

SCIENCE**Part - I : Physical Science***(English version)***Parts A and B***Time : 1 hour 30 min.]**[Max. Marks : 40***Instructions :**

- (i) Read the question paper and understand every question thoroughly and write answers in given 1.30 min. time.
- (ii) **3 very short answer** questions are there in **Section-I**. Each question carries **2 marks**. **Answer all the questions**. Write answer to each question in **3 to 4 sentences**.
- (iii) **3 short answer** questions are there in **Section-II**. Each question carries **4 marks**. **Answer all the questions**. Write answer to each question in **5 to 6 sentences**.
- (iv) **3 essay type answer** questions are there in **Section-III**. Each question carries **6 marks**. **Answer any two** questions. Write answer to each question in **8 to 10 sentences**.

PART - A*Time : 1 hour 15 minutes**Marks : 30***SECTION - I****3 × 2 = 6****Instructions :**

- (i) **3 very short answer** questions are there in this **Section-I**.
- (ii) **Answer all the questions**. Each question carries **2 marks**.
- (iii) Write answer to each question in **3 to 4 sentences**.

1. Mention uses of Nanotubes which is an allotropy form of Carbon in day to day life.

2. List out the material required in the experiment "Reaction of acids with metals".
3. What will happen if household electric appliances are connected in ~~series~~ connection ?

SECTION - II

3 × 4 = 12

Instructions :

- (i) **3 short answer** questions are there in this **Section-II**.
- (ii) Answer **all** the questions. Each question carries **4 marks**.
- (iii) Write answer to each question in **5 to 6 sentences**.

4. Write the uses of Washing Soda in day to day life.
5. Observe the given table and answer the following questions.

Atomic Number	11	12	13	14	15	16	17
Name of the Elements	Na	Mg	Al	Si	P	S	Cl

- (i) Which Period does the elements belongs ?

- (ii) Mention the non-metals in the above.
- (iii) Which element has more atomic radius in the above ?
- (iv) From left to right how is the metallic character changes ?

6. During the Sunset and Sunrise, Sun appears red. Why ?

SECTION - III

2 × 6 = 12

Instructions :

- (i) **3 Essay type** questions are there in this Section.
- (ii) Answer any **two** questions. Each question carries **6 marks**.
- (iii) Write answer to each question in **8 to 10 sentences**.

7. List out the material required to observe the types of images and measuring the object distance and image distance from Concave mirror. Explain the experimental procedure.

8. Draw the ray diagram to form the image when the object is placed between F and C on the principle axis of a Convex lens. Write the characteristics of the image formed.
9. Explain the formation of N_2 molecule by using Valence bond theory.



SCIENCE
Part - II : Biological Science
(English version)

Parts A and B

Time : 1 hour 30 min.]

[Maximum Marks : 40

Instructions :

1. *Read the Question Paper carefully and understand.*
2. *Answer the questions under Part-A in the answer sheet provided.*
3. *Part-A contains three sections - Section I, II and III.*
4. *Part-B answers should be written in the given brackets and attach to the Part-A answer sheet.*
5. *Write the answers by following instructions given in the each section.*

PART - A

Time : 1 hour 15 min.

Marks : 30

SECTION - I

3 × 2 = 6

Instructions :

- (i) This section contains 3 very short answer questions.
- (ii) Answer **ALL** the questions.
- (iii) Write the answers in 3 - 4 sentences.
- (iv) Each question carries 2 marks.

Write two materials required to conduct an experiment to prove Sunlight essential for Photosynthesis.

2. Name two fossil fuels that are used in daily life.
3. What will happen if there is no mucus in the Oesophagus?

SECTION - II

3 × 4 = 12

Instructions :

- (i) This section contains **3** short answer questions.
- (ii) Answer **ALL** the questions.
- (iii) Write the answers in 5 - 6 sentences.
- (iv) Each question carries **4** marks.

4. Write four differences between arteries and veins.
5. Name any four secondary metabolites that are used in daily life and write their uses.
6. Observe the following table.

<i>Vitamin</i>	<i>Deficiency disease</i>	<i>Symptoms</i>
Thiamin	Beri beri	Vomitings, difficulty in breathing.
Retinol	Eye, Skin diseases	Night blindness, Cornea failure, Xerophthalmia.
Tocoferol	Fertility related disorders	Sterility in males, abortions in females.
Niacin	Pellagra	Dermatitis, diarrhoea, loss of memory.

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Answer the following questions based on the given table.

- (i) Name two water soluble vitamins from the table.
- (ii) Write two fat soluble vitamins from the table.
- (iii) Which vitamin from the given table is called vitamin 'E'?
- (iv) Write any one deficiency disease causes due to deficiency of vitamin 'A'.

SECTION - III

2 × 6 = 12

Instructions :

- (i) This section contains **3** essay type questions.
- (ii) Answer any **TWO** questions.
- (iii) Write the answer in 8 - 10 sentences.
- (iv) Each question carries **6** marks.

7. Explain the various stages of Mitosis.

8. Draw a labelled diagram of a Nerve cell and explain the structure.

9. Explain the procedure and results of the experiment that proves "Heat is released during Respiration".
