

1. Short Notes on ANY TWO of the following:

(a) Adventure Activities in NCC

The National Cadet Corps (NCC) places significant emphasis on adventure activities to instill courage, self-reliance, teamwork, and a spirit of adventure in cadets. These activities also enhance physical fitness and leadership qualities. Key adventure activities include:

- **Trekking and Mountaineering:** Expeditions to various terrains and peaks, teaching navigation, survival skills, and endurance.
- **Para-sailing/Para-jumping:** Providing an exhilarating experience and overcoming fear of heights.
- **Water-based Activities:** Sailing, rowing, kayaking, canoeing, and whitewater rafting, promoting watermanship and teamwork.
- **Cycling Expeditions:** Long-distance cycling trips that build stamina and camaraderie.
- **Rock Climbing and Rappelling:** Developing strength, agility, and mental fortitude.
- **Motorcycle Expeditions:** Offering a challenging and adventurous mode of exploration.

These activities are conducted under strict supervision with trained instructors, ensuring safety while maximizing the learning and adventure experience for cadets.

(b) Organisation of NDMA

The National Disaster Management Authority (NDMA) is the apex body in India responsible for laying down policies, plans, and guidelines for disaster management. Its organization is structured to facilitate a coordinated and holistic approach:

- **Chairperson:** The Prime Minister of India serves as the ex-officio Chairperson of the NDMA.
- **Vice Chairperson:** A Vice Chairperson, appointed by the Central Government, assists the Chairperson and heads the executive functions.
- **Members:** Up to nine members are appointed, drawn from diverse fields relevant to disaster management, including experts in administration, science, engineering, and public policy.
- **Secretariat:** The NDMA has a secretariat, headed by a Secretary-level officer, to provide administrative, technical, and research support for its functions.

The NDMA works in conjunction with the National Executive Committee (NEC), State Disaster Management Authorities (SDMAs), and District Disaster Management Authorities (DDMAs) to ensure a comprehensive, multi-layered framework for disaster preparedness, response, and mitigation across the country.

2. What is mindset? How can one change his/her mindset?

What is Mindset?

A mindset refers to a person's established set of attitudes, beliefs, and assumptions that shape how they perceive and interact with the world. It

fundamentally influences how individuals interpret situations, respond to challenges, and define their capabilities. Psychologist Carol Dweck's work popularized the concepts of "fixed mindset" and "growth mindset":

- **Fixed Mindset:** Believes that abilities, intelligence, and talents are inherent, static traits that cannot be significantly changed. People with this mindset tend to avoid challenges, give up easily, feel threatened by others' success, and see effort as pointless.
- **Growth Mindset:** Believes that abilities and intelligence can be developed through dedication, hard work, and learning from experience. Individuals with this mindset embrace challenges, persist in the face of setbacks, learn from criticism, and find inspiration in others' success.

How Can One Change His/Her Mindset?

Changing one's mindset, particularly from a fixed to a growth orientation, is a gradual but achievable process involving conscious effort and consistent practice:

1. **Become Aware of Your Current Mindset:** The first step is to identify when you are operating from a fixed mindset. Pay attention to your inner dialogue, especially when faced with challenges, failures, or successes. Do you hear thoughts like "I can't do this" or "I'm not smart enough"?
2. **Challenge Fixed Mindset Thoughts:** When a fixed mindset thought arises, consciously challenge it. Ask yourself: "Is this truly a limitation,

or can I learn and grow?" "What if I tried a different approach?"

Reframe negative self-talk into opportunities for learning.

3. **Embrace Challenges and Effort:** Actively seek out challenges that push your boundaries. Understand that effort is not a sign of weakness, but a path to mastery. Celebrate the process of learning and growing, not just the outcome.
4. **View Failures as Learning Opportunities:** Instead of seeing failure as evidence of inability, view it as feedback. Analyze what went wrong, what lessons can be learned, and how to improve for next time. "What can I learn from this?" becomes a powerful question.
5. **Focus on the Process, Not Just the Outcome:** Shift your focus from solely achieving results to appreciating the journey, the effort, and the skills acquired along the way. This reduces the pressure of perfectionism and fosters resilience.
6. **Seek Inspiration from Others:** Learn from individuals who have overcome challenges through persistence and dedication. Their stories can reinforce the idea that abilities can be developed.
7. **Practice Positive Self-Talk:** Consciously replace self-limiting beliefs with empowering affirmations. For example, instead of "I'm bad at math," try "I can improve my math skills with practice."
8. **Educate Yourself on Brain Plasticity:** Understanding that the brain is not static but can form new connections and grow throughout life (neuroplasticity) provides a scientific basis for believing in one's capacity for development.

Changing a mindset requires persistence, as it involves rewiring deeply ingrained thought patterns. However, with consistent effort, individuals can

cultivate a growth mindset that empowers them to embrace learning, resilience, and personal development.

**3. Dr. A.P.J. Abdul Kalam: The Visionary Who Ignited Young Minds.
Describe his role as scientist and President of India.**

Dr. A.P.J. Abdul Kalam was a towering figure in India, revered not only for his scientific brilliance but also for his inspirational leadership and unwavering dedication to national progress, particularly among the youth.

Role as a Scientist (The 'Missile Man of India'):

Dr. Kalam's initial career was marked by extraordinary contributions to India's space and defense programs, earning him the moniker "Missile Man of India."

- **ISRO (Indian Space Research Organisation):** He joined ISRO in 1962 and was instrumental in the development of India's first satellite launch vehicle, SLV-III, which successfully launched the Rohini satellite in 1980. This achievement made India an exclusive member of the space club.
- **DRDO (Defence Research and Development Organisation):** He later joined DRDO, where he was the chief scientific adviser to the Defence Minister and Secretary of the Department of Defence Research and Development from 1992 to 1999.
- **Integrated Guided Missile Development Program (IGMDP):** Kalam was the driving force behind India's IGMDP, leading the development of indigenous ballistic missiles and nuclear weapon capabilities. He played a pivotal role in the successful Pokhran-II nuclear tests in

1998, which solidified India's position as a nuclear power. He supervised the development of missiles like Agni, Prithvi, Akash, Trishul, and Nag, significantly enhancing India's defense capabilities.

- **Technological Innovation:** Beyond missiles, he was involved in developing innovative technologies, including a low-cost coronary stent (Kalam-Raju Stent) and lightweight calipers for polio patients, showcasing his commitment to using science for societal benefit.

Role as the President of India (The 'People's President'):

From 2002 to 2007, Dr. Kalam served as the 11th President of India, transforming the largely ceremonial role into an active platform for national development and youth empowerment.

- **Igniting Young Minds:** He strongly believed in the power of youth and spent much of his presidency interacting with students across the country. His speeches often focused on the importance of education, hard work, vision, and patriotism, encouraging young minds to dream big and contribute to national development. He authored books like "Wings of Fire" and "Ignited Minds," which became sources of inspiration.
- **Vision 2020:** He passionately articulated his "Vision 2020" for India, aiming for India to transform into a developed nation by 2020. This vision encompassed economic prosperity, social equity, rural development, and technological self-reliance, providing a roadmap for national aspirations.
- **Accessibility and Connect:** Unlike many predecessors, he made the Rashtrapati Bhavan more accessible to common people,

particularly children. His humility, simplicity, and direct communication style earned him the title "People's President."

- **Science and Technology Promotion:** Even as President, he continued to advocate for science and technology as drivers of national progress, pushing for research and innovation.
- **Moral and Ethical Leadership:** He provided strong moral leadership, emphasizing integrity, secularism, and dedication to duty. His life became a testament to the idea that humility and hard work could lead to the highest office.

Dr. Kalam's legacy as a scientist laid the foundation for India's strategic autonomy, while his presidency transformed the role of the head of state into that of a national mentor and motivator, truly igniting the aspirations of millions.

4. Explain essential services, their maintenance and the role of NCC cadets during disaster.

Essential Services:

Essential services are fundamental public and private services whose continuous operation is deemed critical for the health, safety, security, and well-being of the population. Their disruption, especially during disasters, can have catastrophic consequences. They include:

1. **Healthcare Services:** Hospitals, clinics, emergency medical services (ambulances), pharmacies, and blood banks.
2. **Communication Services:** Telephone networks, internet, radio, television, and emergency broadcasting systems.

3. **Transportation Services:** Roads, railways, airports, ports, and public transport, necessary for movement of people, aid, and goods.
4. **Water Supply and Sanitation:** Drinking water treatment and distribution, sewage systems, and waste disposal.
5. **Electricity and Power Supply:** Power generation, transmission, and distribution networks.
6. **Food and Basic Supplies:** Supply chains for food, fuel, medicines, and other daily necessities.
7. **Law and Order/Security:** Police, fire services, and armed forces to maintain peace and order.
8. **Banking and Financial Services:** Essential for economic stability and aid distribution.

Maintenance of Essential Services During Disaster:

Maintaining essential services during and after a disaster is paramount for effective response and recovery. Without them, relief efforts become crippled, casualties rise, and societal breakdown can occur.

- **Pre-Disaster Planning:** Developing robust contingency plans, identifying vulnerabilities, and creating backup systems (e.g., redundant power lines, alternative communication channels).
- **Emergency Repair and Restoration:** Rapid deployment of skilled personnel and resources to repair damaged infrastructure (e.g., electricity lines, water pipes, communication towers).
- **Resource Prioritization:** Allocating limited resources to restore the most critical services first, based on impact assessment.

- **Backup Systems:** Utilizing generators for power, satellite phones for communication, and alternative routes for transportation.
- **Personnel Safety:** Ensuring the safety of essential service workers to enable them to perform their duties.
- **Public Communication:** Keeping the public informed about the status of services and alternative arrangements.

Role of NCC Cadets During Disaster:

NCC cadets, with their discipline, training, and spirit of social service, play a significant supportive role during disaster relief operations. Their contributions complement the efforts of professional agencies:

1. **First Aid and Medical Assistance:** Cadets trained in first aid can provide immediate medical help to victims, stabilize injuries, and assist medical teams in triage and evacuation.
2. **Communication Support:** They can assist in establishing and maintaining communication lines, especially in remote areas where traditional networks might be down, or act as messengers.
3. **Logistics and Distribution:** Cadets help in organizing, loading, transporting, and distributing relief materials like food, water, blankets, and medicines to affected populations.
4. **Traffic Management and Crowd Control:** They can assist local police in managing traffic flow and controlling crowds at relief camps, distribution points, or evacuation sites, maintaining order.
5. **Search and Rescue Assistance:** While not primary rescuers, they can assist trained teams by searching for missing persons in less hazardous areas, clearing debris, or providing basic support.

6. **Awareness Campaigns:** Post-disaster, they can participate in awareness campaigns on hygiene, sanitation, and disease prevention in temporary shelters or affected communities.
7. **Voluntary Service and Community Mobilization:** Their presence and organized approach can inspire and mobilize local community members to participate in relief efforts, fostering a sense of collective responsibility.
8. **Data Collection and Survey:** They can assist authorities in conducting surveys to assess damage, identify needs, and register affected individuals.

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