of the wave is decreased while the wavelength is unaltered
14. Shadows and eclipse result from the (a) refraction of light (b) rectilinear propagation of light (c) diffraction of light (d) reflection of light.
15. What must be the distance between an object and a converging lens of focal length 20cm to produce an erect image two times the object height? (a) 20cm (b) 15cm (c) 10 cm (d) 5cm.
16. When light is incident on an object which is magenta in colour, which of the following colours would be absorbed? (a) Red and blue (b) green only (c) red and green (d) red only
17. If it takes 5/0 hours to drain a container of 540.0m³ of water, what is the flow rate of water from the container in kgs⁻³? Density of water = 1000kgm⁻³ (a) 32.4 (b) 31.5 (c) 30.8 (d) 30.
18. A motor vehicle is brought to rest from a speed of 15ms⁻² in 20seconds. Calculate the retardation. (a) 0.75ms⁻² (b) 1.33 ms⁻² (c) 5.00 ms⁻² (d) 7.50 ms⁻²
19. Which of the following is TRUE of a particle moving in a horizontal circle with constant angular velocity? (A) the energy is constant but the linear momentum varies (b) the linear momentum is constant but the energy varies (c) both energy and linear momentum are constant (d) the speed and the linear velocity are both constant.
20. The melting point of Naphthalene is 780C. What is the temperature in Kelvin? (a) 100k (b) 351k (c) 378k (d) 444k
21. In a room saturated with water vapour. The temperature of the room must be (a) at 00C (b) above the dew point (c) at 1000C. below or at the dew point
22. The fundamental frequency of vibration of a sonometer wire may be halved by (a) doubling the length of the wire (b) doubling the mass of the wire (c) Reducing the tension by half (d) reducing the absolute temperature by half
23. If the Nigerian flag (green, white, green) is viewed in pure yellow light, which of the following colours would be observed on the flag (a) Green, yellow, green (b) red, yellow, red (c) black, yellow, black (d) green white, green
24. When a biro pen rubbed on a dry silk cloth is moved very close to a piece of paper. This is because both the pen and the cloth are magnetized (b) the pen is magnetized but the cloth is not (c) the pen is charged when the cloth is magnetized (d) both the pen and the cloth are charged.

25. If two parallel conductors carry currents flowing in the same direction, the connected with (a) attract each other (b) repel each other (c) both move in the same direction (d) both have no effect on each other

ANSWERS TO 2008/2009-PHYSICS

1B 2D 3B 4D 5A 6C 7A 8A 9A 10A 11B 12C 13A 14B 15C 16B 17D 18 19B 20B 21B 22C 23C 24D 25C



**UNIVERSITY OF UYO, UYO
POST-UTME SCREENING EXERCISE 2009/2010 SESSION
PHYSICS 2009/2010**

INTRODUCTION: From the option lettered A-D pick the correct answers and shade accordingly

1. A girl warming water in a kettle by means of charcoal fire receives the warm of the fire by (a) Convection (b) absorption (c) conduction (d) radiation
2. A thermometer has its stem marked in millimeter instead of degree Celsius. If the lower fixed point is 5mm and the upper fixed point is 85mm, what is the temperature, in Celsius when the thermometer reads 25mm? (a) 30°C (b) 25°C (c) 32.5°C (d) 7200°C
3. How much heat is required to change 2kg of ice at 0°C to water at the same temperature specific latent heat of fusion of ice = 33600 J/kg (a) 6.72×10^5 J (b) 10.08×10^5 J (c) 22.42×10^5 J (d) 1.68×10^5 J
4. Which of the following is a good absorber of heat (a) white glass (b) Black cloth (c) white roofing sheet (d) silver coated cup
5. The distance between two successive crests is called (a) amplitude (b) node (c) wavelength (d) phase difference
6. The velocity of sound in a medium is 320 m/s. If the sound is propagated with a frequency of 80 Hz, what is its wavelength? (a) 50 m (b) 6.0 m (c) 10.0 m (d) 40 m
7. An image which can be formed on a screen is said to be (a) blurred (b) real (c) virtual (d) inverted
8. Which of the following is a color in white light? (a) red (b) (c) orange (d) magenta
9. The magnification of a lens is 4. If the height of an object is what is the height of the image? (a) 60 cm (b) 48 cm (c) 24 cm (d) 0.40 cm.
10. The critical angle in a medium is 30°. What is the refractive index of the medium? (a) 2.0 (b) 1.5 (c) 1.2 (d) 1.3
11. Calculate the total resistance in the circuit shown below A

12. A melectric motor run under a p.d of 40v and take a current of 1.5 from the supply. What energy is used up by the motor in 50 seconds A. 3000J B. 15000J C. SSOK D. 1350).
13. Which of the following materials obey ohm's law of electricity? A. metals B. semiconductors C. liquids D. insulators.
14. Which of the following observations is not an effect of surface tension? (a) droplets of water dripping slowly from a tap (b) mercury spilled on a clean glass plate forms small spheres of droplets (c) and insect walking across the surface of a pond (d) water flowing out more easily than engine oil from container.
15. Which of the following statement about solid friction are correct? It I is a force II. Occurs between the surfaces of two bodies in contact III Depend on the area of contact (a) I and II only (b) I and III (c) II and III only (d) I, II and II.
16. A body moving at a constant speed accelerates when it is (a) rectilinear motion (c) translation motion (c) circular motion (d) vibrational motion.
17. The term rectilinear acceleration means the rate of increase of (a) velocity along a circular part in a unit time (b) distance along a rectangular path in a unit time (c) displacement along a straight time path in a unit time (d) velocity along a straight path in a unit time.
18. A swinging pendulum between the rest position and its maximum displacement possesses (a) Kinetic energy only (b) potential energy only (c) gravitational energy only (d) both kinetic and potential energy.
19. An eternal force of magnitude 100 acts as a particle of mass 0.15kg for 0.03s cat. The change in the speed of the particle (a) 50ms⁻¹ (b) 25ms⁻¹ (c) 20ms⁻¹ (d) 5ms⁻¹
20. Mechanical energy can be either. (a) Kinetic or electric (b) electrical or potential (c) potential or kinetic (d) electric or heat
21. Which of the following surfaces will radiate heat energy best (a) red surface (b) white surface (c) black surface (d) yellow surface
22. A body of mass 200g and specific heat capacity 04g⁻¹k⁻¹ cools from 3700 to 3100. Calculate the Calculate the quantity of heart released by the body. (a0 4700J (b)1200j (c) 480J (d) 202J.
23. Which of the following statement about sound waves is not correct? sound waves can be (a) reflected (b) refracted (c) diffracted (d) polarized
24. A dry platic comb used in combing hair was found to attract pieces of paper and dust, the most probable explanation for this phenomenon is that the comb has been given. (a) magnetization by induction (b) electric charges by induction (c) electric charges by conduction (d) electric charge by friction
25. A bulb marked 240v, 40w is used for 30 minutes. Calculate the heat generated (a) 320J (b) 400J (c) 10800j (d) 72000J

ANSWERS TO 2009/2010-PHYSICS

1D 2C 3A 4B 5C 6D 7B 8D 9B 10D 11 12A 13A 14D 15D 16A 17D 18B 19C 20C
21B 22C 23D 24D 25A



UNIVERSITY OF UYO, UYO
POST-UTME SCREENING EXERCISE 2011/2012 SESSION
PHYSICS 2011/2012

1. A Tuber of cassava can be processed into powder. This explains the fact that
A. matter can change spontaneously from one state to another B. matter cannot be destroyed C. force is required to change matter from one state to another D. matter made up of tiny particles
2. A piece of metal of relative density 5.0 weighs 60N in air, Calculate its weight when fully immersed in water A. 4N B. 5N C. 48N D. 60N
3. The net force of 15N acts upon a body of mass 3kg for 5s, calculate the change in the speed of body A. 25.0ms⁻¹ B. 9.0ms⁻¹ C. 2.5ms⁻¹ D. 0ms⁻¹
4. The tendency of a body to remain at rest when a force is applied to it is called A. impulse B. momentum C. Inertia D. Friction.
5. Which of the following statement correctly defines a simple machine A. device that can provide electric current B. which can only carry people from one place to another C. with which work can be done easily D. which changes the state of rest or uniform motion of an object
6. The heat capacity of a calorimeter is the amount of energy required to A. change the temperature for 1kg of the calorimeter by 1K B. change 1kg mass of the calorimeter to liquid at the same temperature C. change the temperature of the calorimeter by 1K D. melt the calorimeter into liquid at a constant temperature.
7. Which of the following statement about latent heat of vaporization is correct? It A. weakens the adhesive forces between molecules of a liquid and those of its container B. weak completely the force of attraction between the molecules of a liquid C. adds to the heat content of a liquid D. increases the cohesive forces between liquid molecules.
8. When the pressure of fixed mass of gas is doubled constant temperature, the volume of the gas is increased four times. B. double C. unchanged D. halve

9. A wavelength 0.30 travels 900m in 3.0s calculate frequency. A. 68.0Hz B. 225.0Hz C. 270.0Hz D. 1000hZ.
10. Which of the following conditions is necessary for the occurrence of total internal reflection of light? A. light must travel from an optically less dense to a dense medium B. the angle of incidence must be equal to the critical angle C. the angle of incidence must be greater than the critical angle D. the angle of reaction must be 99.
11. The image which cannot be formed on a screen is said to be A. inverted B. erect C. real. D. virtual.
12. An object is placed in the principal axis and at the center of curvature of a concave mirror, the image on the object formed be the image is A. real and magnified B. real and inverted C. erect and magnified D. erect and virtual
13. A converging lens has a focal length of 5cm determine its power A. 20.0 B. 20.2 C. 20.0 D. 0.20D
14. Which of the following pairs of light rays shows the wide separation in the spectrum of white light? A green and blue B. green and indigo C. blue and violet D. red and yellow
15. The speed of sound in air is directly proportional to A. as temperature on the Celsius scale B. its temperature on the thermodynamic scale C. the square root of its temperature on the Celsius scale D. the square root of its temperature absolute scale.
16. Which of the following statements about the characteristics of sound waves is correct? A. loudness decreases with increase in intensity B. the pitch of a note is determined by its amplitude C. the intensity of sound wave is proportional to its amplitude D. the quality of a note depends on its overtones.
17. Which of the following instruments gives a pure note when sounded: A. tuning drum b. tuning fork C. siren D. guitar
18. A p-n junction diode is used as an A. rectifier in a DC circuit B. an amplifier in an AC circuit C. a rectifier in an AC circuit D. an amplifier in a DC circuit.
19. The process through which free electrons leave the surface of hot metals is known as A. thermion ion emission B. photo emission C. photon emission D. electron emission
20. The electrolyte in the nickel-iron (NiFe) accumulator is A. ammonium chloride solution B. dilute tetraoxosulphate (vi) acid C. copper tetraoxosulphate (vi) solution D. potassium hydroxide solution.
21. The main purpose of the transformer in an AC radio is to A. increase power to the radio B. convert energy from AC to DC C. Step down the voltage D. step up the voltage

22. An electric heater with a p.d. of 240v connected across a terminal has a total resistance of 960n. Find the power rating of the heater. A. 4.0w B. 0.1w C. 60.00W D. 38.40W

23. The wavelength of the first overtone of note in a pipe of length 33cm is A. 44cm B. 33cm C. 22cm D. 17cm

24. The minimum energy required to remove an electron from an atom is known as A. excitation energy B. ionization energy C. binding energy D. photon energy.

25. Nuclear fission is preferred to fusion in the generation of energy because A. very high temperatures are required for fission B. the raw materials for fusion are not easily obtained C. energy obtained from fusion is relatively smaller D. the by-products of fusion are very dangerous.

ANSWERS 2011/2012 PHYSICS

**1.D 2.A 3.D 4.C 5.C 6.C 7.B 8.C 9.C 10.A 11.D 12.B 13.C 14.D 15.D 16.B 17.B
18.C 19.A 20.B 21.C 22.C 23.B 24.B 25.D**