

Comprehensive NCERT Grade 5 Science Study Notes & MCQ Bank

Complete 10-Chapter Curriculum Master Handbook

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RAMAN SPACE
MANTHAN INDIA

Chapter 1: Water — The Essence of Life

1. KEY TERMS & KEYWORDS

Keyword	Definition & Concept
Freshwater	Water with low salt content (rivers, lakes, groundwater) fit for drinking and farming.
Saline Water	Salty water found in oceans and seas, unfit for direct human consumption.
Water Cycle	The continuous movement of water through evaporation, condensation, and precipitation.
Groundwater	Rainwater stored beneath the Earth's surface in porous rocks and soil.
Johads	Traditional earthen check-dams in Rajasthan used to harvest rainwater and recharge aquifers.

2. DETAILED CHAPTER NOTES & CONCEPTS

- About 71% of the Earth's surface is covered with water, but only around 3% is freshwater.
- Water exists in three states: Solid (ice, glaciers), Liquid (rivers, rain), and Gas (water vapour).
- Processes of the Water Cycle: Solar heat causes Evaporation, cooling air leads to Condensation into clouds, and gravity causes Precipitation (rain, snow, hail).
- Groundwater Conservation: Unpaved ground and soak pits allow water to seep into aquifers, whereas concrete surfaces cause runoff and lower the water table.
- Aquatic Adaptations: Fish have gills and streamlined bodies; aquatic plants like lotus have waxy coatings on leaves to prevent decay; water hyacinth has spongy air-filled stalks.
- Key Highlights: Luni River ends in the Rann of Kutch without reaching the sea; Keibul Lamjao in Manipur is the world's only floating national park on 'phumdis'.

3. STANDARD PRACTICE MCQS (30 QUESTIONS)

Q1. Roughly what percentage of the Earth's surface is covered with water?

- (A) 25% (B) 50%
(C) 71% (D) 95%

Q2. Water stored deep beneath the Earth's surface in soil and rocks is called:

- (A) Surface water (B) Groundwater
(C) Saline water (D) Glacier water

Q3. The process of water liquid changing into water vapour due to heat is:

- (A) Condensation (B) Precipitation
(C) Evaporation (D) Freezing

Q4. Which traditional structures are built in Rajasthan to collect rainwater?

- (A) Baolis (B) Johads
(C) Canals (D) Dams

Q5. Clouds in the sky are formed primary through which process?

- (A) Evaporation (B) Condensation
(C) Sublimation (D) Transpiration

Q6. Rain, snow, and hail falling from clouds to Earth are forms of:

- (A) Evaporation (B) Condensation
(C) Precipitation (D) Filtration

Q7. Which material stops rainwater from seeping into the ground?

- | | |
|----------------|-----------------------|
| (A) Grass lawn | (B) Concrete pavement |
| (C) Soil field | (D) Sand bed |

Q8. Why do lotus leaves have a smooth waxy coating?

- | | |
|------------------------|------------------------------------|
| (A) To look shiny | (B) To repel water and prevent rot |
| (C) To attract insects | (D) To trap heat |

Q9. Which river in India originates in the Aravallis and ends in the Rann of Kutch?

- | | |
|-----------|--------------|
| (A) Ganga | (B) Godavari |
| (C) Luni | (D) Narmada |

Q10. The floating vegetation landmasses in Manipur's Loktak Lake are called:

- | | |
|------------|-------------|
| (A) Johads | (B) Phumdis |
| (C) Deltas | (D) Islands |

Q11. Which bird has long, slender legs to wade through shallow water for fish?

- | | |
|-----------------|----------------|
| (A) Woodpecker | (B) Pond Heron |
| (C) Weaver bird | (D) Parrot |

Q12. India's first water museum, 'Jal Shakti Museum', is located in:

- | | |
|------------|---------------|
| (A) Mumbai | (B) New Delhi |
| (C) Jaipur | (D) Kolkata |

Q13. Which village in Maharashtra became famous for exemplary watershed management?

- | | |
|--------------------|------------------|
| (A) Ralegan Siddhi | (B) Hiware Bazar |
| (C) Shirur | (D) Anand |

Q14. Ice, snow, and hail represent which state of water?

- | | |
|-------------|------------|
| (A) Gaseous | (B) Liquid |
| (C) Solid | (D) Plasma |

Q15. Water Hyacinth stays afloat on water bodies because of its:

- | | |
|------------------|-------------------------------|
| (A) Heavy roots | (B) Spongy, air-filled stalks |
| (C) Waxy flowers | (D) Thick trunk |

Q16. The Statue of Unity is situated along the banks of which river?

- | | |
|------------|--------------|
| (A) Ganga | (B) Narmada |
| (C) Yamuna | (D) Godavari |

Q17. Asia's largest freshwater lake located in Jammu and Kashmir is:

- | | |
|------------------|------------------|
| (A) Dal Lake | (B) Wular Lake |
| (C) Chilika Lake | (D) Sambhar Lake |

Q18. An aquatic insect that breathes underwater using a long tail tube is the:

- | | |
|-----------------|--------------------|
| (A) Dragonfly | (B) Water Scorpion |
| (C) Pond Skater | (D) Mosquito |

Q19. What percentage of Earth's water is readily usable freshwater?

- | | |
|------------------|---------------|
| (A) About 30% | (B) About 50% |
| (C) Less than 3% | (D) About 71% |

Q20. Salt pans in Gujarat are used to extract salt from seawater through:

- | | |
|----------------|-------------------------|
| (A) Freezing | (B) Natural evaporation |
| (C) Filtration | (D) Distillation |

Q21. Which aquatic animal has partially webbed paws for swimming in wetlands?

- (A) Fishing Cat (B) Desert Fox
(C) Wild Boar (D) Jackal

Q22. Planting trees helps groundwater recharge because tree roots:

- (A) Absorb all rain (B) Loosen soil and increase water seepage
(C) Block sunlight (D) Produce oxygen

Q23. Which state of water is invisible steam present in air?

- (A) Solid (B) Liquid
(C) Gaseous / Vapour (D) Plasma

Q24. In a 200 ml glass representing all Earth's water, total usable freshwater is about:

- (A) 100 ml (B) 50 ml
(C) 5 ml (1 tsp) (D) 0.1 ml

Q25. When water vapour cools down high in the air, it turns into:

- (A) Ice blocks (B) Liquid water droplets
(C) Gas clouds (D) Salt crystals

Q26. Recharging groundwater aquifers prevents:

- (A) Floods only (B) Drying up of wells and borewells
(C) Soil formation (D) Rainfall

Q27. Which river is Asia's longest and flows across multiple nations?

- (A) Ganga (B) Indus
(C) Brahmaputra (D) Yamuna

Q28. What happens to water placed in an open tray under bright sunlight?

- (A) It freezes (B) It slowly evaporates
(C) It changes colour (D) It doubles in volume

Q29. Plants that grow attached to the bottom bed of a pond with floating leaves are:

- (A) Rooted floating plants (B) Free-floating plants
(C) Submerged plants (D) Desert plants

Q30. World Water Day is observed globally to raise awareness about:

- (A) Ocean sailing (B) Water conservation and clean water access
(C) Fishing sports (D) Swimming competitions

4. ANSWER KEY — CHAPTER 1

Q.1	Ans	Q.2	Ans	Q.3	Ans	Q.4	Ans	Q.5	Ans	Q.6	Ans	Q.7	Ans	Q.8	Ans	Q.9	Ans	Q.10	Ans
1	C	2	B	3	C	4	B	5	B	6	C	7	B	8	B	9	C	10	B
Q.11	Ans	Q.12	Ans	Q.13	Ans	Q.14	Ans	Q.15	Ans	Q.16	Ans	Q.17	Ans	Q.18	Ans	Q.19	Ans	Q.20	Ans
11	B	12	B	13	B	14	C	15	B	16	B	17	B	18	B	19	C	20	B
Q.21	Ans	Q.22	Ans	Q.23	Ans	Q.24	Ans	Q.25	Ans	Q.26	Ans	Q.27	Ans	Q.28	Ans	Q.29	Ans	Q.30	Ans
21	A	22	B	23	C	24	C	25	B	26	B	27	C	28	B	29	A	30	B

Chapter 2: The Journey of River

1. KEY TERMS & KEYWORDS

Keyword	Definition & Concept
Source	The starting point of a river, usually high up in snow-capped mountains or glaciers.
Tributary	A smaller stream or river that flows into and joins a larger main river.
Meander	A winding, looping curve or bend formed by a river flowing across flat plains.
Delta	A triangular landform created by soil/silt deposit at the river mouth before entering the sea.
Estuary	The tidal mouth of a large river where fresh river water meets salty sea water.

2. DETAILED CHAPTER NOTES & CONCEPTS

- Upper Course (Mountain Stage): Rivers originate from glaciers or mountain springs. High slopes create fast-flowing, narrow streams that cut deep V-shaped valleys and waterfalls.
- Middle Course (Valley/Plain Stage): The slope flattens, and the river slows down, widening its bed. It carries heavy sediments and forms winding curves called meanders.
- Lower Course (Mouth Stage): The river moves very slowly across flat plains, carrying rich silt. It branches into distributaries and forms fertile deltas or estuaries before meeting the ocean.
- Importance of Rivers: Rivers provide freshwater for agriculture, drinking, power generation (hydroelectricity), transportation, and support diverse biodiversity.
- Human Impact & Conservation: Pollution from industrial effluents, sewage, and plastic waste harms river ecosystems. Cleaning drives like 'Namami Gange' aim to restore river health.

3. STANDARD PRACTICE MCQS (30 QUESTIONS)

Q1. The origin point where a river begins high in the mountains is called its:

- (A) Mouth (B) Source
(C) Delta (D) Tributary

Q2. A smaller river that flows into a larger main river is known as a:

- (A) Distributary (B) Tributary
(C) Meander (D) Estuary

Q3. What type of valley shape is typically carved by fast-moving upper course rivers?

- (A) U-shaped (B) V-shaped
(C) Flat bed (D) Circular

Q4. S-shaped winding curves formed by rivers on flat land are called:

- (A) Deltas (B) Waterfalls
(C) Meanders (D) Estuaries

Q5. The triangular area of land formed by soil deposits at the river's mouth is a:

- (A) Glacier (B) Delta
(C) Plateau (D) Canyon

Q6. In which stage does a river flow fastest due to steep slopes?

- (A) Upper mountain course (B) Middle plain course
(C) Lower coastal course (D) At the ocean

Q7. Which river is known as the 'Dakshin Ganga' (Ganga of the South)?

- (A) Narmada
- (B) Godavari
- (C) Kaveri
- (D) Krishna

Q8. Hydroelectric power plants generate electricity using:

- (A) Wind speed
- (B) Flowing water force
- (C) Solar radiation
- (D) Coal burning

Q9. Rich fine soil deposited by rivers on floodplains is called:

- (A) Laterite soil
- (B) Alluvial soil
- (C) Black cotton soil
- (D) Sandy soil

Q10. The world's largest river delta, formed by the Ganga and Brahmaputra, is the:

- (A) Nile Delta
- (B) Sundarbans Delta
- (C) Amazon Delta
- (D) Mississippi Delta

Q11. Where a river empties into a lake, sea, or ocean, that point is called the river's:

- (A) Source
- (B) Glacier
- (C) Mouth
- (D) Tributary

Q12. Which major Indian river flows westward into the Arabian Sea?

- (A) Ganga
- (B) Yamuna
- (C) Narmada
- (D) Mahanadi

Q13. Waterfalls are most commonly formed in which section of a river's journey?

- (A) Lower plain
- (B) Delta region
- (C) Upper mountain course
- (D) Ocean mouth

Q14. Small river channels that branch away from the main river near its mouth are:

- (A) Tributaries
- (B) Distributaries
- (C) Gorges
- (D) Canyons

Q15. Which flagship government initiative was launched to clean and rejuvenate River Ganga?

- (A) Clean India Mission
- (B) Namami Gange
- (C) Jal Jeevan Mission
- (D) Project Tiger

Q16. What major energy transformation happens in a hydroelectric dam?

- (A) Chemical to Light
- (B) Kinetic energy of water to Electrical energy
- (C) Heat to Sound
- (D) Nuclear to Thermal

Q17. Rivers originating from snow-capped Himalayan glaciers are typically:

- (A) Seasonal rivers
- (B) Perennial rivers (flow all year)
- (C) Dry channels
- (D) Saline rivers

Q18. Peninsular Indian rivers (like Krishna and Godavari) are primarily fed by:

- (A) Glaciers
- (B) Monsoon rain
- (C) Underground ocean springs
- (D) Snowmelt

Q19. Excessive dumping of untreated industrial waste into rivers leads to:

- (A) Increase in fish population
- (B) Severe river pollution and loss of aquatic life
- (C) Cleaner drinking water
- (D) Higher water table

Q20. A steep fall of river water over a vertical ledge of rock is called a:

- (A) Meander
- (B) Waterfall
- (C) Delta
- (D) Swamp

Q21. Which of these is NOT a river originating in the Himalayas?

- (A) Yamuna (B) Brahmaputra
(C) Kaveri (D) Indus

Q22. Soil carried down by rivers makes floodplains extremely suitable for:

- (A) Desert safari (B) Agriculture and farming
(C) Mining heavy metals (D) Building glaciers

Q23. The space where fresh river water meets salt sea water in a tidal channel is an:

- (A) Estuary (B) Oasis
(C) Glacier (D) Lagoon

Q24. What happens to the speed of a river as it approaches its mouth at the sea?

- (A) It accelerates greatly (B) It slows down significantly
(C) It remains unchanged (D) It stops completely in mountains

Q25. River Yamuna joins River Ganga at Prayagraj. This meeting point is called a:

- (A) Confluence (Sangam) (B) Delta
(C) Estuary (D) Source

Q26. Boats and barges carry heavy cargo along flat river stretches. This use is called:

- (A) Inland water transport (B) Hydro-power generation
(C) Submarine navigation (D) Glacier trekking

Q27. Building high walls across rivers to store water and generate power creates a:

- (A) Canal (B) Dam and Reservoir
(C) Meander (D) Delta

Q28. The area drained by a main river and all its tributaries is called a river:

- (A) Basin / Catchment area (B) Delta zone
(C) Mountain peak (D) Estuary

Q29. Why are river banks historically the sites of ancient human civilizations?

- (A) Easy access to water, fertile soil, and transport (B) To stay away from plants
(C) Cold climate (D) High mountain protection

Q30. Which natural process breaks down rocks along mountain river paths into fine gravel and soil?

- (A) Photosynthesis (B) Erosion and weathering
(C) Evaporation (D) Condensation

4. ANSWER KEY — CHAPTER 2

Q.1	Ans	Q.2	Ans	Q.3	Ans	Q.4	Ans	Q.5	Ans	Q.6	Ans	Q.7	Ans	Q.8	Ans	Q.9	Ans	Q.10	Ans
1	B	2	B	3	B	4	C	5	B	6	A	7	B	8	B	9	B	10	B
Q.11	Ans	Q.12	Ans	Q.13	Ans	Q.14	Ans	Q.15	Ans	Q.16	Ans	Q.17	Ans	Q.18	Ans	Q.19	Ans	Q.20	Ans
11	C	12	C	13	C	14	B	15	B	16	B	17	B	18	B	19	B	20	B
Q.21	Ans	Q.22	Ans	Q.23	Ans	Q.24	Ans	Q.25	Ans	Q.26	Ans	Q.27	Ans	Q.28	Ans	Q.29	Ans	Q.30	Ans
21	C	22	B	23	A	24	B	25	A	26	A	27	B	28	A	29	A	30	B

Chapter 3: The Mystery of Food

1. KEY TERMS & KEYWORDS

Keyword	Definition & Concept
Nutrients	Essential chemical substances in food needed for growth, energy, and maintenance.
Balanced Diet	A meal containing right proportions of carbohydrates, proteins, fats, vitamins, and minerals.
Preservation	Methods used to prevent food spoilage caused by microbes like bacteria and fungi.
Spoilage	Decay of food making it unsafe to eat, noticed by bad smell, change in taste, or fungal growth.
Digestion	The body process of breaking down complex food into simple absorbed substances.

2. DETAILED CHAPTER NOTES & CONCEPTS

- Five Main Nutrients: Carbohydrates (energy), Fats (stored energy/warmth), Proteins (growth/muscle repair), Vitamins & Minerals (disease protection/health).
- Dietary Fibre (Roughage) & Water: Help in smooth digestion, healthy bowel movement, and body temperature regulation.
- Food Spoilage Causes: Microorganisms (fungi/moulds, bacteria) thrive in moist, warm conditions. Signs include foul odor, sour taste, discoloration, and white/green fuzzy growths.
- Food Preservation Techniques: Drying/Dehydration (papad), Salting & Pickling (achar), Sugaring (jams), Freezing/Refrigeration, Boiling/Pasteurization (milk), Air-tight Canning.
- Traditional Indian Culinary Wisdom: Using spices like turmeric (antiseptic), mustard seeds, and asafoetida (hing) aids digestion and keeps food preserved longer.

3. STANDARD PRACTICE MCQS (30 QUESTIONS)

Q1. Which nutrient is the body's primary quick source of energy?

- (A) Protein (B) Carbohydrate
(C) Vitamin C (D) Calcium

Q2. Proteins are essential in our daily diet mainly for:

- (A) Instant energy (B) Body growth and muscle repair
(C) Keeping body warm (D) Strong teeth only

Q3. Fuzzy greenish-white growth appearing on stale bread after two days is caused by:

- (A) Algae (B) Fungus (Mould)
(C) Viruses (D) Insects

Q4. Which method removes water content from food items to preserve them long-term?

- (A) Boiling (B) Freezing
(C) Drying / Dehydration (D) Salting only

Q5. Which nutrient gives us double the energy compared to carbohydrates per gram?

- (A) Proteins (B) Fats
(C) Vitamins (D) Minerals

Q6. Roughage (dietary fibre) in our food primarily helps in:

- (A) Building strong bones (B) Easy digestion and smooth waste removal
(C) Fighting infections (D) Providing quick energy

Q7. Adding excess salt and oil to mangoes and lemon to store them for a year is called:

- | | |
|--------------------|--------------|
| (A) Pasteurization | (B) Pickling |
| (C) Fermentation | (D) Canning |

Q8. Which vitamin is produced in our skin when exposed to sunlight?

- | | |
|---------------|---------------|
| (A) Vitamin A | (B) Vitamin B |
| (C) Vitamin C | (D) Vitamin D |

Q9. Boiling milk before storing it destroys harmful microbes. This is a form of:

- | | |
|-----------------|---|
| (A) Dehydration | (B) Heat sterilization / Pasteurization |
| (C) Freezing | (D) Pickling |

Q10. Citrus fruits like oranges, lemons, and amla are rich sources of:

- | | |
|---------------|-------------|
| (A) Vitamin C | (B) Calcium |
| (C) Iron | (D) Protein |

Q11. Deficiency of iron in our daily diet can lead to which condition?

- | | |
|-------------|------------|
| (A) Rickets | (B) Anemia |
| (C) Goitre | (D) Scurvy |

Q12. A balanced diet must contain proper amounts of:

- | | |
|---------------------------------|---|
| (A) Only carbohydrates and fats | (B) All five nutrients, roughage, and water |
| (C) Only proteins and milk | (D) Only fruits and sweets |

Q13. Which chemical test turns starch solution into deep blue-black colour?

- | | |
|------------------|-----------------|
| (A) Salt test | (B) Iodine test |
| (C) Alcohol test | (D) Litmus test |

Q14. Spoiled food smells foul and tastes sour due to the growth of:

- | | |
|-----------------------|------------------------|
| (A) Beneficial plants | (B) Bacteria and fungi |
| (C) Minerals | (D) Pure air |

Q15. Refrigeration preserves food because low temperature:

- | | |
|-------------------------|---------------------------------|
| (A) Kills all nutrients | (B) Slows down microbial growth |
| (C) Evaporates water | (D) Adds extra vitamins |

Q16. Which mineral is required for building strong bones and healthy teeth?

- | | |
|------------|-------------|
| (A) Iron | (B) Calcium |
| (C) Sodium | (D) Iodine |

Q17. Deficiency of Iodine in drinking water and food causes swelling in the neck called:

- | | |
|--------------|--------------|
| (A) Anemia | (B) Goitre |
| (C) Marasmus | (D) Beriberi |

Q18. Which Indian spice added to food acts as a natural antiseptic and digestive aid?

- | | |
|-------------------|-------------------|
| (A) Turmeric | (B) Sugar |
| (C) Refined flour | (D) Baking powder |

Q19. Jams and jellies are preserved for months by adding high amounts of:

- | | |
|-------------|-----------|
| (A) Salt | (B) Sugar |
| (C) Vinegar | (D) Water |

Q20. Which organ in the human body absorbs most nutrients from digested food?

- | | |
|---------------------|---------------------|
| (A) Stomach | (B) Small Intestine |
| (C) Large Intestine | (D) Food pipe |

Q21. Vitamin A is essential for maintaining healthy:

- (A) Bones (B) Eyesight and skin
(C) Teeth (D) Hair colour

Q22. Which food group includes pulses, beans, eggs, fish, and milk?

- (A) Carbohydrates (B) Protein-rich foods
(C) Fats only (D) Roughage only

Q23. Papad and badiyan are traditionally preserved in Indian homes using:

- (A) Deep freezing (B) Sun drying
(C) Vacuum packing (D) Boiling

Q24. Night blindness is caused by the lack of which vitamin in our diet?

- (A) Vitamin A (B) Vitamin B1
(C) Vitamin C (D) Vitamin D

Q25. Which organ produces bile juice to help digest fats in our body?

- (A) Heart (B) Liver
(C) Pancreas (D) Kidney

Q26. Overeating fat-rich junk foods without physical exercise can lead to:

- (A) Anemia (B) Obesity
(C) Goitre (D) Rickets

Q27. Which nutrient keeps our body warm by forming a protective insulating layer under skin?

- (A) Proteins (B) Fats
(C) Vitamins (D) Water

Q28. Food stored in airtight sealed cans stays fresh longer because it prevents:

- (A) Sunlight entry (B) Air and moisture contact with microbes
(C) Cooling (D) Weight gain

Q29. Saliva in our mouth begins breaking down which nutrient during chewing?

- (A) Fats (B) Starches / Carbohydrates
(C) Proteins (D) Minerals

Q30. Scurvy, characterized by bleeding gums, is caused by deficiency of:

- (A) Vitamin A (B) Vitamin C
(C) Vitamin D (D) Calcium

4. ANSWER KEY — CHAPTER 3

Q.1	Ans	Q.2	Ans	Q.3	Ans	Q.4	Ans	Q.5	Ans	Q.6	Ans	Q.7	Ans	Q.8	Ans	Q.9	Ans	Q.10	Ans
1	B	2	B	3	B	4	C	5	B	6	B	7	B	8	D	9	B	10	A
Q.11	Ans	Q.12	Ans	Q.13	Ans	Q.14	Ans	Q.15	Ans	Q.16	Ans	Q.17	Ans	Q.18	Ans	Q.19	Ans	Q.20	Ans
11	B	12	B	13	B	14	B	15	B	16	B	17	B	18	A	19	B	20	B
Q.21	Ans	Q.22	Ans	Q.23	Ans	Q.24	Ans	Q.25	Ans	Q.26	Ans	Q.27	Ans	Q.28	Ans	Q.29	Ans	Q.30	Ans
21	B	22	B	23	B	24	A	25	B	26	B	27	B	28	B	29	B	30	B

Chapter 4: Our School — The Happy Place

1. KEY TERMS & KEYWORDS

Keyword	Definition & Concept
Cooperation	Working together harmoniously towards a common goal or project.
Inclusion	Ensuring every student, regardless of background or ability, feels welcomed and valued.
Empathy	Understanding and sharing the feelings and experiences of another person.
Civic Duty	Responsibility of maintaining school cleanliness, property, and discipline.
Community	A group of people sharing common values, rules, and learning environment.

2. DETAILED CHAPTER NOTES & CONCEPTS

- **School as a Social Hub:** School is not just for academic learning but for developing social skills, life values, teamwork, and lifelong friendships.
- **Values of Inclusion & Diversity:** Every student brings unique talents, cultures, and background experiences. An inclusive environment treats all abilities and gender equally.
- **Roles in a School Ecosystem:** Teachers guide learning; students participate actively; support staff keep the environment safe and clean; parents partner in growth.
- **Rules & Mutual Respect:** Following classroom norms, sportsmanship on playfields, queue discipline, and protecting school infrastructure foster a safe, positive environment.
- **Community Contribution:** Peer tutoring, eco-clubs, mid-day meal sharing, and student councils teach democracy, leadership, and social responsibility.

3. STANDARD PRACTICE MCQS (30 QUESTIONS)

Q1. Working together with classmates to complete an eco-project is called:

- (A) Competition (B) Cooperation
(C) Isolation (D) Discipline

Q2. Ensuring students of all backgrounds and physical abilities learn together equally is:

- (A) Exclusion (B) Inclusion
(C) Division (D) Segregation

Q3. Understanding how a classmate feels when they are hurt or sad is demonstrating:

- (A) Empathy (B) Anger
(C) Indifference (D) Curiosity

Q4. Who guides students, encourages curiosity, and facilitates learning in a school?

- (A) Teachers (B) Visitors
(C) Inspectors (D) Vendors

Q5. Keeping the classroom clean, dustbins used, and desks undamaged is a student's:

- (A) Civic duty / Responsibility (B) Punishment
(C) Optional task (D) Hobby

Q6. Sharing lunch and helping a friend who missed class notes builds strong:

- (A) Conflict (B) Friendship and bonding
(C) Enmity (D) Rivalry

Q7. Standing in a neat queue while boarding the school bus ensures:

- | | |
|-----------|----------------------|
| (A) Chaos | (B) Safety and order |
| (C) Delay | (D) Noise |

Q8. Mid-day meal programs in Indian government schools promote social equality and:

- | | |
|-------------------------------------|----------------------|
| (A) Nutrition and school attendance | (B) Unhealthy habits |
| (C) Exam stress | (D) Sports trophies |

Q9. A school environment where students feel safe, respected, and joyful is called a:

- | | |
|----------------------|---|
| (A) Stressful center | (B) Happy place / Nurturing environment |
| (C) Quiet library | (D) Factories zone |

Q10. Student councils and eco-clubs in schools teach children about:

- | | |
|----------------------|---|
| (A) Elections only | (B) Leadership, democracy, and environmental care |
| (C) Business profits | (D) Rote learning |

Q11. Good sportsmanship during sports day means:

- | | |
|---------------------------|---|
| (A) Cheating to win | (B) Playing fair, respecting rules, and encouraging teammates |
| (C) Arguing with referees | (D) Crying on losing |

Q12. Celebrating diverse cultural festivals in school helps students learn:

- | | |
|----------------------|---|
| (A) Only one culture | (B) Respect and appreciation for cultural diversity |
| (C) Languages only | (D) Math formulas |

Q13. If a classmate uses a wheelchair, an inclusive school provides:

- | | |
|----------------------------------|-------------------------|
| (A) Ramps and accessible toilets | (B) High stairs |
| (C) No access | (D) Separate dark rooms |

Q14. Raising your hand before speaking during a classroom discussion shows:

- | | |
|--------------|--|
| (A) Fear | (B) Respect for classroom discipline and speaker |
| (C) Weakness | (D) Noise making |

Q15. Which school body brings together parents and teachers to discuss student well-being?

- | | |
|--------------------------------------|-------------------|
| (A) PTA (Parent-Teacher Association) | (B) Sports Club |
| (C) Science Lab | (D) Library Board |

Q16. Proper handwashing before eating mid-day meals prevents:

- | | |
|------------|--|
| (A) Hunger | (B) Spread of germs and stomach infections |
| (C) Thirst | (D) Fatigue |

Q17. Helping a newly admitted student find their classroom on their first day is:

- | | |
|-----------------|----------------------------------|
| (A) Bullying | (B) Welcoming and kind behaviour |
| (C) Strict rule | (D) Waste of time |

Q18. The school library is primarily designed to nurture:

- | | |
|-------------------|---|
| (A) Noise | (B) Reading habits and quiet self-study |
| (C) Eating snacks | (D) Running races |

Q19. Taking turns while playing on swings and sports equipment avoids:

- | | |
|--------------|-----------------------------------|
| (A) Fun | (B) Accidents and unfair quarrels |
| (C) Exercise | (D) Friendship |

Q20. Distributing duties like black-board cleaning and plant watering among monitors promotes:

- | | |
|-----------------|--|
| (A) Favouritism | (B) Shared responsibility and teamwork |
| (C) Lethargy | (D) Punishment |

Q21. Expressing gratitude to school housekeeping and security staff shows:

- (A) Arrogance (B) Respect and value for all labor (Dignity of Labor)
(C) Weakness (D) Fear

Q22. Resolving minor playground arguments through peaceful talking is called:

- (A) Conflict resolution (B) Physical fighting
(C) Ignoring problem (D) Complaining always

Q23. Planting saplings in the school garden during Van Mahotsav creates:

- (A) Pollution (B) A green and healthy school campus
(C) Noise (D) Muddy desks

Q24. Which habit promotes inclusion during group discussions?

- (A) Listening attentively to everyone's ideas (B) Shouting over others
(C) Only talking yourself (D) Leaving the room

Q25. School morning assemblies foster a sense of unity through:

- (A) Group prayers, national anthem, and shared announcements (B) Individual sleep
(C) Exam tests (D) Loud shouting

Q26. Dedicating September 5th as Teachers' Day in India honors the memory of:

- (A) Dr. APJ Abdul Kalam (B) Dr. Sarvepalli Radhakrishnan
(C) Mahatma Gandhi (D) Pt. Jawaharlal Nehru

Q27. Creating colorful charts and science displays on bulletin boards encourages:

- (A) Vandalism (B) Creativity and peer learning
(C) Waste of paper (D) Exam fear

Q28. When students work together to prepare a skit for Annual Day, they learn:

- (A) Isolation (B) Teamwork, time management, and coordination
(C) Rote memorization (D) Individual glory

Q29. A school suggestion box allows students to:

- (A) Dispose trash (B) Share ideas and concerns constructively
(C) Store books (D) Hide toys

Q30. The main purpose of physical education classes in school is to build:

- (A) Exam stress (B) Physical fitness, agility, and mental health
(C) Rote learning (D) Quietness

4. ANSWER KEY — CHAPTER 4

Q.1	Ans	Q.2	Ans	Q.3	Ans	Q.4	Ans	Q.5	Ans	Q.6	Ans	Q.7	Ans	Q.8	Ans	Q.9	Ans	Q.10	Ans
1	B	2	B	3	A	4	A	5	A	6	B	7	B	8	A	9	B	10	B
Q.11	Ans	Q.12	Ans	Q.13	Ans	Q.14	Ans	Q.15	Ans	Q.16	Ans	Q.17	Ans	Q.18	Ans	Q.19	Ans	Q.20	Ans
11	B	12	B	13	A	14	B	15	A	16	B	17	B	18	B	19	B	20	B
Q.21	Ans	Q.22	Ans	Q.23	Ans	Q.24	Ans	Q.25	Ans	Q.26	Ans	Q.27	Ans	Q.28	Ans	Q.29	Ans	Q.30	Ans
21	B	22	A	23	B	24	A	25	A	26	B	27	B	28	B	29	B	30	B

Chapter 5: Our Vibrant Country

1. KEY TERMS & KEYWORDS

Keyword	Definition & Concept
Diversity	A rich variety of languages, cultures, religions, landforms, and traditions.
Unity in Diversity	The national motto reflecting harmony despite cultural and geographical differences.
National Symbols	Official emblems representing India's sovereignty, history, and identity.
Peninsula	A piece of land surrounded by water on three sides (e.g., Southern India).
Heritage	Historical monuments, art forms, and traditions passed down through generations.

2. DETAILED CHAPTER NOTES & CONCEPTS

- Geographical Splendor: Northern Snow Peaks (Himalayas), Northern Plains (Indo-Gangetic), Western Desert (Thar), Southern Peninsular Plateau, Eastern & Western Coastal Plains, and Island Groups (Andaman & Nicobar, Lakshadweep).
- Unity in Diversity: India is home to 22 constitutionally recognized languages, multiple religions, diverse dance forms (Kathak, Bharatanatyam, Bhangra), and rich traditional wear (Saree, Turbans).
- National Symbols: National Flag (Tiranga with Ashoka Chakra), National Emblem (Lion Capital of Ashoka), Anthem ('Jana Gana Mana'), Song ('Vande Mataram'), Animal (Tiger), Flower (Lotus), Bird (Peacock), Tree (Banyan).
- Monuments & Heritage: Taj Mahal, Red Fort, Qutub Minar, Sun Temple, Ajanta & Ellora Caves represent centuries of architecture, art, and craft.
- Civic Pride: Respecting the Constitution, protecting public property, preserving national monuments, and celebrating national days (Republic Day, Independence Day, Gandhi Jayanti).

3. STANDARD PRACTICE MCQS (30 QUESTIONS)

Q1. The national motto of India reflecting harmony among diverse cultures is:

- (A) Work is Worship (B) Unity in Diversity
(C) Truth Alone Triumphs (D) Jai Jawan Jai Kisan

Q2. How many spokes are present in the Ashoka Chakra at the center of the Indian Tricolor?

- (A) 12 (B) 20
(C) 24 (D) 36

Q3. Southern India is termed a 'Peninsula' because it is surrounded by water on:

- (A) One side (B) Two sides
(C) Three sides (D) Four sides

Q4. The world's highest mountain range guarding India's northern boundary is the:

- (A) Aravalli Range (B) Himalayas
(C) Western Ghats (D) Vindhya Range

Q5. Who wrote India's National Anthem 'Jana Gana Mana'?

- (A) Bankim Chandra Chattopadhyay (B) Rabindranath Tagore
(C) Sarojini Naidu (D) Mahatma Gandhi

Q6. Which ocean lies directly to the south of the Indian peninsula?

- (A) Atlantic Ocean (B) Pacific Ocean
(C) Indian Ocean (D) Arctic Ocean

Q7. India's National Song 'Vande Mataram' was composed by:

- | | |
|--------------------------|----------------------------------|
| (A) Rabindranath Tagore | (B) Bankim Chandra Chattopadhyay |
| (C) Subhash Chandra Bose | (D) Kabir |

Q8. The island group situated in the Bay of Bengal belonging to India is:

- | | |
|-------------------------|---------------------------------|
| (A) Lakshadweep Islands | (B) Andaman and Nicobar Islands |
| (C) Maldives | (D) Sri Lanka |

Q9. Which desert is located in the northwestern region of India (Rajasthan)?

- | | |
|-------------------|--------------------|
| (A) Sahara Desert | (B) Thar Desert |
| (C) Gobi Desert | (D) Atacama Desert |

Q10. India's National Animal, symbolising strength and grace, is the:

- | | |
|----------------------|------------------------|
| (A) Asian Elephant | (B) Royal Bengal Tiger |
| (C) One-horned Rhino | (D) Indian Lion |

Q11. The classical dance form 'Bharatanatyam' originated in which Indian state?

- | | |
|------------|----------------|
| (A) Kerala | (B) Tamil Nadu |
| (C) Punjab | (D) Odisha |

Q12. How many major constitutionally recognized languages are listed in the 8th Schedule of India's Constitution?

- | | |
|--------|--------|
| (A) 12 | (B) 18 |
| (C) 22 | (D) 30 |

Q13. Which monument built in Agra on the banks of Yamuna is one of the Seven Wonders of the World?

- | | |
|-----------------|----------------|
| (A) Red Fort | (B) Taj Mahal |
| (C) Qutub Minar | (D) Hawa Mahal |

Q14. Classical dance form 'Kathakali', featuring elaborate face makeup and masks, belongs to:

- | | |
|----------------|------------|
| (A) Tamil Nadu | (B) Kerala |
| (C) Karnataka | (D) Assam |

Q15. Which festival of colors is celebrated across India marking the arrival of spring?

- | | |
|------------|----------|
| (A) Diwali | (B) Holi |
| (C) Eid | (D) Onam |

Q16. The national motto 'Satyameva Jayate' inscribed below the National Emblem means:

- | | |
|--------------------|--------------------------|
| (A) Unity is Power | (B) Truth Alone Triumphs |
| (C) Peace for All | (D) Victory to India |

Q17. Which state in India is famous for its harvest festival 'Bihu'?

- | | |
|------------|-------------|
| (A) Punjab | (B) Assam |
| (C) Kerala | (D) Gujarat |

Q18. The smallest state in India by geographical area is:

- | | |
|-------------|--------------|
| (A) Sikkim | (B) Goa |
| (C) Tripura | (D) Nagaland |

Q19. Which river is regarded as sacred across northern plains and forms a huge delta before Bay of Bengal?

- | | |
|-------------|-----------|
| (A) Narmada | (B) Ganga |
| (C) Tapti | (D) Indus |

Q20. Harvest festival 'Onam', celebrated with grand snake boat races, belongs to:

- | | |
|--------------------|---------------|
| (A) Tamil Nadu | (B) Kerala |
| (C) Andhra Pradesh | (D) Karnataka |

Q21. What do the three colors of the Indian National Flag represent from top to bottom?

- (A) Green (Saffron), White, Courage (B) Saffron (Courage), White (Peace), Green (Prosperity)
(C) Red, Blue, Green (D) Yellow, White, Green

Q22. Which mountain range runs continuously along the western coast of India?

- (A) Himalayas (B) Western Ghats (Sahyadri)
(C) Satpura Range (D) Vindhyas

Q23. The island group located in the Arabian Sea known for coral reefs is:

- (A) Andaman (B) Lakshadweep Islands
(C) Majuli (D) Diu

Q24. Traditional folk dance 'Garba' is enthusiastically performed during Navratri in:

- (A) Punjab (B) Gujarat
(C) Maharashtra (D) Rajasthan

Q25. Who was the chief architect of the Indian Constitution?

- (A) Dr. B.R. Ambedkar (B) Mahatma Gandhi
(C) Pt. Jawaharlal Nehru (D) Sardar Patel

Q26. National Republic Day is celebrated every year on:

- (A) 15th August (B) 26th January
(C) 2nd October (D) 14th November

Q27. Which state is known as the 'Land of Five Rivers' in India?

- (A) Haryana (B) Punjab
(C) Uttar Pradesh (D) Bihar

Q28. The Great Indian Hornbill is an iconic bird species found predominantly in:

- (A) Thar Desert (B) Western Ghats & Northeast forests
(C) Ladakh cold desert (D) Rann of Kutch

Q29. Which UNESCO Heritage Site in Maharashtra features ancient rock-cut Buddhist, Hindu, and Jain caves?

- (A) Ajanta & Ellora Caves (B) Sanchi Stupa
(C) Konark Temple (D) Khajuraho

Q30. Taking care of historic monuments and not writing on ancient walls is our:

- (A) Fundamental Civic Duty (B) Business option
(C) School rule only (D) Punishment

4. ANSWER KEY — CHAPTER 5

Q.1	Ans	Q.2	Ans	Q.3	Ans	Q.4	Ans	Q.5	Ans	Q.6	Ans	Q.7	Ans	Q.8	Ans	Q.9	Ans	Q.10	Ans
1	B	2	C	3	C	4	B	5	B	6	C	7	B	8	B	9	B	10	B
Q.11	Ans	Q.12	Ans	Q.13	Ans	Q.14	Ans	Q.15	Ans	Q.16	Ans	Q.17	Ans	Q.18	Ans	Q.19	Ans	Q.20	Ans
11	B	12	C	13	B	14	B	15	B	16	B	17	B	18	B	19	B	20	B
Q.21	Ans	Q.22	Ans	Q.23	Ans	Q.24	Ans	Q.25	Ans	Q.26	Ans	Q.27	Ans	Q.28	Ans	Q.29	Ans	Q.30	Ans
21	B	22	B	23	B	24	B	25	A	26	B	27	B	28	B	29	A	30	A

Chapter 6: Some Unique Places

1. KEY TERMS & KEYWORDS

Keyword	Definition & Concept
Ecosystem	A community of living organisms interacting with their physical non-living environment.
Biodiversity	The wide variety of plant and animal species inhabiting a specific region.
Endemic Species	Plants or animals found naturally only in one specific geographic region.
Heritage Site	A landmark recognized by UNESCO for its special cultural or physical significance.
Adaptation	Special biological features helping creatures survive in extreme unique habitats.

2. DETAILED CHAPTER NOTES & CONCEPTS

- Cold Desert — Ladakh: High altitude plateau in the Himalayas with freezing temperatures, scarce rain, double-humped Bactrian camels, yaks, and Pashmina goats.
- Salt Marsh — Rann of Kutch (Gujarat): World's largest salt desert. Floods in monsoons and crystallizes into stark white salt flats in winter; famous for Wild Ass (Khur) and Flamingos.
- Floating Wetland — Loktak Lake (Manipur): Features 'Phumdis' (floating organic mats) and Keibul Lamjao, home to the endangered Sangai 'Dancing' Deer.
- Mangrove Forest — Sundarbans (West Bengal): World's largest mangrove forest formed by Ganga-Brahmaputra. Home to Royal Bengal Tigers and saltwater crocodiles; trees have pneumatic breathing roots.
- Wetland Paradise — Chilika Lake (Odisha): Asia's largest brackish water lagoon, famous for Irrawaddy dolphins and migratory winter birds from Siberia.

3. STANDARD PRACTICE MCQS (30 QUESTIONS)

Q1. Which region in Jammu & Kashmir / Union Territory is known as India's 'Cold Desert'?

- (A) Srinagar (B) Ladakh
(C) Jammu (D) Gulmarg

Q2. Double-humped Bactrian camels in India are unique to which high-altitude place?

- (A) Thar Desert (B) Ladakh (Nubra Valley)
(C) Rann of Kutch (D) Western Ghats

Q3. The vast white salt desert that turns into a white paradise in winter is:

- (A) Rann of Kutch (Gujarat) (B) Thar Desert
(C) Ladakh (D) Deccan Plateau

Q4. Which wild animal, locally known as 'Khur', is found exclusively in the Rann of Kutch?

- (A) Indian Wild Ass (B) Snow Leopard
(C) Sangai Deer (D) One-horned Rhino

Q5. Loktak Lake in Manipur is famous worldwide for its floating vegetation landmasses called:

- (A) Baolis (B) Phumdis
(C) Deltas (D) Corals

Q6. The world's only floating national park situated on Loktak Lake is:

- (A) Jim Corbett NP (B) Keibul Lamjao National Park
(C) Kaziranga NP (D) Gir NP

Q7. Which rare dancing deer species is endemic to Keibul Lamjao National Park?

- | | |
|---------------|-----------------|
| (A) Chital | (B) Sangai Deer |
| (C) Blackbuck | (D) Musk Deer |

Q8. The world's largest mangrove forest delta shared between India and Bangladesh is:

- | | |
|--------------------|-----------------|
| (A) Western Ghats | (B) Sundarbans |
| (C) Gulf of Mannar | (D) Nandankanan |

Q9. Mangrove trees in the Sundarbans have special roots rising above mud to breathe air called:

- | | |
|-------------------|--------------------------------------|
| (A) Tap roots | (B) Pneumatophores (Breathing roots) |
| (C) Fibrous roots | (D) Tuber roots |

Q10. Which iconic apex predator inhabits the mangrove swamps of Sundarbans?

- | | |
|------------------|------------------------|
| (A) Snow Leopard | (B) Royal Bengal Tiger |
| (C) Asian Lion | (D) Cheetah |

Q11. Chilika Lake in Odisha is famous for being Asia's largest:

- | | |
|---------------------|---|
| (A) Freshwater lake | (B) Brackish (salty-fresh) water lagoon |
| (C) Glacial lake | (D) Artificial tank |

Q12. Which aquatic mammal species can be spotted leaping in Chilika Lake?

- | | |
|----------------|-----------------------|
| (A) Blue Whale | (B) Irrawaddy Dolphin |
| (C) Dugong | (D) Sea Otter |

Q13. Pashmina wool, famous for ultra-warm shawls, is harvested from goats in:

- | | |
|------------|-------------|
| (A) Ladakh | (B) Kerala |
| (C) Goa | (D) Gujarat |

Q14. Valley of Flowers National Park, known for alpine floral blooms, is in:

- | | |
|----------------------|-----------------------|
| (A) Himachal Pradesh | (B) Uttarakhand |
| (C) Sikkim | (D) Arunachal Pradesh |

Q15. Which national park in Assam is world-famous for protecting the Great One-horned Rhinoceros?

- | | |
|-----------------------------|-----------------------|
| (A) Kaziranga National Park | (B) Gir National Park |
| (C) Sundarbans | (D) Kanha NP |

Q16. Gir National Park in Gujarat is the last natural sanctuary for which big cat?

- | | |
|------------------------|---------------------|
| (A) Royal Bengal Tiger | (B) Asiatic Lion |
| (C) Snow Leopard | (D) Clouded Leopard |

Q17. In cold high mountains like Ladakh, animals like Yaks have thick fur coat to:

- | | |
|-----------------|---|
| (A) Look bigger | (B) Insulate body against freezing cold |
| (C) Fly high | (D) Swim underwater |

Q18. Brackish water in lagoons like Chilika Lake is a natural mixture of:

- | | |
|---|--------------------------|
| (A) Fresh river water and salty sea water | (B) Ice and boiled water |
| (C) Oil and water | (D) Rain and sewage |

Q19. Which migratory birds travel thousands of miles from cold Siberia to winter in Chilika Lake?

- | | |
|-----------------------------------|--------------|
| (A) Flamingos and Siberian Cranes | (B) Penguins |
| (C) Ostriches | (D) Peacocks |

Q20. Majuli, the world's largest riverine island, is situated on which river in Assam?

- | | |
|------------|-----------------|
| (A) Ganga | (B) Brahmaputra |
| (C) Yamuna | (D) Godavari |

Q21. Why do mangrove roots grow upwards out of sticky swamp mud?

- (A) To collect sunlight (B) To absorb atmospheric oxygen (Breathing roots)
(C) To trap insects (D) To hide from tigers

Q22. Living Root Bridges, grown by training Ficus tree roots across rivers, are unique to:

- (A) Meghalaya (B) Rajasthan
(C) Punjab (D) Kerala

Q23. Which cold desert mountain pass in Ladakh is among the world's highest motorable roads?

- (A) Umling La / Khardung La (B) Palakkad Gap
(C) Nathula Pass (D) Rohtang Pass

Q24. Which place in India receives the world's highest average annual rainfall?

- (A) Mawsynram (Meghalaya) (B) Jaisalmer
(C) Ladakh (D) Pune

Q25. The Great Rann of Kutch salt flats turn pink during winter due to nesting of thousands of:

- (A) Flamingos (B) Pelicans
(C) Kingfishers (D) Eagles

Q26. Unique biological features that help an organism survive in its harsh environment are:

- (A) Pollution (B) Adaptations
(C) Extinctions (D) Erosion

Q27. Which Indian Union Territory is a group of coral ring islands (atolls) in the Arabian Sea?

- (A) Lakshadweep (B) Andaman
(C) Daman (D) Puducherry

Q28. Why is Pashmina goat wool extremely prized globally?

- (A) It is heavy and rough (B) It is exceptionally fine, soft, and warm
(C) It changes colour daily (D) It is waterproof

Q29. Cold deserts like Ladakh experience very low rainfall because they lie in the:

- (A) Rain-shadow zone of Himalayas (B) Equator belt
(C) Coastal ocean belt (D) River delta

Q30. Protecting unique fragile ecosystems like Sundarbans and Loktak Lake preserves our planet's:

- (A) Plastic waste (B) Biodiversity and ecological balance
(C) City factories (D) Traffic

4. ANSWER KEY — CHAPTER 6

Q.1	Ans	Q.2	Ans	Q.3	Ans	Q.4	Ans	Q.5	Ans	Q.6	Ans	Q.7	Ans	Q.8	Ans	Q.9	Ans	Q.10	Ans
1	B	2	B	3	A	4	A	5	B	6	B	7	B	8	B	9	B	10	B
Q.11	Ans	Q.12	Ans	Q.13	Ans	Q.14	Ans	Q.15	Ans	Q.16	Ans	Q.17	Ans	Q.18	Ans	Q.19	Ans	Q.20	Ans
11	B	12	B	13	A	14	B	15	A	16	B	17	B	18	A	19	A	20	B
Q.21	Ans	Q.22	Ans	Q.23	Ans	Q.24	Ans	Q.25	Ans	Q.26	Ans	Q.27	Ans	Q.28	Ans	Q.29	Ans	Q.30	Ans
21	B	22	A	23	A	24	A	25	A	26	B	27	A	28	B	29	A	30	B

Chapter 7: Energy — How Things Work

1. KEY TERMS & KEYWORDS

Keyword	Definition & Concept
Energy	The capacity or ability of a system to do physical work.
Renewable Energy	Energy sourced from inexhaustible natural sources like sun, wind, and water.
Non-Renewable Energy	Limited natural resources (coal, petroleum) that deplete upon continuous use.
Solar Energy	Light and heat energy harnessed directly from the Sun.
Transformation	The process of energy changing from one physical form into another.

2. DETAILED CHAPTER NOTES & CONCEPTS

- Forms of Energy: Mechanical (Kinetic + Potential), Solar (Sun light/heat), Electrical, Chemical (stored in food/batteries), Heat (Thermal), Sound, Light, and Wind energy.
- Energy Transformation Examples: Electric bulb (Electrical -> Light + Heat); Solar Panel (Light -> Electrical); Human body (Chemical energy of food -> Mechanical work); Bicycle dynamo (Kinetic -> Electrical).
- Renewable vs. Non-Renewable: Renewable sources (Sun, Wind, Water, Biomass) are clean, sustainable, and non-polluting. Non-renewable sources (Coal, Petrol, Diesel, Natural Gas) release greenhouse gases and pollute the environment.
- Conservation of Energy: 'Energy can neither be created nor destroyed; it only changes form.' Turning off lights, using public transport, and preferring solar gadgets conserve energy.

3. STANDARD PRACTICE MCQS (30 QUESTIONS)

Q1. The fundamental ability or capacity to perform work is called:

- (A) Force (B) Energy
(C) Pressure (D) Speed

Q2. Which primary source of energy powers almost all weather systems and food chains on Earth?

- (A) Moon light (B) The Sun
(C) Volcanoes (D) Wind mills

Q3. Energy stored in food, wood, and dry cell batteries is in the form of:

- (A) Electrical energy (B) Chemical energy
(C) Nuclear energy (D) Sound energy

Q4. When an electric bulb is switched ON, electrical energy transforms into:

- (A) Sound energy (B) Light and Heat energy
(C) Chemical energy (D) Magnetic energy

Q5. Which energy resource will never run out upon continuous usage?

- (A) Coal (B) Petroleum
(C) Solar energy (D) Diesel

Q6. A moving bicycle, rolling ball, or flying bird possesses which type of energy?

- (A) Stored potential energy (B) Kinetic / Mechanical energy
(C) Chemical energy (D) Nuclear energy

Q7. Solar panels convert sunlight directly into:

- | | |
|------------------|-----------------------|
| (A) Wind energy | (B) Electrical energy |
| (C) Sound energy | (D) Chemical fuel |

Q8. Which of the following is a non-renewable fossil fuel source?

- | | |
|-----------------|-------------------------|
| (A) Wind power | (B) Coal |
| (C) Solar power | (D) Hydroelectric power |

Q9. Windmills harness the kinetic energy of blowing wind to generate:

- | | |
|---------------|-----------------|
| (A) Petroleum | (B) Electricity |
| (C) Coal dust | (D) Natural gas |

Q10. When we rub our hands together vigorously in winter, friction converts kinetic energy into:

- | | |
|------------------|-----------------------|
| (A) Sound energy | (B) Heat energy |
| (C) Light energy | (D) Electrical energy |

Q11. Hydroelectric power plants generate clean electricity using energy from:

- | | |
|----------------------|------------------------------|
| (A) Burning coal | (B) Fast flowing river water |
| (C) Atomic splitting | (D) Solar cells |

Q12. What energy transformation occurs when a child eats an apple and then runs a race?

- | | |
|---------------------------------------|----------------------------|
| (A) Chemical energy to Kinetic energy | (B) Heat to Sound energy |
| (C) Light to Electrical energy | (D) Nuclear to Heat energy |

Q13. LPG (Liquefied Petroleum Gas) cylinders used in home kitchens provide:

- | | |
|--|----------------------------------|
| (A) Chemical energy converted to Heat energy | (B) Light energy to Sound energy |
| (C) Electrical to Kinetic | (D) Nuclear power |

Q14. Unplugging chargers when not in use and switching to LED lights helps in:

- | | |
|-------------------------|----------------------------|
| (A) Energy conservation | (B) Increasing power bills |
| (C) Wasting natural gas | (D) Damaging appliances |

Q15. Which appliance converts electrical energy into mechanical movement to circulate air?

- | | |
|------------------|-------------------|
| (A) Electric Fan | (B) Electric Iron |
| (C) Toaster | (D) LED bulb |

Q16. Plant leaves perform photosynthesis by trapping light energy from the Sun and converting it to:

- | | |
|------------------|--|
| (A) Heat energy | (B) Chemical energy stored as food (Glucose) |
| (C) Sound energy | (D) Electrical current |

Q17. Fossil fuels like coal and petroleum were formed underground over millions of years from:

- | | |
|--------------------|--|
| (A) Volcanic rocks | (B) Decomposed remains of ancient plants and animals |
| (C) Ocean salt | (D) Meteor strikes |

Q18. A water bottle kept on a high table top possesses stored energy due to position called:

- | | |
|--------------------|----------------------|
| (A) Kinetic energy | (B) Potential energy |
| (C) Light energy | (D) Thermal energy |

Q19. Burning coal or petrol releases harmful gases like Carbon Dioxide, causing:

- | | |
|-------------------|--------------------------------------|
| (A) Cleaner air | (B) Air pollution and global warming |
| (C) More rainfall | (D) Ozone creation |

Q20. Which device uses solar energy directly to cook food slowly without electricity or gas?

- | | |
|---------------------|------------------|
| (A) Microwave | (B) Solar Cooker |
| (C) Induction stove | (D) LPG cylinder |

Q21. The law of conservation of energy states that energy can:

- (A) Be created out of nothing
(B) Neither be created nor destroyed, only transformed
(C) Be completely destroyed forever
(D) Only exist as heat

Q22. When a musician plucks a guitar string, mechanical energy changes into:

- (A) Light energy
(B) Sound energy
(C) Chemical energy
(D) Nuclear energy

Q23. A battery-powered torch light converts Chemical energy of battery into:

- (A) Electrical energy and then Light/Heat energy
(B) Sound energy only
(C) Kinetic energy
(D) Solar radiation

Q24. Why are LED bulbs preferred over old filament bulbs?

- (A) They consume much less electricity and last longer
(B) They produce more heat than light
(C) They require gas
(D) They work without wires

Q25. Biogas (Gobar Gas) produced from animal dung is a renewable source of:

- (A) Clean cooking gas and energy
(B) Plastic waste
(C) Fossil petrol
(D) Coal dust

Q26. In an electric iron, electrical energy is converted into:

- (A) Sound energy
(B) Heat energy
(C) Light energy
(D) Chemical energy

Q27. Which transport mode consumes zero fossil fuels and relies on human mechanical energy?

- (A) Motorcycle
(B) Bicycle
(C) Diesel car
(D) Bus

Q28. Geothermal energy harnesses heat extracted from:

- (A) Deep inside the Earth
(B) Ocean waves
(C) Desert sand
(D) High clouds

Q29. A stretched rubber band holds which form of stored energy before release?

- (A) Kinetic energy
(B) Elastic Potential energy
(C) Electrical energy
(D) Thermal energy

Q30. Using public buses or carpooling instead of driving individual cars reduces:

- (A) Fuel consumption and harmful emissions
(B) Road space
(C) Bus fares
(D) Solar energy

4. ANSWER KEY — CHAPTER 7

Q.1	Ans	Q.2	Ans	Q.3	Ans	Q.4	Ans	Q.5	Ans	Q.6	Ans	Q.7	Ans	Q.8	Ans	Q.9	Ans	Q.10	Ans
1	B	2	B	3	B	4	B	5	C	6	B	7	B	8	B	9	B	10	B
Q.11	Ans	Q.12	Ans	Q.13	Ans	Q.14	Ans	Q.15	Ans	Q.16	Ans	Q.17	Ans	Q.18	Ans	Q.19	Ans	Q.20	Ans
11	B	12	A	13	A	14	A	15	A	16	B	17	B	18	B	19	B	20	B
Q.21	Ans	Q.22	Ans	Q.23	Ans	Q.24	Ans	Q.25	Ans	Q.26	Ans	Q.27	Ans	Q.28	Ans	Q.29	Ans	Q.30	Ans
21	B	22	B	23	A	24	A	25	A	26	B	27	B	28	A	29	B	30	A

Chapter 8: Clothes — How Things Are Made

1. KEY TERMS & KEYWORDS

Keyword	Definition & Concept
Fibre	Thin, hair-like strands spun into yarn to make woven or knitted fabrics.
Natural Fibres	Fibres obtained directly from plants (cotton, jute) or animals (wool, silk).
Synthetic Fibres	Man-made fibres synthesized chemically from petroleum products (nylon, polyester).
Ginning	The process of separating cotton fibres from harvested cotton seeds.
Weaving & Knitting	Weaving intertwines two sets of yarns at right angles; Knitting loops a single continuous yarn.

2. DETAILED CHAPTER NOTES & CONCEPTS

- Classification of Fibres: Plant-based (Cotton from bolls, Jute from stem, Linen from flax); Animal-based (Wool from sheep/goat fleece, Silk from silkworm cocoons); Synthetic (Polyester, Nylon, Acrylic).
- Journey of Cotton: Cotton bolls harvested -> Ginning (separating seed) -> Spinning (making yarn on Charkha/Spinning Jenny) -> Weaving/Knitting (making fabric on Looms) -> Dyeing & Tailoring.
- Journey of Silk (Sericulture): Rearing silkworms on mulberry leaves -> Silkworms spin cocoons -> Boiling cocoons to extract long silk filaments -> Reeling and weaving.
- Handloom Heritage of India: Khadi (spun by Mahatma Gandhi during Swadeshi movement), Kanjeevaram & Banarasi silk sarees, Pashmina shawls, Ikat, Chanderi, and Paithani.
- Seasonal Clothing: Light cotton clothes in summer (absorb sweat, allow air); Woollen/Thick clothes in winter (trap body heat air layer); Waterproof synthetic coats/umbrellas in monsoons.

3. STANDARD PRACTICE MCQS (30 QUESTIONS)

Q1. Thin, thread-like basic strands used to make yarn and fabrics are called:

- (A) Fabrics (B) Fibres
(C) Cocoons (D) Pellets

Q2. Which of the following is a natural plant-based fibre?

- (A) Nylon (B) Cotton
(C) Polyester (D) Acrylic

Q3. Wool, used for winter clothing, is harvested from the fleece of:

- (A) Silkworms (B) Sheep and goats
(C) Cotton bolls (D) Flax plants

Q4. Synthetic fibres like Nylon and Polyester are synthesized chemically from:

- (A) Wood pulp (B) Petroleum chemicals
(C) Plant stems (D) Animal fur

Q5. The process of separating cotton fibres from cotton seeds is known as:

- (A) Spinning (B) Ginning
(C) Weaving (D) Retting

Q6. The process of twisting raw fibres together to make long continuous yarn is:

- (A) Spinning (B) Knitting
(C) Dyeing (D) Bleaching

Q7. Silk thread is extracted from the cocoons created by:

- | | |
|----------------|---------------|
| (A) Honeybees | (B) Silkworms |
| (C) Earthworms | (D) Spiders |

Q8. Cultivation and rearing of silkworms for silk production is termed:

- | | |
|-----------------|------------------|
| (A) Agriculture | (B) Sericulture |
| (C) Apiculture | (D) Pisciculture |

Q9. Which hand-spinning wooden tool was popularized by Mahatma Gandhi as a symbol of self-reliance?

- | | |
|------------------|--------------|
| (A) Loom | (B) Charkha |
| (C) Ginning comb | (D) Scissors |

Q10. Intertwining two sets of yarns at right angles on a loom to form cloth is:

- | | |
|--------------|--------------|
| (A) Weaving | (B) Knitting |
| (C) Spinning | (D) Ginning |

Q11. Sweaters and woollen socks are made using a single continuous yarn looped together. This is:

- | | |
|-------------|-----------------|
| (A) Weaving | (B) Knitting |
| (C) Ginning | (D) Sericulture |

Q12. Jute fibre is extracted from which part of the jute plant?

- | | |
|-------------|------------|
| (A) Flowers | (B) Stem |
| (C) Roots | (D) Leaves |

Q13. Why do we prefer wearing light-colored cotton clothes in summer?

- | | |
|----------------------|---|
| (A) They absorb heat | (B) They absorb sweat and reflect sunlight, keeping us cool |
| (C) They are heavy | (D) They trap air |

Q14. Synthetic raincoats and umbrellas keep us dry during monsoons because synthetic fabric is:

- | | |
|----------------------------------|-------------------|
| (A) Waterproof and non-absorbent | (B) Heavy woollen |
| (C) Highly absorbent cotton | (D) Made of silk |

Q15. Famous handloom silk saree from Maharashtra known for gold peacocks on borders is:

- | | |
|-----------------|--------------|
| (A) Kanjeevaram | (B) Paithani |
| (C) Banarasi | (D) Chanderi |

Q16. The soft hand-spun cotton fabric made famous during India's freedom struggle is:

- | | |
|---------------|-----------|
| (A) Nylon | (B) Khadi |
| (C) Polyester | (D) Rayon |

Q17. Pashmina shawls are handwoven from fine undercoat hair of goats found in:

- | | |
|-------------|------------------------------|
| (A) Kerala | (B) Ladakh / Jammu & Kashmir |
| (C) Gujarat | (D) Assam |

Q18. Soaking harvested jute stems in water for days to rot soft tissues and extract fibres is:

- | | |
|--------------|-------------|
| (A) Ginning | (B) Retting |
| (C) Spinning | (D) Reeling |

Q19. Silkworm larvae feed primarily on fresh leaves of which tree?

- | | |
|------------|--------------|
| (A) Neem | (B) Mulberry |
| (C) Banyan | (D) Mango |

Q20. Synthetic fibre that closely resembles natural wool and is used in cheap blankets is:

- | | |
|------------|-------------|
| (A) Cotton | (B) Acrylic |
| (C) Jute | (D) Silk |

Q21. Machine frame on which cloth is woven using warp and weft yarns is called a:

- (A) Charkha (B) Loom (Handloom / Powerloom)
(C) Spindle (D) Needle

Q22. Which fabric is best suited for gym sportswear due to high elasticity and quick drying?

- (A) Heavy Wool (B) Synthetic / Polyester blend
(C) Thick Jute (D) Silk

Q23. Coir fibre, used for making rugged doormats and ropes, is extracted from outer husk of:

- (A) Cotton boll (B) Coconut
(C) Jute stem (D) Flax plant

Q24. Adding vibrant colours to yarn or woven cloth using natural or chemical dyes is:

- (A) Dyeing (B) Ginning
(C) Spinning (D) Retting

Q25. Traditional handloom Banarasi silk sarees are famous from which holy Indian city?

- (A) Varanasi (Kashi) (B) Kanchipuram
(C) Pune (D) Jaipur

Q26. Why does woollen clothing keep us warm in freezing winter?

- (A) It generates its own electricity (B) It traps air between fibres, which is a bad conductor of heat
(C) It absorbs solar light (D) It is dark coloured

Q27. Swadeshi Movement encouraged Indians to boycott foreign textiles and wear self-spun:

- (A) Khadi cloth (B) Nylon garments
(C) Silk gowns (D) Polyester suits

Q28. Which plant fibre is widely used to make eco-friendly gunny bags, ropes, and sacks?

- (A) Silk (B) Jute
(C) Rayon (D) Wool

Q29. Linen fabric is obtained from natural fibres of which plant?

- (A) Flax plant (B) Cotton plant
(C) Jute plant (D) Rubber tree

Q30. Proper care of woollen and silk clothes during storage includes using mothballs or dry neem leaves to prevent damage from:

- (A) Sunlight (B) Insects and cloth moths
(C) Water drops (D) Dust

4. ANSWER KEY — CHAPTER 8

Q.1	Ans	Q.2	Ans	Q.3	Ans	Q.4	Ans	Q.5	Ans	Q.6	Ans	Q.7	Ans	Q.8	Ans	Q.9	Ans	Q.10	Ans
1	B	2	B	3	B	4	B	5	B	6	A	7	B	8	B	9	B	10	A
Q.11	Ans	Q.12	Ans	Q.13	Ans	Q.14	Ans	Q.15	Ans	Q.16	Ans	Q.17	Ans	Q.18	Ans	Q.19	Ans	Q.20	Ans
11	B	12	B	13	B	14	A	15	B	16	B	17	B	18	B	19	B	20	B
Q.21	Ans	Q.22	Ans	Q.23	Ans	Q.24	Ans	Q.25	Ans	Q.26	Ans	Q.27	Ans	Q.28	Ans	Q.29	Ans	Q.30	Ans
21	B	22	B	23	B	24	A	25	A	26	B	27	A	28	B	29	A	30	B

Chapter 9: Rhythm of Nature

1. KEY TERMS & KEYWORDS

Keyword	Definition & Concept
Seasons	Cyclical weather changes occurring over months due to Earth's tilt and orbit around the Sun.
Revolution	Earth's movement around the Sun in an elliptical orbit taking 365.25 days (causes seasons).
Rotation	Earth spinning on its own axis every 24 hours (causes Day and Night).
Migration	Seasonal movement of animals/birds across large distances for breeding or food.
Hibernation	Deep winter sleep undertaken by animals (e.g., bears) to survive extreme cold.

2. DETAILED CHAPTER NOTES & CONCEPTS

- Earth's Movements: Rotation (24 hours on axis → Day & Night); Revolution (365¼ days around Sun on tilted axis → Cycle of Seasons).
- Six Traditional Indian Seasons (Ritus): Vasant (Spring), Grishma (Summer), Varsha (Monsoon), Sharad (Autumn), Hemant (Pre-Winter), Shishir (Winter).
- Plant & Animal Responses to Rhythm: Deciduous trees shed leaves in autumn; flowers like Morning Glory bloom at dawn; nocturnal animals (owls, bats) hunt at night.
- Survival Strategies: Migration (Siberian cranes fly thousands of km to warmer Indian wetlands in winter); Hibernation (bears, frogs sleep deep in winter); Aestivation (summer sleep in desert snails/frogs).
- Human Connection: Festivals celebrate seasonal rhythms—Baisakhi, Pongal, Makar Sankranti, and Bihu mark harvest seasons and solar alignments.

3. STANDARD PRACTICE MCQS (30 QUESTIONS)

Q1. Day and night on Earth occur due to which continuous movement of our planet?

- (A) Revolution around the Sun
(B) Rotation on its tilted axis
(C) Gravitational pull of Moon
(D) Ocean tides

Q2. Earth takes approximately how long to complete one full revolution around the Sun?

- (A) 24 hours
(B) 30 days
(C) 365¼ days (One year)
(D) 100 days

Q3. The main cause behind changing seasons on Earth is:

- (A) Earth's rotation speed
(B) Earth's revolution around the Sun on its tilted axis
(C) Distance from Moon
(D) Cloud cover

Q4. According to the traditional Indian calendar, how many 'Ritus' (seasons) are identified?

- (A) 3
(B) 4
(C) 6
(D) 12

Q5. Which Indian season (Ritu) corresponds to lush spring when flowers bloom and weather is pleasant?

- (A) Grishma
(B) Vasant
(C) Shishir
(D) Varsha

Q6. Trees that shed all their leaves in autumn to conserve water during dry months are called:

- (A) Evergreen trees
(B) Deciduous trees
(C) Coniferous trees
(D) Mangroves

Q7. Siberian Cranes fly thousands of kilometers every winter from freezing Russia to India. This behavior is:

- | | |
|-----------------|----------------|
| (A) Hibernation | (B) Migration |
| (C) Aestivation | (D) Camouflage |

Q8. Deep winter sleep undertaken by bears and frogs to survive extreme cold and food scarcity is:

- | | |
|-----------------|--------------------|
| (A) Migration | (B) Hibernation |
| (C) Aestivation | (D) Photosynthesis |

Q9. Summer sleep undertaken by desert animals to escape scorching heat and drying out is:

- | | |
|-----------------|-----------------|
| (A) Aestivation | (B) Hibernation |
| (C) Migration | (D) Breeding |

Q10. Animals that sleep during daytime and remain active during night (e.g., Owls, Bats) are:

- | | |
|---------------------|-----------------------|
| (A) Diurnal animals | (B) Nocturnal animals |
| (C) Aquatic animals | (D) Parasitic animals |

Q11. Harvest festival 'Makar Sankranti' celebrated in January marks the transition of the Sun towards:

- | | |
|-----------------------|-------------------------|
| (A) North (Uttarayan) | (B) South (Dakshinayan) |
| (C) West | (D) East |

Q12. Which flower is famous for turning its face continuously following the direction of the Sun across the sky?

- | | |
|-----------|---------------|
| (A) Rose | (B) Sunflower |
| (C) Lotus | (D) Jasmine |

Q13. During which season in India do monsoon winds bring heavy rains vital for farming?

- | | |
|------------------|-----------------|
| (A) Grishma Ritu | (B) Varsha Ritu |
| (C) Hemant Ritu | (D) Sharad Ritu |

Q14. Tides in Earth's oceans rise and fall regularly twice a day due to gravitational pull of:

- | | |
|------------|----------------------|
| (A) Mars | (B) The Moon and Sun |
| (C) Saturn | (D) North Star |

Q15. Which bird is famously associated with welcoming monsoon rains in Indian poetry and art?

- | | |
|-------------|------------|
| (A) Peacock | (B) Crow |
| (C) Vulture | (D) Parrot |

Q16. Spring festival 'Baisakhi' celebrated enthusiastically in Punjab marks the harvest of:

- | | |
|------------------|------------------------|
| (A) Kharif crops | (B) Rabi crops (Wheat) |
| (C) Zaid crops | (D) Spices |

Q17. The imaginary line around which the Earth spins every 24 hours is called its:

- | | |
|-------------|-----------------|
| (A) Equator | (B) Axis |
| (C) Orbit | (D) Tropic line |

Q18. Why do days become longer and nights shorter in summer in the Northern Hemisphere?

- | | |
|---|--------------------------|
| (A) Northern Hemisphere is tilted towards the Sun | (B) Earth stops spinning |
| (C) Moon disappears | (D) Clouds reflect light |

Q19. Which night-blooming fragrant flower opens its petals only after sunset?

- | | |
|---|---------------|
| (A) Night-blooming Jasmine (Raat Ki Rani) | (B) Sunflower |
| (C) Hibiscus | (D) Marigold |

Q20. Cuckoos (Koyal) are known for singing melodiously during which pleasant Indian season?

- | | |
|--------------------------|--------------------------------|
| (A) Vasant Ritu (Spring) | (B) Shishir Ritu (Cold winter) |
| (C) Grishma Ritu | (D) Hemant Ritu |

Q21. An artificial globe represents Earth. The line dividing the illuminated half from the dark half is circle of:

- (A) Illumination (B) Equator
(C) Orbit (D) Latitude

Q22. Which amphibian buries itself deep in mud during hot summer months (aestivation) and emerges during rain?

- (A) Frog (B) Lizard
(C) Crocodile (D) Snake

Q23. Equinox refers to the two days in a year when all over the Earth:

- (A) Day is 24 hours long (B) Day and night are of equal duration (12 hours each)
(C) Night is 18 hours long (D) Sun never sets

Q24. Longest day of the year in the Northern Hemisphere occurs on:

- (A) 21st June (Summer Solstice) (B) 22nd December
(C) 15th August (D) 26th January

Q25. Which trees remain green throughout the year without shedding all leaves at once?

- (A) Deciduous trees (B) Evergreen trees
(C) Dry scrub bushes (D) Paddy plants

Q26. Arrival of migratory birds in wetland sanctuaries like Bharatpur indicates arrival of:

- (A) Scorching summer (B) Winter season
(C) Monsoon storm (D) Drought

Q27. Which rhythmic biological process causes human sleep-wake cycles matched with daylight?

- (A) Digestive clock (B) Circadian rhythm (Body Clock)
(C) Heart beat (D) Breathing rate

Q28. Farmers look forward to the arrival of Southwest Monsoon winds for sowing major crops like:

- (A) Wheat and Mustard (B) Paddy (Rice) and Cotton
(C) Apple (D) Barley

Q29. In polar regions near North and South poles, during peak summer, the Sun:

- (A) Never sets for almost 6 months (B) Does not rise at all
(C) Turns blue (D) Sets every 2 hours

Q30. Understanding nature's seasonal rhythms helps human societies in planning:

- (A) Agriculture, clothing, festivals, and water management (B) Computer games
(C) Building rockets (D) Factory shifts only

4. ANSWER KEY — CHAPTER 9

Q.1	Ans	Q.2	Ans	Q.3	Ans	Q.4	Ans	Q.5	Ans	Q.6	Ans	Q.7	Ans	Q.8	Ans	Q.9	Ans	Q.10	Ans
1	B	2	C	3	B	4	C	5	B	6	B	7	B	8	B	9	A	10	B
Q.11	Ans	Q.12	Ans	Q.13	Ans	Q.14	Ans	Q.15	Ans	Q.16	Ans	Q.17	Ans	Q.18	Ans	Q.19	Ans	Q.20	Ans
11	A	12	B	13	B	14	B	15	A	16	B	17	B	18	A	19	A	20	A
Q.21	Ans	Q.22	Ans	Q.23	Ans	Q.24	Ans	Q.25	Ans	Q.26	Ans	Q.27	Ans	Q.28	Ans	Q.29	Ans	Q.30	Ans
21	A	22	A	23	B	24	A	25	B	26	B	27	B	28	B	29	A	30	A

Chapter 10: Earth — Our Shelter Home

1. KEY TERMS & KEYWORDS

Keyword	Definition & Concept
Habitat	The natural environment where a plant or animal lives, eats, and reproduces.
Shelter	A structure providing safety, protection from harsh weather, predators, and comfort.
Eco-Friendly	Materials or practices that do not harm the natural environment.
Natural Calamities	Extreme natural events like earthquakes, floods, or cyclones causing destruction.
Coexistence	Living together peacefully in harmony with nature and all living species.

2. DETAILED CHAPTER NOTES & CONCEPTS

- Diversity of Human Shelters: Mud and thatch houses (cool in hot villages); Igloos (ice-block domes in polar Arctic); Stilt houses (bamboo pillars in flood-prone Assam); Houseboats (Dal Lake, Kashmir); Caravans/Tents (nomadic tribes).
- Animal Habitats: Birds build nests (weaver bird weaves, tailor bird sews leaves); Bees build honeycombs; Rabbits dig burrows; Ants build anthills; Wildlife inhabits natural forests, caves, and coral reefs.
- Traditional vs. Modern Architecture: Traditional homes use local eco-friendly materials (bamboo, mud, lime, stone, cowdung plaster) offering natural thermal insulation. Modern homes use concrete, steel, and glass.
- Safety during Calamities: Earthquakes (open grounds, drop-cover-hold under sturdy table); Floods (moving to high altitudes, clean drinking water); Cyclones (evacuation to storm shelters).
- Earth as Our Shared Home: Protecting forests, reducing plastic pollution, preserving wildlife habitats, and practicing sustainable living ensure the survival of all species.

3. STANDARD PRACTICE MCQS (30 QUESTIONS)

Q1. The natural home or surroundings where an organism lives and thrives is called its:

- (A) Address (B) Habitat
(C) Laboratory (D) Factory

Q2. Houses built on raised wooden or bamboo pillars in heavy rainfall areas like Assam are:

- (A) Igloos (B) Stilt houses
(C) Houseboats (D) Multi-storey flats

Q3. Dome-shaped snow houses built by Inuit people in freezing polar Arctic regions are:

- (A) Tents (B) Igloos
(C) Caravans (D) Mud huts

Q4. Floating decorated wooden houses seen on Dal Lake in Srinagar (Kashmir) are called:

- (A) Shikaras / Houseboats (B) Stilt houses
(C) Tents (D) Igloos

Q5. Which bird stitches two broad leaves together using spider silk or plant fibres to build its nest?

- (A) Weaver bird (B) Tailor bird
(C) Woodpecker (D) Owl

Q6. Which small mammal digs complex underground burrows called warrens for shelter?

- (A) Rabbit (B) Squirrel
(C) Bat (D) Monkey

Q7. Nomadic tribes like Bakarwals and Changpas in cold mountains live in portable tents made of yak hair called:

- (A) Rebo
- (B) Igloo
- (C) Stilt house
- (D) Caravan

Q8. Houses made of thick mud walls and thatched roofs keep interiors:

- (A) Extremely cold in winter
- (B) Naturally cool in hot summer and warm in winter
- (C) Wet during rain
- (D) Dark always

Q9. Honeybees construct intricate hexagonal wax structures for storing honey called:

- (A) Nests
- (B) Honeycombs
- (C) Ant hills
- (D) Burrows

Q10. In earthquake-prone regions like Japan, traditional houses are built lightweight using:

- (A) Heavy concrete and iron blocks
- (B) Wood and paper bamboo frames
- (C) Thick granite slabs
- (D) Glass walls

Q11. What immediate action should one take inside a building during an earthquake tremor?

- (A) Run to the terrace
- (B) Drop, Cover, and Hold under a sturdy desk or table
- (C) Stand near glass windows
- (D) Use elevators

Q12. Which bird weaves an intricate upside-down hanging bottle-shaped nest from grass strips?

- (A) Baya Weaver bird
- (B) Crow
- (C) Pigeon
- (D) Sparrow

Q13. Mobile homes built on wheels that can be towed from place to place by nomads are:

- (A) Houseboats
- (B) Caravans
- (C) Igloos
- (D) Stilt houses

Q14. Why is cow dung plaster traditionally applied on rural mud floors and walls?

- (A) It smells sweet
- (B) It acts as a natural insulator and repels insects
- (C) It makes walls shine like glass
- (D) It turns walls red

Q15. Which of these is an eco-friendly building material sourced locally with low carbon footprint?

- (A) Bamboo and Mud
- (B) Synthetic plastic sheets
- (C) Refined steel
- (D) Polyester

Q16. Animals like Owls and Bats find natural shelter during daytime in:

- (A) Deep dark caves and hollow tree trunks
- (B) Open ocean water
- (C) High sky
- (D) Grassy lawns

Q17. Multi-storey high-rise apartment buildings in big cities are constructed to save:

- (A) Electricity
- (B) Ground land space in crowded urban areas
- (C) Water
- (D) Cement

Q18. A temporary collapsible shelter made of canvas cloth used by campers and trekkers is a:

- (A) Caravan
- (B) Tent
- (C) Igloo
- (D) Stilt house

Q19. Deforestation and cutting down forests destroy natural habitats of wild animals, leading to:

- (A) More rainfall
- (B) Human-wildlife conflict and species extinction
- (C) Cleaner air
- (D) Better soil

Q20. Which marine ecosystem provides shelter and breeding grounds for 25% of all ocean life?

- (A) Coral reefs
- (B) Sandy beaches
- (C) Deep ocean trenches
- (D) Salt pans

Q21. Termites build tall, hard earthen towers above ground called:

- (A) Honeycombs (B) Termite mounds / Anthills
(C) Bird nests (D) Burrows

Q22. In flood-prone coastal areas, stilt houses prevent flood water from:

- (A) Cooling the roof (B) Entering the living quarters
(C) Washing away food (D) Drying clothes

Q23. Slanting roofs are designed in hilly regions like Himachal and Uttarakhand so that:

- (A) Rainwater and snow easily slide off (B) People can sit on roofs
(C) Heat stays locked (D) Wind is blocked completely

Q24. Which disaster is caused by sudden shaking of Earth's crust due to tectonic plate movements?

- (A) Cyclone (B) Earthquake
(C) Drought (D) Forest fire

Q25. Earth's atmosphere acts as a protective blanket by shielding life from harmful cosmic rays and:

- (A) Providing oxygen and retaining essential heat (B) Blocking sunlight completely
(C) Creating ocean salt (D) Stopping wind

Q26. Which bird lays its eggs in the nest of a crow, relying on the crow to hatch them?

- (A) Koel (Cuckoo) (B) Peacock
(C) Pigeon (D) Parrot

Q27. Constructing rainwater harvesting pits on residential building terraces helps in:

- (A) Conserving water and recharging local groundwater (B) Wasting rain
(C) Damaging foundation (D) Cooling roof

Q28. Woodpeckers drill deep holes into tree trunks using their strong sharp beaks to create:

- (A) Storage for nuts only (B) Nesting cavities for shelter
(C) Water tanks (D) Tunnels to roots

Q29. Living in harmony with nature and sharing Earth's resources peacefully with all creatures is:

- (A) Exploitation (B) Coexistence and environmental ethics
(C) Urban expansion (D) Industrialization

Q30. Earth Day is celebrated globally every year on April 22nd to promote:

- (A) Space travel (B) Environmental protection and planet conservation
(C) Building super highways (D) Shopping festivals

4. ANSWER KEY — CHAPTER 10

Q.1	Ans	Q.2	Ans	Q.3	Ans	Q.4	Ans	Q.5	Ans	Q.6	Ans	Q.7	Ans	Q.8	Ans	Q.9	Ans	Q.10	Ans
1	B	2	B	3	B	4	A	5	B	6	A	7	A	8	B	9	B	10	B
Q.11	Ans	Q.12	Ans	Q.13	Ans	Q.14	Ans	Q.15	Ans	Q.16	Ans	Q.17	Ans	Q.18	Ans	Q.19	Ans	Q.20	Ans
11	B	12	A	13	B	14	B	15	A	16	A	17	B	18	B	19	B	20	A
Q.21	Ans	Q.22	Ans	Q.23	Ans	Q.24	Ans	Q.25	Ans	Q.26	Ans	Q.27	Ans	Q.28	Ans	Q.29	Ans	Q.30	Ans
21	B	22	B	23	A	24	B	25	A	26	A	27	A	28	B	29	B	30	B

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