1. Choose the correct answer:

1. …………… is genetically closest to humans.
   a) Gorilla  
   b) Chimpanzee
   c) Orangutan  
   d) Great Ape

2. The period called …….. marks the beginning of agriculture and animal domestication.
   a) Palaeolithic  
   b) Mesolithic
   c) Neolithic  
   d) Megalithic

3. Direct ancestor of modern man was …………
   a) Homo habilis  
   b) Homo erectus
   c) Homo sapiens  
   d) Neanderthal man

4. …………… inscriptions datable to third century BCE refer to the Cheras, Cholas and Pandyas in ancient Tamilagam.
   a) Pulekesin  
   b) Ashoka
   c) Chandragupta  
   d) Dhanananda

5. …………… Refers to the area covering Egypt, Israel-Palestine and Iraq.
   a) Great Rift Valley  
   b) Fertile Crescent
   c) Solo river  
   d) Neander Valley

6. Sir Robert Bruce Foote, a geologist from England forst discovered the ………… tools at Pallavaram near Chennai.
   a) Stone age  
   b) Palaeolithic
   c) Mesolithic  
   d) Neolithic

7. i) The period before the introduction of writing is called pre-history.
    ii) The pre-historic people developed language, made beautiful paintings and artifacts.
    iii) The pre-historic societies are treated as literate.
    iv) The pre-historic period is called ancient.
a) (i) is correct  
b) (i) and (ii) are correct  
c) (i) and (iv) are correct  
d) (ii) and (iii) are correct  

8. i) The Neolithic people used polished stones axes called celts.  
   ii) Evidence of Neolithic village is found at Payyampalli in Chennai district.  
   iii) The cultural period that succeeded the Neolithic is called the Bronze Age.  
   iv) The period that witnessed domestication of animals and cultivation of crops is called Mesolithic.  
      a) (i) is correct  
      b) (ii) is correct  
      c) (ii) and (iii) are correct  
      d) (iv) is correct  

9. Assertion (A) : Many of the Mesolithic sites are found nearby rivers and tanks.  
   Reason (R): Irrigation management developed during Mesolithic period.  
      a) A and R are correct and R Explains A  
      b) A and R are correct but R doesn’t explain A  
      c) A is correct but R is incorrect  
      d) A and R both are incorrect  

10. Assertion (A) :The Ashokan inscriptions datable to third century BCE refer to the Cheras, Cholas, Pandyas and Satyaputras outside his empire in Tamilagam.  
    Reason (R): Ancient kings of Tamilagam commenced their political rule in the iron age.  
      a) A and R are correct and R Explains A  
      b) A and R are correct but R doesn’t explain A  
      c) A is correct but R is incorrect  
      d) A and R both are incorrect  

II. Fill in the blanks:  
1. artefact is an object or tool made or modified by humans.  
2. The primitive multi cellular life first appeared in the age of proterozoic era.  
3. Hand axes and cleavers are the important tool types of the Lower Palaeolithic culture.  
4. The methods and techniques involved in the production of stone tools are called Lithic technology.  
5. Mesolithic is known as the Middle Stone Age, as it is placed between the Palaeolithic and Neolithic.  

III. Find out the correct statement:  
1. a) The concept ‘survival of the fittest’ contributed to the scientific understanding of human origins.  
   b) The book on the Origin of Species was published by Herbert Spencer.  
   c) Darwin’s theory of biological evolution connects with the process of natural selection.
d) Geology is the study of lithic technology

2. a) Among the great Apes orangutan is generally the closest of humans.
   b) **The ancestors of humans were called Hominins and their origins have been traced to Africa.**
   c) Flake is a small chip that has flaking on both sides.
   d) Acheulian is the main block of stone from which small chips are flaked by using a hammer stone.

IV. **Match the following:**

1. Palaeo anthropology - a) Teris
2. Hand axe tools - b) Venus
3. Images on stone and bone - c) Acheulian
4. Red stand dunes - d) Microliths

**Ans:** 1-e; 2-c; 3-b; 4-a; 5-d

V. **Short question & Answers:**

1. **Discuss how the age of speculation made humans become conscious and knowledgeable.**
   
   (i) Humans are the only species on earth concerned with understanding as well as explaining the world and the universe.
   
   (ii) In the course of evolution, humans became conscious and knowledgeable.
   
   (iii) They turned curious and began to think and ask questions about nature, organism and the world around them.
   
   (iv) At first, they considered nature as god.
   
   (v) They worshipped sun, moon and various natural forces.
   
   (vi) The lack of scientific knowledge on the creation of the world is reflected in the ancient writings and religious literature.

2. **Write a note on the impact of pastoralism on the prehistoric people in Tamil Nadu?**
   
   (i) The people in the iron age practiced agriculture, domesticated cattle and sheep, and some of the group were still hunting and gathering.
   
   (ii) The introduction of domestication of animals and cultivating plants.
   
   (iii) At home led to production and supply of large quantities of grains and animal food.
(iv) Humans lived in permanent houses, made pottery and with the surplus production, they developed various crafts.

3. Enumerate the distinctive characteristics of Neanderthals.

(i) Neanderthals were shorter in height, smaller in size.
(ii) They made stone tools, used fire and were hunters.
(iii) They buried the dead people systematically.
(iv) They did not have needles, sewn clothes and warm houses essential for survival in colder climates.

4. List out the features of Megalithic Burial type.

The megalithic burials are classified as

(i) The Iron age is also known as megalithic, since people created burial with large stones for the dead people.
(ii) Within these burials, the skeletons or a few bones of the dead persons were placed along with grave goods including iron objects, carnelian beads and bronze objects.
(iii) They may be called memorial burials.

5. Domestication of animals is a milestone in human history. Explain.

(i) The introduction of domestication of animals and cultivating plants.
(ii) Dogs may have been domesticated first.
(iii) Sheep and goat were domesticated – 10,000 BC in South West Asia.
(iv) Oxen were used in Sumerian civilization for tilting the land.
(v) Mehrgarh in Pakistan has evidence of sheep, goat and cattle domestication in the Neolithic period.

6. Examine the tool making technical skills of lower Paleolithic people.

(i) The human ancestors flaked large stone books and designed various tools including hand axes.
(ii) They made various tools such as hand aced and cleavers to meet their subsistence needs.
(iii) The hand tools are also known as Acheulian.
(iv) Bifaces are tools that have flaking on both sides.
(v) This tools making tradition continues till 25000 years to 60000 years ago in India.
VI. Answer all the questions given under each caption:

1. Hominid and Hominins:
   a) Who are Hominids?
   Hominids refer to all the species of the modern and extinct great apes, which also include humans.
   b) Who was the earliest human ancestor to make tool in Africa?
   Homo habilis (handy human) was the earliest human ancestors to make tools in Africa.
   c) How are the modern humans known?
   Modern humans are called Homo sapiens (wise man).
   d) Name any one species of this tribe.
   Homo Neanderthalensis, Homo eruetus, Homo habilis and various species of Australopithecines.

2. Earliest Lithic Assemblages of human ancestors.
   a) Where are Acheulian tools reported to have been found in Karnataka and in Madya Pradesh?
   Isampur in Karnataka and Bhimbetka in Madya Pradesh.
   b) What is meant by Lithic Technology?
   The methods and techniques involved in the production of stone tools are called lithic technology.
   c) What are Biface tools?
   Biface tools are flaking on both sides (bi=two, face=side)
   d) Name a few stone tools used by the human Ancestors.
   Core, flake, hammer stones, sharp edged flakes, hand axe and cleavers.

2. ANCIENT CIVILISATIONS

I. Choose the correct answer:

1. The earliest signs to denote words through pictures
   a) Logographic   b) Pictographic
   c) ideographic   d) Stratigraphic

2. The preservation process of dead body in ancient Egypt
   a) Sarcophagus   b) Hyksos
   c) Mummification   d) Polytheism
3. The Sumerian system of writing
   a) Pictographic  
   b) Hieroglyphic
   c) Sonogram  
   d) Cuneiform

4. The Harappans did not have the knowledge of
   a) Gold and elephant  
   b) Horse and iron
   c) Sheep and Silver  
   d) Ox and platinum

5. The Bronze image suggestive of the use of lost-wax process known to the Indus people
   a) Jar  
   b) Priest king
   c) Dancing girl  
   d) Bird

6. i) The oldest civilization in Mesopotamia belonged to the Akkadians.
   ii) The Chinese developed the Hieroglyphic system.
   iii) The Euphrates and Tigris drain into the Mannar Gulf.
   iv) Hammurabi, the king of Babylon was a great law maker.
   a) (i) is correct  
   b) (i) and (ii) are correct
   c) (iii) is correct  
   d) (iv) is correct

7. i) Yangtze River is known as Sorrow of China.
   ii) Wu-Ti constructed the Great wall of China.
   iii) Chinese invented gun powder.
   iv) According to traditions Mencius was the founder of Taoism.
   a) i is correct  
   b) ii is correct
   c) iii is correct  
   d) iii and iv are correct

8. What is the correct chronological order of four civilizations of Mesopotamia.
   a) Sumerians – Assyrians – Akkadians – Baby lonians
   b) Babylonians – Sumerians – Assyrians – Akkadians
   c) Sumerians – Akkadians – Babylonians – Assyrians
   d) Babylonians – Assyrians – Akkadians – Sumerians

9. Assertion (A): Assyrians of Mesopotamian civilization were contemporaries of Indus civilization.
   Reason (R): The Document s of an Assyrian ruler to the ships from Meluha.
a) A and R are correct and A explains R  
  b) A and R are correct but A doesn’t explain R  
  c) A is incorrect but R is correct  
  d) Both A and R are incorrect

II. Fill in the blanks:
1. **Sphinx of Giza** is a massive lime stone image of a lion with a human head.
2. The early form of writing of the Egyptians is known as **Hieroglyphic**.
3. **Hammurabi’s code of law** specifies the Laws related to various crimes in ancient Babylonia.
4. **Lao Tze** was the master archive keeper of Chou state, according to traditions.
5. The **Terracotta** figurines and painting on the pottery from the sites suggest the artistic skills of the Harappans.

III. Find out the correct statement:
1. a) The Great bath at Harappa is well-built with several adjacent rooms.
   b) **The cuneiform inscriptions relate to the epic of Gilgamesh.**
   c) The terracota figurines and dancing girl made of copper suggest the artistic skills of Egyptians.
   d) The Mesopotamians devised a solar calendar system.
2. a) **Amon was considered the King of God in ancient Egypt.**
   b) The fortified harappan city had the temples.
   c) The great sphinx is a pyramid-shaped monument found in ancient Mesopotamia.
   d) The invention of the potter’s wheel is credited to the Egyptians.

IV. Match the following:
   a) Pharaoh - i) A kind of grass
   b) Papyrus - ii) The oldest written story on Earth
   c) Great Law maker - iii) Mohenjo-Daro
   d) Gilgamesh - iv) Hammurabi
   e) The Great Bath - v) The Egyptian king

   Ans: a-v; b-i; c-iv; d-ii; e-iii

V. Short Questions & Answer:
1. The Egyptians excelled in art and architecture. Illustrate.
   (i) The Egyptians excelled in art and architecture.
(ii) Numerous sculptures, painting and carving attest to the artistic skills of Egyptians.

(iv) The great pyramids near Cairo are known as the Giza Pyramids.

(v) Pyramids are considered to be one of the wonders of the world.

(vi) These monuments display the engineering, architectural and human resource management skills of the Egyptians.

2. State the salient features of the ziggurats.

(i) Ziggurats were pyramid shaped monuments found in Ancient Mesopotamia (modern Iraq)

(ii) One of the most famous Ziggurats of the time is the one in the city of Ur.

(iii) The Ziggurats were at the city centre on a platform and appeared like steep pyramids, with staircases leading to the top.

(iv) Around the temple were complexes of ceremonial courtyards, shrines, burial chambers for the priests and priestesses, ceremonial banquet halls.

(v) Along with workshops, granaries, storehouses and administrative buildings.

3. Hammurabi Code is an important legal document. Explain.

(i) Hammurabi code is an important legal document that specifies the laws related to various crimes.

(ii) It has 282 provisions specifying cases related to family rights, trade, slavery, taxes and wages.

(iii) It is carved on a stone, which portray Hammurabi as receiving the code from the Sun god Shamash.

(iv) It was a compilation of old laws based on retributive principles.

(v) The ‘eye for eye’ and ‘tooth for tooth’ form fo justice is used in the Hammurabi code.


(i) The Great Wall of China, one of the wonders of the world, was a massive effort undertaken for the protection of China from the Mongols.

(ii) In 220 BCE, under Qun Shi Huang, earlier fortifications were connected by walls as a form of defense against invasions.

(iii) It was built from third century BCE until 17th Century CE.

(iv) It ran for over 20,000 kilometers covering the hills an plains, from the border of Korea in the east to the Ordos Desert in the West.

VI. Answer all the questions given under each caption:
1. Early civilizations

1) What is meant by civilization?
Civilization is seen as an advanced, organized way of life.

2) Name the important early civilizations.
The Egyptian, Mesopotamian, the Chinese and the Indus were the important early civilizations.

3) What supported the livelihood of a large number of people?
The surplus food production by the farmers in the fertile regions supported the livelihood of a large number of people.

4) What happened when civilization began to take shape?
As civilization began to take shape, huge buildings were built, the art of living developed and science and technology contributed to the betterment of society.

2. Features of Egyptian civilization.

1) Who built the pyramids and why?
Egyptians built the pyramids. Because pyramids were built to preserve the body of pharaohs.

2) What is the process of mummification?
The Egyptians believed in life after death. Therefore they preserved the dead body. The art of preserving the dead body is known as mummification.

3) What is the belief system of ancient Egyptians?
The Egyptians believed in life after death.

3. Early Tamil Society and Culture

I. Choose the correct answer:

1. The name of the script used in the sangam age
   a) English  b) Devanagari  c) Tamil Brahmi  d) Grantha

2. The Sri lankan chronicle composed in the Pali Language mentioning about merchants and horse traders from Tamil Nadu.
   a) Deepa vamsa  b) Arthasastra  c) Mahavamsa  d) Indica

3. The notable chola king credited with bringing forest lands under the plough and developing irrigational facilities
   a) Karikalan  b) Rajarajan I
   c) Kulothungan  d) Rajendran I
4. Inscription that mentions the Cheras.
   a) Pugalur   b) Cirnar
   c) Pulimankombal   d) Madurai

5. The famous Venetian traveler who described Kayal as a great and noble city.
   a) Vasco da gama   b) Alberumi
   c) Marco Polo   d) Megasthenes

6. i) Coin as a medium of exchange were introduced for the first time in the Sangam Age.
   ii) Prakrit was the language used by the common people in Northern India during the Mauryan period.
   iii) Vienna Papyrus, a Roman document, mentions trade related to Muziri.
   iv) The concept of Thinai is presented in the Tamil grammar work of Pathupaattu.
   a) i is correct   b) ii is correct
   c) i and ii is correct   d) iii and iv is correct

7. i) Pathutrupathu speaks about the Pandya kings and their territory.
   ii) The Akanaanuru describes the trading activities at Kaveripoompattinam.
   iii) The Chola Emblem was the tiger and they issued square copper coins with images of a tiger.
   iv) Neythal is a sandy desert region.
   a) i is correct   b) ii and iii is correct
   c) iii is correct   d) iv is correct

II. Fill in the blanks:
1. **Inscriptions** are documents scripted on stones, copper plates, coins and rings.
2. **Archaeological Excavation** refers to systematically digging a site to recover material evidence for exploring societies of the past.
3. **Arthasastra** the classic work on economy and statecraft authored by Kautilya during the Mauryan period.
4. **Thinai** is a poetic theme which means a class or category and refers to a habitat or eco-zone with specific physiographical characteristics.
5. **Yavanar** referred to the Westerners, including the Greeks, Romans and West Asian people.

III. Find out the correct statement:
1. a) Evidence of iron smelting has been found in Kodumanal and Guttur.
b) Periplus of Erythrean Sea mentions about the pepper trade with India.

c) Punch marked coins are the earliest coins used in India mostly made of gold.

d) The Sangam Age has its roots in the Bronze Age.

2.a) The Cheras rule over Kaveri delta and their capital was Uraiyur.

b) The maangulam Tamil-Brahmi inscriptions mention the king Karikalan.

c) The terms Vanikan and Nigama appear in Tamil-Brahmi inscriptions were different types of merchants.

d) Salt merchants were called vanikars and they travelled in bullock carts along with their family.

IV. Match the following:

1. Epigraphy - a) a narrative text presenting the important historical events.

2. Chronicle - b) Sangam Age port

3. Pastoralism - c) an ornament made in precious stone.


5. Arikkamedu - e) nomadic people earning livelihood by rearing cattle.

Ans: 1-d; 2-a; 3-e; 4-c; 5-b

V. Short Question & Answers:

1. Archaeological sites provide evidence of past history – Discuss.

(i) Archaeology is the study of the past by interpretation of the material cultural remains.

(ii) The sites called Nattam Kottai and Medu provide the evidence of how people lived in the past.

(iii) Archaeological excavation refers to systematically digging a site to recover material evidence for exploring and interpreting societies of the past.

(iv) Archaeological excavations at the early historic sites are the source of evidence of the activities of the Sangam Age people.

2. How important are coins as a source of evidence for the study of Sangam Age?

(i) Coins as a medium of exchange were introduced for the first time in the Sangam Age.

(ii) The coins of the Cheras, the Cholas, Pandyas, punch-marked coins, Roman coins form important source of evidence from the Sangam Age.

(iii) Punch-marked coins are found at Kodumanal and Bodinayakanur.
(iv) Roman coins found in the Coimbatore region Azhagankulam.

3. **The Tamil rulers were independent of Mauryan authority. What explanation would you offer.**

(i) The Mauryan emperor, Asoka, conquered Kalinga (Odhisha) and parts of Andhra and Karnataka regions

(ii) Ashokan inscriptions found in present day Odisha, Karnataka, Telangana and Andhra Pradesh are not seen in Tamil Nadu and Kerala.

(iii) Therefore, we may conclude that the Tamil rulers were independent of Mauryan authority.

4. **Agriculture was one of the main sources of subsistence in Sangam Age. Give reasons.**

(i) Agriculture was one of the main sources of subsistence.

(ii) Crops like paddy, sugarcane, millets were cultivated.

(iii) Millets were cultivated in dry lands.

(iv) Varieties of rice such as sennel, vennel, aivananel are mentioned in the literature.

(v) People in the forest adopted punam or shifting cultivations.

5. **Overseas interactions brought glory to ancient Tamilagam. Give examples in support.**

(i) Tamil country had connection with the countries overseas in the east west.

(ii) Roman ships used monsoon winds to cross the Arabian sea and connected Tamilagam with the western world.

(iii) Spices including pepper, ivory and precious stones were exported.

(iv) Gold, silver, copper and precious stones were imported.

(v) Indian pottery was discovered at a Port Berenite, on the Red sea coast of Egypt.

(vi) Southeast Asia was known as Suvarna Bhumi in Tamil Literature.

V. **Answer all the questions given under each caption:**

1. Hero sones:

   a) **What was the common practice in a pastoral society?**

   As cattle were considered an important source of wealth, raiding cattle owned by adjoining tribes and clans was common practice in a pastoral society.

   b) **Who plundered the cattle wealth of enemies?**
Tribal chieftains plundered the cattle wealth of enemies whose warriors fought to protect their cattle.

c) How were the dead warriors remembered?

Many warriors died in such battles and were remembered as martyrs. Memorial stones were erected in their honour.

d) Which Tamil text describes the procedures for erecting hero stones?
Tholkappiyam describes the procedures for erecting hero stones.

2. Non-Tamil Sources (Foreign Accounts)

a) What does the presence of the non-Tamil sources reveal?
The presence of the Non-Tamil sources reveals the extensive contacts and interaction of the early Tamil society with the outside world.

b) Name the classic work of the Mauryan period that makes a mention that the pearl and shells came from Pandya country.
Arthasastra.

c) What is a chronicle?
Chronicle is a narrative text presenting the important historical events in chronological order.

d) Who speaks about the pepper trade between Roman empire and India?
Pliny speaks about the pepper trade with India.

3. Industries and crafts of the Sangam Age.

a) What were the important aspects of urbanization?
Craft production and craft specialization were important aspects of urbanization.

b) What is the Tamil name for a potter?
Kalamceyko is the tamil name of the potter.

c) What were the different types of pottery used by the people?
Black ware, russe1-coated painted ware, black and red ware potteries were the different types of pottery used.

d) Identify the Iron implements required for agriculture and warfare.
Sangam literature speaks of blacksmiths, and their tools and activities. Iron implements were required for agriculture and warfare.

4. Intellectual awakening and Socio-Political Changes.

I. Choose the correct Answer:
1. Identify the founder or a new sect who exemplified simplicity and self denial.
   a) Buddha 
   b) Lao-tze 
   c) Confucius 
   d) Zoroster 

2. The Magadha king influenced by the teachings of mahavira 
   a. Dhananandha  
   b. Chandragupta 
   c) Bimbisara  
   d) Shishunaga 

3. The northern India extended from the Kabul Valley in the north to the Godavari in the south witnessed the rise of sixteen states 
   a. Mahajanapadas  
   b. Gana-sanghas 
   c) Dravida  
   d) Dakshirtapatha 

4. Tri-ratnas are the three principles taught by 
   a) Buddha 
   b) Mahavira 
   c) Lao-tze  
   d) Confucius 

5. The account which throws light on Maurvan polity and society 
   a) Marco polo  
   b) Fahien 
   c) Megasthanes  
   d) Seleucus 

6. i) Under the Magadha king the maharnatrivas functioned a secretaries io the ministers.  
   ii) Accounts of Megasthanes titled Indica is a useful record about Maurvan polity and society.  
   iii) Nanda’s attempt to build an imperical structure was cut short by Ashoka who founded the Mauryan kingdom.  
   iv)According to tradition, towards the end ol his life Chartdragupta become an ardent follower of Buddhism. 
   a) (i) is correct  
   b) (ii) is correct 
   c) (i) and (ii) is correct  
   d) (iii) and (iv) is correct 

II. Fill in the blanks:  

1. **Zend Avesta** is a collection of sacred literature of different epochs, containing prayers confessions and myths. 

2. In the Gangetic plain **Iron plough** agriculture required the use of bullocks. 

3. Jains believe that **Mahavira** came in a long time of Tirthankaras and he was the twenty-fourth and the last.
4. The place where Buddha attained enlightenment has been built into the Mahabodhi temple that still exists in **Both gaya**

5. The rock edicts from the reliable source to know the mauryan empire in particular the Dharmic rule of **Ashoka**

**III. Find out the correct statements:**

1. a) The introduction of bronze tools made easy the removal of dense forest cover from the banks of the Ganges.
   
   b) Ajivikas had a small presence in western India.
   
   c) The clusters where particular clansmen were dominant came to be known were Pre-Mauryan states.
   
   d) Of the kingdoms mentioned in the literature of the period Kashi, Kosala and Magadha are considered to be powerful.

2.a) Ajathashatru was the first important king of Magadha.

   b) **Bimbisara succeeded in establishing a comprehensive structure of administration.**

   c) The Mauryas were the first of non-kshatriya dynasties to rule in northern India.

   d) Nand’s attempt to build an imperial structure was cut short by Ashoka.

**IV. Match the following:**

1. Eight-fold path - a) Tallest jaina statue

2. Bahubali - b) a code of political morality

3. The spring and autumn annals - c) Sacred literature of laws and myths.

4. Zend Avesta - d) First Tirthankara

5. Rishabha - e) Path to attain the purest state of mind.

**Ans: 1-e; 2-a; 3-b; 4-c; 5-d**

**V. Short Question & Answers:**

1. The invention of smelting of Iron transformed both production and warfare – Justify.

   (i) The invention of smelting of iron changed production and warfare.

   (ii) Copper, bronze was employed in production before iron.

   (iii) The edges of copper, bronze became blunt, so the weapons made of them were not of effective use.

   (iv) Iron ore was available in plenty.
(v) The effect of iron axe on agriculture was great. For eg. use to clear the jungles, iron plough used to break the hardest soil.

2. **Elaborate the term “Tri-ratnas”**

The three principles of Jainism is known as Tri-ratnas.

(i) Right faith: Belief in the teachings and wisdom of Mahavira.

(ii) Right knowledge: Acceptance of the theory that there is no God and that the world existed without a creator.

(iii) Right action: It refers to the Mahavira’s five great vows – a) ahimsa b) honesty c) kindness d) truthfulness and e) not coveting or desiring things belonging to others.

3. **What do you know of Ajatasatru?**

(i) Ajatashatru, the son of Bimbisara.

(ii) The capital city of Magadha was rajagriha, surrounded by five hills.

(iii) Ajatashatru strengthened the rajagriha fort and built another fort at pataligrama on the Ganges.

(iv) Ajatashatru died in 461 BCE and was succeeded b five king.s

4. **What does the edict of Kalinga convey?**

(i) There are 33 edicts, including 14 major rock edicts, 7 pillar edicts and 2 kalinga edicts.

(ii) They form the reliable sources to know about the Mauryan empire, in particular the dharmic rule of Ashoka,

(iii) Ashoka sent his son Mahendra and his daughter Sanghamitra to Ceylon to spread his message of dharma there.

(iv) In one of his Kalinga edicts, he tells us his horror and sorrow over the death which the war and conquest caused.

(v) After his meeting with the Buddhist Monk Upagupta Ashoka became an ardent Buddhist.

(vi) He adopted Dharma.

(vii) He proclaimed the conquest of self and the conquest of men’s hearts by dhammam(pali) and dharma (Sanskrit)

5. **Highlight the steps taken by Ashoka to spread Buddhism.**
(i) Ashoka became an ardent Buddhist after meeting the Buddhist monk Upagupta and adopted his Dharma.

(ii) The only true conquest, he proclaimed is the conquest of self and the conquest of men’s hearts by the Dhamma (Dharma)

(iii) Ashoka sent his son Mahendra and his daughter Sangamitra to Ceylon to spread his message of dharma there.

(iv) He issued edicts, which were carved out in the rock for Buddha Dharma.

(v) Our national emblem with four lions is replica of the Ashoka pillar of sarath.

VI. Answer all the questions given under each caption:

1. Zoroastrianism

a) Who was the founder?
Zoroaster of Persia is the founder of Zoroastrianism.

b) Name the god he proclaimed.
There is one god, Ahura Mazda (The lord of light)

c) What did Zoroaster teach?
Zoroaster taught that the great object of religion, state of society is the cultivation of morality.

d) What was the highest form of worship?
Five was worshipped as a symbol of the deity and considered the highest form of worship.

2. Gautama Buddha

a) What was the original name of Buddha?
Siddhartha

b) Name the birth place of Buddha?
Lumbini garden, near kapilavastu.

c) Where did he get enlightenment?
He got enlightenment in the mahabodhi temple which still exists in Bodh Gaya (Bihar).

d) Mention the place of his first sermon
At Saranath.
UNIT-1 Lithosphere-1

Endogenetic Process

I. Choose the correct answer:

1. The ……… is the rigid outer layer of the Earth.
   a) core       b) mantle
   c) crust      d) inner core

2. .......... layer is made up of liquid iron
   a) inner core  b) outer core
   c) mantle      d) crust

3. Magma is found in the ………
   a) crust       b) mantle
   c) core        d) None of the above

4. Diastrophism is connected to
   a) volcanism   b) earthquakes
   c) tectonics   d) fold/fault

5. The movement of tectonic plates is induced by ………..energy.
   a) hydel       b) thermal
   c) wave        d) tidal

6. In the ancient period, Gondwana land moved towards ..... direction.
   a) north      b) south
   c) east       d) west

7. Many million years ago, India was a part of the super continent
   a) Gondwana    b) Laurasia
   c) Panthalasa  d) Pangea

8. The movement of plates that creates stress and tension in the rocks causing them to stretch and cracks result in ….
   a) fold        b) fault
   c) mountain    d) earthquake
9. …………refers to a bowl-shaped depression found at the top of the volcano
   a) crater  b) vent
   c) chamber  d) volcanic cone

10. The point of origin of an Earthquake is called the ………….
   a) epicentre  b) focus
   c) seismic wave  d) magnitude

II. Match the following:

1. Endogenetic process - a) Seismograph
2. Convergent boundaries - b) Subduction zone
3. Convergent boundaries - c) Volcanic Eruption
4. Earthquake - d) Pacific Ocean
5. Composite volcano - e) SIMA

Ans: 1-c; 2-e; 3-b; 4-a; 5-d

III. Answer the following questions by below statements:

1. i) Mt. Fuji is a dormant volcano  
   ii) Mt. Kilimanjaro is a dormant volcano.
   iii) Mt. Tanzania is a dormant volcano.

Which of the statement(s) is/are true
   a) (i) is true  b) (ii) is true
   c) (iii) is true  d) (i), (ii), (iii) are true

2. Statement: Magma gushes out when it finds vents.

Reason: Interior of the Earth contains compressed hot magma

Which of the statement(s) is/are true
   a) Statement & reason are true  b) Statement is true, reason is false
   c) Statement is false reason is true  d) Statement & reason are false

3. Statement I: Mountain ranges are formed by the collision of tectonic plates.
   Statement II: The movement of tectonic plates is due to the thermal energy from the mantle.

   a) Statement I is false II is true  b) Statement I and II are false
c) Statement I is true II is false     d) Statement I and II are true

IV. Answer the following in one or two sentences:

1. Write a brief note on the various spheres of the Earth.

Various spheres of the Earth:
- The lithosphere is the solid outer part of the Earth.
- The hydrosphere is the watery part of the Earth’s surface including oceans, rivers, lakes and water vapour.
- The atmosphere is a thin layer of gases that surrounds the earth.
- The biosphere is the layer of Earth where life exists.

2. Mention the layers of the interior of the Earth?

The layers of the interior of the earth

    Crust, the mantle, the core.

3. What is pedosphere?

The pedosphere is a part of the lithosphere made up of solid and dirt. It exists at the interface of lithosphere, atmosphere, hydrosphere and biosphere.

4. Define plate tectonics?

- The tectonic plates are divided into major and minor plates.
- These plates float independently over the mantle.
- Collisions of these plates produce mountain ranges and other irregular surface features.
- The movement of tectonic plates is due to thermal energy from the mantle.
- This phenomenon is called plate tectonics.

5. Write a note on fold and fault?

Folding:
- Due to lateral compressional forces, the plates are forced to move upwards and downwards.
- This is called ‘folding’.
- Mountains formed by folding are called Fold Mountains. Eg. The Himalayas and the Alps.

Faulting:
- The movement of plates also create stress and tension in the rocks, causing them to stretch and crack.
6. What is Tsunami?

- The word Tsunami is a Japanese term, meaning harbor waves.
- It is adopted to describe large seismically generated sea waves caused by Earthquakes, submarine explosions and landslides.
- These waves travel at a great speed more than 500 km per hour.
- These waves reach to a height of more than 15m.

7. What is a volcano? Mention its major components

- Volcano is a vent or an opening on the surface of the Earth crust, through which hot solid, liquid and gaseous materials (Magma) erupt out to the surface from the Earth’s interior.
- Magma rise up and ejects on the surface as Lava.
- The major components: Magma chamber, vents, volcanic cone, carter.

8. What is an Earthquake and how does it occur?

- Earthquakes are generally caused by the sudden vibrations in the Earth’s crust, which spreads outward in all directions as waves from the source of disturbance.
- The point of origin of an Earthquake is called ‘Focus’ (Hypocenter) which generates a series of elastic waves.
- ‘Epicentre’ is a point on the Earth’s surface that lies directly above the focus.
- The impact of the Earthquake is felt the most at the epicenter.

9. What are seismic waves and mention it types?

- Earthquakes generate seismic waves.
- The nature, force and speed of these seismic waves depend on the nature of the medium which it passes.

Types:
Primary (or) P-waves. Secondary (or) S-waves, Surface waves (or) L-waves

10. Write about the Pacific Ring of fire.

- The Pacific Ring of fire is the pacific plate meets many surrounding plates.
- The Ring of fire is the most seismically and volcanically active zone in the world.
1. SIAL floats over SIMA

- The density of the crust is 2.9 g/cm$^3$
- The density of upper mantle is 4.4 g/cm$^3$
- The density of lower mantle is 5.6 g/cm$^3$

The less density objects float on the high density objects. So SIAL floats over SIMA.

2. Igneous rocks are also called Primary Rocks or Mother rocks.

Igneous rocks are called primary or mother rocks because all other rocks are directly or indirectly formed from them.

VI. Distinguish between:

1. Core and Crust

<table>
<thead>
<tr>
<th>Crust</th>
<th>Core</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crust is the outer layer</td>
<td>Core is the inner most and hottest layer</td>
</tr>
<tr>
<td>The major elements of crust are silica (Si) and Aluminum (Al) and thus, it is termed as SIAL</td>
<td>It is composed mainly of Nickel (Ni) and iron (Fe). Hence it is called NIFE</td>
</tr>
<tr>
<td>The crust is classified as continental crust and oceanic crust.</td>
<td>The core is divided into solid inner core and liquid outer core.</td>
</tr>
<tr>
<td>The thickness is 30km</td>
<td>The thickness is 3480 km</td>
</tr>
</tbody>
</table>

2. Epicentre and Hypocentre.

<table>
<thead>
<tr>
<th>Epicentre</th>
<th>Hypocentre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epicentre is a point on the Earth’s surface that lies directly above the focus.</td>
<td>The point of origin of an Earthquake is called “Focus”.</td>
</tr>
<tr>
<td>The impact of the earthquake is felt the most at the epicenter.</td>
<td>It generates a series of elastic waves.</td>
</tr>
</tbody>
</table>

3. Divergent and convergent boundaries.

<table>
<thead>
<tr>
<th>Divergent boundaries</th>
<th>Convergent boundaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Divergent boundaries the plates pull away from each other as magma</td>
<td>In convergent boundaries the plate moves toward each other and sometimes,</td>
</tr>
</tbody>
</table>
pushes up from the mantle. a plate sinks under another. The location where the sinking of a plate occurs is called a subduction zone.

4. Primary and Secondary waves.

<table>
<thead>
<tr>
<th>Primary waves</th>
<th>Secondary waves</th>
</tr>
</thead>
<tbody>
<tr>
<td>The waves pass through solids,</td>
<td>The waves travel only through solids.</td>
</tr>
<tr>
<td>liquids and gases</td>
<td></td>
</tr>
<tr>
<td>The velocity is 5.31 cm per second</td>
<td>The velocity is 1 km per second to 8 km per second.</td>
</tr>
<tr>
<td>to 10.6 km per second</td>
<td></td>
</tr>
<tr>
<td>P waves are the fastest of all the</td>
<td>These transverse waves shake the</td>
</tr>
<tr>
<td>earthquake waves and the first to</td>
<td>ground perpendicular to the direction</td>
</tr>
<tr>
<td>reach the epicenter.</td>
<td>in which they propagate.</td>
</tr>
</tbody>
</table>

5. Shield volcano and Volcanic dome.

**Shield Volcano:**
- Shield volcanoes are formed by intense viscous lava.
- These are shallow depositions with gently sloping sides.
- Hence the lava flows out in all directions to create a shield.
- Eg. Mauna Loa, Hawaii

**Volcanic Dome:**
- A lava dome or volcanic dome is roughly a circular mound formed due to the slow ejection of viscous lava from a volcano.
- As the lava is rich in silica with intense viscosity, it is prevented from flowing far from its vent. Eg. Paricutin, Mexico.

**Unit-2 Lithosphere –II**

**Exogenesis Process**

I. Choose the best answer:

1. The disintegration or decomposition of rocks is generally called as ……
   a) weathering  b) erosion
   c) transportation  d) deposition
2. The process of leveling up of land by means of natural agents.
   a) aggradation  b) degradation
   c) gradation  d) none

3. …………… is seen in the lower course of the river
   a) rapids  b) alluvial fan
   c) delta  d) gorges

4. Karst topography is formed due to the action of
   a) glacier  b) wind
   c) sea waves  d) ground water

5. Which one of the following is not a depositional feature of a glacier
   a) cirque  b) moraines
   c) drumlins  d) eskers

6. Deposits of fine salt blown by wind is called as
   a) loess  b) barchans
   c) hamada  d) ripples

7. Stacks are formed by ……………
   a) wave erosion  b) river erosion
   c) glacial erosion  d) wind deposition

8. ………..erosion is responsible for the formation of cirque.
   a) wind  b) glacial
   c) river  d) underground water

8. Which one of the following is a second order land form?
   a) Asia  b) Deccan Plateau
   c) Kulu valley  d) Marina beach

II. Match the following:
   1. Distributaries - a) glacial action
   2. Mushroom rock - b) action of sea wave
   3. Eskers - c) lower course of river
4. Stalactites - d) Aeolian process
5. Cliff - e) Karst topography

Ans: 1-c; 2-d; 3-a; 4-e; 5-b

III. Distinguish between

1. Physical and Chemical weathering

<table>
<thead>
<tr>
<th>Physical weathering</th>
<th>Chemical weathering</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is the breakdown of rocks without changing their chemical composition, though the action of physical forces.</td>
<td>Disintegration and decomposition of rocks due to chemical reactions is called chemical weathering.</td>
</tr>
<tr>
<td>Exfoliation, block disintegration, granular disintegration etc are the different types of weathering.</td>
<td>Chemical weathering takes place through the processes of oxidation, carbonation solution and hydration</td>
</tr>
</tbody>
</table>

2. Delta and Estuary

<table>
<thead>
<tr>
<th>Delta</th>
<th>Estuary</th>
</tr>
</thead>
<tbody>
<tr>
<td>A triangular shaped low lying area formed by the river at its mouth called delta.</td>
<td>Estuary is formed where the river meets the sea.</td>
</tr>
<tr>
<td>Deltas have fine deposits of sediments enriched with minerals. Eg. Cauvery delta</td>
<td>Deposition of silt by the river is not possible here in the estuaries like delta as if the waves keep on eroding the deposits. Eg. River Narmada and Tapti.</td>
</tr>
</tbody>
</table>

3. Stalactite and Stalagmite

<table>
<thead>
<tr>
<th>Stalactite</th>
<th>Stalagmite</th>
</tr>
</thead>
<tbody>
<tr>
<td>When the water containing dissolved calcite gradually drips from the ceiling of the caves, water evaporates and the remaining capcite hangs from the ceiling. Thus stalactites are formed.</td>
<td>When the calcite deposits rises upward like a pillar stalagmites are formed.</td>
</tr>
</tbody>
</table>

4. Longitudinal and Transverse Dunes
<table>
<thead>
<tr>
<th>Dunes</th>
<th>Transverse Dunes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longitudinal dunes are long narrow ridges of sand, which extend in a direction parallel to the prevailing winds. These dunes are called Seifs in Sahara</td>
<td>Transverse dunes are asymmetrical in shape. They are formed by alternate slow and fast winds that blow from the same direction.</td>
</tr>
</tbody>
</table>

5. Inselbergs and Yardangs

Inselbergs:
- Inselbergs is a German term which means an island mountain.
- Certain hard rocks like igneous rocks are more resistant to wind action.
- Such isolates residual hills rising abruptly from their surroundings are termed as insilbergs. Eg. Uluru, Ayers rock, Australia

Yardang:
- In arid regions, certain rocks have hard and soft layers arranged vertically.
- When winds blow over these rocks the soft layers get eroded leaving irregular crusts.
- They are called Yardangs.

6. Continental glaciers and valley glaciers:

Continental Glaciers
- Thick sheets of ice that covers vast areas of a continent is called continental Glacier.

Valley Glaciers:
- The glacier which takes its origin from a snow covered mountain range is known as a valley Glacier.

7. Spit and Bar:

<table>
<thead>
<tr>
<th>Spit</th>
<th>Bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>A spit is a ridge or embankment of sediment attached to the land on one end and terminating in open water on the other end. Spits are common at the mouth of estuaries.</td>
<td>A bar is an elongated deposit of sand, shingle or mud found in the sea. It is almost parallel to the shoreline.</td>
</tr>
</tbody>
</table>

IV. Short Question & Answers:
1. Define weathering.
- Weathering is the disintegration and decomposition of materials of the earth’s crust by their exposure to atmosphere.
- The nature and magnitude of weathering differs from place to place and region to region.

2. What do you mean by biological weathering?
- Biological weathering occurs due to the penetration and expansion of plant roots, earthworms, burrowing animals (rabbits, rats) and some human activities.

3. Mention the three courses of a river with any two land forms associated to each course.
   The upper course – V shaped valleys, canyons.
   The middle course – Alluvial fans, meanders.
   The lower course – delta, estuary.

4. What are ox-bow lakes?
- Meanders in due course of time become almost a complete circle with narrow necks.
- This in turn gets abandoned and forms a lake. This is called an ox-bow lake.

5. How does a cave differ from a sea arch?
   **Sea cave:** Prolonged wave attack on the base of cliff erodes rock materials, which result in the formation of caves.
   **Sea arch:** When two caves approach one another from either side of a head land and unite, they form an arch. Eg. Neil Island, Andaman and Nicobar.

6. List out any four Karst topographical areas found in India.
   1. Guptadham caves - Western Bihar
   2. Robert cave – Uttarakhand
   3. Pandav Caves – Madhya Pradesh
   4. Kutumsar – Bastar district in Chattisgarh
   5. Borra caves – Andhra Pradesh

7. What do you mean by a hanging valley?
- These are valleys eroded by tributary glacier and that hang over the main valley.

8. Define a) Moraine b) Drumlin c) Esker
   **Moraine:** Land forms formed by the glacial deposits of valley or continental glaciers are termed as moraines. They are of various shapes and size, like ground, terminal and lateral moraines etc.
Drumlin: Drumlins are deposits of glacial moraines that resemble giant inverted tea spoons or half cut eggs.

Esker: Long narrow ridges composed of boulders gravel and sand deposited by streams of melting water which run parallel to a glacier are called eskers.

9. Mention the various features formed by wind erosion.
Mushroom rocks, Inselbergs, Yardangs.

10. What are wave cut platforms?
- Flat surface found at the foot of sea cliffs are called as wave cut platforms.
- Wave cut platform is also referred as beach, shell, terrace and plain.

V. Give Reasons:

1. Chemical Weathering is predominant in hot and humid zones.
   - Chemical weathering is predominantly high in the hot and humid regions such as the equatorial, tropical and subtropical zones.
   - Because chemical weathering process of oxidation, carbonation, solution and hydration cannot happen without water and heat.

2. Silt deposits are less at estuaries than deltas.
   - Deposition of silt by the river is not possible here in the estuaries like delta as if the waves keepen on eroding the deposits.
   - So silt deposits are less at estuaries than deltas.

3. The snow line is at the sea level in polar regions.
   - The highest above which there is a permanent snow cover in the higher altitude or latitude is called snow line.
   - Higher the latitude, lower the snowline from sea level.
   - So the snow line is at the sea level in polar regions.

4. Wind can possibly erode the rocks from all sides.
   - Rocks are made up of hard and soft layers.
   - When the rock’s bottom is soft, the sand laden winds blow against it and wear it down.
   - By the constant wearing down action of the wind, the soft rocks get eroded away.

5. In limestone regions, surface drainage is rarely found.
Ground water is an active agent in limestone regions. Karst topography is formed due to the dissolution of soluble rocks.

- So in limestone regions, surface drainage is rarely found.

3. **Atmosphere**

I. Choose the best answer:

1. ………..is the most important gas for the survival of living organisms.
   - a) Helium
   - b) Carbondioxide
   - c) Oxygen
   - d) Methane

2. The lowest layer of the atmosphere is …………
   - a) Troposphere
   - b) Stratosphere
   - c) Exosphere
   - d) Mesosphere

3. ………..reflects radio waves.
   - a) Exosphere
   - b) Ionosphere
   - c) Mesosphere
   - d) Stratosphere

4. The average global surface temperature is ………
   - a) 12°C
   - b) 13°C
   - c) 14°C
   - d) 15°C

5. Temperature …….. from the equator to pole.
   - a) increases
   - b) no change
   - c) decreases
   - d) stable

6. The process of change of state of water from gaseous to liquid state is called …………
   - a) precipitation
   - b) evaporation
   - c) transpiration
   - d) condensation

7. The ………. is the chief energy source of the Earth.
   - a) sun
   - b) moon
   - c) starts
   - d) clouds

8. The ……… pressure belt extends from 5°N and 5°S latitudes.
   - a) Equatorial low
   - b) Subtropical high
c) Sub-polar low  d) polar high

9. All types of clouds are found in the ...........

   a) Troposphere  b) Ionoshphere
   c) Mesosphere  d) Exosphere

10. ..........clouds are called ‘Sheep clouds’.

   a) Alto-cumulus   b) Alto-stratus
   c) Nimbo-stratus  d) Cirro-stratus

11. The monsoons are ........

   a) prevailing winds   b) periodic winds
   c) local winds        d) none of the above

12. Dew in the form of ice crystals is called

   a) frost   b) fog
   c) mist    d) sleet

13. ..........is called the eye of the storm.

   a) pressure   b) wind
   c) cyclones   d) snow

14. The vertical movement of air is called ...........

   a) wind   b) storm
   c) air current d) drift

II. Match the following:

1. Meteorology  - a) wind speed
2. Climatology  - b) direction of wind
3. Anemometer   - c) cirrus
4. Wind vane    - d) study of climate
5. Mare’s tail   - e) study of weather
6. Leeward side - f) Australia
7. Willy willy   - g) rain shadow region

Ans: 1-e; 2-d; 3-a; 4-b; 5-c; 6-g; 7-f
III. Distinguish between the following:

1. Weather and Climate

<table>
<thead>
<tr>
<th>Weather</th>
<th>Climate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weather is observed for short duration over small areas</td>
<td>Climate is observed over long period of time for a larger area.</td>
</tr>
<tr>
<td>It changes hour to hours.</td>
<td>It is more or less permanent.</td>
</tr>
<tr>
<td>A place can experience different types of weather condition in a day.</td>
<td>A place can experience almost the same type of climate.</td>
</tr>
<tr>
<td>Weather data is collected everyday in the observations.</td>
<td>Climate is average of the weather data.</td>
</tr>
<tr>
<td>Study of weather is called Meteorology.</td>
<td>Study of climate is called climatology.</td>
</tr>
</tbody>
</table>

2. Insolation and Temperature.

**Insolation:** The amount of heat received from the sun in the form of short waves is called insolation or incoming solar radiation.

**Temperature:** Temperature is a measure of the warmth of an object expressed in terms of Celsius or Fahrenheit, measured with thermometer.

3. Land breeze and Sea breeze

<table>
<thead>
<tr>
<th>Land breeze</th>
<th>Sea breeze</th>
</tr>
</thead>
<tbody>
<tr>
<td>It blows during the night.</td>
<td>It blows during the day.</td>
</tr>
<tr>
<td>The wind blows from land to sea.</td>
<td>The wind blows from sea to land.</td>
</tr>
<tr>
<td>During the night the land cools more rapidly than the ocean.</td>
<td>During the day, the land masses get heated more rapidly than the oceans.</td>
</tr>
</tbody>
</table>

4. Wind ward side and leeward side

<table>
<thead>
<tr>
<th>Wind ward side</th>
<th>Leeward side</th>
</tr>
</thead>
<tbody>
<tr>
<td>The side of the mountain facing the wind is called the windward side</td>
<td>The other side of the mountain that does not face the wind is called the leeward side.</td>
</tr>
<tr>
<td>It receives heavy rainfall.</td>
<td>It receives less rainfall.</td>
</tr>
</tbody>
</table>

5. Tropical Cyclone and Temperate Cyclones.
<table>
<thead>
<tr>
<th>Tropical Cyclone</th>
<th>Temperate Cyclone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tropical cyclones develop in the inter tropical convergence zone.</td>
<td>Temperate cyclones are formed along a front in mid-latitudes between 35° and 65° N and S</td>
</tr>
<tr>
<td>They are formed due to the differential heating of land and sea.</td>
<td>Temperate cyclones do not become weak like the tropical cyclones on reaching the land.</td>
</tr>
</tbody>
</table>

IV. Short Questions & Answer:

1. Define Atmosphere.

-The blanket of air that surrounds the Earth is called the atmosphere.
- It is held close to the earth by gravitational attraction.

2. Name the different atmospheric layers.

The five atmospheric layers are.

i) Troposphere  ii) Stratosphere  iii) Mesosphere  iv)Thermosphere  v) Exosphere

3. Mention the factors that affect the climate?

The factors that affect the climate:

- Distance from the equator  - Altitude
- Nearness to the sea  - nature of the prevailing winds.
- Mountains barrier  - Cloud cover
- Ocean currents  - Natural vegetation.

4. What are the units used to measure the temperature?

Celsius and Fahrenheit are the units used to measure the temperature.

5. What is insolation?

The amount of heat received from the sun in the form of short waves is called insolation or Incoming Solar Radiation.

6. What are isotherms?

Isotherms are imaginary lines drawn on maps, connecting points that have equal temperatures.

7. Write short note on Lapse rate.

The temperature decreases at the rate of 1°C for every 165mt of height. This is called Normal Lapse rate.
8. What are the processes responsible for heating the atmosphere?
Radiation, Conduction, Convection, Advection

9. How is the Atmospheric pressure measured?
- Atmospheric pressure is measured with a mercury barometer.
- The unit of measurement is millibar. (mb)

10. Polar Easterlies are cold and dry. Why is it so?
Polar Easterlies are cold and dry polar winds. Because they blow from the polar high pressure belt to the sub polar low pressure belt.

11. Mention the planetary wind system of the earth.
- The winds which constantly blow in the same direction throughout the year are called the planetary winds.
- They are also called as permanent winds or the prevailing winds.

12. Write a note on:

a) Trade winds:
- Trade winds blow from the subtropical high pressure belt to the equatorial low pressure belt in both the hemisphere.
- They blow with great regularity, force and a constant direction throughout the year.

b) Roaring Forties:
- Westerlies blow form Southwest to North East in the northern hemisphere and North West to South East in the southern hemisphere.
- The velocity of westerlies become so vigorous and fast to be called Roaring Forties at 40.

13. How are clouds formed?
- Cool moisture laden air, gets collected around particles like dust, salt content from the sea, smoke etc. and forms clouds.
- Sometimes mixing of warmer and cooler air also produces clouds.

14. What are the different types of rainfall?
Convectional rainfall. Frontal or cyclonic rainfall, Orographic rainfall.

15. What is Precipitation? What are the different forms of precipitation?
- Falling down of condensed water vapour in different forms is called precipitation.
- The main forms of precipitation drizzle, rain, sleet, snow and hail.
16. Write short note on

a) Drizzle: Falling of numerous uniform minute droplets of water with diameter of less than 0.5 is called a drizzle.

b) Rain: Rain is the most widespread and important form of precipitation in places having temperature above the freezing point.

It occurs only when there is abundant moisture in the air.

c) Sleet: Sleet refers to a precipitation in the form of pellets made up of transparent and translucent ice. This precipitation is a mixture of snow and rain.

d) Snow: Snow is formed when condensation occurs below freezing point.

It is the precipitation of opaque and semi opaque ice crystals.

e) Heat: Heat is the energy which makes objects hot, while temperature measures the intensity of heat.

17 How are cyclones classified?

Tropical cyclones, Temperate cyclones, Extra tropical cyclones.

V. Give reason:

1. The equatorial low pressure belt is an area of calm.

- At the equator, the earth gets heated by the vertical sun rays and in turn heats the air in contact with it. the heated air expands and raise upwards resulting in low pressure belt.

- This belt is called doldrums due to virtual absence of surface winds.

2. Cyclones cause huge loss of life and property.

- Cyclones are centres of low pressure where, winds from the surrounding high pressure area coverage towards the centre in a spiral form.

- Wind blows more than 250 kph and the tidal wave that swept more than 20km in land.

- So cyclones cause huge loss of life and property.

3. Cloudy days are warmer than cloudless days.

- A visible mass of condensed water vapour floating in the air above the ground level is called a cloud.

- This condensed water reduces the heat, so cloudy day are warmer than cloudless days.

4. Dog is dangerous for traffic.

Fog is the combination of snow with dust and smoke. Light cannot travel through fog. So it is dangerous for traffic.

5. Convectional rainfall is also called 4’o clock rain.
Convectional rainfall occurs regularly in the equatorial region in the evenings around 4’o clock. So it is called 4’o clock rain.

6. Polar Easterlies are cold and dry. Why is it so?

Polar easterlies are cold and dry polar winds, because they blow from the polar high pressure belt to the sub polar low pressure belt.

CIVICS

1. Forms of Government and Democracy

I. Choose the correct Answer:

1. A system of government in which one person reigns supreme, usually a king or queen, is called ……
   a) autocracy     b) monarchy
   c) democracy     d) republic

2. A system of government by one person with absolute power
   a) aristocracy   b) theocracy
   c) democracy    d) autocracy

3. When a country is governed by a few privileged, the form of government is called
   a) oligarchy     b) parliamentary
   c) democracy    d) republic

4. Former Soviet Union is an example for ……
   a) aristocracy   b) theocracy
   c) oligarchy    d) republic

5. Select the odd one
   a) India         b) USA
   c) France       d) Vatican

6. Abraham Lincoln was the President of the ………
   a) USA          b) UK
   c) USSR        d) India

7. Kudavolai system was followed by
8. Direct Democracy in olden times existed

a) In the republics of ancient India    b) Among the USA

c) In the city-state of ancient Athens    d) Among the UK

9. In which country has democracy originated?

a) India    b) Switzerland

b) USA    d) Athens

10. From which language was the term “Democracy” derived?

a) Greek    b) Latic

c) Persian    d) Arabic

11. In democracy the final authority rests with

a) The Parliament    b) The People

c) The Council of Ministers    d) The President

12. Which one of the country has Presidential form of government?

a) India    b) Britain

c) Canada    d) USA

13. The largest democratic country in the world is

a) Canada    b) India

c) USA    d) China

   Reason (R): People directly participate in decision making.

a) Both (A) and (R) are true and (R) explains (A)

b) Both (A) and (R) are true and (R) does not explain (A)

c) (A) is correct and (R) is false
d) (A) is false and (R) is true.

15. Assertion (A): India has parliamentary form of democracy.

Reason (R): Indian parliament comprises two houses.

a) Both (A) and (R) are true and (R) explains (A)
b) Both (A) and (R) are true and (R) does not explain (A)
c) (A) is correct and (R) is false
d) (A) is false and (R) is true.

16. The meaning of Franchise is

a) Right to elect  b) Right to vote for the poor
c) Right to vote  d) Right to vote for the rich

17. The grant of universal franchise creates

a) Social equality  b) Economic equality
c) Political equality  d) Legal equality

18. Prime Minister of India is appointed by the

a) Lok Sabha  b) Rajya sabha
c) Speaker  d) President

19. The President of India can nominate

a) 12 members of Lok Sabha  b) 2 members to Rajya Sabha
c) 12 members to Rajya Sabha  d) 14 members to Rajya Sabha

20. The first general elections after independence in India was held in

a) 1948  b) 1952
c) 1957  d) 1947

II. Fill in the blanks:

1. The Constitution of India was finally adopted on 26, November 1949

2. The two types of democracy are Direct and Indirect
3. An example for direct democracy is **Switzerland**

4. India has a **Parliamentary** form of democracy.

5. **Jawaharlal Nehru** was the first Prime Minister of independent India.

6. The first general elections were held in British India in the year **1920**

7. The Parliament House in India was designed by **Edwin Lutyens** and **Herbert Baker**

### III. Match the following:

1. Autocracy - a) 18
2. Right to vote - b) Arthashastra
3. Chanakya - c) Vatican
4. Theocracy - d) North Korea

**Ans:** 1-d; 2-a; 3-b; 4-c

### IV. Give Short Answer:

1. Give Abraham Lincoln’s definition for democracy.

   According to Abraham Lincoln Democracy is a government of the people, by the people and for the people.

2. Mention the forms of democracy

   Direct democracy; Indirect democracy.

3. Distinguish between direct and indirect democracy.

<table>
<thead>
<tr>
<th>Direct Democracy</th>
<th>Indirect Democracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>The people themselves directly express their will on public affairs.</td>
<td>The people express their will through their elected representatives.</td>
</tr>
<tr>
<td>Eg. Ancient Greek city states, Switzerland.</td>
<td>Eg. India, USA, UK</td>
</tr>
</tbody>
</table>

---

**2. Election, Political Parties and Pressure Groups**

Remember

**Prepared For Tnpsc Exam**

Page 38 of 51
1. The electoral system in India has been borrowed from Great Britain.

2. Free and fair elections are conducted by the Election Commission.

3. The Election commission of India is situated at New Delhi.

4. The election process in the state level is supervised by the Chief Electoral officer.

5. National Voters Day is 25th January.

I. Choose the correct answer:

1. India has adapted the electoral system followed in the
   a) USA  
   b) United Kingdom
   c) Canada  
   d) Russia

2. The Election Commission of India is a/an
   a) Independent body  
   b) Statutory body
   c) Private body  
   d) Public corporation

3. Which Article of the Constitution provides for an Election Commission?
   a) Article 280  
   b) Article 315
   c) Article 324  
   d) Article 325

4. Which part of the constitution of India says about the election commission?
   a) Part III  
   b) Part XV
   c) Part XX  
   d) Part XXII

5. Who accords recognition to various political parties as national or regional parties?
   a) The President  
   b) The Election Commission
   c) The Parliament  
   d) The President in consultation with the election commission

   Reason (R): To ensure free and fair elections in the country.
   a) Both (A) and (R) are true and (R) explains (A)
   b) Both (A) and (R) are true and (R) does not explain (A)
c) (A) is correct and (R) is false

d) (A) is false and (R) is true

7. NOTA was introduced in the year

a) 2012  b) 2013  

\textbf{c) 2014}  \hspace{1cm} d) 2015

8. The term pressure groups originated in ............

a) USA  \hspace{1cm} b) UK

\hspace{1cm} c) USSR  \hspace{1cm} d) India

9. Assertion (A): A large number of pressure groups exist in India.
Reason (R): Pressure groups are not developed in India to the same extent as in the USA.

a) Both (A) and (R) are true and (R) explains (A)

\hspace{1cm} b) Both (A) and (R) are true and (R) does not explain (A)

\hspace{1cm} c) (A) is correct and (R) is false

\hspace{1cm} d) (A) is false and (R) is true

\textbf{II. Fill in the blanks:}

1. The Election Commission of India is a body of \textbf{Three} members.

2. National Voters day has been celebrated on \textbf{January 25}

3. In India \textbf{Multi} Party system is followed.

4. In 2017, there were \textbf{Seven} recognized national parties.

5. Narmada Bachao Andolan is a \textbf{Pressure Group}

\textbf{III. Match the following:}

1. National Party - a) Trade Unions

2. Single – party system - b) USA

3. Two – party system - c) China

4. Pressure groups - d) Seven
Ans: 1-d; 2-c; 3-b; 4-a

IV. Give short answer:

1. Explain the electoral system in India.

- The constitution provides for an independent Election Commission to ensure free and fair elections in India.

- The Parliament may make provision with respect to all matters relating to elections to the Parliament and the State legislatures.

- The state legislature can also make provisions with respect to all matters relating to election to the state legislatures.

2. Give the meaning of a political party.

A political party is a group of people who come together to contest elections and hold power government. A political party has three components a leader, active member and the followers.

3. Distinguish between two party system and multiparty system.

<table>
<thead>
<tr>
<th>Two party system</th>
<th>Multi-Party system</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the Bi-Party system or two party systems only two major parties exist.</td>
<td>In the multi party system more than two political parties exist.</td>
</tr>
<tr>
<td>Eg. USA, UK</td>
<td>Eg. India, Srilanka, France and Italy</td>
</tr>
</tbody>
</table>

4. What is a pressure group?

- A pressure group is a group of people who are organized actively for promoting and defending their common interest.

- It is so called as it attempts to bring a change in the public policy by exerting pressure on the government.

5. Discuss merits of democracy

- Responsible and accountable government
- Equality and fraternity
- Sense of responsibility among common people
- Local-Self – Government
- Development and prosperity for all
- Popular sovereignty
- Sense of Co-operation and fraternal feeling
6. Discuss demerits of democracy

- Indirect or representative nature of democracy
- Lack of interest in democratic process and hence lower turnout in elections.
- Instability in governance due to fractural mandate
- Delay in decision – making process.

7. What is the principle of universal adult franchise? What is its importance?

- The democratic countries in the world follow universal adult franchise.
- In India every Indian citizen who is not less than Eighteen years of age is given the right to vote.
- There is no discrimination on the basis of caste, creed, religion, gender and education.
- Democracy is the form of government that allows the people to choose their rulers.
- In order to give a share to all the citizens in the administration, the principle of universal adult franchise is followed in India.

ECONIMICS

1. Understanding development: Perspectives, Measurement and Sustainability

Remember:

1. Development refers to the progress of a particular field or a particular person.

2. Net National Product is considered as a true measure of National Income.

3. The average income is also called per capital income.

4. The Indian Wildlife Protection act 1972 protects the bio-diversity.

5. Thermal power plants emit large quantity of carbon-di-oxide.

I. Choose the correct answer:

1. Assertion (A): Development increases the quality of life.
   
   Reason (R): People will have higher incomes, better education, better health and nutrition, less poverty.
   
   a) Both (A) and (R) are true and (R) explains (A)
   b) Both (A) and (R) are true and (R) does not explain (A)
   c) (A) is correct and (R) is false
   d) (A) is false and (R) is true

2. The term “Human Resources” refer to
a) investment on poor people b) expenditure on agriculture
c) investment on assets d) collective abilities of people

3. For comparing development between countries, their ………. is considered to be one of the most important attributes.
   a) growth b) income
c) expenditure d) savings

4. …………….is considered a true measure of national income.
   a) GNP b) GDP
c) NNP d) NDP

5. The ……………. Income is also called per capita income.
   a) average b) total
c) people d) monthly

6. Which one of the following country is not a G-8 country.
   a) Japan b) Canada
c) Russia d) India

7. Which one of the following country is not a member of SAARC?
   a) India b) Pakistan
c) China d) Bhutan

8. Assertion (A): The Net National Product (NNP) is considered as a true measure of national output. Reason (R): It is also known as national income.
   a) Both (A) and (R) are true and (R) explains (A)
   b) Both (A) and (R) are true and (R) does not explain (A)
   c) (A) is correct and (R) is false
   d) (A) is false and (R) is true

Reason (R): Investment in education and health of people can result in a high rate in the future for a country.

a) Both (A) and (R) are true and (R) explains (A)
b) Both (A) and (R) are true and (R) does not explain (A)
c) (A) is correct and (R) is false
d) (A) is false and (R) is true

10. The Human Development Index (HDI) does not take into account the following dimension in the calculation

a) Gender       b) Health
c) Education     d) Income

11. Among the following states which state has the literacy rate (2011) higher than national average.

a) Andhra Pradesh   b) Uttar Pradesh
c) Tamil Nadu       d) None of these

12. Sex- ratio means

a) the ration between adult-make and adult-female in a population
b) the ratio between female and male in a population
c) the relationship between male and female
d) the number of females per thousand males.

13. Inter-generational equality is ensured under the process of

a) industrial progress   b) Economic development
c) Sustainable development d) Economic growth

14. Find the odd one

a) solar energy   b) wind energy
c) paper         d) Natural gas

15. ………… is the state with higher installed solar capacity in india.

a) Tamil Nadu   b) West Bengal
c) Kerala       d) Andhra Pradesh

16. ………… resources are those which will get exhausted after years of use.
   a) Natural       b) Renewable
   c) Non-Renewable d) New

17. Thermal plant emits large quantity of ………… which pollutes the environment.
   a) Oxygen       b) Nitrogen
   c) Carbon       d) Carbon dioxide

II. Fill in the blanks:

1. Economic progress of any country is known as Economic development
2. The head quarters of HRD Ministry is in Shastri Bhavan in New Delhi
3. The state having the highest literacy rate in India is Kerala
4. Human Development Report of the world is prepared and released by United Nations Development Programme
5. Ground water is an example of Renewable resource.
6. The book An Uncertain Glory was written by Prof. Amartya Sen

III. Match the following:

1. Development - a) Wild life protection Act
   2. Human resource - b) Renewable resources
   3. Solar energy - c) Par of daily life
   4. 1972 - d) Education

Ans: 1-c; 2-d; 3-b; 4-a

IV. Give Short answers:

1. What do you mean by development?

   The word ‘development’ refers to the progress of a particular field or a particular person.

2. What are the indicators of development?

   Net National Product, Per Capital Income, Purchasing power parity, Human Development Index
3. Why is NNP not considered as a useful measure to compare a country’s development with other countries?

Different countries have different populations. So NNP is not considered as a useful measure to compare a country’s development.

4. Why is human resource considered as the foremost resource of any country?

- Human resource is necessary for the progress of any country.
- Investment in human resource (education and health) can give high rate of returns in the future.
- It will result in higher earnings and greater contribution to the society. So human resource is considered as the foremost resource of any country.

5. Expand the following: 1. PPP  2. HDI

1. PPP - Purchasing Power Parity
2. HDI - Human Development index

6. Expand the following: 1. NNP  2. PCI

1. NNP - Net National Product
2. PCI - Per Capital Income

7. What is solar power?

Solar power is the conversion of energy from sunlight into electricity either directly using concentrated solar power.

8. How is the per Capita income calculated?

Per capita income is obtained by dividing the National income by the population of a country. National income is also called average income.

\[
\text{Per capita} = \frac{\text{National Income}}{\text{Population}}
\]

9. Differentiate between renewable and non-renewable resources

<table>
<thead>
<tr>
<th>Renewable resources</th>
<th>Non-Renewable resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Renewable resources are resources that can be reproduced again and again</td>
<td>Non-renewable resources that cannot be replaced again after utilization</td>
</tr>
<tr>
<td>2 These resources take a short time for renewal</td>
<td>Million of years are needed for the formation of these resources</td>
</tr>
<tr>
<td>3 Renewable resources are</td>
<td>Non-renewable resources</td>
</tr>
</tbody>
</table>
pollution free and environment friendly | pollute and damage the environment
---|---
4 | Example: Solar energy, wind energy, water, wood, paper
4 | Example: Metals, glass, fossil fuels, petroleum, natural gas, diesel

### 10. Mention any five environment acts and their action

<table>
<thead>
<tr>
<th>Act</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>National Green Tribunal Act, 2010</td>
</tr>
<tr>
<td>2</td>
<td>Biological Diversity Act, 2002</td>
</tr>
<tr>
<td>3</td>
<td>The Environment (Protection) Act, 1986</td>
</tr>
<tr>
<td>4</td>
<td>Forest (Conservation Act, 1980)</td>
</tr>
<tr>
<td>5</td>
<td>Wildlife protection Act, 1972</td>
</tr>
</tbody>
</table>

### 2. Employment in India and Tamil Nadu

**Remember**

1. Economic activity is classified into three sectors.
2. Job security is guaranteed in organized sectors.
3. Public sectors are government undertakings.
4. In unorganized sector, the workers are paid low salary.
5. Agriculture is the largest employer in Tamil Nadu.

**I. Choose the correct answer:**

1. We take age group .............. years for computation of the workforce.
   - a) 12-60
   - b) **15-60**
   - c) 21-65
   - d) 5-14

2. Which is the correct sequence of various sectors i GDP of India in the deseeding order.
a) Primary sector, Secondary sector, Tertiary sector

b) **Primary sector, Tertiary sector, Secondary sector**

c) Tertiary sector, Secondary sector, Primary sector

d) Secondary sector, Tertiary sector, Primary sector

3. Which one of the following sectors is the largest employer in India?

a) **Primary sector**

b) Secondary sector

c) Tertiary sector
d) Public sector

4. Which one of the following sectors is not in Primary Sector?

a) Agriculture

b) **Manufacturing**

c) Mining
d) Fishery

5. Which one of the following is not in Secondary sector?

a) Construction

b) **Manufacturing**

c) Small scale industry
d) **Forestry**

6. Tertiary sector includes

a) Transport

b) **Insurance**

c) Banking
d) **All of these**

7. Match of List I with List II using the codes given below

<table>
<thead>
<tr>
<th>I</th>
<th>II</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Agriculture, Forestry, Fishery and Mining</td>
<td>1. Unorganized sector</td>
</tr>
<tr>
<td>b) Manufacturing, Electricity, Gas and Water Supply</td>
<td>2. Service sector</td>
</tr>
<tr>
<td>c) Trade, Transport and Communication</td>
<td>3. Secondary sector</td>
</tr>
<tr>
<td>d) Unincorporated Enterprises and Household industries</td>
<td>4. Primary sector</td>
</tr>
</tbody>
</table>

(A) (B) (C) (D)

a) 1 2 3 4

b) 4 3 2 1
8 Which sector is not included in the occupational pattern?
   a) Primary sector           b) Secondary sector
   c) Tertiary sector          d) Private sector

9. Which Delhi Sultan of medieval India formed ‘Employment Bureau’ to solve the unemployment problem.
   a) Muhamed Bin Tugulq    b) Allauddin Khilji
   c) Feroz Shah Tugluq     d) Balban

10. ……. sector is registered and follows government rules.
    a) Agriculture           b) Organised
    c) Unorganised          d) Private

11. ………….. sector provides job security and higher wages
    a) Public sector        b) Organised sector
    c) Unorganised sector   d) Private sector

12. Find the odd One
    a) Banking              b) Railway
    c) insurance            d) Small scale industry

13. The sectors are classified into Public and Private sectors on the basis of
    a) number of workers employed
    b) nature of economic activity
    c) ownership of enterprises
    d) employment conditions

    Reason (R): Jobs here are low paid and often not regular.
    a) Both (A) and (R) are true and (R) explains (A)
    b) Both (A) and (R) are true and (R) does not explains (A)
c) (A) is correct and (R) is false

d) (A) is false and (R) is true

15. People who employ workers and pay rewards for their work is termed as ………..

a) employee  b) employer  c) labour  d) caretaker

16. ………… continues to be the largest employer in Tamil Nadu.

a) Agriculture  b) Manufacturing  c) Banking  d) Small scale industry

II. Fill in the blanks:

1. In **Unorganized** sector, the employment terms are not fixed and regular.

2. Economic activities are classified into **public** and **Private** sectors.

3. **Employment** has always featured as an important element of development policy in India.

4. Employment pattern changes due to **Life style of the people**

5. The nature of employment in India is **Multi-dimensional**

6. **Labour force** of the economy is the number of people in the country, who work and also capable of working.

7. Public sector means **government undertaking**

III. Match the following:

1. Public sector  -  a) Banking
2. Private sector  -  b) Poultry
3. Primary sector  -  c) profit motive
4. Tertiary sector  -  d) Service motive

Ans: 1-d; 2-c; 3-b; 4-a

IV. Give short answer:

1. What is labour force of the economy?

Labour force of the economy is the number of people in the country who works and also capable of working.

2. Why are children and old age (above 60 years) not considered for computation of workforce?
- Persons who are less than 15 years are considered as children.

- Persons who have crossed 60 years of age are excluded as they are not physically fit to undertake productive occupation.

- So they are not considered for computation of work force.

3. What are the three sectors of an economy?

Primary sector:

- Agriculture, forestry, animal husbandry, poultry, dairy farming, fishing etc.

Secondary sector:

- Manufacturing, small and large scale industries and constructional activities.

Tertiary sector:

- Transport, insurance, banking, trade, communication, real estate, government and non-government services.

4. Agricultural, despite a sharp decline in Gross Domestic Product, continues to be the largest employer in Tamil Nadu. Give reason.

- The non-agriculture sectors have not generated enough employment to affect a shift of labour force.

- So agriculture continues to be the largest employer in Tamil Nadu.

5. Distinguish between Public sector and Private sector.

<table>
<thead>
<tr>
<th>Public sector</th>
<th>Private sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service motive</td>
<td>Profit motive</td>
</tr>
<tr>
<td>Government owns the assets</td>
<td>Private individual own the assets</td>
</tr>
<tr>
<td>Wages are paid by Government</td>
<td>Wages are paid by the owner of private enterprises</td>
</tr>
<tr>
<td>Eg. NLC, SAIL, BSNL</td>
<td>Eg. TVS Motors, Ashok Leyland, TATA steel</td>
</tr>
</tbody>
</table>