**JETS SENIOR PHYSICS QUESTIONS**

35. What is the potential difference across two cells connected in parallel if their voltages are 3v and 9v? ANS :9V

36. A wire of length 50cm has a resistance of 20 ohms. If the cross section area of this wire is doubled and its length tripled What can be its resistance? ANS: 18 Ohms

37. What is a light year? ANS: The distance covered by light in a Year

38. What name is given to the path taken by a projectile? ANS: Trajectory

39. A snail covering half the remaining distance every minute. How long can it take to reach its destination? ANS: It will never reach its destination or it will take infinite time

40. A 10 litre container of negligible mass is half filled with mercury and the other half with Water. Given that the densities of mercury and water are 13600kg/m3 and 1000kg/m3 respectively. What is the mass of the mixture? ANS: 73 kg

41. The half life of radio active isotope is Half a minute. If 80g of this radioisotope is originally present How much of it will have Decayed after a minute? ANS : 60g

42. The Mercury thread of a liquid in a glass thermometer is 12cm at 500 C and 21 cm at 1000 c. What is its height at 00C ?ANS: 3 cm

43. A water jug of capacity 2/3 L is used t drain water from a drum containing 180L of water. Every minute a pupil takes out 48 jags of water from the drum . How long will it take to drain the Drum completely? ANS: 5.625 minutes

44. The quantity of Heat required to change 1kg of ice at 0oc to water at the same temperature is called\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ANS: specific latent Heat

45.Which mode of heat transfer does not require a medium? (one attempt) ANS :RADATION

46.Calculate the frequency of a radio wave of Wavelength 300m if the speed of all electromagnetic waves in free space is 3 × 108 m/s? ANS: 1 MHz or 10,000KHz or 10,000,000Hz

47. Who Devised a law that states that: “ The direction of induced cyrrent is always such as to oppose the change producing it” ANS: Lenz

48. A block system of five pulley s that has efficiency of 70% Calculate the effort that will be required to raise a load of 84 N? ans: 24N

49. When is the Mechanical Advantage equal to Velocity Ratio in aMachine? ANS: When the friction in the machine is Zero

50. What is the unit of Stress? ANS: N/m2

51. A hydraulic press works on the principle of the transmission of What? ANS : Pressure

52. A block of material has a volume 20cm3 and a density of 2.5g/cm3. It is suspended from a spring

Balance with half the volume of the block immersed in water . What is the reading of the spring Balance in Grams? ANS: 20 g

53. State the unit of linear expansivity? ANS: metre per Square Kelvin m/k2

54. The Volume of a gas is 76cm3 at 27oC and 800mm mercury pressure.What is the Volume at standard temperature and pressure (s.t.p)? ANS: 72.8 cm3

55. What term is used for quantity of heat required to raise the temperature of a body by one degree celcius? ANS: Specific Heat Capacity

56. A tank 4m long 2m wide and 0.5m deep is filled wiyh oil which weighs 1.0 N What is the pressure on the base of the tank? ANs: 0.25pa

57.Name the method of Heat transfer in a Vacuum? ANS: Radiation

58. Heat loss or transfer by radiation is through the emission of electromagnetic radiation.name the radiation involved? ANS: Infra-Red Radiation