TED (15) – 1252

(REVISION — 2015)

Reg. No. .....

Signature .....

# FIRST SEMESTER DIPLOMA EXAMINATION IN CABM — MARCH, 2016

## FOUNDATION IN SCIENCE AND TECHNOLOGY

[*Time* : 3 hours

(Maximum marks : 100)



### PART— A

(Maximum marks : 10)

Marks

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. State the term hypothesis in scientific method.
2. Define the term individual in an ecosystem. Give one example.
3. List the seven fundamental physical quantities.
4. Define radio activity.
5. Define the term greenhouse effect. (5×2=10)

### PART— B

(Maximum marks : 30)

II Answer *any five* questions from the following. Each question carries 6 marks.

1. Explain law of conservation of momentum.
2. Which type of neuclear energy related to atom bomb and H-bomb ? Explain.
3. Explain food chain and food web.
4. Explain acid rain and formation of acid rain.
5. Explain photosynthesis.
6. Differentiate between inductive logic and deductive logic.
7. An object has an initial velocity 10m/s and moving with an accelaration of $m/s^2$. Find its velocity after 5 seconds. (5×6 = 30)

Marks

## PART— C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

### UNIT—I

III Explain the steps in scientific method. 15

OR

IV (a) Explain the nature of scientific knowledge. 10

(b) Explain the role of observation in scientific method. 5

### UNIT—II

V (a) Explain water cycle. 10

(b) Write a note on Globalwarming. 5

OR

VI (a) Explain the terms Respiration and Bhopal disaster. 10

(b) Explain Carbon cycle. 5

### UNIT—III

VII (a) What is SI unit and advantages of SI unit. 10

(b) Explain dimensions and different physical quantities. 5

OR

VIII (a) State Newton's second law of motion and derive the equation F = ma. 10

(b) Derive the expressions for recoil velocity of Gun. 5

### UNIT—IV

IX (a) Explain structure of neucleus. 10

(b) Explain neuclear force. 5

OR

X Explain five applications of Radioactivity. 15