INDIAN SCHOOL DARSAIT
DEPARTMENT OF PHYSICS

Subject : Physics	Topic : Chapter 4&5	Date of Worksheet : 18.8.19
Resource Person: Susan Anil		Objective type question
Name of the Student :_____	Class & Div : XII____	Roll No : __

1) If in a circular coil A of radius R, current I is flowing and in another coil B of radius 2R a current 2I is flowing; then the ratio of the magnetic fields B_A and B_B produced by them will be:

a)	1	b)	2
c)	1/2	d)	4

2) A long wire carries a steady current. It is bent into a circle of one turn and the magnetic field at the centre of the coil is B. it is then bent into a circular loop of n turns. The magnetic field at the centre of the coil will be:

a)	nB	b)	n^2B
c)	2nB	d)	$2\ n^2B$

3) A charged particle moves through a uniform magnetic field perpendicular to its direction. Then,

a)	Momentum changes, but the K.E. is constant	b)	Both momentum & the K.E. are not constant
c)	Both momentum & K.E. are constant	d)	K.E. changes, but the momentum is constant

4) A uniform electric field and a uniform magnetic field are acting along the same direction in a certain region. If an electron is projected along the direction of the fields with a certain velocity, then

a) Its velocity will decrease
b) Its velocity will increase
c) It will turn towards right of direction of motion
d) It will turn towards left of the direction of motion

5) In a region, steady and uniform electric and magnetic field are present. These two fields are parallel to each other. A charged particle is released from rest in the region. The path of the particle will be

a) ellipse
b) circle
c) helix
d) Straight line

6) If an electron and a proton having same momenta enter perpendicularly to a magnetic

	field, then, a) Curved path of electron & proton will be same b) They will move undeflected c) Path of electron is more curved than proton d) Path of proton is more curved
7)	The time period of a charged particle undergoing a circular motion in a uniform magnetic field is independent of its: a) speed b) mass c) Charge d) Magnetic induction
8)	If a current is passed through a spring, then the spring will: a) expand b) compress c) Remain same d) None of these
9)	Two long conductors, separated by a distance d carry currents I_1 and I_2 in the same direction. They exert a force F on each other. Now the current in one of them is increased to two times and its direction is reversed. The distance is also increased to 3d. The new value of force between them is : a) -2F b) F/3 c) -2F/3 d) -F/3
10)	If an ammeter is to be used in place of a voltmeter, then we must connect with the ammeter a) A low resistance in parallel b) A high resistance in parallel c) A high resistance in series d) A low resistance in series
11)	A square current carrying loop is suspended in a uniform magnetic field acting in the plane of the loop. If the force on one arm of the loop is F, the net force on the remaining three arms of the loop is a) F b) -F c) 3F d) -3F
12)	A magnetic needle is kept in a non-uniform magnetic field. It experiences a) A torque but not a force b) Neither force nor torque c) A force and a torque d) A force but not a torque
13)	Needles N_1,N_2 &N_3 are made of a ferromagnetic, a paramagnetic and a diamagnetic substance respectively. A magnet, when brought close to them, will: a) Attract N_1strongly,but repel N_2 &N_3 b) Attract all three of them

	weakly c) Attract N_1 &N_2 strongly but repels N_3 d) Attract N_1 strongly, N_2 weakly & repel N_3 weakly
14)	Curie temperature is the temperature above which: a) A ferromagnetic material becomes paramagnetic b) A paramagnetic material becomes diamagnetic c) A ferromagnetic material becomes diamagnetic d) A paramagnetic material becomes ferromagnetic
15)	The material suitable for making electromagnets should have: a) High retentivity and high coercivity b) Low retentivity & low coercivity c) High retentivity & low coercivity d) Low retentivity & high coercivity
16)	A bar magnet of magnetic moment M is cut into two parts of equal lengths. The magnetic moment and pole strength of either part is: a) M/2, m/2 b) M, m/2 c) M/2,m d) M,m
17)	If a diamagnetic material is brought near north or south pole of a bar magnet, it is a) Attracted by the poles b) Repelled by the poles c) Attracted by the north pole and repelled by the south pole d) Attracted by the south pole and repelled by the north pole
18)	According to Curie's law, the magnetic susceptibility of a substance at absolute temperature T is proportional to a) T b) T^2 c) 1/T d) $1/T^2$
19)	The magnetic moment of a revolving electron around the nucleus varies with Principal quantum number n as : a) $\mu \propto n$ b) $\mu \propto 1/n^2$ c) $\mu \propto n^2$ d) $\mu \propto 1/n$
20)	If a magnetic material moves from stronger to weaker part of a magnetic field, it is a) diamagnetic b) paramagnetic c) ferromagnetic d) ferrimagnetic