Quarterly Examination 2017- 2018
Subject – Physics
Class -- XII 'A

Time:3:00 hrs
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M.M. 75

Que:1 Choose the correct alternatives :——

1.The conductivity of super conducting substance :

2. The depolarizes of lanclanchhe cell is :

[infinity, very large, very small, zero]   5

[H₂So₄, NH₄Cl, Mno₂, CuSo₄]

3. The C.G.S unit of intensity of magnetic field is :
[newton/metre, guass 'or' oersted, newton/amperemetre, weber metre²]

4. The resistance of shunt required to send 10% current through the moving coil galvanometer of 99 ohm is :
[10 ohm, 9 ohm, 11 ohm, 0.9 ohm]

5.On reducing the separation between two magnetic poles to half the force acting between them will become :
[half, twice, one-fourth, four times]

Que:2   Fill in the blanks :—   5

1. The S.I. unit of pole strength is _____
2. The resistance of an Ideal voltmeter must be _____
3. The dimensional formula of specific resistance will be _____
4. The condensor's each of capacity 3 H f are joined in series its equivalent capacity will be __
5. The potential of earth is assumed to be _____

Que:3   Match the column :——

Water voltameter   - NH₄cl

Copper voltameter   - H₂So₄

Silver voltameter   - KoH

Leclomchhe cell   - CuSo₄

Ni – Fe cell   - AgNo₃

5

Que:4   Answer in one word :——

1.What is meant by Quantisation of charge ?
2.Name an instrument based on wheat stone bridge principle ?
3. On which electrode the polarasation in a simple voltaic cell ?
4. Write expressions of Lorentz force ?
5. Write the relationship between the potential difference and intensity of electric field.

"Or"   2

Que:5   What is thermister ? write its one use.
What is meant by super conductivity ? Give one example of super conductor ?

"Or"   2

Que:6   Secondary cell are superior over the primary cell ? why
What is meant by potential gradient in a potentiometer ? write its unit ?

"Or"   2

Que:7   Define potential and potential difference ? write their S.I. unit ?
Write the S.I. unit and dimensional formula of electric dipale moment ?

"Or"   2

Que:8   Write the fleming left hand rule ?
What is natural point and define it ?

"Or"   3

Que:9   Obtain expression for the intensity of electric field due to a point charge at distance r form it ?
Obtain expression for the equivalent capacity at three condenser connected in parallel

Que:10 What is dirft velocity ? establish a relationship between the dirft velocity and the current. 3
"Or"
Explain the principle of wheat stone bridge ?

Que:11 Differentiate between a lead acculator and Ni – Fe cello. "Or"
Differentiate between voltmeter and potentiometer ?

Que:12 Write the Biot - sauart law and derive expression. "Or"
What due mean by magnetic storm ?

Que:13 Find out magnetic field intensity in broad side on position ? "Or"
Write the difference between ammeter and voltmeter ?

Que:14 Find out of magnetic field at a point on the axis of current carrying circular coil ?
"Or" 4
Drive the magnetic field at the centre of a current carrying circular coil ?

Que:15 Explain Kircholf's law of current and voltages law ? "Or" 4
Write a notes on i) current density, ii) drift velocity, iii) resistivity, iv) conductonce.

Que:16 Expression of electric potential in end on position ? "Or" 5
Drive expression of potential at a point due to a charged point ?

Que:17 State and proved that Gauss theorm ? "Or" 4
Find out the capacity of cylindrical condenser ?

Que:18 Establish the necessary formula for the torque acting on an electric dipole in a uniform
electric field done in this process ? "Or" 5

Describe van-de Graff generator under the following points :
i) Construction, ii) labeled diagram, iii) principle, iv) working and use.

Que:19 Establish ohm's law on the basis of free electron model in metals ? "Or" 5

Draw circuit diagram and obtain condition to get maximum current in the external resistance in
mixed combination. Also derive and expression for the maximum current.

Que:20 Describe moving coil galvanometer under following for the current : "Or" 5
i)construction, ii) diagram and iii) derivation of formula for the current.

Obtain expression for the intensity of magretic field at a point situated at same distance
from either pole of Bar magnet ?

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