

Mock Exam for CSS-2025  
10 July - 2024 (Mock-3)  
Batch # 059 (online)  
Iqra Sultan

General Science & Ability

Question on : 02

A.

Artificial intelligence is the new electricity. Justify with Your Opinion?  
My opinion is often referred to as the new electricity because, like electricity, it has the potential to transform and revolutionize numerous aspects of our lives. Here's a detailed justification for this statement:

1- Ubiquity :-

Just as electricity is an essential part of our daily lives, it is becoming increasingly ubiquitous in various industries and applications, from virtual assistants to healthcare and finance.

2. Powering innovation :-

Electricity enabled the development of many groundbreaking technologies, such as lighting, refrigeration and computers. Similarly, it is driving innovation in areas like robotics, natural language processing, and computer vision.

### 3. Transforming industries :-

Electricity revolutionized industries like manufacturing, transportation, and communication. It is doing the same in sectors like healthcare, finance, and education, improving efficiency, accuracy, and decision-making.

Q2: B; CPU is brain of computer, how it resembles with human brain in working?

The CPU (Central processing Unit) is indeed often referred to as the "brain" of a computer and while it's not a biological brain, it shares some interesting similarities with the human brain in terms of its functioning. Here are some detailed comparisons.

- 1- Processing information
- 2- Input-Output
- 3- Memory
- 4- Execution
- 5- Control Unit
- 6- Parallel Processing
- 7- Adaptation

Q3: C. What do you mean by a balanced A, B and C. Can result into what type of unbalances in human body?

1. Oxide
2. Carbide
3. Nitride
4. Piezoelectric
5. Ferrite
6. Glass - Ceramics
7. Advanced Ceramics

D. States some of the merits and demerits of global warming?

### Merits of global warming -

1. Increased food production -  
warmer temperatures and CO<sub>2</sub> levels can boost crop yields.
2. Economic benefits -  
Some industries, like construction and tourism, may benefit from milder winters.
3. Reduced cold-related deaths -  
Warmer temperatures can lead to fewer fatalities from hypothermia and frostbite.

### Demerits of Global warming -

1. Rising sea levels -  
Thawing glaciers and ice sheets threaten coastal cities and ecosystems.
2. Extreme weather events -  
Increased frequency and intensity of heatwaves, droughts, and storms.
3. Water scarcity -  
Changes in precipitation patterns

and increased evaporation lead to drought.

4- Loss of biodiversity :-

Rising temperatures and altered ecosystems threaten many species' survival.

D- What is polio? what are the challenge in eradication of polio in Pakistan?  
Polio :-

Polio, also known as poliomyelitis, is a highly infectious disease consisting of Serotypes 1, 2 and 3. It is primarily spread via the faeco-oral transmission. Contribution to the majority of cases especially in regions with poor hygiene and sanitation. The development of the inactivated poliovirus vaccine (IPV) has led to a sharp reduction in viral transmission and cases.

The Challenges in the eradication of Polio in Pakistan include :-

- **Illiteracy:** The major challenge for the eradication of polio in Pakistan is illiteracy, as people are not prevent it.
- **Misconceptions and misinformation,** especially among the religious segments of society, have hindered the polio eradication.
- **Insecurity:** The conflict in polio-endemic regions of the country has hindered the polio eradication campaign in Pakistan.

## Question on : 4

A: write a note on liver juice "Bile".

Bile, also known as liver juice, is a digestive fluid produced by the liver and stored in the gallbladder. It plays a crucial role in the digestion and absorption of fats and fat-soluble vitamins in the small intestine.

### Composition:

- water (85-95%)
- Bile Salts (bile acids and bile alcohols)
- Cholesterol
- Phospholipids
- Bilirubin (a breakdown products of hemoglobin)
- Electrolytes (Sodium, Potassium, Calcium and Chloride)

B. Describe role of kidney in excretion?

- The kidney play a crucial role in excretion by removing waste products and excess substances from the blood, regulating electrolyte levels, and maintaining acid-base balance. The kidneys' excretory functions include:

- 1- Filtering waste
- 2- Regulating electrolytes.
- 3- Maintaining acid-base balance.
- 4- Excreting excess substances
- 5- Producing urine

day/date

C- Discuss different methods of solid waste management.  
Solid waste management involves the collection, treatment, and disposal of solid waste in a manner that minimizes its impact on the environment and public health.

Different methods of solid waste management include:

- 1- Landfilling
- 2- Incineration
- 3- Recycling
- 4- Composting
- 5- Vermicomposting
- 6- Waste-to-Energy (WTE).

D. Define the term.

- 1- Anemia
- 2- Appendicitis
- 3- Myopia
- 4- Isotones

Here are the definitions;

### **Anemia:-**

A medical condition where the body has a lower than normal number of red blood cells or hemoglobin, leading to inadequate oxygen delivery to tissues.

### **Appendicitis:-**

Inflammation of the

appendix, a small organ attached to the large intestine, which can cause severe abdominal pain, nausea, and fever.

### Myopia :-

A vision condition also known as nearsightedness, where close objects are seen clearly but distant objects appear blurry due to the shape of the cornea or lens.

### Isotones:

Atoms or nuclei that have the same number of neutrons but a different number of protons (atomic number), resulting in different elements with similar mass.

## Question on : 7

A: find the volume of a cylinder with radius 30 cm and height?

To find the volume of a cylinder with formula:

$$\text{Volume} = \pi \times \text{Radius}^2 \times \text{Height}$$

$$\text{Radius} = 30 \text{ cm}$$

$$\text{Height} = ?$$

$$= \pi \times (30 \text{ cm})^2 \times 40 \text{ cm} = 113,097 \text{ cubic}$$

$$= 113.1 \text{ liters Ans}$$

day/date

C. Identify the Series,  
8, 19, 52, 151, 447, \_\_\_\_\_,

- what is wrong number in this Series?

Geometric progression with a common ratio of approximately 2.3-2.4.

$$8 \times 2.375 = 19$$

$$19 \times 2.421 = 46$$

$$46 \times 2.5 = 115$$

$$115 \times 2.413 = 278 \text{ Ans.}$$