This Question Paper contains 3 Printed Pages.

1044

SCIENCE

19E(A)

Part-I : Physical Science

(English Version)

Parts – A & B

Time : 1 Hour 30 Mins.] *Roll Number .* *[Maximum Marks : 40*

Instructions :

(i) *Read the question paper carefully and understand.*

(ii) *Answer the questions under **Part-A** in the answer sheet provided.*

(iii) ***Part-A** contains **three** Sections : Section-I, II and III.*

(iv) ***Part-B** answers should be written in the given brackets and attach it to the **Part-A** answer sheet.*

(v) *Write the answers by following the instructions given in each section.*

PART – A

Time : 1 Hour 15 Mins.] *[Marks : 30*

SECTION – I

3 × 2 = 6

Instructions : *(1)* *3 Very short answer questions are there in this Section-I.*

(2) *Answer **all** the questions. Each question carries **2** marks.*

(3) *Write answer to each question in **3** to **4** sentences.*

1. Write any two uses of Nanotubes.

2. What would happen if the magnetic field could not apply force on a current carrying conductor ? Guess and write.

3. List out the material required to prove corrosion of iron occurs in presence of water and air.

SECTION – II

3 × 4 = 12

Instructions : *(1) 3 Short answer questions are there in this Section-II.*

(2) Answer all the questions. Each question carries 4 marks.

(3) Write answer to each question in 5 to 6 sentences.

4. Write any four uses of bleaching powder.

5. A bulb is marked as 60 W and 240 V, then find the resistance (R) of the bulb if current flows through it in normal condition.

6. Analyse the given table and answer the following questions :

Shell	n	l	Sub-shell	No. of orbitals
K	1	0	s	1
L	2	0	s	1
		1	p	3
M	3	0	s	1
		1	p	3
		2	d	5
N	4	0	s	1
		1	p	3
		2	d	5
		3	f	7

(i) Write all the sub-shell notations present in 'N' shell.

(ii) How many total number of orbitals are present in 'L' shell ?

(iii) Write the maximum number of electrons that can occupy 'M' shell.

(iv) Mention the maximum number of electrons that can occupy sub-shell-'f'.

SECTION – III

$2 \times 6 = 12$

Instructions : *(1)* ***3** Essay type questions are there in this Section-**III**.*

(2) *Answer any **two** questions. Each question carries **6** marks.*

(3) *Write answer to each question in **8** to **10** sentences.*

7. Mention the depending factors of ionization energy. Explain any four (4) among them.

8. An object at infinity with a height of '*l*' cm is placed in front of a convex lens and forms a point image. Draw the ray diagram and write the characteristics of the image.

9. Write the material required and experimental procedure in the experiment for observing the types of images and measuring the object distance and image distance from the concave mirro