15

3

OLABISI ONABANJO UNIVERSITY
FACULTY OF SCIENCE
DEPARTMENT OF PHYSICS
2004/2005 RAIN SEMESTER EXAMINATION
PHY 102: GENERAL PHYSIC II TIME ALLOWED: 1HOUR

Surname.....
Matric No: .....

Names.....
Department/option.....

INSTRUCTION: Shade The Correct Box With Ink Or Biro

S/NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A															
B															
C															
D															

S/NO	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
A															
B															
C															
D															

1. When two electrons are brought close to themselves. (a) repulsion takes place (b) Attraction takes place (c) They both remain stationary (d) they perform random motion.
2. An electron carries a charge of 1.6×10^{-19}C. At what distance would the force of the two electrons be 1.2N? Take $1/4\pi\epsilon_0$ to $9 \times 10^{9}Nm^{2}c^{-2}$. (A) 1.4×10^{-14}m (b) 1.8×10^{-14}m (c) 3.8×10^{-10}m (d) 1.5×10^{-9}m
3. Determine the electric field at a point 5m directly above a particle having an electric charge of 2μc (a) $720NC^{-1}$ upward (b) $720\ NC^{-1}$ downward (c) $8 \times 10^{-8}NC^{-1}$ upward (d) 8×10^{-8} downward
4. The following materials are classified as ferromagnetic materials except: (a) soft iron (b) Nickel (c) Lithium (d) Cobalt
5. A particle of charge 3×10^{-19}C move a total distance of 0.2m along a straight line. If the electric field along the straight line of motion is $300NC^{-1}$, determine the potential difference between the beginning to the end of motion moved through. (a) 2×10^{-10}v (b) 60v (c) 1.8×10^{-2}v (d) 4.5×10^{-2}v
6. The unit of magnetic induction or magnetic field strength B is not (a) Tesla (b) Wbm^{-2} (c) $NA^{-1}m^{-1}$ (d) $NA^{-1}m$

(14)