PART – II

| TIME ALLOWED: THREE HOURS | PART-I (MCQS) | MAXIMUM MARKS – 20 |
| PART-I(MCQS): MAXIMUM 30 MINUTES | PART-II | MAXIMUM MARKS – 80 |

NOTE: (i) Part-II is to be attempted on the separate Answer Book.
(ii) Attempt ONLY FOUR questions from PART-II by selecting TWO questions from EACH SECTION. ALL questions carry EQUAL marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the question will not be considered.
(vii) Use of Calculator is not allowed.

(SECTION – A)

Q. 2. (a) The age of the Universe is estimated to be 13.8 billion years. How was it estimated? (5)

(b) Explain the phenomenon of Solar Eclipse. (5)

(c) Describe James Webb Space Telescope, its principle of operation, construction and importance. (5)

(d) Explain the Global Positioning System and its applications. (5) (20)

Q. 3. (a) What is a 'Weather Cycle'? Describe its causes and parts. (5)

(b) What is 'Air Pollution'? Discuss its causes and measurement methods. Name the countries with the highest and lowest percentage of it. (5)

(c) Write a comprehensive note on 'Pole Reversal' of Earth. (5)

(d) Describe different Ocean Currents, their causes and effects on Climate. (5) (20)

Q. 4. (a) Write a note on data storage in a 'USB'. How it is different from the Hard disk? (5)

(b) Describe how a 'Solar Cell' converts light into electricity. Describe its construction, operation and applications. (5)

(c) Write a comprehensive note on 'Food cycle in our body'. (5)

(d) What is 'Artificial Intelligence'? How it is helpful for humanity? (5) (20)

Q. 5. (a) Explain the concept of diabetes, its causes and classifications in the human body. (5)

(b) Describe different sources of 'Renewable Energy'. How is it helpful for the environment? (5)

(c) Define 'Enzymes'. Describe it types and functions within organisms. (5)

(d) Describe the 'Cell Structure'. Elaborate 7 main functions of a cell in human beings. (5) (20)

(SECTION – B)

Q. 6. (a) Find the area of a rectangular field whose length is 20 m and the length of its diagonal is 25m. (5)

(b) A Crow travels 5 km due South, 3 km due West, 4 km due North and 2 km toward South-East. How far is crow from its starting position? (5)

(c) Three persons, Zain, Ali and Umar started a bussiness with Rs. 150,000, Rs. 190,000 and Rs. 120,000 respectivily. Zain manages the bussiness and receives allowance of Rs. 160,000 for this management. After 5 months Ali withdraws Rs. 90,000 and bussiness is closed after 9 months. What did each receive in the profit of Rs. 580,000. (5)

(d) Mst. Razia Begum died leaving behind her property of Rs. 802,500 which was to be distributed among her husband, her mother and two daughters. The husband got 1/4 , mother got 1/6 and remaining for 2 daughters. Rs. 7500 was spent on her burial. Find the share of each one. (5) (20)