



**NATIONAL OFFICERS ACADEMY**  
**Mock Exams for CSS-2026**  
**August 2025 (Mock-3)**  
**GENERAL KNOWLEDGE-I**  
**GENERAL SCIENCE AND ABILITY**

<b>TIME ALLOWED: THREE HOURS</b>	<b>PART-I (MCQS)</b>	<b>MAXIMUM MARKS = 20</b>
<b>PART-I(MCQS): MAXIMUM 30 INUTES</b>	<b>PART-II</b>	<b>MAXIMUM MARKS = 80</b>
<b>NOTE:</b> <ul style="list-style-type: none"><li><b>i. Part-II is to be attempted on the separate Answer Book.</b></li><li><b>ii. Attempt ONLY FOUR questions from PART-II by selecting TWO questions from EACH SECTION. ALL questions carry EQUAL marks.</b></li></ul>		

**PART-II**  
**SECTION-I**

**Q. No. 2**

- a. What are the main components of a cell, and how do they work together to maintain cellular functions? Discuss the differences between prokaryotic and eukaryotic cells. How do cells respond to external stimuli and maintain homeostasis?
- b. How do mobile phones work, and what are the key technologies that enable mobile communication? Discuss the advantages and disadvantages of mobile phone use, including impacts on social interactions and mental health. How have mobile phones changed the way we communicate and access information?
- c. What are the different layers of the Earth, and how do they interact with each other? Discuss the Earth's water cycle and how it supports life on our planet. How do human activities impact the Earth's ecosystems and natural resources?
- d. What are the main sources and effects of air pollution, and how do they impact human health and the environment? Discuss the differences between primary and secondary air pollutants. How can we reduce air pollution through individual and collective actions?

**Q. No. 3**

- a. What is the Big Bang theory, and how does it explain the origin and evolution of the universe? Discuss the role of dark matter and dark energy in the universe's expansion. What are some of the key evidence supporting the Big Bang theory?
- b. What is a galaxy, and how are galaxies classified? Describe the structure and composition of the Milky Way galaxy. How do galaxies form and evolve over time?
- c. What is remote sensing, and how is it used in Earth observation? Discuss the different types of remote sensing technologies, such as satellite imaging and aerial photography. How can remote sensing be used to monitor environmental changes and natural disasters?
- d. What are the main functions of the human brain, and how do different brain regions work together? How can brain function be affected by factors such as sleep, nutrition, and stress?

**Q. No. 4**

- a. What are fiber optics, and how do they work? Discuss the advantages of fiber optic communication over traditional copper wire communication. How do fiber optics enable high-speed data transmission?
- b. What are the causes and effects of earthquakes? Describe the different types of seismic waves and how they are measured. How can earthquake-resistant construction and preparedness measures reduce the impact of earthquakes?
- c. What is a balanced diet, and why is it essential for maintaining good health? Discuss the importance of macronutrients and micronutrients in a balanced diet. How can a balanced diet help prevent chronic diseases?
- d. What are the main sources and effects of water pollution? Discuss the impact of water pollution on

human health and the environment. How can we prevent and control water pollution in our communities?

## **SECTION-II**

### **Q. No. 5**

- a. The sum of three consecutive prime numbers is 187, then the numbers are?
- b. Find a positive number which when increased by 17 is equal to 60 times the reciprocal of the number.
- c. The population of a town increased from 1,75,000 to 2,62,500 in a decade. The average percent increase of population per year is?
- d. Salman purchased 20 dozens of eggs at the rate of Rs. 375 per dozen. He sold each one of them at the rate of Rs. 33. What was his percentage profit?

### **Q. No. 6**

- a. The product of two numbers is 120 and the sum of their squares is 289. The sum of the number is?
- b. Six years ago, the ratio of the ages of Kamran and Salman was 6 : 5. Four years hence, the ratio of their ages will be 11 : 10. What is Salman's age at present?
- c. The sum of three numbers is 98. If the ratio of the first to second is 2:3 and that of the second to the third is 5 : 8, then the second number is?
- d. A shopkeeper expects a gain of 22.5% on his cost price. If in a week, his sale was of Rs. 392, what was his profit?

### **Q. No. 7**

- a. In a two-digit number, if it is known that its unit's digit exceeds its ten's digit by 2 and that the product of the given number and the sum of its digits is equal to 144, then the number is?
- b. Find the missing terms:
  - i. 53, 53, 40, 40, 27, 27, .....
  - ii. 14, 28, 20, 40, 32, 64, .....
  - iii. 8, 6, 9, 23, 87, .....
  - iv. B, F, R, .....
  - v. V, U, W, V, X, W, .....
- c. If 20% of  $a = b$ , then  $b\%$  of 20 is the same as?
- d. The age of father 10 years ago was thrice the age of his son. Ten years hence, the father's age will be twice that of his son. The ratio of their present ages is?

**\*\*\*\*\* We wish you Good Luck for CSS-2026\*\*\*\*\***