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Test Booklet Series

TEST BOOKLET

C

GENERAL STUDIES (P) 2019 – Test–2679

Time Allowed: Two Hours

Maximum Marks: 200

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS BOOKLET DOES **NOT** HAVE ANY UNPRINTED OR TURN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C** OR **D** AS THE CASE MAY BE IN THE APPROPRIATE PLACE IN THE ANSWER SHEET.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. **Do NOT** write anything else on the Test Booklet.
4. This Test Booklet contains **100** items (Questions). Each item is printed in English. Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response with you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer Sheet provided. See direction in the answers sheet.
6. All items carry equal marks. Attempt all items. Your total marks will depend only on the number of **correct responses** marked by you in the answer sheet. For **every incorrect** response **1/3rd of the allotted marks** will be deducted.
7. Before you proceed to mark in the Answer sheet the response to various items in the Test booklet, you have to fill in some particulars in the answer sheets as per instruction sent to you with your Admission Certificate.
8. After you have completed filling in all responses on the answer sheet and the examination has concluded, you should hand over to Invigilator only the answer sheet. You are permitted to take away with you the Test Booklet.
9. Sheet for rough work are appended in the Test Booklet at the end.

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1. The Constitution makers chose the model of a secular state for India. In this context, which of the following is/are provided by the Indian Constitution?

1. The Constitution prohibits discrimination on grounds of religion.
2. The Constitution provides to all individuals and communities freedom to profess, practice and propagate any religion.
3. The Constitution allows the state to intervene in the matters of religion in order to ensure equality within religious communities.

Select the correct answer using the code given below.

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

2. Which among the following factors may lead to incomplete transmission of monetary policy, where banks do not pass on the entire benefit of a repo rate cut to borrowers?

1. Higher interest rates on small saving schemes than on bank deposits.
2. Mandatory agricultural credit under priority sector lending.
3. High Statutory Liquidity Ratio.

Select the correct answer using the code given below.

- (a) 1 and 3 only
- (b) 2 and 3 only
- (c) 1 only
- (d) 1, 2 and 3

3. What is "IPrism", sometimes seen in the news?

- (a) A seven-pronged strategy to fight terrorism.
- (b) A funding scheme for the start ups.
- (c) An Intellectual Property (IP) competition for students of schools, colleges and universities.
- (d) A framework related to Ethical hacking.

4. With reference to Law Commission of India, consider the following statements:

1. The Law Commission of India is a statutory advisory body.
2. Its function is to recommend the legislative measures for the purpose of consolidation and codification of laws.
3. Its recommendations are not binding on the government.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

5. Consider the following statements regarding Corporate Environment Responsibility (CER):

1. CER is imposed at flat 5% of the capital invested in the project.
2. It is applicable to both greenfield as well as brownfield projects.
3. It is mandated under Companies Act, 2013.

Which of the statements given above is/are correct?

- (a) 2 only
- (b) 1 and 2 only
- (c) 3 only
- (d) 1, 2 and 3

6. Consider the following statements about Global Heat Budget on Earth:

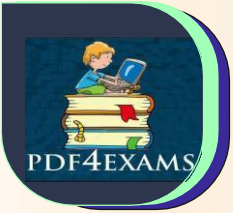
1. Only half of the total incoming solar radiation reaches the earth's surface.
2. The Heat received by the surface is in the form of Short wavelength energy.
3. The Insolation rises sharply as we move from the poles to the equator.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 1, 2 and 3
- (c) 3 only
- (d) 1 only

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7. With reference to the temple architecture of south India, consider the following statements about Raya gopuram:

1. These are the Royal gateways to the temples.
2. They are shorter in height than the towers on the Central Shrines.
3. They are the characteristic feature of temple architecture under Vijaynagar rulers.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 only
- (d) 1 and 3 only

8. How is the Bureau of Indian Standards (BIS) different from the Bureau of Energy Efficiency (BEE)?

1. The BEE has been established by an Act whereas the BIS has been created by an executive order of the Government.
2. BIS provides safe reliable quality goods whereas BEE promotes energy efficiency by reducing the energy intensity of the Indian economy.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

9. Consider the following statements with reference to subordinate courts in India:

1. The judges of a district court are appointed by the Chief Justice of the High Court of the state.
2. The district judge is called the sessions judge when he hears the criminal cases.
3. No death sentence can be imposed by Sessions Judge.

Select the answer using the code given below.

- (a) 1 and 2 only
- (b) 3 only
- (c) 2 only
- (d) 2 and 3 only

10. With reference to 'UN World Data Forum', which of the following statements is/are correct?

1. It works under the aegis of United Nations High Commissioner for Refugees.
2. It tracks and collects the data of refugees, forcibly displaced communities and stateless people around the world.
3. Recently the 'Dubai Declaration' was adopted at the UN World Data Forum, 2018.

Select the correct answer using the code given below.

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 3 only
- (d) 2 and 3 only

11. Consider the following statements:

1. In Centrally Sponsored Schemes (CSS) a certain percentage of the funding is borne by the States.
2. Central sector schemes are 100% funded by the Union government.
3. Central Sector schemes are implemented by the State Governments.
4. Centrally Sponsored Schemes (CSS) are implemented by the Central government machinery.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 3 and 4 only
- (c) 1, 2 and 4 only
- (d) 2, 3 and 4 only

12. The Happy Seeder technology, sometimes seen in the news, can lead to

- (a) higher demand for chemical fertilizers due to the use of hybrid varieties of seeds.
- (b) reduction in yield of milk due to poor quality of cattle feed.
- (c) elimination of need for irrigation by efficient use of soil moisture for germination of seeds.
- (d) reduction in air pollution due to stubble burning.

13. Consider the following statements with respect to cultural conditions during the reign of Satavahanas:

1. The rule of Satavahanas represented the march of triumphant Brahmanism.
2. Their reign represented the decline of rock-cut architecture and increasing trend of structural temple building activity.
3. The official language of Satavahanas was Prakrit.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 1 and 2 only
- (c) 1 and 3 only
- (d) 2 and 3 only

14. With reference to Indian cultural history, the *Kalamukhas* are a sect associated with

- (a) Shaivism
- (b) Vaishnavism
- (c) Jainism
- (d) Buddhism

15. Consider the following statements, regarding Agri-Market Infrastructure Fund (AMIF):

1. It is for the development and up-gradation of agricultural marketing infrastructure in Gramin Agricultural Markets (GrAMs) and Regulated Wholesale Markets.
2. The amount of fund granted is Rs. 10,000 crores.
3. It is created by SIDBI.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 1 and 2 only
- (c) 3 only
- (d) 2 and 3 only

16. With respect to Mahatma Gandhi's social reform movements, consider the following statements:

1. He set up All India Anti-Untouchability League.
2. He started a weekly journal Harijan.
3. He was pioneer in passing of Temple Entry Bill, 1934

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 only
- (d) 3 only

17. Total internal reflection refers to the complete reflection of a ray of light within a given medium from the surrounding surface. In this context consider the following :

1. Mirage in the deserts
2. Rainbow formation
3. Inverted appearance of a ship on a sea during winter evenings.

Total internal reflection is associated with which of the phenomena given above?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

18. Which of the following events took place during the tenure of Warren Hastings?

1. Introduced Permanent Settlement in Bengal.
2. System of Dastaks or Free passes was abolished.
3. Treaty of Serirangapatnam was signed.

Select the correct answer using the code given below.

- (a) 1, 2 and 3
- (b) 2 only
- (c) 1 only
- (d) 1 and 3 only

19. Consider the following statements regarding Gandhi Peace Prize:

1. It was instituted on the occasion of the 50th anniversary of Mahatma Gandhi's Salt Satyagraha.
2. The award for 2018 was given for Leprosy Eradication.

Which of the statements given above is/are **not** correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

20. Consider the following statements regarding Environmental Investigating Agency:

1. It is specialised investigation agency of Convention on International Trade in Endangered Species of Wild Fauna and Flora.
2. World Wide Fund for Nature-India (WWF-India) is the nodal authority for Environmental Investigating Agency in India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

21. Consider the following statements regarding 'Laterite soils' :

1. They are derived from a wide variety of rocks weathering under strongly oxidizing and leaching conditions.
2. They do not contain clay minerals and are rich in silica content.
3. In India, they are found dominantly in the North eastern states.

Which of the statements given above is / are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

22. Photoelectric effect, for which Albert Einstein was awarded the Nobel Prize in physics in 1921, refers to:

- (a) a technique in which lightning could be harnessed to produce electrical energy.
- (b) a phenomenon when photons (light particles) are deflected in an electric field.
- (c) a demonstration in which doubly charged Helium ions get scattered in a magnetic field.
- (d) emission of electrons when light of or above a particular frequency strikes a material.

23. Regarding International Coral Reef Initiative (ICRI), which of the following statements is/are correct?

1. It is an informal partnership between nations and organizations which strives to preserve coral reefs and related ecosystems around the world.
2. Its decisions are binding on its members.
3. It emerged out of Paris Agreement of 2015.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 1 and 2 only
- (c) 3 only
- (d) 2 and 3 only

24. With reference to International Solar Alliance, consider the following statements:

1. It is a coalition of solar resource-rich countries lying fully or partially between the Tropics of Cancer and Capricorn.
2. It is the first International inter-governmental treaty-based organization headquartered in India.
3. It aims to specifically address energy needs by harnessing solar energy.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

25. With respect to Sasipada Banerji, consider the following statements:
1. He was a social worker and a leader of Brahmo Samaj.
 2. He was the editor of the journal Bharat Sramajivi.
 3. He established the Working Men's club in 1870.
- Which of the statements given above are correct?
- (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
26. The process of Gleying in soil formation is correctly described by which of the following statements?
- (a) Waterlogged and anaerobic conditions leading to iron compounds being reduced/removed from the soil.
 - (b) Strongly acid soil solutions causing the breakdown of clay minerals.
 - (c) Removal of soluble components of the soil column due to heavy rainfall.
 - (d) Movement of salt and minerals from the lower levels to upper layers of soil.
27. UNNATI, an initiative by ISRO, aims to
- (a) manufacture special launch vehicles for Geostationary Satellites.
 - (b) build capacity on nanosatellite development.
 - (c) equip India for space wars.
 - (d) encourage engineering graduates to contribute in satellite designing.
28. '*Acinetobacter junii*', was recently seen in news, in the context of:
- (a) assisting in crop production in cold climate.
 - (b) degradation of petrochemical wastes.
 - (c) a new bacterial strain found on Jupiter.
 - (d) production of genetically modified and fortified crops.

29. Consider the following factors influencing the energy production through windmills:
1. Wind speed
 2. Blade radius
 3. Air density
 4. Air Pollution
- Which of the factors given above are the main factors influencing power output from the windmill?
- (a) 1 and 2 only
 - (b) 1, 2 and 3 only
 - (c) 3 and 4 only
 - (d) 1, 2, 3 and 4
30. In the context of Indian economy, consider the following statements regarding the currency notes and coins:
1. Only currency notes are called fiat money.
 2. Both currency notes and coins are legal tenders.
 3. The Reserve Bank of India has the sole authority to mint coins and issue currency notes.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only
 - (b) 2 only
 - (c) 2 and 3 only
 - (d) 1 only
31. With reference to the doctrine of 'No First Use' (NFU) Policy of India, consider the following statements:
1. It refers to a policy to not use nuclear weapons as a means of warfare unless first attacked by an adversary using nuclear weapons.
 2. India adopted this policy after Pokhran Nuclear test of 1974.
 3. China was the first nation to propose and pledge NFU policy.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 1 and 3 only
 - (c) 3 only
 - (d) 1, 2 and 3

32. With reference to The Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES), consider the following statements:

1. It is an inter-governmental organization for generation and application of early warning systems.
2. It is supported by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP).
3. India is the current chairman of the RIMES Council.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

33. Which of the following statements is/are correct about the International Treaty on Plant Genetic Resources for Food and Agriculture?

1. It aims to establish a global system to provide farmers and scientists with access to plant and genetic material.
2. It was concluded within the framework of the Food and Agriculture Organization of the United Nations.
3. India is not its member.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

34. With reference to Multilateral Investment Guarantee Agency (MIGA), consider the following statements:

1. It safeguards investments from effects of political turmoil in developing countries.
2. MIGA guarantee is limited to projects related to infrastructure and manufacturing sectors only.
3. India is a member of MIGA.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

35. With reference to medieval Indian history, what does "Nanadesi" mean ?

- (a) These were group of agricultural labourer under Hoysala empire which paid taxes directly to the king.
- (b) These were the panchayat members in villages under the Chola kingdom.
- (c) These were the merchant guilds in South India.
- (d) These were the priestly class which involved in the policy making under the Cholas.

36. With reference to Land revenue system in the Mughal era, consider the following statements:

1. Productivity of the land was assessed before fixing the taxes.
2. Amil-guzar was the officer in charge of revenue collection.
3. The taxes had to be paid in cash only.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 only
- (d) 1 and 3 only

37. Which of the following agencies publish World Economic Situation and Prospects Report?

- (a) IMF
- (b) World Bank
- (c) UN
- (d) World Economic Forum

38. Consider the following statements with reference to LIGO Detector:

1. It is a gravitational wave observatory situated in the low earth orbit.
2. It can also be used to detect electromagnetic waves from the deep space.

Select the correct answer using the codes given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

39. Consider the following differences between incineration and pyrolysis:

1. Incineration is the burning of waste products in the absence of oxygen while pyrolysis takes place in an adequate supply of oxygen.
2. By-products of pyrolysis and incineration can be used as fuels.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

40. Consider the following pairs:

<i>Tribes</i>	<i>Associated Dance</i>
1. Mizo people	: Cheraw
2. Kandha Tribe	: Dhap
3. Reang Tribe	: Hojagiri

Which of the pairs given above are correctly matched?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

41. *It rises on the western slopes of the Aravalli Range near Ajmer, where it is known as the Sagarmati, the river flows generally southwestward through the hills and across the plains of the region. It finally dissipates into the wastes of the northeastern part of the marsh called the Rann of Kachchh (Kutch) in Gujarat state. It receives much of the drainage of the southwest slopes of the Aravalli Range. The Jowai, Sukri, and Jojari rivers are its main tributaries.*

The above passage describes which of the following river ?

- (a) Kali Sindh
- (b) Luni
- (c) Banas
- (d) Mahi

42. Which of the following can be the consequences of simultaneous elections for Lok Sabha and State Legislative Assemblies?

1. Reduction in government and political party expenses.
2. More developmental work due to minimum "Campaign mode" disruptions and Code of Conduct restrictions.
3. India will lose its federal character.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 only
- (d) 1, 2 and 3

43. Consider the following pairs:

<i>Battle</i>	<i>Treaty/Outcome</i>
1. Battle of Plassey	: Mir Qasim was defeated
2. Third Anglo-Mysore War	: Treaty of Seringapatam
3. Third Battle of Panipat	: Defeat of Marathas

Which of the pairs given above is/are correctly matched?

- (a) 3 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

44. With respect to Anglo Burma Wars, consider the following statements:

1. First Burma War came to an end with the signing of Treaty of Yandabo.
2. Lord Canning was the Governor General of India during second Burma War.
3. Burma was annexed in British India after the third Burma War.

Which of the statement given above is/are correct ?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

45. Recently, the government issued regulations regarding how much a bag for school-going children should weigh. In this context, who among the following chaired a committee and released a report titled 'Learning Without Burden'?

(a) Yash Pal
(b) Shakuntala Devi
(c) C. Rangarajan
(d) TSR Subramanian

46. The nodal Ministry of the Government of India responsible for Administrative Reforms is

(a) Ministry of Home Affairs
(b) Ministry of Personnel, Public Grievances and Pension
(c) Ministry of Human Resource Development
(d) Ministry of Parliamentary Affairs

47. Consider the following statements:

1. It is also called the land of elegant Red Panda.
2. The forests consist of mixed species like rhododendron, bamboo, oak, ferns and sal.
3. It is located on the tri-junction of Bhutan, Sikkim and West-Bengal

Which of the following protected area has been described by the above statements?

(a) Pobitora Wildlife Sanctuary
(b) Buxa Tiger reserve
(c) Neora valley National Park
(d) Amchang National park

48. Consider the following pairs:

<i>Congress Sessions</i>	<i>Developments related to foreign policy</i>
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- | | |
|--------------------------|---|
| 1. Calcutta Session 1920 | : Congress called upon the Indian people not to join the army to fight in West Asia |
| 2. Tripuri Session 1939 | : Congress disassociated itself from the British Foreign Policy that aided fascists |
| 3. Haripura Session 1938 | : Congress Called upon the Indian people to boycott Japanese goods |
| 4. Madras Session 1927 | : Congress advised Indians not to go to China to fight against Chinese people. |

Which of the above pairs is/are correctly matched?

- (a) 1, 2, 3 and 4
(b) 1, 2 and 4
(c) 1, 2 and 3
(d) 4 only

49. He founded Deccan Education Society. He organized a no-tax campaign with the help of Poona Sarvajanik Sabha. He was also a member of the Bombay Legislative Council. He was prosecuted for sedition.

The person being referred to in the above passage is:

- (a) Balganagadhar Tilak
(b) G K Gokhale
(c) Dadhabai Naoroji
(d) M G Ranade

50. With reference to the 74th Constitutional Amendment Act, consider the following statements:

1. The Act provides for reservation of not less than one-third of the total number of offices of Chairpersons in the municipalities for women.
2. The Act provides for the reservation of seats for the scheduled castes and the scheduled tribes in every municipality in the proportion of their population.

Which of the statements given above is/are correct?

- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

51. Which of the following are criteria for qualifying as a 'Startup' under the Startup India Scheme ?

1. Up to seven years from the date of its incorporation/registration, in the case of startups in the biotechnology sector, the period shall be up to ten years from the date of its incorporation/registration.
2. If its turnover for any of the financial years since incorporation/registration has not exceeded INR 50 Crores
3. It has a scalable business model with a high potential of employment generation or wealth creation

Select the correct answer using the code given below:

- (a) 1 only
- (b) 1 and 2 only
- (c) 3 only
- (d) 1 and 3 only

52. With reference to the International Convention for the Prevention of Pollution from Ships (MARPOL), consider the following statements:

1. It was adopted at the Rio Earth Summit.
2. It is aimed at minimizing both operational and accidental pollution from ships.
3. It does not deal with air emissions from ships.

Which of the statements given above is/are correct?

- (a) 1 and 3 only
- (b) 2 and 3 only
- (c) 2 only
- (d) 1 only

53. Consider the following statements about communication satellites:

1. They are used for point to point telecommunications links, mobile communications and direct broadcast.
2. They are generally placed in the low earth orbit for better and effective communication.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

54. Which among the following tribes are listed as Particularly Vulnerable Tribal Groups?

1. Maria Gond
2. Didayi
3. Siddi
4. Purigpa

Select the correct answer using the code given below.

- (a) 1 and 2 only
- (b) 1, 3 and 4 only
- (c) 1, 2 and 3 only
- (d) 2, 3 and 4 only

55. In the context of production of goods in an economy, consider the following statements:

1. A packet of tea leaves used in a shop selling drinkable tea is not a consumer good.
2. Durable possessions like a domestic TV set and a taxicab are both capital goods.
3. Only the value of capital goods produced in an economy is considered in calculating its GDP.

Which of the statements given above is/are correct?

- (a) 2 only
- (b) 1 and 2 only
- (c) 1 only
- (d) 1, 2 and 3

56. Which of the following correctly describes 'Drop-in' fuels?

- (a) Synthetically produced alternative to diesel for use in specially designed compression ignition diesel engines.
- (b) Liquid fuels, produced from Biomass, which can be directly utilized in vehicles without any modification.
- (c) Fifth generation biofuel, produced from carbon nanopolymers, with nearly zero emissions.
- (d) Compressed liquid fuels, produced from anaerobic respiration, which can be directly used at higher elevations without freezing.

57. Which of the following statements is/are correct regarding LaQshya program ?

1. It is aimed at improving quality of care in labour room and maternity Operation Theatre (OT).
2. It provides maternity benefit in cash to pregnant women & lactating mothers.
3. It is implemented by Ministry of Women and Child Development.

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 only
- (d) 1 and 3 only

58. Consider the following statements regarding Board for Regulation and Supervision of Payment and Settlement Systems:

1. It is a statutory body set up under the Payment and Settlement Systems Act, 2007.
2. It is a sub-committee of the Central Board of the Reserve Bank of India headed by its Governor.
3. It is the highest policy making body empowered with setting standards for all the payment and settlement systems.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

59. Which among the following is the first mammal species to become extinct due to anthropogenic climate change?

- (a) Black-footed ferret
- (b) Red-faced spider monkey
- (c) Bramble Cay melomys
- (d) Mongolian gerbil

60. With reference to oceanography, the term Gyre refers to:

- (a) a zone of temperature inversion in ocean water.
- (b) a system of circulating ocean currents.
- (c) a region of periodic upwelling of water.
- (d) depressions formed in ocean waters in mid-latitudes.

61. Consider the following factors:

1. Volcanic eruption.
2. Increase in the oxygen content due to increased photosynthesis.
3. Increase in the nitrogen content of the soil due to nitrogen-fixing bacteria.

Succession caused due to which of the above factors will lead to allogenic succession?

- (a) 1 and 2 only
- (b) 1 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

62. In medieval India, the term Nastaliq was used for ?

- (a) The method of guerrilla warfare.
- (b) The method of Mosque construction in Eastern part of India.
- (c) A method of salutation in Mughal Court.
- (d) A calligraphic style used in writing Persian alphabets.

63. Which of the following are examples of a symbiotic relationship?

1. Lichen
2. Mycorrhizae
3. Corals

Select the correct answer using the code given below

- (a) 1, 2 and 3
- (b) 1 and 2 only
- (c) 1 and 3 only
- (d) 2 and 3 only

64. ExoMars Program recently seen in news is a joint project of Russian space agency (ROSCOSMOS) and
- (a) National Aeronautics and Space Administration (NASA)
 - (b) European Space Agency (ESA)
 - (c) Japan Aerospace Exploration Agency (JAXA)
 - (d) Indian Space Research Organisation (ISRO)

65. Consider the following passage:
"It provides the earliest specimen of the Indo-European languages and shares many commonalities with the oldest text in the Iranian language. It is a collection of prayers offered to Gods by Poets or Sages."
Which of the following is being referred to in the above passage?
- (a) Rigveda
 - (b) Samveda
 - (c) Yajurveda
 - (d) Nāṭya Shāstra

66. With reference to UNESCO's "Award of Excellence for Handicrafts", consider the following statements:
1. It is awarded to authentic handicrafts made in a socially and environmentally responsible manner.
 2. No Indian has won this award till date.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2

67. Which of the following factors were responsible for the emergence of Magadha as the most powerful Mahajanapada in ancient India?
1. Presence of Iron deposits
 2. Presence of fertile alluvial Soil
 3. Rise of towns and use of coins
 4. Unorthodox character of the Magadhan Society
- Select the correct answer using the code given below.
- (a) 1 and 2 only
 - (b) 1, 3 and 4 only
 - (c) 2 and 4 only
 - (d) 1, 2, 3 and 4

68. Which of the following statements is/are correct with reference to Fast Breeder Nuclear Reactor in India?
1. It forms the second stage of India's 3 stages nuclear programme.
 2. It uses heavy water as a moderator fuel.
 3. Kudankulam nuclear facility would be the first commercial Fast breeder plant in India.
- Select the correct answer using the code given below.
- (a) 1 and 3 only
 - (b) 1 only
 - (c) 1, 2 and 3
 - (d) 2 and 3 only

69. Which of the following statements is/are correct about Relative Humidity?
1. It is defined as the percentage of water vapor relative to the maximum water the air can hold at a particular temperature.
 2. For a given air mass, relative humidity increases with increasing temperature.
- Select the correct answer using the code given below:
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2

70. Which of the following bodies acts as National Central Bureau (Interpol) in India?
(a) Central Bureau of Investigation (CBI)
(b) Intelligence Bureau (IB)
(c) Research and Analysis Wing (R&AW)
(d) National Technical Research Organisation (NTRO)
71. With reference to the scientific progress of ancient India, which of the statements given below are correct?
1. Surgery for cataract had been performed by the 5th century AD.
2. Binary numbers were known in the 4th century AD.
3. It was known that the earth rotates on its axis by the 6th century AD.
Select the correct answer using the codes given below.
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1, 2 and 3
(d) 1 and 3 only
72. Consider the following statements regarding the National Consumer Disputes Redressal Commission:
1. It is a quasi-judicial body.
2. The commission is headed by a sitting or retired judge of the Supreme Court of India.
3. It has jurisdiction to entertain a complaint valued up to rupees one crore.
Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3
73. Which of the following best explains the term 'Inflation Premium'?
(a) A premium charged on the borrowers due to high inflation.
(b) A bonus brought to the borrowers by inflationary trends.
(c) A premium to people holding cash when inflation erodes the value of money.
(d) A bonus to the creditors when inflation rates are high.

74. The Prohibition of Traffic in Human Beings and Forced Labour under Article 23 is available- to and against, which of the following entities?
1. To the citizens
2. To the non-citizens
3. Against the State
4. Against private persons
Select the correct answer using the code given below.
(a) 1, 2 and 3 only
(b) 1 and 4 only
(c) 1, 2, 3 and 4
(d) 1, 3 and 4
75. Which among the following is/are conditions for a party to be recognized as a national party?
1. Recognition as a state party in six states.
2. Secured six percent of valid votes polled in any four or more states at a general election to the Lok Sabha and also win atleast four seats in the Lok Sabha.
3. Won two percent of seats in the Lok Sabha at a general election and these candidates are elected from three states.
Select the correct answer using the code given below.
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3
76. Consider the following statements about India's first Aqua Mega Food Park:
1. It is exclusively for the processing of fish and marine products.
2. First such park has been commissioned in Andhra Pradesh.
3. It is being implemented by the Ministry of Water Resources.
Which of the statements given above is/are correct?
(a) 1 only
(b) 1 and 2 only
(c) 3 only
(d) 2 and 3 only

77. With reference to underground coal gasification in coal seams, consider the following statements:

1. It is a technique of *in-situ* gasification of coal.
2. This process does not require water.
3. It is not practiced on a large scale because of the danger it poses to miners.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1, 2 and 3
- (d) 1 and 2 only

78. With reference to core inflation in the Indian context, consider the following statements:

1. It is a measure of price rise of in the economy of those products whose prices are not volatile.
2. It is used to study the long term trend in the price rise in an economy.
3. Housing and education sectors are among the key components of the core inflation.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3 only

79. Under which of the following conditions can Parliament make a law on a State List subject?

1. When Lok Sabha passes a resolution in this regard
2. When two or more states pass a resolution in this regard.
3. When an international treaty is being ratified.
4. When the state is under President's Rule.

Select the correct answer using the code below.

- (a) 1, 2 and 3 only
- (b) 2, 3 and 4 only
- (c) 2 and 4 only
- (d) 3 and 4 only

80. Which of the following are the components of Capital Receipts?

1. Loan recoveries from State Governments.
2. Disinvestment of part of government equity in central Public sector Enterprises (CPSEs).
3. Sale of Dated Government Securities.
4. Profits and dividends from its central Public sector Enterprises (CPSEs).

Select the correct answer using the code given below.

- (a) 1, 2 and 3 only
- (b) 2, 3 and 4 only
- (c) 1, 3 and 4 only
- (d) 1, 2 and 4 only

81. With reference to Mutiyettu, which of the following statements is/are correct?

1. It is a ritual dance-drama from Kerala.
2. The theme is based on the battle between the goddess Durga and the demon Mahishasura.
3. The entire village participates in the ritual.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1 and 3 only

82. Consider the following modes of bioremediation:

1. Bioventing
2. Biosparging
3. Biopiles
4. Landfarming

Which of the bioremediation techniques given above are in-situ in nature?

- (a) 1 and 2 only
- (b) 3 and 4 only
- (c) 1 and 3 only
- (d) 2 and 3 only

83. With reference to cess in India, consider the following statements:

1. It is a state welfare tax added to all the central taxes.
2. The funds collected under a cess are required to be shared between the centre and the states.
3. The amount collected in the form of a particular cess can be used for any purpose by the government.

Which of the following statements given above is/are **not** correct?

- (a) 1 only
- (b) 1 and 2 only
- (c) 1, 2 and 3
- (d) 2 and 3 only

84. Which of the following best describes Ricardian Equivalence?

- (a) As the export potential of a nation grows, its import undergoes a sharp increase.
- (b) In the face of high deficits, people save more.
- (c) As import of a nation increases, its economy experiences a sluggish growth.
- (d) In the face of high deficits, people spend more.

85. With reference to Permanent Settlement system, consider the following statements:

1. It fixed total amount of revenue to be paid by each landlord for his zamindari to the Government for ten years.
2. One of the purposes of Permanent Settlement was to increase investment in agriculture.
3. The system came to an end in Bengal during the tenure of Lord William Bentick.

Which of the above given statements is/are correct ?

- (a) 1 and 2 only
- (b) 1 only
- (c) 2 only
- (d) 2 and 3 only

86. Consider the following statements with respect to the Young Bengal movement:

1. The followers of the movement ridiculed old traditions, defied social and religious rites.
2. It failed to create a long term impact due to lack of real link with masses.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

87. With reference to the Chittagong Armoury Raid, consider the following the statements:

1. The raid was carried out in the name of Indian Republican Army, Chittagong.
2. The raid was led by revolutionary leader Surya Sen.
3. Bina Das was an active female participant in the raid.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

88. Which of the following rights are implicit under the right to freedom of speech and expression, guaranteed under Article 19(1) of the Indian Constitution?

1. Right to Silence
2. Right to Information
3. Right to not listen

Select the correct answer using the code given below.

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 1, 2 and 3
- (d) 2 and 3 only

89. Which of the following statements about India Post Payment Bank (IPPB) are correct?

1. It is a 100% Government owned entity under Department of Posts.
2. Unlike scheduled commercial banks, it can not issue loans and credit card.
3. It can accept deposits of upto Rs.5 lakh per customer.

Select the correct answer using the code given below.

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

90. How does Shadow Banking differ from commercial banking?

1. While commercial banks are tightly regulated, shadow banking regulation lacks transparency.
2. While commercial banks can create money being depository institutions, shadow banking cannot create money.
3. While liabilities of commercial banks are insured, shadow banking liabilities are not insured.
4. While commercial banks have access to central bank liquidity in the times of distress, shadow banking does not have such recourse.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 1 and 2 only
- (c) 2, 3 and 4 only
- (d) 1, 2, 3 and 4

91. 'Coastal Employment Zones' is an initiative under the:

- (a) Ministry of Shipping
- (b) Ministry of Labour & Employment
- (c) Ministry of Commerce and Industry
- (d) Ministry of Food Processing Industry

92. Mohar Reservoir Project was recently in news. In which of the following states is it located?

- (a) Chhattisgarh
- (b) Maharashtra
- (c) Madhya Pradesh
- (d) Uttar Pradesh

93. With reference to the coastal security of India, consider the following statements:

1. Indian Coast Guard carries out overall responsibility for coastal security upto only 12 nautical miles from the baseline.
2. Indian Coast Guard operates under the Union Ministry of Home Affairs.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

94. Which of the following butterfly species was recently rediscovered in southern India after a gap of 130 years?

- (a) Southern Birdwing
- (b) Nilgiri Plain Ace
- (c) Blue Mormon
- (d) Southern Duffer

95. Which of the following is/are bacterial diseases?

1. Measles
2. Typhoid
3. Cholera

Select the correct answer using code given below.

- (a) 3 only
- (b) 2 and 3 only
- (c) 1 and 2 only
- (d) 1, 2 and 3

96. Which of the following statements regarding the Comptroller and Auditor General of India is/are correct?

1. He controls the financial system both at the Central and State levels.
2. He is removed in the manner as the judge of a Supreme Court.
3. He is not eligible for any office under the Central government after retirement.

Select the correct answer using the code given below.

- (a) 1, 2 and 3
- (b) 3 only
- (c) 2 and 3 only
- (d) 2 only

97. Consider the following statements regarding Presumptive Taxation Scheme:

1. Under it, the tax is calculated on an estimated income or profit.
2. Those who adopt this scheme to file their returns are not required to maintain books of accounts.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

98. Which of the following statements correctly describes the concept of cryptojacking?

- (a) It is an advanced cryptographic technique that ensures safer storage and transmission of user data.
- (b) It is the unauthorized use of others' computers and devices by cybercriminals in order to mine for cryptocurrency.
- (c) It is a passengers' information tampering technique devised to hijack flights and pirate ships.
- (d) It is an international level cyber security competition that brings white hat hackers together to identify various digital loopholes in the system.

99. Consider the following statements about Atal Jyoti Yojana (AJAY):

1. It covers all states and union territories of India as beneficiaries.
2. It will operate in rural, semi-urban and urban areas that face less than 50% grid connectivity.
3. It is being implemented by Energy Efficiency Services Limited (EESL).

Which of the statements given above are correct?

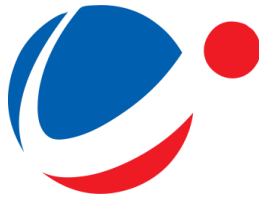
- (a) 1, 2 and 3
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1 and 2 only

100. Which of the following procedures of amendments is/are provided under Article 368 of the Constitution?

1. Amendment by a simple majority of the Parliament.
2. Amendment by a special majority of the Parliament.
3. Amendment by a special majority of the Parliament and the ratification of half of the state legislatures.

Select the correct answer using the code given below.

- (a) 2 only
- (b) 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3



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ANSWERS & EXPLANATION

GENERAL STUDIES (P) TEST – 2679 (2019)

Q 1.D

- Articles 25 to 28 of the constitution of India guarantees the right of Freedom of religion.
- Article 25. Freedom of conscience and free profession, practice and propagation of religion. **Hence, statement 2 is correct.**
- Article 26. Freedom to manage religious affairs - According to Article 26, every religious denomination or any of its section shall have the following rights: (a) Right to establish and maintain institutions for religious and charitable purposes; (b) Right to manage its own affairs in matters of religion; (c) Right to own and acquire movable and immovable property; and (d) Right to administer such property in accordance with law.
- Article 27. Freedom as to payment of taxes for promotion of any particular religion.
- Article 28. Freedom as to attendance at religious instruction or religious worship in certain educational institutions.
- There is no official religion for the Indian state. Unlike the status of Buddhism in Sri Lanka, that of Islam in Pakistan and that of Christianity in England, our Constitution does not give special status to any religion.
- The Constitution provides to all individuals and communities freedom to profess, practice and propagate any religion, or not to follow any.
- The Constitution prohibits discrimination on grounds of religion. **Hence, statement 1 is correct.**
- At the same time, the Constitution allows the state to intervene in the matters of religion in order to ensure equality within religious communities. For example, Uniform Civil Code, protection of religious minorities etc. **Hence, statement 3 is correct.**

Q 2.D

- When banks do not pass on the entire benefit of a repo rate cut (the rate at which banks borrow from RBI) to borrowers, it is called an incomplete transmission of monetary policy. The impediments to complete transmission of monetary policy were examined by the Urjit Patel Committee of 2014, which pointed to mostly structural factors such as administered interest rates, rigidities in the repricing of deposits, interest rate subventions, the coexistence of large informal finance, fiscal dominance through statutory pre-emptions and asset quality.
- **Statement 1 is correct:** Banks compete with small saving schemes for deposits and given the high interest on offer on post office savings schemes, banks could not cut interest rates beyond a point without losing out on deposits. The interest rate being offered by banks on a deposit for a year hovers around 7.5-8 percent, much lower than the 8.7-9.3 percent being offered on small saving schemes. Recognizing this, the government recently has reduced rates on some small savings schemes to make them more responsive to market conditions.
- **Statement 2 is correct:** Agricultural credit under the dictates of priority sector lending has imparted additional friction in the credit allocation process in the country. Interest becomes lower with subvention schemes. Given the scarcity of overall credit supply, the distortions implicit in the subsidised credit extension to agriculture compromise the monetary policy objectives.
- **Statement 3 is correct:** SLR is the proportion of deposits that banks have to mandatorily invest in approved securities. The SLR requirement crowds out private demand as banks cannot reallocate scarce deposits between higher return private loans and government bonds. The binding constraint on banks to invest a fraction of their deposits in government bonds under Statutory Liquidity Ratio (SLR) results in a scrambling effect on monetary policy transmission.

Q 3.C

- IPrism is an IP Competition for students enrolled and currently studying at graduate, postgraduate, MPhil and Ph.D. levels in India.
- The second edition of IPrism has been recently launched by **Cell for IPR Promotion and Management (CIPAM)** in collaboration with ASSOCHAM and ERICSSON.
- This competition aims to help foster a culture of innovation and creativity. This Competition would greatly help spread awareness of Intellectual Property Rights (IPR) and empower the young innovators to protect their inventions. IPrism will provide a unique opportunity for students to learn and showcase their understanding of IPRs.
- Cell for IPR Promotion and Management (CIPAM): It is a professional body under the aegis of the Department for Promotion of Industry and Internal Trade (formerly known as Department of Industrial Policy and Promotion) which ensures focused action on issues related to IPRs. CIPAM assists in simplifying and streamlining of IP processes, apart from undertaking steps for furthering IPR awareness, commercialization and enforcement.
- ASSOCHAM: The Associated Chambers of Commerce and Industry of India (ASSOCHAM) is one of the apex trade associations of India. The organisation represents the interests of trade and commerce in India. ASSOCHAM was established in 1921 by promoter chambers, representing all regions of India.

Q 4.C

- **Statement 1 is not correct:** The Law Commission of India is a non-statutory advisory body. It is established by an order of the Central Government from time to time for a fixed tenure.
- **Statement 2 is correct:** Its function is to recommend the legislative measures for the purpose of consolidation and codification of laws.
- **Statement 3 is correct:** Its recommendations are not binding on the government.

Q 5.A

- **Statement 3 is not correct:** Corporate Environment Responsibility is prescribed under Terms of Reference (TORs) and Environmental Clearances (ECs) to be granted by MoEF /SEIAAs under EIA Notification, 2006.
- The Environment Impact Assessment (EIA) Notification, 2006 is issued under the Environment (Protection) Act, 1986,
- It prescribes the process for granting prior environment clearance (EC) in respect of certain development projects/activities listed out in the Schedule to the Notification.
- **Statement 2 is correct:** It is applicable for both greenfield and brownfield projects.
- **Statement 1 is not correct:** The fund allocation for the CER shall be deliberated in the EAC/SEAC or DEAC, as the case may be, with due diligence to the maximum percentage as prescribed below for different cases:

S No.	Capital Investment / Additional Capital Investment (in Rs)	Greenfield Project — % of Capital Investment	Brownfield Project — % of Additional Capital Investment
I	II	III	IV
1	< 100 crores	2.00%	1.00%
2	> 100 crores to 500 crores	1.50%	0.75%
3	> 500 crores to < 1000 crores	1.00%	0.50%
4	from > From 1000 crores to < 10000 crores	0.50%	0.25%
5	> 10000 crores	0.25%	0.13%

Q 6.B

- **The global heat budget is the balance between incoming and outgoing solar radiation.** Incoming solar energy varies at different times of year and for different locations across the globe.
- **Statement 1 and 2 are correct:** Input is received in the form of short-wave solar energy. This is called insolation. Insolation is solar radiation received in the Earth's atmosphere or at its surface. **Only approximately 52 percent of this insolation reaches the earth's surface.** The rest is absorbed by water vapour, dust and clouds, or is reflected by the Earth's surface and scattered by particles in the air.

- **Statement 3 is correct: Insolation rises sharply from approximately 50 joules at the poles to 275 joules at the equator.** Terrestrial radiation varies less, from 120 joules at the poles to 200 joules at the equator.
- The two main features of the Earth's energy balance are that: (1) there is a net gain of solar energy in the tropical latitudes and (2) a net loss towards the pole tropical latitudes receive more of the Sun's energy than polar regions. There's an energy deficit between 35° North and the North Pole, and between 35° South and the South Pole. Here the outgoing radiation exceeds incoming insolation.
- Energy is transferred from lower latitude energy surplus areas to higher latitude energy deficit areas by atmospheric circulation. If there was no atmospheric circulation, lower latitudes would get hotter and hotter and higher latitudes colder and colder.

Q 7.D

- In terms of temple architecture, in the Vijayanagar period, certain new features were in evidence. These included structures of immense scale that must have been a mark of imperial authority, best exemplified by the **Raya gopurams or royal gateways that often dwarfed the towers on the central shrines**, and signalled the presence of the temple from a great distance. They were also probably meant as reminders of the power of kings, able to command the resources, techniques and skills needed to construct these towering gateways.

Q 8.C

- **Statement 1 is not correct:** Both BIS & BEE are statutory bodies established under an Act.
 - BIS is the National Standard Body of India established under the BIS Act 2016.
 - Bureau of Energy Efficiency (BEE) on 1st March 2002 under the provision of the Energy Conservation Act, 2001.
- **Statement 2 is correct:**
 - BIS aims at harmonious development of the activities of standardization, marking and quality certification of goods and for matters connected therewith or incidental thereto.
 - BIS has been providing traceability and tangibility benefits to the national economy in a number of ways:
 - **providing safe reliable quality goods**
 - minimizing health hazards to consumers
 - promoting exports and imports substitute
 - control over proliferation of varieties etc. through standardization, certification and testing.
 - The mission of Bureau of Energy Efficiency is to assist in developing policies and strategies with a thrust on self-regulation and market principles with the **primary objective of reducing energy intensity** of the Indian economy within the overall framework of the Energy Conservation Act, 2001.
- **Energy intensity:** It is a measure of the energy inefficiency of an economy. It is calculated as units of energy per unit of GDP. Low energy intensity indicates a lower price or cost of converting energy into GDP

Q 9.C

- The state judiciary consists of a high court and a hierarchy of subordinate courts, also known as lower courts. The subordinate courts are so called because of their subordination to the state high court. They function below and under the high court at district and lower levels.
- The control over district courts and other subordinate courts including the posting, promotion and leave of persons belonging to the judicial service of a state and holding any post inferior to the post of district judge is vested in the high court. The appointment, posting and promotion of district judges in a state are made by the governor of the state in consultation with the high court. **Hence, statement 1 is not correct.**
- The district judge is the highest judicial authority in the district. He possesses original and appellate jurisdiction in both civil as well as criminal matters. In other words, the district judge is also the sessions judge. **When he deals with civil cases, he is known as the district judge and when he hears the criminal cases, he is called as the sessions judge. Hence, statement 2 is correct.**
- The sessions judge has the power to impose any sentence including life imprisonment and capital punishment (death sentence). However, a capital punishment passed by him is subject to confirmation by the High Court, whether there is an appeal or not. **Hence, statement 3 is not correct.**

Q 10.C

- The United Nations World Data Forum on Sustainable Development Data (UN World Data Forum) was formed as a platform for intensifying cooperation with various professional groups, such as information technology, geospatial information managers, data scientists, and users, as well as civil society stakeholders.

- The first United Nations World Data Forum was hosted in January 2017 at Cape Town, South Africa.
- **Statement 1 is not correct:** United Nations World Data Forum on Sustainable Development Data (UN World Data Forum) was formed following the recommendations in the report entitled “A World That Counts”, presented by the United Nations Secretary-General’s Independent Expert and Advisory Group on Data Revolution for Sustainable Development. It is under the guidance of the United Nations Statistical Commission.
- **Statement 2 is not correct:** UN World Data Forum aims to provide a framework for discussion, planning and implementation of capacity building necessary to achieve the 2030 Agenda for Sustainable Development Goals (SDGs).
- **Statement 3 is correct:** The second UN World Data Forum was hosted by in October 2018 in Dubai. At the conclusion of the UN World Data forum, 2018, ‘Dubai Declaration’ was adopted.
- The Dubai Declaration calls for the establishment of an innovative funding mechanism open to all stakeholders, that will aim to mobilize both domestic and international funds, and to activate partnerships and funding opportunities to strengthen the capacity of national data and statistical systems. The funding mechanism will be created under the guidance of representatives of statistical systems and different data and donor communities who will support the decision making on the operational modalities and on raising resources to address the data needs for the full implementation of the 2030 Agenda.

Q 11.A

- In India's developmental plan exercise we have two types of schemes viz; central sector scheme and centrally sponsored scheme. The nomenclature is derived from the pattern of funding and the modality for implementation.
- Under Central sector schemes, it is 100% funded by the Union government and implemented by the Central Government machinery.
- Under Centrally Sponsored Scheme (CSS) a certain percentage of the funding is borne by the States in the ratio of 50:50, 70:30, 75:25 or 90:10 and the implementation is by the State Governments.
- **Hence, only statements 1 and 2 are correct.**

Q 12.D

- An acre of paddy field produces around 2.5 tonnes of stubble which, on burning, releases 7.5 kg of particulate matter, 150 kg of carbon monoxide, 3,650 kg of carbon dioxide, 498 kg of ash and 5 kg of sulphur dioxide.
- Also, the nutrients present in the stubble are wasted in burning and farmers have to spend on chemical fertilisers to maintain soil quality. Burning leads to the ground temperature rising and the soil drying up, necessitating additional water for irrigation. And livestock is also impacted by crop burning, with milk yields reducing up to 50 per cent during the two months (October and November). This results in less earnings through selling milk.
- A machine called the ‘**Happy Seeder**’ has been developed in the last few years that can plant the wheat seed without getting jammed by the rice straw. It was conceived by the Punjab Agricultural University. The Happy Seeder is a tractor-mounted machine that cuts and lifts rice straw, sows wheat into the bare soil, and deposits the straw over the sown area as mulch. So, **widespread adoption of this technology by farmers, especially if it is made widely accessible and affordable, can lead to improved air quality in the northern parts of the country, especially in the Delhi NCR (National Capital Region), by elimination of need for stubble burning.**

Q 13.C

- **Statement 1 is correct:** The Satavahana rulers claim to have been Brahmanas, and they **represented the march of triumphant Brahmanism**. From the very beginning kings and queens performed the Vedic sacrifices such as the asvamedha, vajapeya, etc. They also worshipped a large number of Vaishnava gods such as Krishna, Vasudeva, and Others. They paid liberal sacrificial fees to the Brahmanas. However, the Satavahana rulers also promoted Buddhism by granting land to the monks in their kingdom. The Mahayana form of Buddhism commanded considerable following.
- **Statement 2 is not correct:** In the Satavahana phase, **many temples and monasteries were cut out of the solid rock in the north-western Deccan or Maharashtra with great skill and patience.** The two common structures were the temple which was called chaitya and the monastery which was called vihara. The famous Chaitya of Karle was the most impressive specimen of massive rock-cut architecture. Rock-cut architecture is also to be found in Andhra in the Krishna-Godavari region. The most famous of them were Amaravati and Nagarjunakonda stupas.
- **Statement 3 is correct:** **The official language of the Satavahanas was Prakrit.** All inscriptions were composed in this language and written in the Brahmi script. One Prakrit text called Gathasaptasati is attributed to a Satavahana king called Hala.

Q 14.A

- **Shaivism** is the organized worship of the God Shiva and, with *Vaishnavism* and *Shaktism*, is one of the three principal forms of modern Hinduism. *Shaivism* includes such diverse movements as the highly philosophical *Shaiva-Siddhanta*, the socially distinctive *Lingayat*, ascetics such as the *dashnami sannyasins*, and many other folk variants. Pashupatas also belong to Shaivism.
- The *Pashupatas* are perhaps the earliest Hindu sect to worship the God Shiva as the supreme deity.
 - The school fell into disrepute when distortions of some of the mystical practices gave rise to two extreme sects, the *Kapalikas* and **Kalamukhas**.
- **Kalamukhas** ("Black-Faced," so-called because of the black mark, or tilak, customarily worn on their foreheads) are members of group of *Shaivite* ascetics, most prominent in India from the 8th through the 13th century, who became notorious for their practices of esoteric rituals that allegedly included both animal and human sacrifice, though there is no evidence for the latter.
 - Both *kapalika* and *kalamukha* were designated as *mahavratins* ("observers of the great vows"), referring to a 12-year vow of rigorous self-abnegation that was purported to follow the sacrifice of a Brahman or other high-ranking person
 - The epigraphical sources for *Kapalikas* are very few. Only two inscriptions, one from Nasik district and another from Baroda district have been found which clearly register donations to *Mahavratin* ascetics. However the term '*Kapalika*' does appear in three Jain inscriptions from southern Mysore state.
 - There are a large number of epigraphs recording donations to **Kalamukha** temples and *mathas*. These epigraphical evidences reveal the existence of at least two major divisions of the **Kalamukha** order—the *Sakti Parisad* and the *Simha-Parisad*.
- Note: Some of the *Pashupatas* also developed the more moderate *Shaiva-siddhanta* school, whose philosophical teachings became not only acceptable but also central to modern *Shaivism*. The *Pashupata* and the extreme sects were called *Atimargika* ("Away from the Path") to distinguish them from the *Shaiva-siddhantas*.

Q 15.A

- The Cabinet Committee of Economic Affairs (Chaired by Prime Minister) has given its approval for the creation of a corpus of **Rs. 2000 crore** for Agri-Market Infrastructure Fund (AMIF) for development and up-gradation of agricultural marketing infrastructure in Gramin Agricultural Markets (GrAMs) and Regulated Wholesale Markets. **Hence statement 1 is correct and 2 is not correct.**
- **This corpus is to be created with NABARD. Hence statement 3 is not correct.**
- AMIF will provide the State/UT Governments subsidized loan for their proposal for developing marketing infrastructure in 585 Agriculture Produce Market Committees (APMCs) and 10,000 Grameen Agricultural Markets (GrAMs). States may also access AMIF for innovative integrated market infrastructure projects including Hub and Spoke mode and in Public Private Partnership mode. In these GrAMs, physical and basic infrastructure will be strengthened using MGNREGA and other Government Schemes. The Scheme being demand driven, its progress is subject to the demands from the States and proposals received from them.

Q 16.A

- In order to better organize the campaign for the amelioration of the untouchables' condition, Gandhi set up a new body in October 1932. It was first named the All India Anti-Untouchability League and later renamed the Harijan Sevak Sangh. Gandhi started publishing a **weekly journal called "Harijan" on 11 February 1933** from Yerwada Jail during British rule. **Hence statement 1 is correct.**
- Though Gandhi popularized the term harijan, which literally meant children of god, some contested that as per certain religious texts, brahmins are said to be children of God. The term may have been suggested to Gandhi based on the term used in the works by the Gujarati Bhakti era poet-saint Narsi Mehta. **Hence statement 2 is correct.**
- In the 1933, the Indian National Congress introduced a Temple Entry Bill in the Madras Legislative Assembly as well as the Central Legislative Assembly. The Bill, introduced by Ranga Iyer in the Central Assembly, called for temples in the country to be opened for lower castes. The British government disallowed the Madras Bill; however it circulated the Central Bill to garner public opinion. The Bill was widely opposed by upper caste Hindus; Ironically, temples that had started to allow lower castes entry began to shut their doors in light of the Bill. Gandhi unsuccessfully fasted between May 8th and 29th, 1933 to galvanise public support against untouchability and the Bill. In the light of heavy public backlash, the British Government opposed the Bill stating it was 'impracticable and likely to lead to serious disturbance,' and would cause "serious invasion of private rights." As a result, Ranga Iyer withdrew the Bill on July 23rd, 1934. **Hence statement 3 is not correct.**

Q 17.D

- **Total internal reflection**, in physics, refers to the complete reflection of a ray of light within a medium such as water or glass from the surrounding surfaces back into the medium. The phenomenon occurs if the angle of incidence is greater than a certain limiting angle, called the critical angle. In general, total internal reflection takes place at the boundary between two transparent media when a ray of light in a medium of higher index of refraction approaches the other medium at an angle of incidence greater than the critical angle.
- **Examples in real life:**
 - **Mirages:** On hot summer days or in the deserts, patches of water appear to us, some miles in front of us, only to find none when we approach them. This phenomenon is caused by the total internal reflection. The air layers on the ground become hot and less dense in these places and light, when comes down has to pass through these less-dense layers. At a certain point, the light exceeds the critical angles and the total internal reflection takes place on a vast scale, creating the illusive puddles of water. **Hence, option 1 is correct.**
 - **Formation of rainbow:** The formation of a rainbow involves a series of physical phenomena - reflection, refraction, dispersion and total internal reflection. The occurrence of each of these is due to the interaction of light with air and water and the boundaries between them. **Hence, option 2 is correct.**
 - **Looming Or Superior Mirage:** It is an optical illusion, seen, at sea-shore in winter evening, due to which an image of a ship is seen formed in air in sea-sky. The actual ship is nowhere visible. It is due to total internal reflection. **Hence, option 3 is correct.**
 - **Endoscope:** An endoscope is an instrument used by doctors, has a bundle of optical fibres which are used with lenses to see inside the patient's body. Endoscopes work on total internal reflection phenomenon. Its working principle is similar to the optical fibre communication.

Q 18.B

- Warren Hastings, 1772-1785 was an English statesman and the first Governor of the Presidency of Fort William (Bengal), the head of the Supreme Council of Bengal, and thereby the first Governor General of Bengal.
- **Works by Warren Hastings:**
 - **He abolished the system of dastaks, or free passes and regulated the internal trade and abolition of the Dual System.**
 - Reorganization of the Judicial System
 - He reduced the number of custom houses and enforced a uniform tariff of 2.5 percent for Indian and non-Indian goods
 - Weavers were given better treatment and facilities were made to improve their condition.
 - He also introduced a uniform system of pre-paid postage system.
 - A bank was started in Calcutta.
- **Wars Fought :**
 - The Rohilla War (1774)
 - First Anglo-Maratha War (1775-82)
 - The Second Anglo-Mysore War (1780-84)
- Lord Cornwallis enjoyed the confidence of the British Government and was knighted in 1786. In the same year, he was appointed as the Governor-General of Bengal and the Commander-in-chief of India. Lord Cornwallis enacted various significant reforms within the East India Company and its territories, including the Cornwallis code, part of which was responsible for implementing a number of significant land taxation reforms known as **the Permanent Settlement of Bengal (1793)** (also known as the Zamindari system). **Hence statement 1 is not correct.**
- Treaty of Serirangapatnam was signed by Lord Cornwallis. **Hence statement 3 is not correct.**

Q 19.A

- The Gandhi Peace Prize was instituted in the year 1995 on the occasion of the 125th birth anniversary of Mahatma Gandhi. **Hence, statement 1 is not correct.**
- This annual award is given to individuals and institutions for their contributions towards social, economic and political transformation through non-violence and other Gandhian methods. The award carries a cash prize of Rs 1 crore, a citation and a Plaque as well as an exquisite traditional handicraft/handloom item.
- The Award for every year is selected by a Jury under the Chairmanship of the Prime Minister.
- Julius K Nyerere, former Tanzanian President, was the first recipient of the award in 1995.
- The awardees are selected by the jury under the Chairmanship of Prime Minister.

- Recently, awards for year 2015-2018 were announced.
- Year and the corresponding awardees are as follows:
 - 2015: Vivekananda Kendra, Kanyakumari for contribution in rural development, education, development of natural resources.
 - 2016 : Akshaya Patra Foundation and Sulabh International. Akshaya Patra Foundation was chosen for its contribution in providing mid-day meals to millions of children across India. Sulabh International was chosen for its contribution in improving the condition of sanitation in India and emancipation of manual scavengers.
 - 2017: Ekal Abhiyan Trust for contribution in providing education for rural and tribal children in remote areas pan India, rural empowerment, gender and social equality
 - **2018: Yohei Sasakawa for his contribution in Leprosy Eradication in India and across the world. Hence, statement 2 is correct.**

Q 20.D

- **Statement 1 is not correct:** Environmental Investigating Agency (EIA) is a UK-based independent NGO formed in 1984 by environmentalists Dave Currey, Jennifer Lonsdale and Allan Thornton. It is involved with investigating and campaigning against environmental crime and abuse. Its undercover investigations expose transnational wildlife crime, with a focus on elephants and tigers, and forest crimes such as illegal logging and deforestation for cash crops such as palm oil. It works to safeguard global marine ecosystems by addressing the threats posed by plastic pollution, bycatch and commercial exploitation of whales, dolphins and porpoises.
- **Statement 2 is not correct:** EIA doesn't have any designated authority. However, it partners with like-minded NGOs in the main countries to achieve its goal of investigating and campaigning against environmental crime and abuse. In India, it has pooled resources with the Wildlife Protection Society of India in investigating trade in tiger parts.
- **World Wide Fund for Nature**
 - It is an international non-governmental organization founded in 1961, working in the field of the wilderness preservation, and the reduction of human impact on the environment. It publishes the Living Planet Report every two years. It is the world's largest conservation organization with over five million supporters worldwide, working in more than 100 countries.
 - It aims to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

Q 21.A

- Laterite, soil layer that is rich in iron oxide and derived from a wide variety of rocks weathering under strongly oxidizing and leaching conditions. It forms in tropical and subtropical regions where the climate is humid. **Hence statement 1 is correct.**
- Lateritic soils may contain clay minerals, but they tend to be silica-poor because silica is leached out by waters passing through the soil. Typical laterite is porous and claylike. **Hence statement 2 is not correct.**
- Laterite soils in India are found in the Eastern Ghat of Orissa, the Southern parts of Western Ghat, Malabar Coastal plains and Ratnagiri of Maharashtra and some part of Andhra Pradesh, Tamil Nadu, Karnataka, Meghalaya, the western part of West Bengal. **Hence statement 3 is not correct.**

Q 22.D

- **The photoelectric effect is the emission of electrons or other free carriers when light falls on a material. Electrons emitted in this manner can be called photoelectrons.** This phenomenon is commonly studied in electronic physics, as well as in fields of chemistry, such as quantum chemistry or electrochemistry. Einstein won the Nobel Prize in Physics for explaining the photoelectric effect. He proposed that light is made up of packets of energy called photons. The photoelectric effect occurs when light shines on a metal and sometimes electrons are emitted.
- **Predictions of the wave theory of light:** Light of any frequency will cause electrons to be emitted. The more intense the light the more kinetic energy the emitted electrons will have.
- **What actually happens:** Light below a certain cutoff frequency, no matter how intense, will not cause any electrons to be emitted. Light above the cutoff frequency, even if it's not very intense, will always cause electrons to be emitted. Above the cutoff frequency, turning up the intensity produces more electrons but does not change the maximum kinetic energy of the electrons.
- **Explanation:** To eject one electron from the metal takes one photon. Electrons are bound to the metal by a binding energy we call the work function, W_0 , which differs from metal to metal. If the photon energy is less than the work function, no electrons are emitted. The cutoff frequency f_0 is where the photon energy

$h\nu = W_0$. Above the cutoff frequency the photons have more energy than what is needed to eject an electron. The extra energy shows up as the electron's kinetic energy.

- The phenomena such as interference, diffraction, and polarization can only be explained when light is treated as a wave whereas the phenomena such as the photoelectric effect, line spectra, and the production and scattering of x rays demonstrate the particle nature of light.

Q 23.A

- The International Coral Reef Initiative (ICRI) is an informal partnership between Nations and organizations which strives to preserve coral reefs and related ecosystems around the world. **Hence statement 1 is correct.**
- Although the Initiative is an informal group whose decisions are not binding on its members, its actions have been pivotal in continuing to highlight globally the importance of coral reefs and related ecosystems to environmental sustainability, food security and social and cultural wellbeing. The work of ICRI is regularly acknowledged in United Nations documents, highlighting the Initiative's important cooperation, collaboration and advocacy role within the international arena. **Hence statement 2 is not correct.**
- The Initiative was founded in 1994 by eight governments: Australia, France, Japan, Jamaica, the Philippines, Sweden, the United Kingdom, and the United States of America. It was announced at the First Conference of the Parties of the Convention on Biological Diversity in December 1994.
- **Hence statement 3 is not correct.**

Q 24.D

- INTERNATIONAL SOLAR ALLIANCE (ISA) , which was launched by Prime Minister of India (Sh Narendra Modi) and Mr. François Hollande, former President of France on 30th November 2015 in Paris, entered into force on 6th December 2017.
- With ISA Framework Agreement's entry into force, ISA has become a de jure treaty-based International Intergovernmental Organization.
- ISA is the **first International intergovernmental treaty-based organization headquartered in India (Gurugram, Haryana)**. As on date, 46 countries have signed and out of these, 19 countries have ratified the ISA Framework Agreement.
- **ISA is a coalition of solar resource-rich countries lying fully or partially between the Tropics of Cancer and Capricorn and aims to specifically address energy needs by harnessing solar energy.**
- The Paris Declaration establishing ISA states that the countries share the collective ambition to undertake innovative and concerted efforts for reducing the cost of finance and cost of technology for immediate deployment of solar generation assets.
- Government of India has made a provision of `100 crore as one-time fund for ISA Fund corpus.
- The United Nations including its organs are ISA's strategic partners.
- **Hence, all the statements are correct.**

Q 25.D

- Sasipada Banerji (1840–1924) was a social worker and leader of the **Brahmo Samaj** who is remembered as a champion of women's rights and education and as one of the earliest workers for labour welfare in India. He was the founder of several girls' schools, a widow's home, temperance societies, a workers' organisation and the editor of the journal Bharat Sramajibi.
- Sasipada Banerji was among the earliest Indians to work for the rights of the labour class in India, the **Working Men's Club he established in 1870** has been described as the first labour organisation in Kolkata. The Brahmo Samaj established a Working Men's Mission in 1878 and established several schools for working men and the depressed classes and Banerji founded the Baranagar Institute the same year. In 1870 he founded the workers' organisation Sramajivi Samiti and **established the newspaper Bharat Sramajivi**. The Bharat Sramajivi was the first Indian journal of the working class and its circulation peaked at 15,000 copies a remarkable number for its time. Banerji's contributions to the welfare and upliftment of the working class have however been criticised by Sumit Sarkar of being little more than 19th century middle class interest in industrial and plantation labour and of not going beyond the realm of philanthropy. Others like Dipesh Chakrabarty have argued that Banerji's efforts aimed to create an "ideal working class imbued with bhadrak values" and to create "not only orderly but also noiseless Bengalis for the jute mills"

Q 26.A

- **Leaching** - leaching is the removal of soluble components of the soil column. As water washes down through the soil it can carry away bases such as calcium, held as exchangeable ions in clay-humus complexes, as well as acidification through the substitution of hydrogen ions.

- **Gleying** - gleying occurs in waterlogged, anaerobic conditions when iron compounds are reduced and either removed from the soil or segregated out as mottles or concretions in the soil. Marshy wetlands often contain gleyed soils.
- **Podzolization** - podzolization occurs when strongly acid soil solutions cause the breakdown of clay minerals. As a result silica, aluminum and iron form complexes with organic substances in the soil. These minerals are removed from the surface zone of the soil and can accumulate in distinct dark subsurface layers - very evident on inspection. Upland heaths and moors often contain podzols.
- **Capillary Action:** During hot and humid condition, when the water evaporates from the surface, the tiny tube-like structure in the soil causes the salts and other minerals to rise from the groundwater level to the surface level. This is called capillary action.

Q 27.B

- **UNNATI (UNISpace Nanosatellite Assembly & Training by ISRO), a capacity building programme on Nanosatellite development, is an initiative by ISRO** to commemorate the 50th anniversary of the first United Nations conference on the exploration and peaceful uses of outer space (UNISPACE-50). The programme provides opportunities to the participating developing countries to strengthen in assembling, integrating and testing of Nanosatellite. UNNATI programme is planned to be conducted for 3 years by U.R. Rao Satellite Centre of ISRO in 3 batches and will target to benefit officials of 45 countries.

Q 28.B

- **Using bacteria isolated from soil and effluents near an oil refinery, researchers from the University of Delhi and Indian Institute of Technology (BHU), Varanasi, have successfully degraded toluene into less-toxic byproducts.** Toluene is one of the petrochemical wastes that get released without treatment from industries such as refineries, paint, textile, paper and rubber. Toluene has been reported to cause serious health problems to aquatic life, and studies point that it has genotoxic and carcinogenic effects on human beings.
- To the soil and effluent samples containing some bacteria, 100 mg/L of toluene was added and incubated for four weeks. The bacteria were isolated from the samples, identified and studied for their toluene-degrading abilities. They isolated eight to 10 strains of bacteria and found that a particular bacteria *Acinetobacter junii* showed good degrading potential — about 80% of toluene (50 ppm) in a liquid medium was degraded within 72 hours. Another interesting find was that when exposed to toluene, these bacteria changed their morphology to escape toxicity. The bacteria use up this toluene as their carbon source in the presence of oxygen. Though most of the waste degradation studies have involved the use of bacteria that grow in an anaerobic environment, IIT BHU tried an aerobic one and succeeded.

Q 29.B

- Wind power is the generation of electricity from wind. Wind power harvests the flow of energy in the atmosphere generated from the uneven heating of the Earth's surface by the Sun. Therefore, wind power is an indirect way to harness solar energy. Wind power is converted to electrical energy by wind turbines. Several different factors influence the potential wind resource in an area.
- **The three main factors that influence power output are: wind speed, air density, and blade radius.** Wind turbines need to be in areas with a lot of wind on a regular basis, which is more important than having occasional high winds.
- **Wind Speed:** Wind speed largely determines the amount of electricity generated by a turbine. Higher wind speeds generate more power because stronger winds allow the blades to rotate faster.
- **Air Density:** Power output is related to the local air density, which is a function of altitude, pressure, and temperature. Dense air exerts more pressure on the rotors, which results in higher power output.
- **Blade Radius:** Wind turbines are designed to maximize the rotor blade radius to maximize power output. Larger blades allow the turbine to capture more of the kinetic energy of the wind by moving more air through the rotors.

Q 30.B

- The value of the currency notes and coins is derived from the guarantee provided by the issuing authority of these items. Every currency note bears on its face a promise from the Governor of RBI that if someone produces the note to RBI, or any other commercial bank, RBI will be responsible for giving the person purchasing power equal to the value printed on the note. The same is also true of coins. **Currency notes and coins are therefore called fiat money.** They do not have intrinsic value like gold or silver coin. They are also called legal tenders as they cannot be refused by any citizen of the country for settlement of any kind of transaction. Cheques drawn on savings or current accounts, however, can be refused by anyone as a mode of payment. **Hence, statement 1 is not correct and statement 2 is correct.**

- **While the Reserve Bank of India prints currency, the government of India directly handles the minting of coins.** Coins are minted at the four mint: Alipore in South Kolkata, Saifabad in Hyderabad, Cherlapally in Hyderabad and Noida in Uttar Pradesh. Although the government handles minting coins, the Reserve Bank issues them for circulation. **Hence, statement 3 is not correct.**

Q 31.B

- No first use (NFU) refers to a pledge or a policy by a nuclear power not to use nuclear weapons as a means of warfare unless first attacked by an adversary using nuclear weapons. Earlier, the concept had also been applied to chemical and biological warfare. **Hence, statement 1 is correct.**
- India first adopted a "No first use" policy after its second nuclear tests, Pokhran-II, which happened in 1998. In August 1999, the Indian government released a draft of the doctrine which asserts that nuclear weapons are solely for deterrence and that India will pursue a policy of "retaliation only". Despite the escalation of tensions between India and Pakistan in 2001–2002, India remained committed to its nuclear no-first-use policy. India articulated its policy of no first use of nuclear weapons in 2003. **Hence, statement 2 is not correct.**
- China proposed and declared its NFU policy in 1964 after it became nuclear capable, and has since maintained this policy. In 1993, Russia dropped a pledge against first use of nuclear weapons made in 1982. **Hence, statement 3 is correct.**

Q 32.D

- Recently, the Odisha government sought to collaborate with the Thailand-based Regional Integrated Multi-Hazard Early Warning System (RIMES) for strengthening its early warning services and enhancing preparedness for management of hazards in the State.
- **The Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES) is an international and intergovernmental institution,** owned and managed by its Member States, for the generation and application of early warning information. RIMES evolved from the efforts of countries in Africa and Asia, in the aftermath of the 2004 Indian Ocean tsunami.
- **RIMES was registered with the United Nations under Article 102 on 1 July 2009, and has been supported since inception by UNESCAP and DANIDA (Danish International Development Agency).** The 12 Member States include Bangladesh, Cambodia, Comoros, India, Lao PDR, Maldives, Mongolia, Papua New Guinea, Philippines, Seychelles, Sri Lanka and Timor-Leste.
- **RIMES Council** is composed of heads of National Meteorological and Hydrological Services (NMHSs) and national scientific and technical agencies generating multi-hazard early warning information. Currently, India chairs the RIMES Council. **Dr. Madhavan Nair Rajeevan, Secretary of the Ministry of Earth Sciences of the Government of India, is the current Chairman of RIMES Council.**

Q 33.B

- The conservation and sustainable use of plant genetic resources for food and agriculture are key to ensuring that the world will produce enough food to feed its growing population in the future. In 1983, the Commission on Genetic Resources for Food and Agriculture was established, and the voluntary International Undertaking on Plant Genetic Resources was adopted.
- Another major step was taken in 1996 with the adoption of the Global Plan of Action at the Leipzig International Technical Conference on Plant Genetic Resources.
- All this work culminated on 3 November 2001 when the International Treaty on Plant Genetic Resources for Food and Agriculture was adopted by the Thirty-First Session of the Conference of the Food and Agriculture Organization (FAO) of the United Nations.
 - **So, the agreement was concluded within the framework of the Food and Agriculture Organization of the United Nations (under Article XIV of the FAO Constitution).** It entered into force on 29 June 2004.
- **The Treaty aims at:**
 - recognizing the enormous contribution of farmers to the diversity of crops that feed the world;
 - **establishing a global system to provide farmers, plant breeders and scientists with access to plant genetic materials;**
 - ensuring that recipients share benefits they derive from the use of these genetic materials with the countries where they have been originated.
- The Treaty recognizes the enormous contribution farmers have made to the ongoing development of the world's wealth of plant genetic resources. It calls for protecting the traditional knowledge of these

farmers, increasing their participation in national decision-making processes and ensuring that they share in the benefits from the use of these resources.

- The Treaty's solution to access and benefit sharing, the Multilateral System, puts 64 of the most important crops – crops that together account for 80 percent of the food we derive from plants – into an easily accessible global pool of genetic resources that is freely available to potential users in the Treaty's ratifying nations for some uses.
- The Treaty facilitates access to the genetic materials of the 64 crops in the Multilateral System for research, breeding and training for food and agriculture. Those who access the materials must be from the Treaty's ratifying nations and they must agree to use the materials totally for research, breeding and training for food and agriculture.
- The Treaty prevents the recipients of genetic resources from claiming intellectual property rights over those resources in the form in which they received them, and ensures that access to genetic resources already protected by international property rights is consistent with international and national laws.
- The Governing Body is the highest organ of the Treaty as established in Article 19. Composed of representatives of all Contracting Parties, its basic function is to promote the full implementation of the Treaty, including the provision of policy guidance on the implementation of the Treaty.
 - The Governing Body holds regular sessions at least once every two years. The decisions are taken by consensus unless it is decided (by consensus) to employ another method to arrive at decisions on certain measures. Consensus is always required for amendments of the Treaty and its annexes.
- **India signed and ratified the treaty after approval from Cabinet, on 10th June, 2002.**

Q 34.C

- **Statement 1 is correct:** MIGA - the Multilateral Investment Guarantee Agency - is a member of the World Bank Group. MIGA's mission is to promote foreign investment into developing countries. It provides political risk insurance guarantees to private sector investors and lenders. It provides non-commercial guarantees (insurance) for cross-border investments into developing countries. MIGA's guarantees protect investors against the risks of transfer restriction (including inconvertibility), expropriation, war and civil disturbance, breach of contract, and non-honoring of financial obligations.
- **Statement 2 is not correct:** Most sectors are eligible for MIGA guarantees, including (but not limited to) financial, infrastructure, oil and gas, mining, telecommunications, services, agribusiness, and manufacturing.
- **Statement 3 is correct:** India is a member of MIGA.

Q 35.C

- Traders had to pass through many kingdoms and forests, they usually travelled in caravans and formed guilds to protect their interests. There were several such **guilds** in south India from the eighth century onwards – the most famous being the Manigramam and Nanadesi. These guilds traded extensively both within the peninsula and with Southeast Asia and China.

Q 36.A

- The Mughal state tried to first acquire specific information about the extent of the agricultural lands in the empire and what these lands produced before fixing the burden of taxes on people. **Hence statement 1 is correct.**
- In the list of duties of the amil-guzar or revenue collector was first, assessment and then an actual collection of land revenue. The land revenue arrangements consisted of two stages – The jama was the amount assessed, as opposed to hasil, the amount collected. **Hence statement 2 is correct.**
- Akbar decreed that while he should strive to make cultivators pay in cash, the option of payment in kind was also to be kept open. **Hence statement 3 is not correct.** While fixing revenue, the attempt of the state was to maximize its claims. The scope of actually realizing these claims was, however, sometimes thwarted by local conditions.

Q 37.C

- The report is a joint product of the various **UN Agencies** i.e. United Nations Department of Economic and Social Affairs (UN/DESA), the United Nations Conference on Trade and Development (UNCTAD) and the five United Nations regional commissions (Economic Commission for Africa (ECA), Economic Commission for Europe (ECE), Economic Commission for Latin America and the Caribbean (ECLAC), Economic and Social Commission for Asia and the Pacific (ESCAP) and Economic and Social Commission for Western Asia (ESCWA)).
- According to World Economic Situation and Prospects Report 2019, Global growth is expected to remain at 3.0 per cent in 2019 and 2020.

- It has expected India to be world's fastest-growing large economy in 2019 as well as in 2020, much ahead of China. India's growth is driven by robust private consumption, a more expansionary fiscal stance and benefits from previous reforms and robust and sustained recovery of private investment .

Q 38.D

- **Statement 1 is not correct:** LIGO is the world's largest gravitational wave observatory and a marvel of engineering. Comprising two enormous laser interferometers located thousands of kilometers apart, LIGO exploits the physical properties of light and of space itself to detect and understand the origins of gravitational waves LIGO (and other detectors like it) is unlike any other observatory on Earth. It consists of two widely-separated interferometers within the United States—one in Hanford, Washington and the other in Livingston, Louisiana—operated in unison to detect gravitational waves. It is a ground-based observatory and not a space-based observatory.
- **Statement 2 is not correct:** Unlike optical or radio telescopes, LIGO cannot see electromagnetic radiation (e.g., visible light, radio waves, microwaves) nor does it have to because gravitational waves are not part of the electromagnetic spectrum. In fact, electromagnetic radiation from space is so unimportant to LIGO that its detector components are completely isolated and sheltered from the outside world.

Q 39.D

- Incineration is a waste treatment process that involves the combustion of organic substances contained in waste materials.
- Pyrolysis is also called dry distillation, thermal decomposition or carbonization, which refers to the process of heating the organic matter in the absence of oxygen and making it decomposition. **Hence, statement 1 is not correct.**
- Differences between incineration and pyrolysis:
 - The end products of incineration are mainly carbon dioxide and water, while the end products of waste pyrolysis plant are mainly combustible low molecular weight compounds. Thus the byproducts of pyrolysis can be used as fuels whereas byproducts of incineration cannot. **Hence, statement 2 is not correct.**
 - Incineration is an exothermic process while pyrolysis is an endothermic process, which needs to absorb a large amount of heat.
 - The heat generated by incineration can be used to generate electricity if the amount is large, and only can be used for heating water or producing steam if the amount is small. It is suitable for nearby use. While the end products of pyrolysis are fuel oil and fuel gas, which are convenient for storage and long-distance transportation as a heat source.

Q 40.D

- **Cheraw Dance:** Cheraw is a very old traditional dance of the Mizos. It is believed that the dance had already existed way back in the 1st Century A.D. Men sitting face to face on the ground tap long pairs of horizontal and cross bamboo staves open and close in rhythmic beats. Girls in colorful Mizo costumes dance in and out between the beats of bamboo. This dance is now performed in almost all festive occasions. Gongs and drums are used to accompany the dance.
- **Dhap Dance:** An ancient Adivasi tribe of Western Orissa, the **Kandhas**, perform the Dhap Dance. The dance is an integral part of all major festivals, especially the Nirakhai festival. The villagers gather together, as one united family, to worship the village deity. An elaborate village feast and merry making follow this. The 'Mukhia' or village senior also joins the dance, carrying an axe on his shoulder. Through this gesture, he symbolically promises to protect the dignity of the women of the village.
- **Hojagiri:** Hojagiri is a folk dance, performed in the state of Tripura by the Reang people. The dance is performed by women and young girls, about 4 to 6 members in a team, singing, balancing on an earthen pitcher and managing other props such as a bottle on the head and earthen lamp on the hand, while only the lower half of the body is moved. It is attractive due to its melodious songs accompanied by bamboo flute, cymbals and the khamb.

<https://t.me/pdf4exams>

Q 41.B

- **Luni** is a river in Rajasthan. Rising on the western slopes of the Aravalli Range near Ajmer, where it is known as the Sagarmati, the river flows generally southwestward through the hills and across the plains of the region. It then enters a patch of dessert before it finally dissipates into the wastes of the northeastern part of the marsh called the Rann of Kachchh (Kutch) in Gujarat state.
 - A seasonal river, it receives much of the drainage of the southwest slopes of the Aravalli Range; the Jowai, Sukri, and Jojari rivers are its main tributaries. The Luni derived its name from the Sanskrit lavanavari ("salt river") and is so called because of its excessive salinity.

- **Kali Sindh**, is a river in the Malwa region of Madhya Pradesh. The Kali Sindh originates from Bagli in Madhya Pradesh.
- **Banas** is a river in Rajasthan. It rises near Kumbhalgarh and then flows in a northeasterly course onto the plains and joins the Chambal River. It is a seasonal river that is often dry in the hot months. Its main tributaries are the Berach and Kotari rivers.
- **Mahi River** originates from Vindhyaachal Hills, Madhyapradesh and meets in Bay of Khambhat. Bhadar is right bank tributary & Panam, Kun and Goma are left bank tributaries of Mahi river.

Q 42.B

- Ever since the disruption of the cycle of simultaneous elections at Centre and State level in 1969, India has been called to be in a constant “Campaign Mode”. In the 2014 Lok Sabha elections, nearly 4000 crore rupees was spent. Thus, a single election in five years will ensure less wastage of money for campaigning by parties and conducting by the government. Moreover, developmental work is disrupted due to frequent interruptions by the imposition of the Model Code of Conduct. **Hence statements 1 and 2 are correct.**
- Holding elections simultaneously will not have any effect on the two-tier structure at Centre and State levels. **Hence statement 3 is not correct.**

Q 43.C

- **Battle of Plassey:** The battle took place at Plassey on the banks of the Hooghly River. **The belligerents were the Nawab Siraj-ud-Daulah**, the last independent Nawab of Bengal, and **the British East India Company**. Siraj-ud-Daulah had become the Nawab of Bengal the year before, and he ordered the English to stop the extension of their fortification. Robert Clive bribed Mir Jafar, the commander-in-chief of the Nawab's army, and also promised him to make him Nawab of Bengal. Clive defeated Siraj-ud-Daulah at Plassey in 1757 and captured Calcutta. As a result of this victory, Mir Jafar became the Nawab of Bengal. He gave large sums of money plus the zamindari rights of 24 Parganas to the English. The Battle of Plassey had political significance for it laid the foundation of the British empire in India; it has been rightly regarded as the starting point of British rule in India. Mir Qasim was defeated in battle of buxar.
- **Third Anglo-Mysore war:** The Third Anglo–Mysore War (1790–1792) was a conflict in South India between the Kingdom of Mysore and the East India Company and its allies, including the Maratha Empire and the Nizam of Hyderabad. **The 'Treaty of Srirangapatnam** (also called Seringapatam), signed 18 March 1792, ended the Third Anglo-Mysore War. Its signatories included Lord Cornwallis on behalf of the British East India Company, representatives of the Nizam of Hyderabad and the Maratha Empire, and Tipu Sultan, the ruler of Mysore.
- **Third Battle of Panipat:** The Third Battle of Panipat took place on 14 January 1761 at Panipat between a northern expeditionary force of the Maratha Empire and invading forces of the King of Afghanistan, Ahmad Shah Abdali. The forces led by Ahmad Shah Abdali came out victorious after destroying several Maratha flanks. The result of the battle was **the halting of further Maratha advances in the north, and destabilization of their territories, for roughly ten years.**

Q 44.C

- The first Anglo Burmese war was the first in the series of wars that were fought between British India and Burma from 1824 till 1885. King Bodawpaya died and his son and successor King Bagyidaw tried to put down British instigated rebellions in Manipur in 1819 and Assam in 1821–1822. There were cross border encroachments from both the sides. The British tried to avoid clash with some peaceful proposals with scorn. At last Lord Amherst declared war in 1824. The prolonged war ended with a decisive victory of the British. However, they lost 20000 men from the Anglo-Indian army. **In 1826, Burma signed the famous “Treaty of Yandabo”. Hence statement 1 is correct .**
- There were minor bilateral issues regarding the Treaty of Yandabo. However, exactly under which circumstances, Second Anglo Burma war was fought was not made public. The war started in April 5, 1852 and as soon as the war started the port of Martaban was taken on the same day. On 12th April Rangoon was annexed and in June Pegu was taken. In January 1853, a proclamation of annexation was read out and thus this war ended without any treaty signed. The outcome of this war was that Pegu was annexed to the British Empire and it was renamed Lower Burma. British dominion now was from Chittagong to Singapore in the East. **Lord Dalhousie** was able to change the map of British India considerably. It was he, who waged a war against Burma (Second Anglo-Burmese War) without any considerable reasons other than his desire to exclude all other European powers from Burma and expand the territory of the British Empire. **Hence statement 2 is not correct.**
- On the eastern front, there was an unrest caused by the French activities in Indo-China, which led the British to poke their nose in the affairs of independent Burma. The Kind Thebau was alleged of persistent

ill treatment with the British subjects. There was a succession crisis and British resident was thrown out of Burma. The result was **Third Anglo Burma war** in which a force under General Harry North Dalrymple Prendergast invaded upper Burma. In two weeks, the King surrendered and was sent as a prisoner to Madras. **On January 1, 1886, the territories of Burma were annexed in British India and on September 25, 1886, Lower Burma was annexed as province of British India under Sir Charles Bernard as the first chief commissioner. Hence statement 3 is correct.**

Q 45.A

- **Recently, a circular issued by the Ministry of Human Resource Development has brought the school bag back in focus. The circular lays down rules regarding the maximum weight of the bag that school children can be asked to carry.** It is 1.5 kg for Class 1 and Class 2, and 2.3 kg for Classes 3, 4 and 5. It jumps to 4 kg for Classes 6, 7 and 8, and finally to 5 kg for Class 10. Homework is banned for Classes 1 and 2.
- In 1993, a committee chaired by the 'People's Scientist' Professor Yash Pal was constituted, whose remit was to ascertain why school bags were getting heavier and what could be done to resolve this situation. The committee came up with its report titled 'Learning Without Burden', whose recommendations remain as relevant as ever. **This year is the 25th anniversary of the Yash Pal committee's report, *Learning without Burden*.** Its analysis shows that heavy schoolbags are only a symptom of deeper problems that lie in the concept of knowledge shared by curriculum designers, teachers and parents.

Q 46.B

- **The Department of Administrative Reforms and Public Grievances under Ministry of Personnel, Public Grievances and Pension is the nodal agency of the Government of India for administrative reforms** as well as redressal of public grievances relating to the states in general and those pertaining to Central Government agencies in particular.

Q 47.C

- **The Neora Valley National Park (NVNP)**, is a compact patch of virgin forest, rich in biodiversity located in the Eastern Himalayas, a global 'biodiversity hotspot'. It is contiguous with Sikkim and Bhutan at its northern and north-eastern boundaries respectively and links the Pangolakha Wildlife Sanctuary in Sikkim and the Toorsa Strict Reserve of Bhutan. It is located in the Darjeeling district of the state of West Bengal,
- The **mammals of NVNP include the Red Panda**, Himalayan Tahr, Himalayan Black Bear, Sāmbhar, Barking Deer, Gaur, Tiger, Clouded Leopard, Leopard, Leopard cat. It is also called the land of elegant RED panda. Its floral diversity is noteworthy with mixed species of rhododendrons, bamboo, sal etc. along with several species of orchids.
- **Pobitora Wildlife Sanctuary**: is located in the Morigaon district of the state of Assam in India. Pobitora is mainly famous for its great Indian One-horned rhinoceros. Besides rhinoceros, the other animals are leopard, wild boar, Barking deer, wild buffalo etc
- **Buxa Tiger reserves**: is located inside the Buxa National Park in West Bengal. Its northern boundary runs along the international border with Bhutan. Animals found in the park include, the tiger, civet, elephant, gaur (Indian bison), Indian boar and red jungle fowl.
- **Amchang National Park**: is located in the eastern fringe of Guwahati city. Mammals species include Chinese pangolin, Flying fox, Slow loris, Assamese macaque, Rhesus macaque, Capped langur, Hoolock gibbon.

Q 48.A

- Indians voiced their sympathy for the freedom fight of other countries. The Irish and Egyptian people and the Government of Turkey were extended active support. At its Calcutta session in 1920, the Congress asked the people not to join the army to fight in West Asia. **Hence pair 1 is correctly matched.** In May 1921, Gandhiji declared that the Indian people would oppose any attack on Afghanistan
- At Tripuri, in early 1939, the Congress passed a resolution dissociating itself 'entirely from the British foreign policy, which has consistently aided the fascist Powers and helped the destruction of the democratic countries.' **Hence pair 2 is correctly matched.**
- In 1937, Japan launched an attack on China. The Congress passed a resolution condemning Japan and calling upon the Indian people to boycott Japanese goods as a mark of their sympathy with the Chinese people. At its Haripura session in early 1938, the Congress **reiterated this call** while condemning 'the aggression of a brutal imperialism in China and horrors and frightfulness that have accompanied it.' It warned that the invasion of China was 'fraught with the gravest consequences for the future of the world'

peace and of freedom in Asia.' As an expression of its solidarity with the Chinese people, 12 June was celebrated throughout India as China Day. **Hence pair 3 is correctly matched.**

- In January 1927, S. Srinavasa Iyengar moved an adjournment motion in the Central Legislative Assembly to protest against Indian troops being used to suppress the Chinese people. The strong Indian feelings on the question were repeatedly expressed by the Congress during 1927 (including at Its Madras session). The Madras Congress advised Indians not to go to China to fight or work against the Chinese people who were fellow fighters in the struggle against imperialism. It also asked for the withdrawal of Indian troops from Mesopotamia and Iran and all other foreign countries. **Hence pair 4 is also correctly matched and answer is option (a).**

Q 49.A

- The young Tilak was educated at Deccan College in Poona, where in 1876, he earned bachelor's degrees in mathematics and Sanskrit. Tilak then studied law, receiving his degree in 1879 from the University of Bombay (now Mumbai). At that point, however, he decided to teach mathematics in a private school in Poona. The school became the basis for his political career. He developed the institution into a university college **after founding the Deccan Education Society (1884)**, which aimed at educating the masses, especially in the English language; he. In 1881, along with G.G. Agarkar, Bal Gangadhar Tilak founded the newspaper Kesari (in Marathi) and Mahratta (in English). In 1888, he took over the two papers and used their columns to spread discontent against British rule and to preach national resistance to it.
- He initiated a no-tax Campaign in Maharashtra during 1896-97 with the help of the young workers of the Poona Sarvajanik Sabha. Referring to the official famine code whose copies he got printed in Marathi and distributed by the thousand, he asked the famine-stricken peasants of Maharashtra to withhold payment of land revenue if their crops had failed.
- Tilak was also a member of the Bombay Legislative Council. Tilak's activities aroused the Indian populace, but they soon also brought him into conflict with the British government, which prosecuted him for sedition and sent him to jail in 1897. The trial and sentence earned him the title Lokamanya ("Beloved Leader of the People"). He was released after 18 months.

Q 50.B

- The act provides for the reservation of seats for the scheduled castes and the scheduled tribes in every municipality in the proportion of their population to the total population in the municipal area. **Hence, statement 2 is correct.**
- Further, it provides for the reservation of not less than one-third of the total number of seats for women (including the number of seats reserved for a woman belonging to the SCs and the STs). The state legislature may provide for the manner of reservation of offices of Chairpersons in the municipalities for SCs, STs and women. **Hence, statement 1 is not correct.** It may also make any provision for the reservation of seats in any municipality or offices of chairpersons in municipalities in favour of backward classes.

Q 51.D

- Startup India is a flagship initiative of the Government of India, intended to build a strong ecosystem that is conducive for the growth of startup businesses, to drive sustainable economic growth and generate large scale employment opportunities. The Government through this initiative aims to empower startups to grow through innovation and design.
- An entity shall be considered as a Startup:
 - If it is incorporated as a private limited company or registered as a partnership firm or a limited liability partnership in India
 - Up to seven years (earlier, it was 5 years) from the date of its incorporation/registration; however, in the case of startups in the biotechnology sector, the period shall be up to ten years from the date of its incorporation/registration. **Hence, statement 1 is correct.**
 - If its turnover for any of the financial years since incorporation/registration has not exceeded INR 25 Crore. **Hence, statement 2 is incorrect.**
 - If it is working towards innovation, development or improvement of products or processes or services, or if it is a scalable business model with a high potential of employment generation or wealth creation. **Hence, statement 3 is correct.**
- Note: An entity formed by splitting up or reconstruction of a business already in existence shall not be considered a 'Startup'.
- **The benefits** provided to recognized startups under the Startup India initiative are:
 - Self-Certification: Self-certify and comply under 3 Environmental & 6 Labour Laws

- Tax Exemption: Income Tax exemption for a period of 3 consecutive years and exemption on capital and investments above Fair Market Value
- Easy Winding of Company: In 90 days under Insolvency & Bankruptcy Code, 2016
- Startup Patent Application & IPR Protection: Fast track patent application with up to 80% rebate in filling patents
- Easier Public Procurement Norms: Exemption from requirement of earnest money deposit, prior turnover and experience requirements in government tenders
- SIDBI Fund of Funds: Funds for investment into startups through Alternate Investment Funds Further, the Startup India portal – www.startupindia.gov.in – is a one-stop platform for all stakeholders in the startup ecosystem to interact amongst each other, exchange knowledge and form successful partnerships in a highly dynamic environment.

Q 52.C

- The **International Convention for the Prevention of Pollution from Ships (MARPOL)** is the main international convention covering prevention of pollution of the marine environment by ships **from operational or accidental causes**.
- **The MARPOL Convention was adopted on 2 November 1973 at IMO (International Maritime Organisation), and not at the Rio Earth Summit.** The Protocol of 1978 was adopted in response to a spate of tanker accidents in 1976-1977. As the 1973 MARPOL Convention had not yet entered into force, the 1978 MARPOL Protocol absorbed the parent Convention. The combined instrument entered into force on 2 October 1983.
- From 3-14 June 1992, Rio de Janeiro hosted the United Nations Conference on Environment and Development (UNCED). The focus of this conference was the state of the global environment and the relationship between economics, science and the environment in a political context. The conference concluded with the **Earth Summit**, at which leaders of 105 nations gathered to demonstrate their commitment to sustainable development.
- MARPOL has been updated by amendments through the years. In 1997, a Protocol was adopted to amend the Convention and a **new Annex VI (Prevention of Air Pollution from Ships) was added which entered into force on 19 May 2005.**
 - It sets limits on sulphur oxide and nitrogen oxide emissions from ship exhausts and prohibits deliberate emissions of ozone depleting substances; designated emission control areas set more stringent standards for SO_x, NO_x and particulate matter. A chapter adopted in 2011 covers mandatory technical and operational energy efficiency measures aimed at reducing greenhouse gas emissions from ships.

Q 53.A

- **Statement 1 is correct:** These satellites possibly form the greatest number of satellites that are in orbit. They are used for communicating over large distances. A geostationary **satellite** often provides a **point-to-point** connection between two locations on the ground (or in the air or on water). INSAT and GSAT of India comes under this category.
- **Statement 2 is not correct:** The height of the satellite above the Earth enables the satellites to communicate over vast distances, and thereby overcoming the curvature of the Earth's surface. They are thus placed in higher orbits like the Geo-stationary and Geo-synchronous orbits.

Q 54.C

- There are 75 **Particularly Vulnerable Tribal Groups (PVTGs)** notified by Ministry of Home Affairs. The criteria followed for determination of PVTGs are: i. A pre-agriculture level of technology; ii. A stagnant or declining population; iii. Extremely low literacy; and iv. A subsistence level of economy.
- Among the 75 listed PVTGs the highest number are found in Odisha (13), followed by Andhra Pradesh (12), Bihar including Jharkhand (9) Madhya Pradesh including Chhattisgarh (7) Tamil Nadu (6) Kerala and Gujarat having five groups each. The remaining PVTGs live in West Bengal (3) Maharashtra (3), two each in Karnataka and Uttarakhand and one each in Rajasthan, Tripura and Manipur. All the four tribal groups in Andamans, and one in Nicobar Islands, are recognised as PVTGs. **Maria Gond** (Maharashtra), **Didayi** (Odisha), and **Siddi** (Gujarat) are among the PVTGs.
- **The Purigpa tribe** (Jammu and Kashmir) is not classified as a PVTG.
- The Ministry of Tribal Affairs is implementing a scheme namely "Development of PVTGs" which covers the 75 identified PVTGs among Scheduled Tribes in 18 States/ UT of Andaman & Nicobar Islands.
 - It is a flexible scheme and covers funding for activities like housing, land distribution, land development, agricultural development, animal husbandry, construction of link roads, installation of

non-conventional sources of energy for lighting purpose, social security including Janshree Beema Yojana or any other innovative activity meant for the comprehensive socio-economic development of PVTGs.

- Priority is also assigned to PVTGs under the schemes of Special Central Assistance (SCA) to Tribal Sub-Scheme(TSS), Grants under Article 275(1) of the Constitution, Grants-in-aid to Voluntary Organisations working for the welfare of Schedule Tribes and Strengthening of Education among ST Girls in Low Literacy Districts.

Q 55.C

- Gross domestic product (GDP) is a monetary measure of the market value of **all the final goods and services produced in a period of time, often annually. Of the final goods, we can distinguish between consumption goods and capital goods.** Goods like food and clothing, and services like recreation that are consumed when purchased by their ultimate consumers are called consumption goods or consumer goods. (This also includes services which are consumed but for convenience we may refer to them as consumer goods.) **Hence, statement 3 is not correct.**
- Some commodities like television sets, automobiles or home computers, although they are for ultimate consumption, have one characteristic in common with capital goods – they are also durable. Although taxi (an automobile that carries passengers for a fare usually determined by the distance traveled) is a capital good, TV set is not (despite being durable like taxicab). **Hence, statement 2 is not correct.**
- Tea leaves purchased by the consumer are not consumed in that form – they are used to make drinkable tea, which is consumed. In this case tea leaves are a consumer good. However, if the same cooking or tea brewing was done in a restaurant where the cooked product would be sold to customers, then the same items, such as tea leaves, would cease to be final goods and would be counted as inputs to which economic value addition can take place. **Hence, statement 1 is correct.**

Q 56.B

- **Properties of Drop-In Fuels:**
 - These are liquid fuels which are produced from Biomass, agri-residues, wastes such as Municipal Solid Wastes (MSW) etc.
 - They meet the Indian standards for petrol, diesel, Jet fuel, in pure or blended form.
 - They can be directly utilized in vehicles without any modifications in the engine systems. For eg Hydrotreated Vegetable Oils (HVO).
- **Hence option (b) is the correct answer.**
- **Liquified Dimethyl Ether:** Dimethyl ether (DME) is a synthetically produced alternative to diesel for use in specially designed compression ignition diesel engines. DME is a colorless gas. Dimethyl ether requires about 5 bar pressure to be in liquid form. The use of DME in vehicles requires a compression ignition engine with a fuel system specifically developed to operate on DME.

Q 57.C

- Approximately 46% maternal deaths, over 40% stillbirths and 40% newborn deaths take place on the day of the delivery. A transformational change in the processes related to the care during the delivery, which essentially relates to intrapartum and immediate postpartum care, is required to achieve tangible results within short period of time.
- Therefore, Ministry of Health and Family Welfare has recently launched the program 'LaQshya'(Labour Room Quality Improvement Initiative).
- It is aimed at improving quality of care in labour room and maternity Operation Theatre (OT). It attempts to reduce preventable maternal and newborn mortality, morbidity and stillbirths associated with the care around delivery in Labour room and Maternity OT and ensure respectful maternity care. **Hence statement 1 is correct and statement 3 is not correct.**
- There is no cash benefit to pregnant and lactating mothers under this program. **Hence statement 2 is not correct.**
- The Program will improve quality of care for pregnant women in labour room, maternity Operation Theatre and Obstetrics Intensive Care Units (ICUs) and High Dependency Units (HDUs). The LaQshya program is being implemented at all Medical College Hospitals, District Hospitals and First Referral Unit (FRU), and Community Health Center (CHCs) and will benefit every pregnant woman and new-born delivering in public health institutions.
- The Targets under the program have been divided into:
 - Immediate (0-4 Months) : 80% of the selected Labour rooms & Maternity OTs assess their quality and staff competence using defined checklists etc.

- Short Term (up to 8 Months) : 50% of deliveries take place in presence of the Birth Companions etc. Intermediate Term (Up to 12 Months): 20% reduction in Stillbirth rate etc.
- Long Term (up to 18 Months): 60% of labour rooms achieve quality certification against the NQAS etc.
- After 18 months, this initiative would be continued through sustained mentoring. Interventions To be done under the Program:
 - Ensuring availability of optimal and skilled human resources as per case-load and prevalent norms through rational deployment and skill upgradation.
 - Ensuring skill assessment of all staff of LR & Maternal OT through OSCE (Objective Structured Clinical Examination) testing
 - Enhance proficiency of labour room and operation theatre staff for management of the complications through skill-lab training, simulations and drills.
 - Ensuring that staff working in the labour room and maternity OT are not shifted from maternity duty to other departments/ wards frequently and so on.

Q 58.D

- **Statement 1 is correct:** In India, the payment and settlement systems are regulated by the Payment and Settlement Systems Act, 2007 (PSS Act) which was legislated in December 2007. It provides for the constitution of the Board for Regulation and Supervision of Payment and Settlement Systems (BPSS).
- **Statement 2 is correct:** BPSS is a sub-committee of the Central Board of the Reserve Bank of India. It is chaired by RBI Governor along with Deputy Governors and three directors from the Central Board of the Reserve Bank of India to be nominated by the Governor.
- **Statement 3 is correct:** BPSS is the highest policy making body on payment systems in the country. It is empowered for authorising, prescribing policies and setting standards for regulating and supervising all the payment and settlement systems in the country. The Department of Payment and Settlement Systems of the Reserve Bank of India serves as the Secretariat to the Board and executes its directions.

Q 59.C

- Australia officially declared a Great Barrier Reef rodent extinct on February 19, 2019, making it the **first mammal believed to have been killed off by human-induced climate change**.
- The rodent, which built furrows in herd fields and among strandline plants, had been feared to be extinct for some time. The Australian government's decision to list the species as extinct comes after the Queensland state government made an identical determination in 2016.
- The rat-like **Bramble Cay melomys** (*Melomys rubicola*) — whose only known habitat was a small sandy island in far northern Australia — had not been spotted in a decade.
- The *Melomys rubicola*, also referred to as the Bramble Cay Mosaic-tailed rat, was found in Bramble Cay, a small vegetable coral key at Australia's extreme north. Researchers from Queensland determined a key factor in its disappearance was "almost certainly" repeated ocean inundation of the cay — a low-lying island on a coral reef — over the last decade, which had resulted in dramatic habitat loss.
- Available data on sea-level rise and weather events in the Torres Strait region "point to **human-induced climate change being the root cause of the loss of the Bramble Cay melomys**", a study released in 2016 had said.
- Australia is rare among developed countries because it is described as mega-diverse, but experts warn that biodiversity is under threat from environmental upheaval. The nation is also not on track to meet its commitment of reducing emissions by 26-28% on 2005 levels by 2030.

Q 60.B

- The primary forces that influence the currents are:
 - heating by solar energy;
 - wind;
 - gravity;
 - coriolis force.
- Heating by solar energy causes the water to expand. That is why, near the equator the ocean water is about 8 cm higher in level than in the middle latitudes. This causes a very slight gradient and water tends to flow down the slope.
- Wind blowing on the surface of the ocean pushes the water to move. Friction between the wind and the water surface affects the movement of the water body in its course.
- Gravity tends to pull the water down to pile and create gradient variation.

- The Coriolis force intervenes and causes the water to move to the right in the northern hemisphere and to the left in the southern hemisphere. These large accumulations of water and the flow around them are called Gyres. These produce large circular currents in all the ocean basins.

Q 61.B

- Ecological succession is the process of change in the species structure of an ecological community over time. The time scale can be decades (for example, after a wildfire), or even millions of years after a mass extinction.
- Succession is of two types:
- Allogenic Succession: It is succession driven by the abiotic components of an ecosystem.
- Autogenic Succession: It is driven by the biotic components of the ecosystem.
- Volcanic eruptions are examples of allogenic succession as the driving force behind them are abiotic in nature.
- Statements 2 and 3 are examples of autogenic succession as both the scenarios are brought about by biotic components of the ecosystem (plants and bacteria).

Q 62.D

- **Nastaliq is an Arabic calligraphy developed about the 15th century, characterized by a tendency to slope downward from right to left, and used mainly for Persian poetical writings and in Urdu and Malay manuscript.** Urdu Nastaliq calligraphy is a collection of two other scripts Naskh and Talique. These two scripts were combined to form another script formally called Naskh-Talique, which was shortened to Nastaliq. Hence, this 38 alphabets script has properties of both Naskh and Talique. Two most common feature of Nastaliq found in Naskh or for that matter in any Persian or Arabic script is that it is cursive. That is, the tip of the pen is not raised until a ligature is complete. Another characteristic is that Nastaliq is written from right to left unlike English which is from left to right. In addition to these, there are other characteristics of Nastaliq that have made its automation difficult.

Q 63.A

- **Symbiotic relationship**, also called mutualism, is an interaction that confers benefits on both the interacting species.
- Lichens represent an intimate mutualistic relationship between a fungus and photosynthesising algae or cyanobacteria.
- Similarly, the mycorrhizae are associations between fungi and the roots of higher plants.
- Corals also form a symbiotic relationship with a class of dinoflagellate algae, zooxanthellae

Q 64.B

- **Exomars is a joint project of the European Space Agency (ESA) and Russian space agency (Roscosmos).**
- Two missions are foreseen within the ExoMars programme: one consisting of the Trace Gas Orbiter plus an Entry, Descent and landing demonstrator Module (EDM), known as Schiaparelli, launched on 14 March 2016, and the other, featuring a rover, with a launch date of 2020. Both missions will be carried out in cooperation with Roscosmos. The ExoMars programme will demonstrate a number of essential flight and in-situ enabling technologies that are necessary for future exploration missions, such as an international Mars Sample Return mission. These include:
 - Entry, descent and landing (EDL) of a payload on the surface of Mars; Surface mobility with a rover;
 - Access to thomposed of the Trace Gas Orbiter (TGO) and an Entry, descent and landing Demonstrator Module (EDM), known as Schiaparelli. TGO carries scientific instruments to detect and study atmospheric trace gases, such as methane. Schiaparelli contains sensors to evaluate the lander's performance as it descends, and additional sensors to study the environment at the landing site.
 - The 2020 mission of the ExoMars programme will deliver a European rover and a Russian surface platform to the surface of Mars. A Proton rocket will be used to launch the mission, which will arrive to Mars after a nine-month journey. The ExoMars rover will travel across the Martian surface to search for signs of life. It will collect samples with a drill and analyse them with next-generation instre subsurface to acquire samples; and Sample acquisition, preparation, distribution and analysis. At the same time a number of important scientific investigations will be carried out, for example: Search for signs of past and present life on Mars; Investigate how the water and geochemical environment varies; and Investigate Martian atmospheric trace gases and their sources.
 - ExoMars will be the first mission to combine the capability to move across the surface and to study Mars at depth.

Q 65.A

- Rigveda is the earliest text of the Indo-European languages. It is a collection of prayers offered to Agni, Indra, Mitra, Varuna and other Gods by various Poets or Sages. It consists of ten mandalas or books. It has many things in common with Avesta, which is the oldest text in the Iranian language. The two texts use the same names or several gods and even for social classes.
- **Hence, option (a) is the correct answer.**
- **Samveda**
 - It is the third Veda and the shortest in terms of the count of the Mantras.
 - It is the veda of melodies and chants. It mainly deals with that knowledge and activity by which the soul of human being is relieved from the cycle of life and death.
 - It is devoted to the adoration, praise and worship of God; manifestations of his powers; and mode of worship for spiritual attainments.
- **Yajur Veda**
 - It is the second Veda. The name comes from Sanskrit word, Yajus, meaning "worship" or "sacrifice," and Veda, meaning "knowledge."
 - It describes the way in which religious rituals and sacred ceremonies should be performed.
- **Nāṭya Shastra**
 - It is a text on the performing arts. The text is attributed to sage Bharata Muni, and its first complete compilation is dated to between 200 BCE and 200 CE, but estimates vary between 500 BCE and 500 CE.
 - It is often referred to as the fifth Veda.

Q 66.A

- The "Award of Excellence for Handicrafts" programme was established by UNESCO in 2001 (formerly known as the 'SEAL of Excellence' programme) recognizes handicrafts products that are culturally authentic and have been manufactured in a socially responsible manner with respect for the environment. **Hence statement 1 is correct.** These standards ensure the highest level of craft excellence and distinguish a product as a benchmark for craft production.
- SEAL originated in Southeast Asia as a partnership between the ASEAN Handicraft Promotion and Development Association (AHPADA) and UNESCO. Several Indians have received the Seal of Excellence. **Hence statement 2 is not correct.**

Q 67.D

- The age of Mahajanpadas witnessed the march of the Magadhan empire preceding the rise of Mauryan empire. It was an outcome of several factors -:
 - Role of several enterprising and ambitious rulers
 - Rulers like Bimbisara, Ajatashatru and Mahapadma Nanda who employed all possible means to enlarge and strengthen their kingdom.
 - **Presence of Iron**
 - The empire was located at an advantageous location which enabled access to Iron deposits. This led Magadhan princes to equip themselves with effective weapons, which were not easily available to their rivals.
 - The strategic location of two capitals
 - The strategic location of the two capitals, the first at Magadha and second at Pataliputra enhanced the security of the kingdom. For e.g. Rajgir was surrounded by five hills, and so it was rendered impregnable.
 - **Presence of fertile alluvial soil**
 - This along with heavy rainfall owing to location at the mid-Gangetic plain of the kingdom enabled agricultural productivity especially in comparison to other nearby kingdoms. Consequently, the peasants could produce surplus grains, which was then mopped up by the rulers in the form of taxes.
 - **Rise of towns and use of coins**
 - This led to increase in trade and commerce. Consequently, this enabled the rulers to levy tolls on the sale of commodities and accumulate wealth to pay and maintain their army.
 - **Unorthodox character of the Magadhan society**
 - The unorthodox character of Magadhan society was another important factor in the rise of Magadha imperialism. Culturally, Magadha, being in the East, was a place where a balanced synthesis between the Aryan and the non- Aryan culture took place. Its inhabitants were the kiratas and Magadhas. Brahmanic culture could not claim dominance therefore the liberal

tradition in religion and society could be maintained in Magadha. It showed more enthusiasm for expansion. Heterodox sects like Jainism and Buddhism took their birth within the territories of Magadha. They participated in enhancing the liberal traditions. The liberal traditions, particularly a sense of social equality and catholicity of religious ideas, contributed to the building of a strong empire in Magadha.

Q 68.B

- **India's three-stage nuclear power programme was formulated by Homi Bhabha in the 1950s** to secure the country's long term energy independence, through the use of uranium and thorium reserves found in the monazite sands of coastal regions of South India.
- **In the first stage** of the programme, natural uranium fuelled pressurized heavy water reactors (PHWR) produce electricity while generating plutonium-239 as by-product.
- **In the second stage**, fast breeder reactors (FBRs) [moderators not required] would use plutonium-239, recovered by reprocessing spent fuel from the first stage, and natural uranium.
- **A Stage III reactor or an Advanced nuclear power system involves a self-sustaining series of thorium-232-uranium-233 fuelled reactors. Thus Statement 1 is correct and statement 2 is not correct.**
- The Prototype Fast Breeder Reactor (PFBR) is a 500 MWe fast breeder nuclear reactor. Presently India's first commercial fast breeder reactor constructed at the **Madras Atomic Power Station in Kalpakkam**, India. The Indira Gandhi Centre for Atomic Research (IGCAR) is responsible for the design of this reactor. **Statement 3 is not correct.**

Q 69.A

- **Statement 1 is correct: Relative humidity is the amount of water vapor actually in the air, expressed as a percentage of the maximum amount of water vapor the air can hold at the same temperature.** Think of the air at a chilly -10 degrees Celsius (14 degrees Fahrenheit). At that temperature, the air can hold, at most, 2.2 grams of water per cubic meter. So if there are 2.2 grams of water per cubic meter when it's -10 degrees Celsius outside, we are at 100 percent relative humidity. If there was 1.1 grams of water in the air at -10 degrees Celsius, we are at 50 percent relative humidity.
- **Statement 2 is not correct: As temperature increases, the water holding capacity i.e the saturation point of the air increases.** This, for the same air mass, with higher temperature, the relative humidity decreases and vice versa.

Q 70.A

- India is one of the oldest members of Interpol, having joined the organization in 1949.
- **The Central Bureau of Investigation, which is a Federal/Central investigating agency functioning under the Central Government, Department of Personnel & Training is designated as the National Central Bureau of India.**
- The Director of the Central Bureau of Investigation is the ex-officio Head of the NCB-India. All matters relating to the NCB India are, however, dealt with by the Ministry of Home Affairs, Government of India.

Q 71.C

- Ancient Indians contributed immensely to the knowledge in Mathematics as well as various branches of Science.
- **Aryabhatta was a fifth century mathematician, astronomer, astrologer and physicist. He was a pioneer in the field of mathematics. At the age of 23, he wrote Aryabhattiya, which is a summary of mathematics of his time. Disregarding the popular view that our planet earth is 'Achala' (immovable), Aryabhatta stated his theory that 'earth is round and rotates on its own axis.'**
- **Binary numbers** were known at the time of **Pingala's Chhandahshastra**. Pingala lived around the **early first century B.C.** The knowledge of binary numbers indicates a deep understanding of arithmetic. A binary representation requires the use of only two symbols, rather than the ten required in the usual decimal representation, and it has now become the basis of information storage in terms of sequences of 0s and 1s in modern-day computers. The system Pingala described is quite similar to that of Leibnitz, who was born in the 17th century.
- **Susruta** was a pioneer in the field of surgery. Most historians place the time of his life to **600 BC** and he lived in Benares. He considered surgery as "the highest division of the healing arts and least liable to fallacy". Susruta's greatest contribution was in the fields of rhinoplasty (plastic surgery) and ophthalmic surgery (removal of cataracts). In the *Sushruta Samhita* there are eighteen chapters devoted to the eye and it described seventy-six different ocular diseases, many of which required surgery. **Perhaps Sushruta performed cataract surgery by couching.**

Q 72.A

- The National Consumer Disputes Redressal Commission (NCDRC) was set up in 1988 under the Consumer Protection Act of 1986. It is a quasi-judicial commission which is headed by a sitting or retired judge of the Supreme Court of India. **Hence, statements 1 and 2 are correct.**
- It has jurisdiction to entertain a complaint valued more than one crore and also have Appellate and Revisional jurisdiction from the orders of State Commissions or the District fora as the case may be. **Hence, statement 3 is not correct.**

Q 73.B

- The **bonus brought by inflation to the borrowers** is known as inflation premium. The interest rates that banks charge on their lending is known as the nominal interest rate which might not be the real cost of the borrowing paid by the borrower to the banks. To calculate the real cost a borrower is paying on its loan, the nominal rate of interest is adjusted with the effect of inflation and thus the interest rate we get is known as the real rate of interest.
- Real interest rate is always lower than the nominal interest rates if the inflation is taking place-- the difference is the inflation premium. Rising inflation premium shows the depleting profits of the lending institutions. At times, to neutralise the effect of inflation premium, lender takes the recourse to increase the nominal rate of interest.

Q 74.C

- **Article 23** prohibits traffic in human beings, begar (forced labour) and other similar forms of forced labour. Any contravention of this provision shall be an offence punishable in accordance with law. This right is available to **both citizens and non-citizens**. It protects the individual not only against the **State but also against private persons**.

Q 75.B

- A party is recognised as a national party if any of the following conditions is fulfilled:
 - If it **secures six per cent of valid votes polled in any four or more states at a general election to the Lok Sabha or to the legislative assembly**; and, in addition, it wins four seats in the Lok Sabha from any state or states; or
 - **If it wins two per cent of seats in the Lok Sabha at a general election**; and these candidates are elected from three states; or
 - If it is recognised as a state party in four states.

Q 76.B

- India's first Aqua Mega Food Park was recently commissioned in Andhra Pradesh named Godavari Mega Aqua Food Park. It will be the first Mega Food Park operationalized exclusively for fish and marine products processing. **Hence statements 1 and 2 are correct.**
- Under the Mega Food Park Scheme, Government of India provides financial assistance up to Rs 50.00 Crore per Mega Food Park project. The scheme is being implemented by the **Ministry of Food Processing Industries (MoFPI)**. **Hence statement 3 is not correct.**

Q 77.A

- **Underground coal gasification (UCG)** – is the technique of converting coal into gas while it is still in the seam(*in-situ*) and then extracting it through wells. Hence, **statement 1 is correct.**
- In the UCG process, injection wells are drilled into an unmined coal seam, and either air or oxygen is injected into the seam along with water. Hence, **statement 2 is not correct.**
- The coal face is ignited, and the high temperatures (about 1,200°C) from the combustion and limited oxygen causes nearby coal to partially oxidize into hydrogen, carbon monoxide (CO), carbon dioxide (CO₂), and minimal amounts of methane (CH₄) and hydrogen sulfide (H₂S).
- These products flow to the surface through one or more production wells located ahead of the combustion zone.
- UCG eliminates the need for mining, and the dangers to miners and environmental degradation that are associated with it. Hence, **statement 3 is not correct.**
- It also makes deep or difficult to access coal seams into usable energy assets, as only one-sixth to one-eighth of the world's coal reserves are economically mineable.
- Challenges with UCG stem from the potential leaching of unwanted substances into groundwater. Subsidence, where the surface actually sinks as the deep seam is gasified, can also be an issue.

- Since some coal is burned in order to gasify surrounding coal, some of the heat content of the coal seam is lost. However, it is estimated that this energy loss is less than the energy that would be required to mine the seam.
- It is also capital intensive, and has been successfully practiced at only a few world-wide locations.
- Only 40-45 per cent of the underground coal resources in India can be mined at present. The country has plenty of coal, and despite the movement towards green energy, coal will remain the mainstay of energy supply. Hence, in-situ gasification technology can be adopted for optimal exploitation of untapped coal resources in the country.

Q 78.D

- Core inflation is the measure of price rise in an economy excluding the price rise of certain products (whose prices are volatile). Example food (fruits and vegetables etc) and fuel (oil prices). It is used as a measure to study the long term trend in the price rise, so that, long term policies can be framed to control inflation. **Hence, statements 1 and 2 are correct.**
- The key components of core inflation are housing, education, household goods and services, transport & communication, recreational and amusement and personal care etc. **Hence, statement 3 is correct.**

Q 79.B

- **Parliament's Power to Legislate on State List:** Though under ordinary circumstances the Central Government does not possess power to legislate on subjects enumerated in the State List, but under certain special conditions the Union Parliament can make laws even on these subjects.
- **In the National Interest (Art.249) :** If the Rajya Sabha declares by a resolution supported by not less than 2/3 of its members present and voting, that it is necessary or expedient in the national interest that the Parliament should make laws with respect to any matter enumerated in the State List (Art.249). After such a resolution is passed, Parliament can make laws for the whole or any part of the territory of India. Such a resolution remains in force for a period of 1 year and can be further extended by one year by means of a subsequent resolution.
- **Under Proclamation of National Emergency (Art.250) :** Parliament can legislate on the subjects mentioned in the State List when the Proclamation of National Emergency is in operation. However, the laws made by the Parliament under this provision shall cease to have effect on the expiration of a period of six months after the Proclamation has ceased to operate, except as respects things done or omitted to be done before the expiry of the said period.
- **By Agreement between States (Art. 252) :** The Parliament can also legislate on a State subject if the legislatures of two or more states resolve that it is lawful of Parliament to make laws with respect to any matter enumerated in the State List relating to those State. Thereafter, any act passed by the Parliament shall apply to such states and to any other state which passes such a resolution. The Parliament also reserves the right to amend or repeal any such act.
- **To Implement Treaties (Art. 253) :** The Parliament can make law for the whole or any part of the territory of India for implementing any treaty, international agreement or convention with any other country or countries or any decision made at any international conference, association or other body. Any law passed by the Parliament for this purpose cannot be invalidated on the ground that it relates to the subject mentioned in the State list.
- **Under Proclamation of President's Rule (Art.356) :** The President can also authorize the Parliament to exercise the powers of the State legislature during the Proclamation of President's Rule due to breakdown of constitutional machinery in a state. But all such laws passed by the Parliament cease to operate six months after the Proclamation of President's Rule comes to an end.

Q 80.A

- All non-Revenue receipt are called as Capital Receipts. It contains both non-debt and debt receipts. Following are the components of Capital receipts:
 - The recoveries are in respect of loans advanced to the State Government and Union Territories with legislature i.e. Union Territory of Puducherry and NCT of Delhi. **Hence, statement 1 is correct.**
 - Receipts on account of disinvestment of part of government equity in central Public sector Enterprises (CPSEs), proceeds from strategic disinvestment and other such transactions. **Hence, statement 2 is correct.**
 - Its market loans under the Scheme of Sale of Dated Government Securities and Treasury bills. **Hence, statement 3 is correct.**
 - Securities against Small Savings
 - Borrowing from International institutions like IMF, WB etc.

- However, Profits and dividends from its central Public sector Enterprises (CPSEs) comes under Revenue Receipts. **Hence, statement 4 is not correct.**

Q 81.D

- Mudi yettu is a ritual dance-drama from Kerala. It was inscribed in the UNESCO's List of Intangible Cultural Heritage for Humanity in 2010. **Hence statement 1 is correct.**
- It is based on the mythological tale of a battle between the goddess Kali and the demon Darika. **Hence statement 2 is not correct.**
- It is a community ritual in which the entire village participates. After the summer crops have been harvested, the villagers reach the temple in the early morning on an appointed day. **Hence statement 3 is correct.**
- Mudi yettu performers purify themselves through fasting and prayer, then draw a huge image of goddess Kali, called as kalam, on the temple floor with coloured powders, wherein the spirit of the goddess is invoked. This prepares the ground for the lively enactment to follow, in which the divine sage Narada importunes Shiva to contain the demon Darika, who is immune to defeat by mortals. Shiva instead commands that Darika will die at the hand of the goddess Kali.

Q 82.A

- **Bioremediation** is the process of using organisms to neutralize or remove contamination from waste.
- **In-situ conservation**, the conservation of species in their natural habitats, is considered the most appropriate way of conserving biodiversity.
- Ex-situ conservation is the preservation of components of biological diversity outside their natural habitats. This involves conservation of genetic resources, as well as wild and cultivated or species, and draws on a diverse body of techniques and facilities.
- **Bioventing**: Bioventing is an in-situ process of stimulating the natural in situ biodegradation of contaminants in soil by providing air or oxygen to existing soil microorganisms.
- **Biosparging**: Biosparging is an in-situ remediation technology that uses indigenous microorganisms to biodegrade organic constituents in the saturated zone. In biosparging, air (or oxygen) and nutrients (if needed) are injected into the saturated zone to increase the biological activity of the indigenous microorganisms.
- **Biopiles**: Biopiles are an **ex-situ**, solid-phase biological process for converting contaminants to low-toxicity byproducts. Biopiles are aerated with the use of perforated pipes and blowers in order to control the progression of biodegradation more efficiently by controlling the supply of oxygen.
- **Landfarming**: Landfarming is an **ex-situ waste treatment** process that is performed in the upper soil zone or in biotreatment cells. Contaminated soils, sediments, or sludges are transported to the landfarming site, incorporated into the soil surface and periodically turned over (tilled) to aerate the mixture.

Q 83.C

- A cess imposed by the central government is a tax on tax, levied by the government for a specific purpose. Generally, cess is expected to be levied till the time the government gets enough money for that purpose. **Hence, statements 1 and 3 are not correct.**
- A cess is different from the usual taxes like excise duty and personal income tax as it is imposed as an additional tax besides the existing tax (tax on tax). For example, the education cess of 3% on personal income tax of 30% is imposed as a tax on the prevailing 30%. As a result, the total tax rate goes up to 30.9% (30% basic rate + 3% (cess) of the 30%).
- Another difference between cess and the usual tax is the way in which tax revenue from cess is kept. Revenue from main taxes like Personal Income taxes are kept at Consolidated Fund of India (CFI). However, the funds collected in the name of a cess are required to be kept outside of the CFI and to be allocated specifically for the purpose for which it was levied.
- Another major feature of cess like surcharges is that the Centre need not share it with states. **Hence, statement 2 is not correct.**

Q 84.B

- Ricardian Equivalence is a term (view) that is coined after one of the greatest nineteenth-century economists, David Ricardo, who first argued that in the face of high deficits, people save more.
- It is called 'equivalence' because it argues that taxation and borrowing are equivalent means of financing expenditure. When the government increases spending by borrowing today, which will be repaid by taxes in the future, it will have the same impact on the economy as an increase in government expenditure that is financed by a tax increase today. **Hence, option (b) is correct.**

Q 85.C

- The Permanent Settlement (also Premanent Settlement of Bengal) was introduced by Lord Cornwallis in 1793. It was an agreement between the British East India Company and the Landlords of Bengal to settle the Land Revenue. Lord Cornwallis came to India as the Governor General. In introducing the Permanent Settlement, British officials hoped to resolve the problems they had been facing since the conquest of Bengal. By the 1770s, the rural economy in Bengal was in crisis, with recurrent famines and declining agricultural output. Officials felt that agriculture, trade and the revenue resources of the state could all be developed by encouraging investment in agriculture. This could be done by securing rights of property and permanently fixing the rates of revenue demand. It was not for ten years only. **Hence statement 1 is not correct.**
- If the revenue demand of the state was permanently fixed, then the Company could look forward to a regular flow of revenue, while entrepreneurs could feel sure of earning a profit from their investment, since the state would not siphon it off by increasing its claim. The process, officials hoped, would lead to the emergence of a class of yeomen farmers and rich landowners who would have the capital and enterprise to improve agriculture. **Hence statement 2 is correct.**
- Nurtured by the British, this class would also be loyal to the Company. Permanent settlement lasted as long as the British rule lasted in the areas where introduced. **Hence statement 3 is not correct.**

Q 86.C

- During the late 1820s and early 1830s, there emerged a radical, intellectual trend among the youth in Bengal, which came to be known as the '**Young Bengal Movement**'. A young Anglo-Indian, Henry Vivian Derozio (1809-31), who taught at the Hindu College from 1826 to 1831, was the leader and inspirer of this progressive trend. A noteworthy trait of Derozio's writing is its nationalistic fervour. Not only in his journalism, but also in his poetry - poems such as "**To India - My Native Land**", "**The Harp of India**" and "**To the Pupils of Hindu College**" are excellent examples - there is strong assertion of patriotism which stamps Derozio as an Indian English poet whose Indianness supersedes his Englishness.
- Derozio was one of the earliest activists to wage a war against the traditional orthodox society of India in general and of Bengal in particular. In the spirit of English rationalism and French revolution, Derozio criticized the social practices and religious beliefs of orthodox Hinduism. Derozio along with his followers **ridiculed the old traditions, defied social and religious rites, demanded education for women and to flaunt their independence indulged in wine drinking and beef eating. Hence, statement 1 is correct.**
- The Derozians, however, **failed to have a long-term impact.** The main reason for their limited success was the prevailing social conditions at that time, which were not ripe for the adoption of radical ideas. Further, there was no support from any other social group or class. The Derozians **lacked any real link with the masses**; for instance, they failed to take up the peasants' cause. **Hence, statement 2 is correct.**

Q 87.A

- Among the new Revolt Groups, the most active and famous was the Chittagong group led by Surya Sen. **Hence statement 2 is correct.**
- In 1929, Surya Sen was the Secretary and five of his associates were members of the Chittagong District Congress Committee. Their action plan was to include occupation of the two main armouries in Chittagong and the seizing of their arms with which a large band of revolutionaries could be formed into an armed detachment; the destruction of the telephone and telegraph systems of the city; and the dislocation of the railway communication system between Chittagong and the rest of Bengal. In all, sixty-five were involved in the raid, which was undertaken in the name of the Indian Republican Army, Chittagong Branch. **Hence statement 1 is correct.** A remarkable aspect of this new phase of the terrorist movement in Bengal was that many young women participated in it. Pritilata Waddadar died while conducting a raid, while Kalpana Dutt (now Joshi) was arrested and tried along with Surya Sen and given a life sentence.
- Bina Das, daughter of Beni Madhab Das (one Netaji Subhas Bose's teachers) and social worker Sarala Devi, was an Indian revolutionary and nationalist from Bengal. She was a member of Chhatri Sangha, a semi-revolutionary outfit for women in Kolkata. On 6 February 1932, she fired five shots at Bengal Governor Stanley Jackson, but failed to kill him. She was imprisoned and released in 1939, after which she joined the Congress party. Bina Das did not take part in the Chittagong Armory raid. **Hence statement 3 is not correct**

Q 88.C

- It has been held in the "Om Birangana Religious Society" case that the Freedom of speech and expression guaranteed under Article 19(1)(a) of the Constitution of India includes, **by necessary implication, freedom not to listen and/or to remain silent**. A citizen has a right to **leisure, right to sleep, right not to hear and right to remain silent**. He also has the right to read and speak with others". Because of the tremendous sound and noise, the citizens cannot exercise all these fundamental rights. **Hence options 1 and 3 are correct.**
- The Supreme Court through its verdicts on several landmark cases has stated **that Right to information is an integral part part of the freedom of expression, particularly a voter's right to know the antecedents/assets of a candidate contesting election e.g. People's Union For Civil Liberties (PUCL) v Union of India. Hence option 2 is correct.**

Q 89.A

- Prime Minister on 1st September 2018 launched the India Post Payments Bank (IPPB) that offers doorstep banking to customers.
- India Post Payments Bank has been incorporated as a public sector company under the department of posts, with 100% government equity and is governed by the Reserve Bank of India. **Hence, Statement 1 is correct.**
- It will offer a range of products—savings and current accounts, money transfer, direct benefit transfer, bill and utility payments, enterprise and merchant payments. These products, and services, will be offered across multiple channels (counter services, micro-ATM, mobile banking app, SMS and IVR). It will also provide access to third-party financial services such as insurance, mutual funds, pension, credit products and forex. It will not offer any ATM debit card. Instead, it will provide its customers a QR Code-based biometric card. Unlike traditional banks, it cannot issue loans and credit cards. **Hence, Statement 2 is correct.**
- It will offer three types of savings accounts—regular, digital and basic—at an interest rate of 4% per annum. It can accept deposits of up to Rs. 1 lakh per customer. **Hence, statement 3 is not correct.**

Q 90.D

- Shadow banking refers to all the non-bank financial intermediaries that provide services similar to those of traditional commercial banks. These institutions operate outside the regular banking system, meaning that they function in an environment of lesser transparency and regulation than those institutions performing the same functions in the mainstream banking arena.
- Shadow banks, like conventional banks undertake various intermediation activities akin to banks, but they are fundamentally distinct from commercial banks in various respects.
 - First, unlike commercial banks, which by dint of being depository institutions can create money, shadow banks cannot create money.
 - Second, unlike the banks, which are comprehensively and tightly regulated, the regulation of shadow banks is not that extensive and their business operations lack transparency.
 - Third, while commercial banks, by and large, derive funds through mobilization of public deposits, shadow banks raise funds, by and large, through market-based instruments such as commercial paper, debentures, or other structured credit instruments.
 - Fourth, the liabilities of the shadow banks are not insured, while commercial banks' deposits, in general, enjoy Government guarantee to a limited extent.
 - Fifth, in the times of distress, unlike banks, which have direct access to central bank liquidity, shadow banks do not have such recourse.

Q 91.A

- The **Ministry of Shipping has identified Fourteen Coastal Economic Zones along the coastline of the country under National Perspective Plan (NPP) of Sagarmala Programme**. The 14 employment zones will be built in coastal states on the special purpose vehicle route. These zones will have 35 industrial clusters across sectors such as food, cement, furniture and electronics, besides traditional labour intensive sectors such as garments, leather and gems & jewellery.
- The 14 proposed sites are Kachchh, Suryapur and Saurashtra in Gujarat; North and South Konkan in Maharashtra; Dakshin Kanara in Karnataka; Malabar in Kerala; Mannar, VCIC South and Poompuhar in Tamil Nadu; VCIC Central and North in Andhra; Kalinga in Odisha; and Gaud in West Bengal.

Q 92.A

- Mohar Reservoir Project is located in Balod district of **Chhattisgarh**.
- Recently, the CAG report has revealed that The Chhattisgarh Water Resources Department (CWRD) commenced the work on Mohar Reservoir Project without ensuring the land required was acquired and obtaining environment and forest clearances. The Mohar reservoir project is across the confluence of river Dangarh and Dalekasa with a catchment of 143 square km.

Q 93.D

- The Indian Coast Guard (ICG) is an armed force that protects India's maritime interests and enforces maritime law. Indian Coast Guard carries out overall responsibility for coastal security in territorial waters including contiguous zone and exclusive economic zone.
- The Coast Guard works in close cooperation with the Indian Navy, the Department of Fisheries, the Department of Revenue (Customs) and the Central and State police forces. It operates under the **Union Ministry of Defence**. Hence statement 2 is not correct.
- **The coastal police's jurisdiction extends up to 12 nautical miles territorial waters except in Port Blair where jurisdiction of 10 designated coastal police stations has been extended up to India's Exclusive Economic Zone (EEZ) or 200 nautical miles. Hence statement 1 is not correct.**
- In the aftermath of the 2008 Mumbai terror attacks, the coastal police is primarily responsible for prevention of smuggling, collection of intelligence, handling law and order situations, disaster management as well as providing additional line of defence along the coastline.
- **United Nations Convention on the Law of the Sea (UNCLOS)**, provide an international framework for analysis of private maritime security. UNCLOS sections the oceans, splitting marine areas into five main zones, each with a different legal status: Internal Waters, Territorial Sea, Contiguous Zone, Exclusive Economic Zone (EEZ) and the High Seas.
 - **Internal Waters:** Internal Waters include littoral areas such as ports, rivers, inlets and other marine spaces landward of the baseline (low-water line) where the port state has jurisdiction to enforce domestic regulations. Enforcement measures can be taken for violations of static standards while in port as well as for violations that occurred within the coastal state's maritime zones and beyond. However, foreign vessels are not usually held to non-maritime or security port state laws so long as the activities conducted are not detrimental to the peace and security of the locale.
 - **Territorial Sea:** In the Territorial Sea, a coastal state has unlimited jurisdiction over all (including foreign) activities unless restrictions are imposed by law. All coastal states have the right to a territorial sea extending 12 nautical miles from the baseline.
 - **Contiguous Zone:** The Contiguous Zone is an intermediary zone between the territorial sea and the high seas extending enforcement jurisdiction of the coastal state to a maximum of 24 nautical miles from baselines for the purposes of preventing or punishing violations of customs, fiscal, immigration or sanitary (and thus residual national security) legislation.
 - **Exclusive Economic Zone (EEZ):** The EEZ is another intermediary zone, lying between the territorial sea (12 nautical miles) and the high seas to the maximum extent of 200 nautical miles. Although high seas freedoms concerning general navigation principles remain in place, in this zone the coastal state retains exclusive sovereignty over exploring, exploiting and conserving all natural resources. The coastal state therefore can take action to prevent infringement by third parties of its economic assets in this area including, inter alia, fishing, bio-prospecting and wind-farming. In order to safeguard these rights, the coastal state may take necessary measures including boarding, inspection, arrest and judicial proceedings, as may be necessary to ensure compliance with the international laws and regulations.
 - **High Seas:** The High Seas, which lie beyond 200 nautical miles from shore, are to be open and freely available to everyone, governed by the principle of equal rights for all. In agreeing to UNCLOS, all state parties acknowledged that the oceans are for peaceful purposes as the Convention's aim was to maintain peace, justice and progress for all people of the world. On the High Seas, no state can act or interfere with justified and equal interests of other states.

Q 94.B

- Butterflies are a key indicator of the health of the local ecosystems. **Recently, the Nilgiri Plain Ace, a butterfly species, was rediscovered after 130 years, during the Larsen memorial butterfly survey, conducted by the Wynter-Blyth Association (WBA) and the Forest Department.** It had been recorded previously in 1888.
- **Southern Birdwing is India's largest butterfly while Blue Mormon is the state butterfly of Maharashtra.** The southern duffer is a butterfly found in Sri Lanka and south India.

Q 95.B

- **Measles is a highly contagious viral disease.** It remains an important cause of death among young children globally, despite the availability of a safe and effective vaccine. Measles is transmitted via droplets from the nose, mouth or throat of infected persons. Initial symptoms, which usually appear 10–12 days after infection, include high fever, a runny nose, bloodshot eyes, and tiny white spots on the inside of the mouth. Several days later, a rash develops, starting on the face and upper neck and gradually spreading downwards. Measles kills an estimated 49,000 children in India each year, which is about 37% of the global deaths due to this disease.
- **Cholera is an infection of the small intestine by some strains of the bacterium *Vibrio cholerae*.** Symptoms may range from none, to mild, to severe. The classic symptom is large amounts of watery diarrhea that lasts a few days. Vomiting and muscle cramps may also occur. Diarrhea can be so severe that it leads within hours to severe dehydration and electrolyte imbalance.
- **Typhoid fever is a bacterial infection due to *Salmonella typhi* that causes symptoms.** Symptoms may vary from mild to severe and usually begin six to thirty days after exposure. Often there is a gradual onset of a high fever over several days; weakness, abdominal pain, constipation, headaches, and mild vomiting also commonly occur.

Q 96.A

- **Statement 1 is correct:** CAG is the head of the Indian Audit and Accounts Department. He is the guardian of the public purse and controls the entire financial system of the country at both the levels—the Centre and the state. His duty is to uphold the Constitution of India and the laws of Parliament in the field of financial administration.
- **Statement 2 is correct:** He holds office for a period of six years or up to the age of 65 years, whichever is earlier. He can resign any time from his office by addressing the resignation letter to the president. He can also be removed by the president on same grounds and in the same manner as a judge of the Supreme Court. In other words, he can be removed by the president on the basis of a resolution passed to that effect by both the Houses of Parliament with the special majority, either on the ground of proved misbehavior or incapacity.
- **Statement 3 is correct:** He is not eligible for further office, either under the Government of India or of any state, after he ceases to hold his office.

Q 97.C

- As per sections 44AA of the Income-tax Act, 1961, a person engaged in business is required to maintain regular books of account under certain circumstances. To give relief to small taxpayers from this tedious work, the Income-tax Act has framed the presumptive taxation scheme under sections 44AD, sections 44ADA and sections 44AE. **A person adopting the presumptive taxation scheme can declare income at a prescribed rate and, in turn, is relieved from tedious job of maintenance of books of account. Hence statement 2 is correct.**
- **Presumptive taxation scheme (PTS) thus allows to calculate your tax on an estimated income or profit. Hence statement 1 is correct.**
- The presumptive taxation scheme of section 44AD can be adopted by following persons:
 - Resident Individual
 - Resident Hindu Undivided Family
 - Resident Partnership Firm (not Limited Liability Partnership Firm)
- In other words, the scheme cannot be adopted by a non-resident and by any person other than an individual, a HUF or a partnership firm (not Limited Liability Partnership Firm).
- Further, this Scheme cannot be adopted by a person who has made any claim towards deductions under section 10A/10AA/10B/10BA or under sections 80HH to 80RRB in the relevant year.
- **Presumptive taxation scheme can be used by businesses having a total turnover of less than Rs. 2 crore and eligible professionals with gross receipts of less than Rs. 50 lakh in a financial year.**
- Those who adopt PTS to file their returns are not required to maintain books of accounts. Under PTS, the eligible businesses can estimate their net income at the rate of 6-8% of the total turnover, based on the mode of payment. Professionals who are governed or regulated by an institute or body such as doctors, lawyers, architects, interior designers and others can adopt PTS. For them, 50% of the total receipts during the fiscal will be considered as profit and get taxed accordingly. A professional can voluntarily declare the income at a higher rate than mandatory 50% of the total receipts.
- Presumptive taxation is a scheme under Section 44AD of the Income Tax Act, 1961.

Q 98.B

- **Cryptojacking is a form of cyber attack in which a hacker hijacks a target's processing power in order to mine cryptocurrency on the hacker's behalf. Cryptojacking has become an increasingly popular way for bad actors to extract money from targets in the form of cryptocurrency.**
- Widely publicized hacks such as the WannaCry worm, which affected systems on several continents in May 2017, encrypted victims' files and demanded cryptocurrency ransoms – bitcoin, in the case of WannaCry – in order to decrypt them. It takes a different approach, harnessing victims' machines to "mine": perform the computations necessary to update cryptocurrencies' blockchains, creating new tokens and generating fees in the process. These new tokens and fees are deposited to wallets owned by the attacker, while the costs of mining – electricity and wear and tear to computers – are borne by the victim.

Q 99.C

- The Ministry of New and Renewable Energy (MNRE) launched the Atal Jyoti Yojana (AJAY) to illuminate dark regions across five states through solar power. It is a sub scheme under off –grid and decentralized solar application scheme of Ministry of New and Renewable Energy (MNRE), Govt. of India.
- **Statement 1 is not correct:** The scheme covers 5 states only. Uttar Pradesh, Assam, Bihar, Jharkhand, and Odisha are the states covered by the Atal Jyoti Yojana (AJAY).
- **Statement 2 is correct:** The rural, semi-urban and urban areas that face less than 50% grid connectivity in Uttar Pradesh, Assam, Bihar, Jharkhand, and Odisha will be illuminated with solar LED street lights. These solar lights will be installed on major roads, markets, and public conveniences in remote areas to sustainably enhance the citizens' quality of life.
- **Statement 3 is correct:** As the scheme falls under the Ministry of New and Renewable Energy, MNRE will provide 75% of the cost of street lights and remaining 25% will come from Member of Parliament Local Area Development funds (MPLADS), Panchayat funds or Municipalities and other Urban Local Bodies (ULBs) Funds. Energy Efficiency Services Limited (EESL) has been entrusted to implement this path-breaking initiative in a mission mode by March 31, 2018.

Q 100.C

- Article 368 provides for two types of amendments, that are, by a special majority of the Parliament and also through the special majority of the Parliament and ratification of half of the states by a simple majority. **Hence statements 2 and 3 are correct.**
- But, some other articles provide for the amendment of certain provisions of the Constitution by a simple majority of Parliament, that is, a majority of the members of each House present and voting (similar to the ordinary legislative process). Notably, these amendments are not deemed to be amendments of the Constitution for the purposes of Article 368. **Hence statement 1 is not correct.**

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