National Officers Academy
Mock Exams CSS-2023
October 2022(Mock-3)
General Science and Abilities

TIME ALLOWED: THREE HOURS PART-I(MCQS): MAXIMUM 30 MINUTES	PART-I (MCQS) MAXIMUM MARKS = 20 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.

PART-II
SECTION-I

Q2.
   a). What are volcanic eruptions? How is a volcano formed? Briefly discuss the causes and effects of a volcanic eruption.
   b). What are the advantages and limitations of renewable energy resources? What are the sources that Pakistan can utilize? What are the prospects for the country regarding these sources?
   c). What are Fertilizers? What are the major components of fertilizers? What role do different fertilizers play in plant growth?
   d). What are semiconductors? What do you understand by the term doping?

Q3.
   a). What do you understand by the term food preservation? Briefly explain different methods for the purpose of preservation.
   b). What are the major health risks unfolding amid floods in Pakistan? Briefly explain measures that should be taken regarding outbreak prevention and control.
   c). Eating a healthy, balanced diet is an important part of maintaining good health. What are the important components of a balanced diet?
   d). Why the sun has such a strong gravitational pull if it's just a ball of gases?

Q4.
   a). What is Vaccination? How vaccination contributes to health?
   b). What is the atmosphere? Discuss different layers of the atmosphere. Also, briefly explain their role in the atmosphere.
   c). What do you understand by the term remote sensing? Write its basic principles. Give the important applications.
   d). Differentiate between artificial and natural satellites. Explain the working of communication satellites with the help of examples.

Q5.
   a). What is the relation between a cell, tissue, and an organ? Differentiate between a plant and animal cell?
   b). Differentiate between DNA and RNA? Briefly explain DNA.
   c). Describe the term black hole. What's expected inside it?
   d). What is artificial intelligence? What is your understanding of the term robotics?

SECTION-II

Q6.

    a). A shopkeeper bought 600 oranges and 400 bananas. He found 15% of oranges and 8% of bananas were rotten. Find the percentage of fruits in good condition.

    b). Profit obtained by selling a floppy disc at Rs. 320 is equal to $7/5^{th}$ of profit obtained by selling the same floppy disc at Rs. 300. What is the cost price?

    c). Two numbers are in the ratio 3:4 of sum of numbers is 63. Find the numbers.

    d). What must be added to each term of the ratio 2:3 so that it may become equal to 4:5?

Q7.

    a). Identify the series

        i. 1,3,6,11,18, ____

    b). In a certain code language YEARLY is called as BVZIOB. What will be code for ANNUAL?

    c). Average weight of a class of 35 students is 45kg. If the weight of a teacher be included, the mean weight increases by 500g. Find the weight of teacher?

    d). A soap factory makes 600 units in 9 days, with the help of 20 machines. How many units can be made in 12 days with the help of 18 machines?

Q8.

    a). A child is looking for his father. He went 90m in the east before turning to his right. He went 20m before turning to his right again to look for his father at his uncle's place30m from his point. His father was not there. From there, he went 100m to north before meeting his father in the street. What is the smallest distance between his starting point and his father's position?

    b). Present stages of Sameer and Ahmad are in ratio of 5:4 respectively. Three years hence their ages will be 11:9 respectively. What is Ahmad current present age?

    c). If A= {1,3,5}, B= {3,5,6}, U= (1,2,3,4,5,6,7}

        Verify DE Morgan's Law.

    d). What are mental abilities? Differentiate I.Q and E.Q

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Best of Luck for CSS-2023