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This question paper contains 4 printed pages.]

Your Roll No. ....

**522**

**B.Sc. (G) / (Hons.)                      A**

**HISTORY OF SCIENCE AND SCIENTIFIC  
METHOD**

**Time : 3 Hours**

**Maximum Marks : 100**

*(Write your Roll No. on the top immediately on receipt of this  
question paper.)*

Use separate answer-books for Section – A and  
Section – B.

**Section – A**

(Marks : 50)

(Physical Sciences)

Attempt **three** questions only.

Question No. 1 is compulsory.

**Section – B**

(Marks : 50)

(Biological Sciences)

Attempt **three** questions only.

Question No. 1 is compulsory.

**Section – A**  
**Physical Sciences**

1. Name the scientist associated with the discovery of the following : **9 × 2 = 18**
- (i) Universal Law of Gravitation
  - (ii) Law of mass-action
  - (iii) Discovery of electron
  - (iv) X-rays
  - (v) Photo-electric effect
  - (vi) Expanding universe
  - (vii) Anti-matter
  - (viii) Chain reaction
  - (ix) Parity-violation
2. Give an account of the life and work of any **two** of the following in about **200** words : **2 × 8 = 16**
- (a) Galileo
  - (b) C.V. Raman
  - (c) Albert Einstein
  - (d) Ludwig Boltzmann
3. Write short notes in about **200** words on any **two** of the following : **2 × 8 = 16**
- (a) Growth of Alchemy and its role in the development of chemical techniques.
  - (b) Heliocentric Model of the Universe
  - (c) Big-bang theory
  - (d) Development of Atomic bomb
4. Explain how the study of chemical reactions led to the concept of atoms and molecules and of valence. **16**

**OR**

The Renaissance in sciences started around 15<sup>th</sup> century. Give an account of the development in Astronomy and Natural Philosophy during Renaissance.

5. Describe the development of any **two** of the following in about 200 words.  $2 \times 8 = 16$
- (a) Nuclear energy
  - (b) Atomic model
  - (c) X-rays
  - (d) Internet

**Section – B**

**Biology**

1. Match the following :  $9 \times 2$

<b>Column A</b>	<b>Column B</b>
(i) Karl Landsteiner	(a) Lysosome
(ii) Meophratus	(b) Blood Groups
(iii) Christian de Dune	(c) Exchange of gases in plants
(iv) Joseph Priestley	(d) Anthrax bacillus
(v) Edward Jenner	(e) Reflex action
(vi) Wilhelm Roux	(f) History of plants
(vii) Ivan Pavlov	(g) Vitamin
(viii) Eijkmann	(h) Vaccination against Small pox
(ix) Robert Koch	(i) Diphtheria bacillus

2. Give an account of life and work of any **four** of the following : **4 × 4**
- (i) Leeuwenhoek
  - (ii) Louis Pasteur
  - (iii) Alexander Fleming
  - (iv) Galen
  - (v) Hargobind Khorana
  - (vi) Andreas Vesalius
3. Write short notes on any **two** of following : **2 × 8**
- (i) Germ theory of disease
  - (ii) Cell theory
  - (iii) Historical background of photosynthesis
  - (iv) Discovery of hormone
4. (i) Explain theory of blood circulation as given by William Harvey. **8**
- (ii) Give an account of Mendel's Laws of Inheritance. **8**
5. Give a detail account of life history of Charles Darwin and give his theory of natural selection for origin of species. **16**
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