

# CDS - I 2018

## General Knowledge Question Paper

1. Which one of the following elements is used as a timekeeper in atomic clocks?  
A. Potassium                      B. Caesium  
C. Calcium                        D. Magnesium
  2. Which one of the following elements is involved in the control of water content of the blood?  
A. Potassium                      B. Lithium  
C. Rubidium                       D. Caesium
  3. Which one of the following gases dissolves in water to give acidic solution?  
A. Carbon dioxide    B. Oxygen  
C. Nitrogen                        D. Hydrogen
  4. Which one of the following elements is essential for the formation of chlorophyll in green plants?  
A. Calcium                        B. Iron  
C. Magnesium                      D. Potassium
  5. Consider the following chemical reaction :  
$$a\text{Fe}_2\text{O}_3(s) + b\text{CO}(g) + c\text{Fe}(s) + d\text{CO}_2$$
  
In the balanced chemical equation of the above, which of the following will be the values of the coefficients a, b, c and d respectively?  
A. 3, 2, 3, 1                      B. 1, 3, 2, 3  
C. 2, 3, 3, 1                      D. 3, 3, 2, 1
  6. Why is argon gas used along with tungsten wire in an electric bulb?  
A. To increase the life of the bulb  
B. To reduce the consumption of electricity  
C. To make the emitted light colored  
D. To reduce the cost of the bulb
  7. Which one of the following is the correct relation between the Kelvin temperature (T) and the Celsius temperature ( $t_c$ )?  
A. These are two independent temperature scales  
B.  $T = t_c$   
C.  $T = t_c - 273.15$   
D.  $T = t_c + 273.15$
  8. Sound waves can not travel through a  
A. copper wire placed in air  
B. silver slab placed in air  
C. glass prism placed in water  
D. wooden hollow pipe placed in vacuum
  9. Which one of the following is the value of one nanometer?  
A.  $10^{-7}$  cm                      B.  $10^{-6}$  cm  
C.  $10^{-4}$  cm                      D.  $10^{-3}$  cm
  10. Consider the following statements :  
1. There is no net moment on a body which is in equilibrium.  
2. The momentum of a body is always conserved.  
3. The kinetic energy of an object is always conserved.  
Which of the statements given above is/are correct?  
A. 1, 2 and 3                      B. 2 and 3 only  
C. 1 and 2 only                      D. 1 only
  11. Working of safety fuses depends upon  
1. magnetic effect of the current  
2. chemical effect of the current  
3. magnitude of the current  
4. heating effect of the current  
Select the correct answer using the code given below.  
A. 1, 2, 3 and 4                      B. 1, 2 and 3 only  
C. 3 and 4 only                      D. 4 only
- Directions :**  
The following seven (7) items consist of two statements, Statement I and Statement II. Examine these two statements carefully and select the correct answer using the code given below.
- Code :**
- A. Both the statements are individually true and Statement II is the correct explanation of Statement I
  - B. Both the statements are individually true but Statement II is not the correct explanation of Statement I
  - C. Statement I is true but Statement II is false
  - D. Statement I is false but Statement II is true
12. Statement I :  
By far the most common topographic form in a Karst terrain is the sinkhole.  
Statement II :  
Topographically, a sinkhole is a depression that varies in depth from less than a meter to few hundred meters.  
rejuvenation and upliftment of land.
  13. Statement I :  
Incised meanders are formed in the mature stage of a river.  
Statement II :  
Incised meanders are characterized by

14. Statement I :  
Portions of glacial troughs may exhibit remarkably flat floors.  
Statement II :  
The flat floor in a glacial trough is produced by uniform glacial erosion.
15. Statement I :  
In Tundra climate, biodiversity is comparatively less.  
Statement II :  
Tundra climate has less reproductive warm period.
16. Statement I :  
Tides are the rise and fall of sea levels caused by the combined effects of the gravitationed forces exerted by the Moon and the Sun and the rotation of the Earth.  
Statement II :  
The Earth rotates from west to east.
17. Statement I :  
A person may suffer from tuberculosis if she/he frequently visits crowded place.  
Statement II :  
Bacteria of tuberculosis spread through droplets by sneezing or coughing.
18. Statement I :  
Bioaccumulation is a process of progressive accumulation of heavy metals and pesticides in an organism.  
Statement II :  
Large fishes of the pond are found to have higher concentration of pesticides than planktons of the same pond.
19. Which one of the following is a true fish as per the biological system of classification?  
A. Silverfish                      B. Jellyfish  
C. Cuttlefish                      D. Flying fish
20. In which one of the following types of connective tissues in animals does fat get stored?  
A. Adipocyte                      B. Chondrocyte  
C. Osteocyte                      D. Reticulocyte
21. Which one of the following pairs about organ/part that helps in locomotion is not correctly matched?  
A. Euglena : Flagellum  
B. Paramecium : Cilia  
C. Nereis : Pseudopodia  
D. Starfish : Tubefeet
22. Lysosome is formed from which of the following cell organelles?  
A. Nucleus  
B. Endoplasmic reticulum  
C. Golgi bodies  
D. Ribosomes
23. A protein is synthesized in the endoplasmic reticulum bound ribosomes and it targets to the inner thylakoid space of chloroplast. How many double-layered membrane layers it has to pass to reach its destination?  
A. 2                                      B. 3  
C. 4                                      D. 5
24. Which of the following causes adiabatic temperature changes in atmosphere?  
A. Deflection and advection  
B. Latent heat of condensation  
C. Expansion and compression of the air  
D. Partial absorption of solar radiation by the atmosphere
25. Which one of the following is applicable to collision-coalescence process of precipitation?  
A. Clouds which do not extend beyond the freezing level  
B. Clouds which extend beyond the freezing level  
C. All types of clouds  
D. Cirrocumulus cloud
26. Which one of the following places of India experiences highest atmospheric pressure during winter?  
A. Jaisalmer                      B. Leh  
C. Chennai                      D. Guwahati
27. Match List-I with List-II and select the correct answer using the code given below the Lists :
- List-I**  
**(Hypothesis/ Theory)**  
A. Planetesimal hypothesis  
B. Thermal contraction theory  
C. Geosynclinal Orogen theoiy  
D. Hypothesis of sliding continent
- List-II**  
**(Propounder)**  
1. Kober  
2. Chamberlin  
3. Daly  
4. Jeffreys

**Code :**

- |    |   |   |   |   |
|----|---|---|---|---|
|    | A | B | C | D |
| A. | 2 | 4 | 1 | 3 |
|    | A | B | C | D |
| B. | 2 | 1 | 4 | 3 |
|    | A | B | C | D |
| C. | 3 | 1 | 4 | 2 |
|    | A | B | C | D |
| D. | 3 | 4 | 1 | 2 |
28. Bright light is found to emit from photographer's flashgun. This brightness is due to the presence of which one of the following noble gases?
- A. Argon                      B. Xenon  
C. Neon                        D. Helium
29. Which one of the following is not a characteristic of a compound?
- A. Composition is variable.  
B. All particles of compound are of only one type.  
C. Particles of compound have two or more elements.  
D. Its constituents cannot be separated by simple physical methods.
30. Which of the following substances cause temporary hardness in water?
1.  $\text{Mg}(\text{HCO}_3)_2$   
2.  $\text{Ca}(\text{HCO}_3)_2$   
3.  $\text{CaCl}_2$   
4.  $\text{MgSO}_4$
- Select the correct answer using the code given below.
- A. 3 and 4                      B. 2 and 3  
C. 1 and 4                      D. 1 and 2
31. Which one of the following elements will be an isobar of calcium if the atomic number of calcium is 20 and its mass number is 40?
- A. Element with 18 neutrons and 20 protons  
B. Element with 19 neutrons and 18 protons  
C. Element with 19 neutrons and 20 protons  
D. Element with 18 neutrons and 22 protons
32. Which of the following represents a relation for 'heat lost = heat gained'?
- A. Principle of thermal equilibrium  
B. Principle of colors  
C. Principle of calorimetry  
D. Principle of vaporization

33. Two metallic wires made from copper have same length but the radius of wire 1 is half of that of wire 2. The resistance of wire 1 is  $R$ . If both the wires are joined together in series, the total resistance becomes

- |                   |                   |
|-------------------|-------------------|
| A. $2R$           | B. $\frac{R}{2}$  |
| C. $\frac{5}{4}R$ | D. $\frac{3}{4}R$ |

34. When the Sun is near the horizon during the morning or evening, it appears reddish. The phenomenon that is responsible for this observation is

- A. reflection of light  
B. refraction of light  
C. dispersion of light  
D. scattering of light

35. Match List-I with List-II and select the correct answer using the code given below the Lists :

List-I (Cloud)	List-II (Characteristic)
A. Cirrus	1. Rain-giving
B. Stratus	2. Feathery appearance
C. Nimbus	3. Vertically growing
D. Cumulus	4. Horizontally spreading

**Code :**

- |     |   |   |   |   |
|-----|---|---|---|---|
| (a) | A | B | C | D |
|     | 3 | 1 | 4 | 2 |
| (b) | A | B | C | D |
|     | 2 | 1 | 4 | 3 |
| (c) | A | B | C | D |
|     | 2 | 4 | 1 | 3 |
| (d) | A | B | C | D |
|     | 3 | 4 | 1 | 2 |

36. Which one of the following is not an exclusive right of the concerned coastal nations over Exclusive Economic Zone (EEZ)?

- A. Survey and exploitation of mineral resources of ocean deposits  
B. Exploitation of marine water energy and marine organisms including fishing  
C. Conservation and management of marine resources  
D. Navigation of ships and laying down submarine cables

37. In which one of the following groups of States in India is the Integrated Coastal Zone Management (ICZM) Project being implemented as a pilot investment?
- Gujarat, Kerala and Goa
  - Kerala, Karnataka and Andhra Pradesh
  - Gujarat, Odisha and West Bengal
  - Maharashtra, Andhra Pradesh and Tamil Nadu
38. Which of the following statements about the National Water Academy (NWA) is/are correct?
- The primary objective of the NWA is to function as Centre of Excellence in training for in-service engineers from Central and State organizations on various aspects of water resource planning.
  - The NWA is located in New Delhi.
- Select the correct answer using the code given below.
- 1 only
  - 2 only
  - Both 1 and 2
  - Neither 1 nor 2
39. A wire of copper having length  $l$  and area of cross-section  $A$  is taken and a current  $I$  is flown through it. The power dissipated in the wire is  $P$ . If we take an aluminium wire having same dimensions and pass the same current through it, the power dissipated will be
- $P$
  - $< P$
  - $> P$
  - $2P$
40. The pressure of a fluid varies with depth  $h$  as  $P = P_0 + \rho gh$ , where  $\rho$  is the fluid density. This expression is associated with
- Pascal's law
  - Newton's law
  - Bernoulli's principle
  - Archimedes' principle
41. Consider the following constituent gases of the atmosphere :
- Argon
  - Neon
  - Helium
  - Carbon dioxide
- Which one of the following is the correct ascending sequence of the above gases in terms of the volume percentage?
- 1-3-2-4
  - 1-4-2-3
  - 4-2-3-1
  - 2-4-1-3
42. Which one of the following Indian States has the highest percentage of Scheduled Tribe population to its total population?
- Mizoram
  - Nagaland
  - Meghalaya
  - Arunachal Pradesh
43. Extrusive volcanoes are not found in which one of the following mountains?
- Alaska
  - Rocky
  - Andes
  - Himalayas
44. Which one of the following crops is not cultivated in Karewas, the lacustrine deposit's of sand, clay, loam, silt and boulders?
- Saffron
  - Almond
  - Walnut
  - Ling nut
45. Consider the following tributaries of river Ganga :
- Gandak
  - Kosi
  - Ghaghara
  - Gomti
- Which one of the following is the correct order of the above rivers from east to west?
- 3-4-1-2
  - 2-1-3-4
  - 2-3-1-4
  - 1-2-4-3
46. Which of the following National Parks of India are declared as World Heritage by UNESCO?
- Keoladeo National Park
  - Sundarbans National Park
  - Kaziranga National Park
  - Ranthambore National Park
- Select the correct answer using the code given below.
- 1 and 2 only
  - 1, 2 and 3 only
  - 3 and 4 only
  - 1, 2, 3 and 4
47. Match List-I with List-II and select the correct answer using the code given below the Lists :
- | List-I           | List-II         |
|------------------|-----------------|
| (Railway Zone)   | (Headquarters)  |
| A. North Central | 1. Secunderabad |
| B. North Eastern | 2. Jabalpur     |
| C. West Central  | 3. Gorakhpur    |
| D. South Central | 4. Allahabad    |
- Code :**
- |     | A | B | C | D |
|-----|---|---|---|---|
| (a) | 4 | 3 | 2 | 1 |
|     | A | B | C | D |
| (b) | 4 | 2 | 3 | 1 |
|     | A | B | C | D |
| (c) | 1 | 2 | 3 | 4 |
|     | A | B | C | D |
| (d) | 1 | 3 | 2 | 4 |

48. Which one of the following statements about lymph is correct?
- Lymph is formed due to leakage of blood through capillaries.
  - Lymph contains blood cells such as RBC.
  - Lymph is also circulated by the blood circulating heart.
  - Lymph only transports hormones.
49. Which of the following classes of animals has/have three-chambered heart?
- Pisces and Amphibia
  - Amphibia and Reptilia
  - Reptilia only
  - Amphibia only
50. Accumulation of which one of the following in the leads to cramp?
- Lactic acid
  - Ethanol
  - Pyruvic acid
  - Glucose
51. Which one of the following statements about Exchange-Traded Fund (ETF) is not correct?
- It is a marketable security.
  - It experiences price changes throughout the day.
  - It typically has lower daily liquidity and higher fees than mutual fund shares.
  - An ETF does not have its net asset value calculated once at the end of every day.
52. Which one of the following is the maximum age of joining National Pension System (NPS) under the NPS Private Sector?
- 55 years
  - 60 years
  - 65 years
  - 70 years
53. The Reserve Bank of India has recently constituted a high-level task force on Public Credit Registry (PCR) to suggest a road map for developing a transparent, comprehensive and near-real-time PCR for India. The task force is headed by
- Sekar Kamam
  - Vishakha Mulye
  - Sriram Kalyanaraman
  - Y. M. Deosthalee
54. In October 2017, India sent its first shipment of wheat to Afghanistan as a part of commitment made by the Government of India to supply 1.1 million tonnes of wheat to that country on grant basis. The shipment was sent through
- Iran
  - Pakistan
  - Tajikistan
  - China
55. Which of the following statements about the India Post Payments Bank (IPPB) is/are correct?
- It has been incorporated as a Public Limited Company.
  - It started its operation by establishing two pilot branches at Hyderabad and Varanasi.
- Select the correct answer using the code given below.
- 1 only
  - 2 only
  - Both 1 and 2
  - Neither 1 nor 2
56. Which of the following are the functions of the National Human Rights Commission (NHRC)?
- Inquiry at its own initiative on the violation of human rights
  - Inquiry on a petition presented to it by a victim
  - Visit to jails to study the condition of the inmates
  - Undertaking and promoting research in the field of human rights
- Select the correct answer using the code given below.
- 1 and 2 only
  - 2, 3 and 4 only
  - 1, 3 and 4 only
  - 1, 2, 3 and 4
57. A person is disqualified for being chosen as, and for being, a Member of either House of the Parliament if the person
- holds any office of profit under the Government of India or the Government of any State other than an office declared by the Parliament by law not to disqualify its holder
  - is an undischarged insolvent
  - is so disqualified under the Tenth Schedule of the Constitution of India
  - is of unsound mind and stands so declared by a competent Court
- Select the correct answer using the code given below.
- 1, 2 and 4 only
  - 1, 2, 3 and 4
  - 3 and 4 only
  - 1, 2 and 3 only
58. According to the Election Commission of India, in order to be recognized as a 'National Party', a political party must be treated as a recognized political party in how many States?
- At least two States
  - At least three States
  - At least four States
  - At least five States

59. Which one of the following statements with regard to Antrix Corporation Limited is correct?
- It is a commercial arm of the Department of Industrial Policy and Promotion.
  - It is under the administrative control of the Department of Space.
  - It is under the administrative control of the Ministry of Health and Family Welfare.
  - It is a commercial arm of the Department of Science and Technology.
60. Verses ascribed to poet-saint Kabir have been compiled in which of the following traditions?
- Bijak in Varanasi
  - Kabir Granthavali in Rajasthan
  - Adi Granth Sahib
- Select the correct answer using the code given below.
- 1 and 2 only
  - 1, 2 and 3
  - 2 and 3 only
  - 3 only
61. Around twelfth century, Sufi Silsilas began to crystallize in different parts of the Islamic world to signify
- continuous link between the master and disciple
  - unbroken spiritual genealogy to the Prophet Muhammad
  - the transmission of spiritual power and blessings to devotees
- Select the correct answer using the code given below.
- 1 and 2 only
  - 2 only
  - 1 and 3 only
  - 1, 2 and 3
62. In the 10th Mandala of the Rigveda, which one of the following hymns reflects upon the marriage ceremonies?
- Surya Sukta
  - Purusha Sukta
  - Dana Stutis
  - Urna Sutra
63. Which of the following statements about the Non-Cooperation Movement is/are correct?
- It was marked by significant participation of peasants from Karnataka.
  - It was marked by non-Brahmin lower caste participation in Madras and Maharashtra.
  - It was marked by the lack of labour unrest in places like Assam, Bengal and Madras.
  - It was badly shaken by the Chauri Chaura incident in 1922 after which Gandhiji decided to continue with the movement on a much smaller scale.
- Select the correct answer using the code given below.
- 1 only
  - 1, 2 and 4
  - 2 and 3
  - 2 only
64. Which one of the following was a focus country of the World Food India, a mega food event held in November 2017 in New Delhi?
- Germany
  - Japan
  - Denmark
  - Italy
65. Which one of the following States will host the Nobel Prize Series—India 2018 (Science Impacts Life) Exhibition?
- Gujarat
  - Rajasthan
  - Goa
  - Madhya Pradesh
66. The Ministry of Communication has recently launched a Pan India scholarship programme for schoolchildren called TDeen Dayal SPARSH Yojana. The objective of the scheme is to increase the reach of
- sports
  - philately
  - music
  - web designing
67. Which one of the following temples of India has won the 'UNESCO Asia Pacific Award of Merit, 2017' for cultural heritage conservation?
- Kamakhya Temple, Guwahati
  - Sri Ranganathaswami Temple, Srirangam
  - Meenakshi Temple, Madurai
  - Kedarnath Temple, Kedarnath
68. Which one of the following teams was defeated by India to win the Women's Hockey Asia Cup title, 2017?
- Japan
  - China
  - South Korea
  - Pakistan
69. Which one of the following statements about India is not correct?
- India has 12 major ports and about 200 non-major ports.
  - 95 percent of India's trade by volume and 68 percent by value are moved through maritime transport.
  - India has a coastline of about 7500 km.
  - In the Maritime Agenda, 2010-2020, a target of 300 MT port capacity has been set for the year 2020.

70. Which one of the following statements is not correct?
- India joined MTCR in 2016.
  - India submitted a formal application for membership of the NSG in 2016.
  - India proposed the Comprehensive Convention on International Terrorism in 1996.
  - The Commonwealth Heads of Government Meeting (CHOGM) was held in 2016 at Malta.
71. Which one of the following Amendments to the Constitution of India has prescribed that the Council of Ministers shall not exceed 15 percent of total number of members of the House of the People or Legislative Assembly in the States?
- 91 St Amendment
  - 87th Amendment
  - 97th Amendment
  - 90th Amendment
72. Which of the following about the role of Indian Coast Guard is/are correct?
- Indian Coast Guard has been entrusted with the offshore security coordination authority
  - Lead intelligence agency for coastal and sea border
  - Coastal security in territorial waters
- Select the correct answer using the code given below.
- 1 and 3 only
  - 1, 2 and 3
  - 1 and 2 only
  - 3 only
73. Which one of the following is India's first indigenously designed and developed long-range subsonic cruise missile which can be deployed from multiple platforms?
- Astra
  - Akash
  - Nirbhay
  - Shankhnaad
74. The Ministry of Power, Government of India has recently constituted a Committee to investigate the causes of the accident that occurred on 1<sup>st</sup> November, 2017 at Feroze Gandhi Thermal Power Plant Ltd., Unchahar, in Uttar Pradesh. Who among the following is the Chairman of the Committee?
- Dr. L. D. Papney
  - Shri Dhawal Prakash Antapurkar
  - Shri Subir Chakraborty
  - Shri P. D. Siwal
75. In November 2017, an Indian short film, The School Bag won the Best Short Film Award at the South Asian Film Festival held at Montresd. Who among the following is the Director of the film?
- Anurag Kashyap
  - Dheeraj Jindal
  - Sujoy Ghosh
  - Samvida Nanda
76. In November 2017, India's MC Mary Kom won the gold medal at the Asian Boxing Championship, 2017 held at Ho Chi Minh City in Vietnam. In which one of the following categories was she declared winner?
- 48 kg
  - 51 kg
  - 54 kg
  - 57 kg
77. Which one of the following is the theme of the World Soil Day, 2017?
- Soils and pulses, a symbol for life
  - Caring for the Planet starts from the Ground
  - Soils, a solid ground for life
  - Soils, foundation for family farming
78. Who among the following is the winner of the National Badminton Championship (Men), 2017?
- Kidambi Srikanth
  - H. S. Prannoy
  - Ajay Jayaram
  - Sai Praneeth
79. Which of the following statements about the usage of the term 'barbarian' is/are correct?
- It is derived from the Greek word 'barbaros' which means a non-Greek.
  - Romans used the term for the Germanic tribes, the Gauls and the Huns.
- Select the correct answer using the code given below.
- 1 only
  - 2 only
  - Both 1 and 2
  - Neither 1 nor 2
80. Which one of the following statements is not correct?
- Al-Biruni identifies the Sufi doctrine of divine love as selfannihilation with parallel passages from Bhagavad Gita.
  - According to Al-Biruni, Sufi theories of Soul were similar to those in Patanjali's Yoga Sutra.
  - The Hatha Yogic treatise Amrita Kunda had lasting impact on Sufism.
  - Hujwiri's conversation with the Yogis shows that he was impressed with their theory of the division of the human body.

81. Consider the following statement :  
 "So much is wrung from the peasants, that even dry bread is scarcely left to fill their stomachs."  
 Who among the following European travellers had made the above statement about the condition of peasantry in the Mughal Empire?  
 A. Francisco Pelsaert  
 B. Francois Bernier  
 C. Jean-Baptiste Tavernier  
 D. Niccolao Manucci
82. What is the name of the literary genre developed by the Khojas who are a branch of the Ismaili sect?  
 A. Ginan  
 B. Ziyarat  
 C. Raag  
 D. Shahada
83. Who was/were the 10th century composer(s) of the Nalayira Divya Prabandham?  
 A. Alvares  
 B. Nayanars  
 C. Appar  
 D. Sambandar
84. Which one of the following is not a correct ascending order of commissioned ranks in the defence forces of India?  
 A. Lieutenant, Captain, Major, Lieutenant Colonel, Colonel, Brigadier, Major General, Lieutenant General, General  
 B. Flying Officer, Flight Lieutenant, Squadron Leader, Wing Commander, Group Captain, Air Commodore, Air Vice Marshal, Air Marshal, Air Chief Marshal  
 C. Flying Officer, Flight Lieutenant, Squadron Leader, Group Captain, Wing Commander, Air Commodore, Air Vice Marshal, Air Marshal, Air Chief Marshal  
 D. Sub Lieutenant, Lieutenant, Lieutenant Commander, Commander, Captain, Commodore, Rear Admiral, Vice Admiral, Admiral
85. Which of the following statements about Attorney General of India is/are not correct?  
 1. He is the first Law Officer of the Government of India.  
 2. He is entitled to the privileges of a Member of the Parliament.  
 3. He is a whole-time counsel for the Government.  
 4. He must have the same qualifications as are required to be a judge of the Supreme Court.  
 Select the correct answer using the code given below.  
 A. 1, 2 and 3  
 B. 2 and 4  
 C. 3 only  
 D. 1 only
86. Under which one of the following Amendment Acts was Sikkim admitted into the Union of India?  
 A. 35th  
 B. 36th  
 C. 37th  
 D. 38th
87. Which one of the following became a part of China in 1997 following the principle of 'one country, two systems'?  
 A. Tibet  
 B. Hong Kong  
 C. Xinjiang  
 D. Inner Mongolia
88. Which one of the following statements in respect of the States of India is not correct?  
 A. States in India cannot have their own Constitutions.  
 B. The State of Jammu and Kashmir has its own Constitution.  
 C. States in India do not have the right to secede from the Union of India.  
 D. The maximum number of members in the Council of Ministers of Delhi can be 15 percent of the total number of members in the Legislative Assembly.
89. Consider the following statements about National Wildlife Action Plan (NWAP) of India for 2017-2031 :  
 1. This is the Third National Wildlife Action Plan.  
 2. The NWAP is unique as this is the first time India has recognized the concerns relating to climate change impact on wildlife.  
 3. The NWAP has ten components.  
 Which of the statements given above is/are correct?  
 A. 1 only  
 B. 1 and 2 only  
 C. 2 and 3 only  
 D. 1, 2 and 3
90. Growth in production (in percent) of which one of the following core industries in India during the period 2015-2016 was negative?  
 A. Natural gas  
 B. Refinery products  
 C. Fertilizer  
 D. Coal
91. eBiz is one of the integrated services projects and part of the 31 Mission Mode Projects (MMPs) under the National e-Governance Plan of the Government of India. eBiz is being implemented under the guidance and aegis of the Department of Industrial Policy and Promotion, Ministry of Commerce and Industry by  
 A. Tata Consultancy Services  
 B. Infosys Technologies Limited  
 C. Wipro  
 D. HCL Technologies



92. Which of the following statements about the olive ridley turtles is/are correct?
1. They are the smallest and most abundant of all sea turtles found in the world.
  2. They live in warm waters of Pacific, Atlantic and Indian Oceans.
  3. The Coromandel Coast in India is the largest mass nesting site for the olive ridley turtles.
- Select the correct answer using the code
- A. 1, 2 and 3      B. 1 and 2 only  
C. 2 and 3 only      D. 1 only
93. Consider the following statement :  
"A sound body means one which bends itself to the spirit and is always a ready instrument at its service."  
The above statement is attributed to
- A. Sardar Patel  
B. Winston Churchill  
C. Mahatma Gandhi  
D. Baden-Powell
94. Who among the following was the founder of Phoenix Settlement?
- A. Mahatma Gandhi  
B. B. R. Ambedkar  
C. Rabindranath Tagore  
D. Swami Vivekananda
95. Name the platform used for ritual purposes by the kings of the Vijayanagara Empire.
- A. Mahanavami Dibba  
B. Lotus Mahal  
C. Hazara Rama  
D. Virupaksha
96. The idea of 'Farr-i Izadi', on which the Mughal kingship was based, was first developed by which one of the following Sufi saints?
- A. Shihabuddin Suhrawardi  
B. Nizamuddin Auliya  
C. Ibn al-Arabi  
D. Bayazid Bistami
97. Which Buddhist text contains an account of the Mauryan Emperor Ashoka?
- A. Vinaya Pitaka  
B. Sutta Pitaka  
C. Abhidhamma Pitaka  
D. Mahavamsa
98. Which one of the following statements about Buddhist Stupas in India is not correct?
- A. Ashoka played an important role in popularizing the Stupa cult.  
B. They were repositories of relics of Buddha and other monks.  
C. They were located in rural areas.  
D. They were located close to trade routes.
99. Which one among the following States of India has the largest number of seats in its Legislative Assembly?
- A. West Bengal  
B. Bihar  
C. Madhya Pradesh  
D. Tamil Nadu
100. Which of the following statements about the Ordinance-making power of the Governor is/are correct?
1. It is a discretionary power.
  2. The Governor himself is not competent to withdraw the Ordinance at any time.
- 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
101. Which one of the following events is not correctly matched with the year in which it happened?
- A. Inauguration of the SWIFT system of electronic interbank fund transfers worldwide— 1985  
B. Conclusion of the Uruguay Round of GATT— 1994  
C. Inauguration of the World Trade Organization— 1995  
D. Establishment of the first wholly electronic stock exchange (Nasdaq)— 1971
102. Consider the following statements about Indo-Tibetan Border Police (ITBP) :
1. ITBP was raised in 1962.
  2. ITBP is basically a mountain trained force.
  3. ITBP replaced Assam Rifles in Sikkim and Arunachal Pradesh in 2004-2005 for border guarding duty.
  4. ITBP presently has 52 service battalions.
- Which of the statements given above are correct?
- A. 1, 2 and 4 only      B. 3 and 4 only  
C. 1, 2, 3 and 4      D. 1, 2 and 3 only

103. Which one of the following is not an International Human Rights Treaty?
- International Covenant on Civil and Political Rights
  - Convention on the Elimination of All Forms of Discrimination against Women
  - Convention on the Rights of Persons with Disabilities
  - Declaration on the Right to Development
104. In the context of elections in India, which one of the following is the correct full form of VVPAT?
- Voter Verifiable Poll Audit Trail
  - Voter Verifying Paper Audit Trail
  - Voter Verifiable Paper Audit Trail
  - Voter Verifiable Paper Account Trail
105. Which one of the following is not an objective of the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)?
- To achieve convergence of investment in irrigation at the field level
  - To expand cultivable area under irrigation
  - To improve on-farm water use efficiency to reduce wastage of water
  - To protect farmers against crop failure due to natural calamities
106. Which one of the following statements about 'Niryat Bandhu Scheme' is correct?
- It is a scheme for mentoring first generation entrepreneurs.
  - It is a scheme for crop protection.
  - It is a scheme for the vulnerable section of the society.
  - It is a scheme for monitoring rural poor.
107. Which one of the following statements about the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) is **not** correct?
- It is a placement-linked skill training programme exclusively for rural girls.
  - It aims to convert India's demographic surplus into a demographic dividend.
  - The scheme aims to benefit more than 55 million poor rural folk.
  - It is a generational poverty alleviation programme.
108. Where is Hambantota Port located?
- Iran
  - Sri Lanka
  - Japan
  - Pakistan
109. The projects under Coastal Berth Scheme of the flagship Sagarmala Programme are distributed over how many States?
- Eight
  - Ten
  - Twelve
  - Fourteen
110. Which one of the following statements about the National Adaptation Fund for Climate Change is not correct?
- The fund is meant to assist national and State level activities to meet the cost of adaptation measures.
  - This scheme has been taken as a Central Sector Scheme.
  - The Indian Council of Agricultural Research is the national implementing entity for the fund.
  - The scheme has been in force since
111. 'SAMPRITI-2017' is a joint military exercise between armed forces of India and
- Bhutan
  - Bangladesh
  - Pakistan
  - Myanmar
112. The judgement of the Supreme Court of India in the Vishakha Case pertains to
- sexual harassment in the work-place
  - Sati
  - dowry death
  - rape
113. The first BRICS Summit, after the inclusion of South Africa, was held at
- Brasilia
  - Sanya
  - Yekaterinburg
  - Durban
114. Who deciphered the Brahmi and Kharoshthi scripts?
- Piyadassi
  - Colin Mackenzie
  - Alexander Cunningham
  - James Prinsep
115. Which of the following is/are the feature(s) of the Brahmadeya Grants during c 600-1200 AD?
- Their creation meant a renunciation of actual or potential sources of revenue by the State.
  - These grants could vary from a small plot to several villages.
  - Most grants were made in unsettled areas.
- Select the correct answer using the code given below.
- 1 only
  - 2 and 3 only
  - 1 and 2 only
  - 1, 2 and 3

116. Who is the author of Manimekalai?  
 A. Kovalan                      B. Sathanar  
 C. Ilango Adigal              D. Tirtakkatevar
117. Which one of the following statements about the Elephanta Island is correct?  
 A. It was given its name by the British after a large elephant structure located there.  
 B. It contains one large cave.  
 C. It is well-known for a spectacular carving of Vishnu described in the Vishnudharmottara Purana.  
 D. It is associated with the Pashupata sect.
118. Which of the following statements about Sir Syed Ahmad Khan is/are correct?  
 1. He argued that India was a federation of ethnic communities based on common descent.  
 2. His philosophy was very similar to that of the Indian National Congress.  
 3. He imagined India as a Nation State based on individual citizen's rights.  
 4. The curriculum at the Mohammedan Anglo-Oriental College blended Muslim theology and European empiricism.

Select the correct answer using the code given below.

- A. 1 only                      B. 2 and 3  
 C. 3 only                      D. 1 and 4
119. Consider the following statements about impact of tax :  
 1. A tax is shifted forward to consumers if the demand is inelastic relative to supply.  
 2. A tax is shifted backward to producers if the supply is relatively more inelastic than demand.  
 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
120. According to the law of diminishing marginal utility, as the amount of a good consumed increases, the marginal utility of that good tends to  
 A. improve  
 B. diminish  
 C. remain constant  
 D. first diminish and then improve

\*\*\*

# Solutions

## 1. Ans. (b) Caesium

When exposed to certain frequencies of radiation, such as radio waves, the subatomic particles called electrons that orbit an atom's nucleus will "jump" back and forth between energy states. Clocks based on this jumping within atoms can therefore provide an extremely precise way to count seconds. It is no surprise then that the international standard for the length of one second is based on atoms.

Since 1967, the official definition of a second is 9,192,631,770 cycles of the radiation that gets an atom of the element called caesium to vibrate between two energy states.

## 2. Ans. (a) Potassium

Aldosterone is a key steroid hormone critical for maintaining salt and water balance. It regulates the concentration of minerals, like sodium and potassium, in the fluid outside your cells.

When your sodium levels drop, or potassium levels rise, your body signals your adrenal glands to release aldosterone into your blood.

Aldosterone signals your kidneys to reabsorb sodium into the blood, and acts on your sweat glands to reduce sodium loss through sweat.

## 3. Ans. (a) Carbon dioxide

Carbon dioxide (CO<sub>2</sub>) gas dissolved in water can cause water to become acidic.

The acidity of water from dissolved CO<sub>2</sub> can be reduced by a base such as baking soda (sodium bicarbonate).

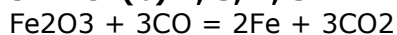
## 4. Ans. (c) Magnesium

Forms taken up by plants: Mg<sup>++</sup>

Functions in plants: a part of the chlorophyll molecule - essential in photosynthesis: related to phosphorus metabolism: large quantities found in seed.

Mg deficiency symptoms: Mg is mobile, so symptoms occur first in old leaves; A whitish or yellowish striping effect on grasses.

## 5. Ans. (b) 1, 3, 2, 3



Hematite + Carbon Monoxide = Iron + Carbon Dioxide

In this reaction, the iron oxide is reduced to iron, and the carbon is oxidised to carbon dioxide.

## 6. Ans. (a) To increase the life of the bulb

Argon gas is used in fluorescent and incandescent light bulbs to stop the oxygen in the light bulbs from corroding the hot tungsten filament.

The use of argon in light bulbs prevents the evaporation of the tungsten filaments, which results in increased light bulb life.

Argon is also used to create an inert atmosphere for growing semiconductor crystals, arc welding and for processes that need protection from other kinds of atmospheric gases.

## 7. Ans. (d) $T = t_c + 273.15$

Lord Kelvin, working in Scotland, developed the Kelvin scale in 1848. His scale uses molecular energy to define the extremes of hot and cold. Absolute zero, or 0 K, corresponds to the point at which molecular energy is at a minimum. The Kelvin scale is preferred in scientific work, although the Celsius scale is also commonly used. Temperatures measured on the Kelvin scale are reported simply as K, not °K.

$$T(\text{in } ^\circ\text{C}) + 273.15 = T(\text{in K})$$

$$T(\text{in K}) - 273.15 = T(\text{in } ^\circ\text{C})$$

## 8. Ans. (d) Wooden hollow pipe loaded in a vacuum

Sound is a kind of energy created when something vibrates.

When this vibration reaches an ear, it is translated into what we recognize as a sound.

Sound vibration must travel through matter. Therefore, it can travel through air and water but not through vacuum.

## 9. Ans. (a) 10<sup>-7</sup> cm

**Amount:** 1 nanometer (nm) of length

**Equals:** 0.00000010 centimetres (cm) in length.

This is equal to 10<sup>-7</sup> cm.

## 10. Ans. (c) 1 and 2 only

There are two conditions that must be met for an object to be in equilibrium. The first condition is that the net force on the object must be zero for the object to be in equilibrium. If net force is zero, then net force along any direction is zero.

Kinetic energy (KE) is the energy of motion, and kinetic energy is not always conserved in a collision. Energy and momentum are always conserved.

## 11. Ans. (c) 3 and 4 only

An electric fuse is a device which is used to limit the current in an electric circuit. The fuse safeguards the circuit and the electrical appliances from being damaged.

The fuse wire is generally an alloy of lead and tin. It has a low melting point and breaks the circuit if the current exceeds a safe value.

The thickness and length of the fuse wire depends on the maximum current allowed through the circuit.

It is connected in series in the beginning of the electric circuits.

If too many electrical appliances of high power rating (like electric iron, water heater etc) are switched on at the same time, they draw an extremely large current from the circuit. This condition is called overloading and it can cause overheating of the wiring and lead to a fire. (heating effect and magnitude of the current)

**12. Ans. (b)**

A sinkhole (in Karst topography) is a hole in the ground that forms when water dissolves surface rock. Often, this surface rock is limestone, which is easily eroded, or worn away, by the movement of water.

Formation of a Sinkhole: In a landscape where limestone sits underneath the soil, water from rainfall collects in cracks in the stone. These cracks are called joints. Slowly, as the limestone dissolves and is carried away, the joints widen until the ground above them becomes unstable and collapses. The collapse often happens very suddenly and without very much warning. Water collects in these collapsed sections, forming sinkholes.

Sinkholes also form when the roofs of caves collapse. Sinkholes are often funnel-shaped, with the wide end open at the surface and the narrow end at the bottom of the pool.

Sinkholes vary from shallow holes about 1 meter (3 feet) deep, to pits more than 50 meters (165 feet) deep.

**13. Ans. (d)**

Rejuvenation occurs when the river's base level falls (i.e. when sea level falls). This can be a consequence of either a fall in the amount of sea water or the land rising. Incised meanders are meanders which are particularly well developed and occur when a river's base level has fallen giving the river a large amount of vertical erosion power, allowing it to down cut. Hence, 2<sup>nd</sup> statement is correct.

There are two types of incised meanders, entrenched meanders and ingrown meanders.

As they are products of rejuvenation, they are not formed in mature stage of a river.

**14. Ans. (a)**

Glaciers cut distinctive U-shaped valleys with a flat floor and steep sides. These are an example of a glacial erosion landform.

Example: As the main glacier erodes deeper into the valley, the tributary is left higher up the steep sides of the glacier.

**15. Ans. (b)**

Species richness is generally lower in the Arctic than at lower latitudes, and richness also tends to decline from the low to high Arctic.

Many hypotheses have been advanced to explain the overall decline of biodiversity with increasing latitude, although there is still no consensus about a mechanistic explanation.

Abiotic factors include lower available energy and area at high latitudes, and the relatively young age of Arctic ecosystems.

Among biotic factors, latitudinal differences in rates of diversification have been suggested, but empirical evidence for this as a general principle is lacking.

**16. Ans. (b)**

Tides are the rise and fall of sea levels caused by the combined effects of the gravitational forces exerted by the Moon and the Sun and the rotation of Earth.

Statement 2 is also correct. But it is not the correct explanation for the 1<sup>st</sup> statement.

**17. Ans. (d)**

Tuberculosis (TB) is caused by a type of bacterium called *Mycobacterium tuberculosis*.

It's spread when a person with active TB disease in their lungs coughs or sneezes and someone else inhales the expelled droplets, which contain TB bacteria.

One would have to spend prolonged periods (several hours) in close contact with an infected person to catch the infection yourself.

For example, TB infections usually spread between family members who live in the same house. It would be highly unlikely for you to become infected by sitting next to an infected person on a bus or train. Hence, statement 1 is incorrect.

**18. Ans. (b)**

Bioaccumulation is defined as the increase in concentration of a substance(s) in an organism or a part of that organism.

The affected organism has a higher concentration of the substance than the concentration in the organism's surrounding environment.

For the second statement: Microorganisms eat pesticide infected things. Invertebrates eat hundreds of the microorganisms and plants infected with the pesticides, accumulating a pretty large amount of the toxin in them.

The invertebrates are generally then eaten by larger invertebrates or amphibians, which ingest hundreds of similar organisms, accumulating an even higher concentration of toxins in their bodies. Then the fish eat hundreds of these organisms, accumulating the highest concentration of toxins in themselves.

**19. Ans. (d) Flying fish**

Cuttlefish or cuttles are marine animals of the order Sepiida. They belong to the class Cephalopoda, which also includes squid, octopuses, and nautilus. Cuttlefish have a unique internal shell, the cuttlebone. Despite their name, cuttlefish are not fish but molluscs.

Jellyfish are soft bodied, free-swimming aquatic animals with a gelatinous umbrella-shaped bell and trailing tentacles.

Lepismasacharina commonly known as silver fish is small wingless insect belongs to phylum- Arthropoda.

The Exocoetidae are a family of marine fishes in the order Beloniformes class Actinopterygii. Fish of this family are known as flying fish.

**20. Ans. (a) Adipocyte**

Adipocytes are the major source of leptin production, and plasma leptin concentrations directly correlate with the amount of total body fat.

Adipocytes are highly specialized cells that play a crucial role in the energy balance of most vertebrates. Adipocytes convert excess energy to tri-acylglycerol and deposit it during feeding in preparation for periods of food deprivation.

Adipocytes may become enlarged by increased fat storage.

**21. Ans. (c) Nereis: Pseudopodia**

Euglena move by a flagellum (plural, flagella), which is a long whip-like structure that acts like a little motor.

The paramecium uses its cilia to sweep the food along with some water into the cell mouth after it falls into the oral groove.

The underside of the starfish is covered with hundreds of tube feet, which it uses for walking around, for attaching tightly to rocks, and for holding on to prey.

Nereis possess setae and parapodia for locomotion

**22. Ans. (c) Golgi bodies**

- Lysosomes are spherical membranous sacs of enzymes.
- The lysosome membrane helps to keep its internal compartment acidic and separates the digestive enzymes from the rest of the cell.
- Lysosomes are formed by budding from the Golgi complex.

**23. Ans. (b) 3**

There are 3 double-layered membrane layers, which the protein has to pass to reach its destination.

**24. Ans. (c) Expansion and compression of the air**

Application of temperature changes in the atmosphere is in adiabatics, or temperature change which are caused by compressing or allowing air to expand.

**25. Ans. (a) Clouds which do not extend beyond the freezing level**

In colder clouds: droplets formed by Bergeron mechanism. But, in many parts of the world the air is too warm for ice crystals to form.

This being the case, rain and snow cannot develop following the Bergeron Process.

Instead, tiny droplets form as they collide into one another creating larger and larger droplet, this is known as collision- coalescence process. So, warmer clouds are associated with this keyword.

**26. Ans. (b) Leh**

As temperature of Leh will be lowest during winters from the given options, the highest pressure will be at Leh.

**27. Ans. (a) A-2, B-4, C-1, D-3**

The Chamberlin-Moulton planetesimal hypothesis was proposed in 1905 by geologist Thomas Chrowder Chamberlin and astronomer Forest Ray Moulton to describe the formation of the solar system.

Mechanism of the Thermal Contraction Theory: Jeffrey's theory is based essentially on the history of the contraction of the earth

Famous German geologist Kober has presented a detailed and systematic description of the surface features of the earth in his book 'Der Bau der Erde'. Kober's geosynclinal theory is based on the forces of contraction produced by the cooling of the earth. Hypothesis of sliding continent was given by Daly.

**28. Ans. (b) Xenon**

Electronic Flash differs from the consumable bulb flash in important aspects. Instead of creating light by burning up in an atmosphere containing oxygen, a consumable material (each bulb being used therefore only once), it produces a brilliant incandescent by discharging a current for a brief instant through a rarified gas, usually **xenon**.

The gas glows every time the discharge is made through it but it is not consumed, so that many thousands of flashes are obtainable from a single tube, which helps to offset the much higher cost of the initial apparatus.

**29. Ans. (b) All particles of compound are of only one type.**

A mixture is made from different substances that are not chemically joined.

Compound:

- Two or more elements combine together chemically to form a new substance called compound.
- The different elements are chemically joined together.
- Compounds are homogeneous, i.e. their properties are the same throughout
- The compound has properties different from the elements it contains.
- It can only be separated into its elements using chemical reactions. (not using physical methods)
- During the formation of a compound from its elements, a certain amount of energy in the form of heat, light, electricity is either absorbed or evolved

**30. Ans. (d) 1 and 2**

There are two types of water hardness: temporary and permanent hardness.

Temporary hardness is due to the presence of calcium hydrogen carbonate  $\text{Ca}(\text{HCO}_3)_2(\text{aq})$  and magnesium hydrogen carbonate  $\text{Mg}(\text{HCO}_3)_2(\text{aq})$ .

**31. Ans. (d) Element with 18 protons and 22 neutrons**

Isobar: one of two or more atoms having equal atomic weights but different atomic numbers.

	Mass number	Electrons	Neutrons
Calcium	40	20	20
Argon	40	18	22

**32. Ans. (c) Principle of calorimetry**

Heat lost by hot object = Heat gained by cold object

where we ignore heat gained or lost from/to the surroundings. The study of heat gained and lost in this manner is often called Calorimetry.

**33. Ans. (c) 5/4 R**

$$R = \frac{\rho L}{A}$$

$\rho$  = resistivity  
 $L$  = length  
 $A$  = cross sectional area

So, resistance of Wire 2 is  $R/4$  as radius is half of wire 1, so area would be 4 times of wire 1.

Now for resistance in series.  $R = R_1 + R_2$ .

Therefore, Final  $R = R + R/4 = 5R/4$

**34. Ans. (d) scattering of light**

According to Rayleigh's law, the intensity of scattered light varies inversely as the fourth power of its wavelength.

Sunlight consists of seven colours. Of these, red has the maximum wavelength. During sunrise and sunset, the rays have to travel a larger part of the atmosphere because they are very close to the horizon.

Therefore, light other than red is mostly scattered away. Most of the red light, which is the least scattered, enters our eyes. Hence, the sun and the sky appear red.

**35. Ans. (C) A-2, B-4, C-1, D-3**

Cirrus clouds are formed at high altitudes (8,000 – 12,000m). They are thin and detached clouds having a feathery appearance. They are always white in colour.

Clouds with extensive vertical development are cumulus and cumulonimbus. And they cause heavy rainfall and thunderstorms.

Stratus clouds are the lowest forming and are often called fog or mists when they are earth-bound. Stratus clouds are formed when a large air mass cools at the same time (e.g. – a warm air parcel drifts into or above a cooler region). They are therefore, horizontally forming.

**36. Ans. (d) Navigation of ships and laying down submarine cables**

In the exclusive economic zone, the coastal nation has sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, including production of energy from the water, currents and winds.

However, In the exclusive economic zone, all nations, whether coastal or land-locked shall enjoy the freedom of navigation and overflight and of the laying of submarine cables and pipelines, and other internationally lawful uses of the sea. That means fourth right is not exclusive only for the coastal nations.

**37. Ans. (c) Gujarat, Odisha and West Bengal**

India Integrated Coastal Zone Management Project

- To conserve, project and manage the coastal and marine environment, the Ministry is implementing the India ICZM Project with the World Bank assistance.

- For the implementation of the project the Ministry has established a Society of Integrated Coastal Management (SICOM) as nodal body under the Society Registration Act, in Delhi.

- The ICZM Project is being implemented as pilot investments in the coastal states of Gujarat, Odisha and West Bengal.

- National activities are implemented through SICOM along with monitoring of activities carried out by three selected states.

- The project has four implementing agencies-MoEF at the national level with lead responsibilities, and the Departments of Forests and Environment (DoEF) of the three participating states.

**38. Ans. (a) 1 only**

National Water Academy (formerly known as Central Training Unit) was set up in Central Water Commission Opens in a new window by the Ministry of Water Resources, RD and GR, opens in a new window Govt. of India in the year 1988, to impart training to the in-service engineers of various Central/State organizations involved in the Development & Management of Water Resources.

It was established under USAID assistance and strengthened with the subsequent assistance received from the World Bank.

It is located at Pune.

**39. Ans. (c) >P**

Aluminum has a resistivity varying from  $2.65$  to  $2.82 \times 10^{-8} \Omega \text{ m}$ .

The resistivity of copper is generally given as:  $1.72 \times 10^{-8} \Omega \text{ m}$ .

So, since resistivity of aluminium is higher than that of copper, so Power dissipated will be greater than P. this is because rest of the factors ( $I$ ,  $A$  and  $l$ ) are constant.

**40. Ans. (a) Pascal's law**

Pascal's law is a principle in fluid mechanics that states that a pressure change occurring anywhere in a confined incompressible fluid is transmitted throughout the fluid such that the same change occurs everywhere.

This principle is stated mathematically as:

$$P = P + \rho gh$$

**41. Ans. (b) 1-4-2-3**

Composition of Dry Air (Substance, % by volume)

Nitrogen, N<sub>2</sub> 78.08

Oxygen, O<sub>2</sub> 20.95

Argon, Ar 0.93

Carbon dioxide, CO<sub>2</sub> 0.033

Neon, Ne 0.0018

Helium, He 0.00052

Methane, CH<sub>4</sub> 0.0002

Krypton, Kr 0.00011

Dinitrogen oxide, N<sub>2</sub>O 0.00005

Hydrogen, H<sub>2</sub> 0.00005

Ozone, O<sub>3</sub> 0.000001

**42. Ans. (a) Mizoram****Scheduled Tribes**

State with highest proportion of Scheduled Tribes	Mizoram (94.5 %)
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State with lowest proportion of Scheduled Tribes	Goa (0.04 %)
--	--------------

UT with highest proportion of Scheduled Tribes	Lakshadweep (94.5 %)
--	----------------------

UT with lowest proportion of Scheduled Tribes	A & N Islands (8.3 %)
---	-----------------------

**43. Ans. (d) Himalayas**

Volcanic mountains are very common along the destructive plate boundaries i.e. Oceanic-continental plate boundaries which are yet uncovered in the rock folded mountains formed due to continental –to continental plate collision.

The Himalayas are also a plate-to-plate collision tectonic boundary. In this case, the Indian Plate [of the Indian Subcontinent] is colliding head-on with the Eurasian Plate. Both plates are comprised of continental lithospheric crust, so there is no appreciable distinction in density.

**44. Ans. (d) Ling nut**

Karewa sediments are treasures of many human civilizations and habitations. In fact, the agriculture of the valley dominantly survives and sustains on Karewa soils. The world famous saffron from Pampore and apples from Shopian are best examples.

The famous almond orchids are best grown in the soils of karewas.

The karewas are mainly devoted to the cultivation of saffron, almond, walnut, apple and orchards. Ling nuts (singharas) grow throughout the East of India: West Bengal, Jharkhand, and Bihar are examples of such regions.

**45. Ans. (b) 2-1-3-4****46. Ans. (d) 1, 2, 3 and 4**

List of Natural World Heritage Sites. Name of UNESCO World Heritage Site, location, year of notification, and total area is as follows:

Sl. No.	Name of Natural World Heritage Site	State	Year of Notification
1	Kaziranga National Park	Assam	1985
2	Keoladeo Ghana National Park	Rajasthan	1985
3	Manas Wildlife Sanctuary	Assam	1985
4	Nanda Devi National Park and Valley of Flowers	Uttarakhand	1982 2005
5	Sunderbans National Park	West Bengal	1984
6	Western Ghats	Maharashtra, Goa, Karnataka, Tamil Nadu and Kerala	2012
7	Great Himalayan National Park	Himachal Pradesh	2014

**47. Ans. (a) A-4, B-3, C-2, D-1**

	Name of the Railway Zone	Zonal Headquarter
1	Central Railway	Mumbai
2	Eastern Railway	Kolkata
3	East Central Railway	Hajipur



4	East Coast Railway	Bhubaneshwar
5	Northern Railway	Baroda House, New Delhi
6	North Central Railway	Allahabad
7	North Eastern Railway	Gorakhpur
8	North Frontier Railway	Maligaon, Guwahati
9	North Western Railway	Jaipur
10	Southern Railway	Chennai
11	South Central Railway	Secunderabad
12	South Eastern Railway	Garden Reach, Kolkata
13	South East Central Railway	Bilaspur
14	South Western Railway	Hubli
15	Western Railway	Mumbai CST
16	West Central Railway	Jabalpur

**48. Ans. (c) Lymph is also circulated by the blood circulating heart.**

The lymphatic system is a complex system of fluid drainage and transport, and immune response and disease resistance.

Fluid that is forced out of the bloodstream during normal circulation is filtered through lymph nodes to remove bacteria, abnormal cells and other matter.

This fluid is then transported back into the bloodstream via the lymph vessels.

Lymph only moves in one direction, toward the heart.

**49. Ans. (b) Amphibia and Reptilia**

Mammalian and avian hearts have four chambers two atria and two ventricles.

Amphibians and reptiles, by contrast, have a three-chambered heart. The three-chambered heart consists of two atria and one ventricle.

Fish possess the simplest type of true heart a two-chambered organ composed of one atrium and one ventricle.

**50. Ans. (a) Lactic acid**

Muscle cramping is a common problem encountered by athletes and nonathletes alike. Defined as painful involuntary skeletal muscle contractions, cramps may be categorized as either nonexercise related or exercise related.

Traditionally, such cramping was believed to arise from dehydration, electrolyte imbalances (including magnesium, potassium and sodium), accumulation of lactic acid, or low cellular energy levels.

**51. Ans. (c) It typically has lower daily liquidity and higher fees than mutual fund shares.**

- An ETF, or exchange-traded fund, is a marketable security that tracks an index, a commodity, bonds, or a basket of assets like an index fund.

- Unlike mutual funds, an ETF trades like a common stock on a stock exchange.
- ETFs experience price changes throughout the day as they are bought and sold.
- ETFs typically have higher daily liquidity and lower fees than mutual fund shares, making them an attractive alternative for individual investors.

**52. Ans. (c) 65 years**

<http://pib.nic.in/newsite/PrintRelease.aspx?relid=173147>

In continuance of the several initiatives under taken by Pension Fund Regulatory and Development Authority (PFRDA) during the last few years to increase the pension coverage in the country, PFRDA has now increased the maximum age of joining under NPS-Private Sector (i.e. All Citizen and Corporate Model) from the existing 60 years to 65 years of age.

Now, any Indian Citizen, resident or non-resident, between the age of 60- 65 years, can also join NPS and continue up to the age of 70 years in NPS. With this increase of joining age, the subscribers who are willing to join NPS at the later stage of life will be able to avail the benefits of NPS.

**53. Ans. (d) Y. M. Deosthalee**

The Reserve Bank of India has constituted a 10-member 'High Level Task Force on Public Credit Registry (PCR) for India', which will, among other things, suggest a roadmap for developing a transparent, comprehensive and near-real-time PCR for India.

Headed by YM Deosthalee, ex-CMD, L&T Finance Holdings, the task force includes Sekar Karnam, DMD & Chief Credit Officer, SBI; Vishaka Mulye, ED, ICICI Bank; Rashesh Shah, Chairman and CEO, Edelweiss Group; and Sriram Kalyanaraman, MD and CEO, National Housing Bank.

<https://www.thehindubusinessline.com/money-and-banking/rbi-sets-up-task-force-on-public-credit-registry/article9920197.ece>

**54. Ans. (a) Iran**

October 2017: A press release from the Ministry of External Affairs (MEA) noted that the consignment would be the first to use the new route via **Chabahar (Iran)** to access Afghanistan, even as India plans similar transfers in the coming months.

The shipment of wheat is a landmark moment as it will pave the way for operationalisation of the Chabahar port as an alternative, reliable and robust connectivity for Afghanistan.

It will open up new opportunities for trade and transit from and to Afghanistan and enhance trade and commerce between the three countries (India, Iran and Afghanistan) and the wider region.

<http://www.thehindu.com/news/national/india-ships-wheat-to-afghanistan-via-chabahar/article19945498.ece>

**55. Ans. (a) 1 only**

With simple, diverse and growth-oriented offerings, IPPB aims to give every Indian access to efficient banking services.

Incorporated as a **Public-Sector Bank** under the Department of Posts with **100% GOI equity**, IPPB has launched on January 30th, 2017 in **Ranchi and Raipur** with the objective of being present in all corners of India by the end of the year.

**56. Ans. (d) 1, 2, 3 and 4**

The Commission performs the following functions, namely:

Inquire, Suo motu or on a petition presented to it by a victim or any person on his behalf, into complaint of

a) violation of human rights – this is extremely obvious

b) negligence in the prevention of such violation, by a public servant.

c) intervene in any proceeding involving any allegation of violation of human rights pending before a court with the approval of such court.

d) visit, under intimation to the State Government, any jail or any other institution under the control of the State Government, where persons are detained or lodged for purposes of treatment, reformation or protection to study the living conditions of the inmates and make recommendations.

e) review the safeguards provided by or under the Constitution or any law for the time being in force for the protection of human rights and recommend measures for their effective implementation.

f) review the factors, including acts of terrorism that inhibit the enjoyment of human rights and recommend appropriate remedial measures.

g) study treaties and other international instruments on human rights and make recommendations for their effective implementation.

h) undertake and promote research in the field of human rights.

i) spread human rights literacy among various sections of society and promote awareness of the safeguards available for the protection of these rights through publications, the media, seminars and other available means.

j) encourage the efforts of non-governmental organisations and institutions working in the field of human rights.

**57. Ans. (b) 1, 2, 3 and 4**

Disqualification of MP's and MLA's on the ground of holding office of profit is a controversial topic of nation-wide debate. It began with the disqualification of Samajwadi Party MP Jaya Bachchan from Rajya Sabha on March 17, 2006 with retrospective effect from July 14, 2004.

There are separate provisions of disqualification for the Members of Parliament and MLAs. Our constitution clearly mentions that the Parliament has the power to make a law in respect to the issue of qualification and disqualification of the membership in case:

(i) He holds any office of profit under the Government of India or of any state, other than an office declared by a law of Parliament not to disqualify its holder.

(ii) He is of unsound mind and stand so declared by a competent court.

(iii) He is an undischarged insolvent.

(iv) He is not a citizen of India or has voluntarily acquired the citizenship of a foreign state, or is under any acknowledgement or allegiance or adherence to a foreign state, and

(v) It is he so disqualified by or under any law of Parliament. It applies to the case of 'defection' as prescribed in tenth schedule.

**58. Ans. (c) At least four States**

Trinamool Congress became the 7th political party to be recognized as a National Party in September 2016.

Conditions for Recognition as a National Party	
1	Secure at least 6% of the valid vote in an Assembly or a Lok Sabha General Election in any four or more states and won at least 4 seats in a Lok Sabha General Election from any State or States
2	Win at least 2% of the total Lok Sabha seats in a Lok Sabha General Election and these seats have to be won from at least 3 states
3	The party is recognized as a State Party in at least four states

**59. Ans. (b) It is under the administrative control of the Department of Space.**

Antrix Corporation Limited (ACL), Bengaluru is a wholly owned Government of India Company under the administrative control of the Department of Space.

Antrix Corporation Limited was incorporated as a private limited company owned by Government of India in September 1992 as a Marketing arm of ISRO for promotion and commercial exploitation of space products, technical consultancy services and transfer of technologies developed by ISRO.

As the commercial and marketing arm of ISRO, Antrix is engaged in providing Space products and services to international customers worldwide.

**60. Ans. (b) 1, 2 and 3**

Verses ascribed to Kabir have been compiled in three distinct but overlapping traditions. The Kabir Bijak is preserved by the Kabirpanth (the path or sect of Kabir) in Varanasi and elsewhere in Uttar Pradesh, the Kabir Granthavali is associated with

the Dadupanth in Rajasthan, and many of his compositions are found in the Adi Granth Sahib. Bijak is the best known of the compilations of the Kabir, and as such is the holy scripture for followers of the Kabirpanthi religion. The Bijak, an anthology of Kabir's verses compiled in Eastern Uttar Pradesh and/or Bihar, is one of Kabir's most influential works.

In the case of the Guru Granth Sahib, Kabir's poems were collected to be sung and are organized in ragas.

**61. Ans. (d) 1, 2 and 3**

Sufi silsilas began to crystallise in different parts of the Islamic world around the twelfth century.

The word silsila literally means a chain, signifying a **continuous link between master and disciple**, stretching as an unbroken spiritual genealogy to the Prophet Muhammad.

It was through this channel that spiritual power and blessings were transmitted to devotees.

Special rituals of initiation were developed in which initiates took an oath of allegiance, wore a patched garment, and shaved their hair. **Thus, all statements are correct.**

**62. Ans. (b) Purusha Sukta**

- surya sukta-- a hymn in the praise of the sun god
- dana stuti-- these are hymns in the praise of those who donate
- urna sutra-- is the dot/mark on the forehead that is put before performing rituals.
- purusha sukta--- contains hymns about marriage ceremonies

**63. Ans. (d) 2 only**

Non-Brahmin lower caste movement took place in Madras and Maharashtra

Karnataka was not affected by the NCM. There was labour unrest in Assam, Bengal and Madras

Statement 4 is incorrect as after the Chauri-Chaura incident the movement was completely stopped.

**64. Ans. (d) Italy**

World food India is shaping up to be one of the premier food exhibitions for the food processing industry in India.

An initiative of the Indian government, this year's edition is set to feature 400+ exhibitors both local and international.

**Italy** due to its excellence in all aspects of the food processing chain will be a focus country.

**65. Ans. (c) Goa**

The Department of Biotechnology (DBT) of the Ministry of Science and Technology, Government of India, has collaborated with Nobel Media AB, Sweden to hold the Nobel Prize Series in India for five years.

The second edition of the Nobel Prize Series - India 2018 will be **held at Panjim, Goa** in partnership with Government of Goa on February 1-2, 2018. It will start on February 1, 2018 with the formal inauguration of the Nobel Prize Series - India 2018, Science Exhibition by the Hon'ble Chief Minister Mr. Manohar Parrikar.

**66. Ans. (b) philately**

Minister of Communications Shri Manoj Sinha today launched a Pan India scholarship program for school children called Deen Dayal SPARSH Yojana to **increase the reach of Philately.**

Under the scheme of SPARSH (Scholarship for Promotion of Aptitude & Research in Stamps as a Hobby), it is proposed to award annual scholarships to children of Standard VI to IX having good academic record and also **pursuing Philately** as a hobby through a competitive selection process in **all postal circles.**

The Minister said that to avail this scholarship, a child must be a student of a recognized school within India and the concerned school should have a Philately Club and the candidate should be a member of the Club.

<http://pib.nic.in/newsite/PrintRelease.aspx?relid=173212>

**67. Ans. (b) Sri Ranganathaswami Temple, Srirangam**

<http://www.thehindu.com/news/national/tamil-nadu/srirangam-temple-wins-unesco-award/article19976575.ece>

The massive renovation and restoration effort at the Sri Ranganathaswamy Temple in Srirangam has won the UNESCO Asia Pacific Award of Merit 2017 for cultural heritage conservation.

**68. Ans. (b) China**

- The 2017 Women's Hockey Asia Cup was the ninth Hockey Asia Cup for women.
- It was held from 28 October to 5 November 2017 in Kakamigahara, Gifu, Japan.
- The winner of this tournament qualified for the 2018 World Cup in England.
- India won their second title, **after beating China** in the final

**69. Ans. (d) In the Maritime Agenda, 2010-2020, a target of 300 MT Port capacity has been set for the year 2020.**

Statement 1 and 3 are factual and are correct.

The Maritime Agenda projects a total traffic of 2494.95 million tonnes for all major and non-major ports taken together and a capacity of 3280.04 million tonnes. Hence, statement 4 is incorrect.

**70. Ans. (d) The Commonwealth Heads of Government Meeting (CHOGM) was held in 2016 at Malta.**

The Commonwealth Heads of Government Meeting is held every 2 years. It is the association's ultimate policy and decision-making forum.

The November 2015 Meeting, to be held in Malta, had the theme of 'Commonwealth – Adding Global Value'.

**71. Ans. (a) 91st Amendment**

On July 7, the 91st Amendment to the Constitution, limiting the size of the Council of Ministers at the Centre and the States to no more than 15 per cent of the numbers in the Lok Sabha or the State Legislature, came into effect.

**72. Ans. (b) 1, 2 and 3**

After the Mumbai attacks in 2008, there has been a paradigm shift in the maritime security apparatus that increased emphasis on surveillance, intelligence gathering and information sharing amongst the various stakeholders to ensure an effective response to any emerging situation.

In Feb 2009, the Indian Coast Guard (ICG) was additionally designated as the authority responsible for **coastal security in territorial waters**, including areas to be patrolled by the Coastal Police.

The Coast Guard is also responsible for **overall coordination** between Central and State agencies in matters relating to Coastal Security.

In order to achieve **near gap-free surveillance** of the entire coastline, 38 additional Radar Stations and 08 Mobile Surveillance Systems are being installed.

**73. Ans. (c) Nirbhay**

Nirbhay missile is India's first indigenously designed and developed long range sub-sonic cruise missile. It is designed and made by DRDO (Defence Research & Development Organisation).

The Nirbhay missile can be deployed from multiple platforms.

**74. Ans. (d) Shri P. D. Siwal**

Power Ministry constitutes a Committee to investigate into the causes of the NTPC, Unchahar Thermal Power Plant accident

The composition of the committee would be as follows:

S. No	Name	Position
1	Shri P.D. Siwal, Member (Thermal), CEA	Chairman
2	Shri Subir Chakraborty, Director (Projects), UPRVUNL	Member
3	Shri Dhawal Prakash Antapurkar, Director of Steam Boilers, Maharashtra	Member
4	Dr. L.D. Papney, Chief Engoneer, (TE&TD), CEA	Member & Convenor

**75. Ans. (b) Dheeraj Jindal**

<http://www.tribuneindia.com/news/nation/indian-short-film-the-school-bag-wins-award-in-montreal/493389.html>

Indian short film 'The School Bag', which tells a story based in Pakistan, has won the Best Short Film Award at the South Asian Film Festival of Montreal (SAFFM).

It is directed by Dheeraj Jindal.

**76. Ans. (a) 48 kg**

Indian sporting legend M.C. Mary Kom (48kg) clinched an unprecedented fifth gold medal but Sonia Lather (57kg) settled for silver at the ASBC Asian Confederation women's boxing championships.

This was Mary Kom's first international gold medal since the 2014 Asian Games.

**77. Ans. (b) Caring for the Planet starts from the Ground**

World Soil Day 2017 is celebrated on 5 December under the theme "Caring for the Planet starts from the Ground," with activities aiming to communicate messages on the importance of soil quality for food security, healthy ecosystems and human well-being.

Soils not only produce 95% of the food we consume, they also have a huge potential for taking carbon from the atmosphere and offsetting the greenhouse gas emissions.

Keeping the soil healthy can bring a multitude of gains, from food security to sustainable livelihoods and climate benefits.

**78. Ans. (b) H. S. Prannoy**

H S Prannoy has won the men's singles title at the 82nd Senior National Championship Senior National Badminton Championships in Nagpur, Maharashtra on November 8, 2017. He defeated higher ranked Kidambi Srikanth in the final by 21-15, 16-21, 21-7.

**79. Ans. (c) Both 1 and 2**

The ancient Greek word "bárbaros," from which it derives, meant "babbler,".

In the Greek ear, speakers of a foreign tongue made unintelligible sounds ("bar bar bar").

Similar words exist in other Indo-European languages, including the Sanskrit "barbara," which means "stammering."

The word "barbarian" originated in ancient Greece and was initially used to describe all non-Greek-speaking peoples, including Persians, Egyptians, Medes and Phoenicians.

**80. Ans. (d) Hujwiri's conversation with the Yogis shows that he was impressed with their theory of the division of the human body**

According to al-Biruni, the sufi theories of the soul were similar to those in Patanjali's Yoga Sutra. Like the Yoga Sutra, sufi works also stated that 'the bodies are the snares of the souls for the purpose of acquiring recompense'.

Al-Biruni also identifies the sufi doctrine of divine love as self-annihilation with parallel passages from the Bhagavad Gita.

There was also much exchange of ideas between the Sufis and Indian yogis. In fact the hatha-yoga treatise Amrita Kunda was translated into Arabic and Persian, So C is right.

Hujwiri was known as Datta Ganj Baksh. Hujwiri comments that before he settled in Lahore some sufis believed in theories that he calls brahmanical. According to Hujwiri they wrongly believed that 'annihilation (fand') signifies loss of essence and destruction of the personality, and that subsistence (baqa) indicates the subsistence of God in man.

### 81. Ans. (a) Francisco Pelsaert

But while the average Mughal farmer produced more than in later times, he most probably produced less than in earlier times.

On the whole, the Mughal period was marked by agricultural stagnation, if not slump. The per capita yield was declining, and the average man in Mughal India probably had less to eat than before.

'The surplus income left to the peasant was tending to decrease, where it had not already vanished,' says Moreland.

'The provinces,' says Pelsaert, 'are so impoverished that a jagir which is reckoned to be worth 50,000 rupees, may sometimes not yield even 25,000, although so much is wrung from the peasants, that even dry bread is scarcely left to fill their stomachs.'

### 82. Ans. (a) Ginan

Ginans are devotional hymns or poems recited by Shia Ismaili Muslims.

Although ginans can be recited, studied, and listened to by non-Nizari Ismailis, ginans hold a special role in the cultural practice and rituals of Nizari Ismailis, specifically the community of Khojas, a caste of south asians of whom the majority now identify as Nizari Ismaili.

### 83. Ans. (a) Alvars

The Nalayira Divya Prabandham is a collection of 4,000 Tamil verses composed by the 12 Alvars and was compiled in its present form by Nathamunigal during the 9th - 10th centuries.

These were sung by the Alvars in **devotional** ecstasy in varrious shirineas of Vishnu, made famous as Magalashasana sthalas.

**84. Ans. (c) Flying Officer, Flight Lieutenant, Squadron Leader, Group Captain, Wing Commander, Air Commodore, Air Vice Marshal, Air Marshal, Air Chief Marshal**

Army	Air Force	Navy
*Field Marshal	*Marshal of the Air Force	*Admiral of the fleet
General	Air Chief Marshal	Admiral
Lt. General	Air Marshal	Vice Admiral
Major General	Air Vice Marshal	Rear Admiral
Brigadier	Air Commodore	Commodore
Colonel	Group Captain	Captain
Lt. Colonel	Wing Commander	Commander
Major	Squadron Leader	Lt. Commander
Captain	Flight Lieutenant	Lieutenant
Lieutenant	Flying Officer	Sub Lieutenant

### 85. Ans. (a) 1, 2 and 3

The Attorney General is responsible for giving advice to the Government of India upon such legal matters and to perform such other duties of legal character as may be referred or assigned to him by the President.

The Attorney General has the right of audience in all Courts in India as well as the right to participate in the proceedings of the Parliament, though not to vote.

The Attorney General appears on behalf of Government of India in all cases (including suits, appeals and other proceedings) in the Supreme Court in which Government of India is concerned.

He also represents the Government of India in any reference made by the President to the Supreme Court under Article 143 of the Constitution.

The Attorney General for India is appointed by the President of India under Article 76(1) of the Constitution of India and holds office during the pleasure of the President. He must be a person qualified to be **appointed as a Judge of the Supreme Court. So, statement 4 is incorrect.**

### 86. Ans. (b) 36th

**The 35th constitutional Amendment Act (1975):** Terms and Conditions for the Incorporation of Sikkim into the Union of India.

**The 37th constitutional Amendment Act (1975):** Formation of Arunachal Pradesh legislative assembly.

**The 38th constitutional Amendment Act (1975):** Enhances the powers of President and Governors to pass ordinances.

**The 36th constitutional Amendment Act (1975):** Formation of Sikkim as a State within the Indian Union.

### 87. Ans. (b) Hong Kong

Originally designed for Taiwan, Beijing applied the "One Country, Two Systems" principle to Hong Kong on July 1, 1997 when sovereignty of the territory was passed from Britain to China.

But "One Country, Two Systems," which guarantees a degree of autonomy under Chinese supervision, isn't applicable to Taiwan. The island has evolved into a self-ruled, hyper-democracy that enjoys de facto operational independence

**88. Ans. (d) The maximum number of members in the Council of Ministers of Delhi can be 15 percent of the total number of members in the Legislative Assembly.**

There shall be a Council of Ministers consisting of **not more than ten per cent (a special provision for Delhi as against the 15 percent clause under 91<sup>st</sup> Amendment Act)** of the total number of members in the Legislative Assembly, with the Chief Minister at the head to aid and advise the Lieutenant Governor in the exercise of his functions in relation to matters with respect to which the Legislative Assembly has power to make laws.

**89. Ans. (b) 1 and 2 only**

India unveiled the third National Wildlife Action Plan for 2017-2031. The plan was unveiled by environment minister Dr Harsh Vardhan on the inaugural day of the Global Wildlife Programme (GWP) conference

The third National Wildlife Action Plan is unique as this is the first time India has recognised the concerns relating to climate change impact on wildlife and stressed on integrating actions that need to be taken for its mitigation and adaptation into wildlife management planning processes.

The plan adopts a "landscape approach" in conservation of all wildlife.

The government has also underlined an increased role of private sector in wildlife conservation.

The plan has 5 components, 17 themes, 103 conservation actions and 250 projects.

**90. Ans. (a) Natural gas**

<http://pib.nic.in/newsite/printrelease.aspx?relid=148122>

**Coal**

Coal production (weight: 4.38 %) **increased** by 12.0 % in June 2016 over June 2015. Its cumulative index during April to June 2016-17 increased by 5.4 % over corresponding period of previous year.

**Natural Gas**

The Natural Gas production (weight: 1.71 %) **decreased** by 4.5 % in June 2016 over June 2015. Its cumulative index during April to June 2016-17 declined by 6.1 % over the corresponding period of previous year.

**Refinery Products (93% of Crude Throughput)**

Petroleum Refinery production (weight: 5.94%) **increased** by 3.5 % in June 2016 over June 2015. Its cumulative index during April to June 2016-17 increased by 7.1 % over the corresponding period of previous year.

**Fertilizers**

Fertilizer production (weight: 1.25%) **increased** by 9.8 % in June 2016 over June 2015. Its cumulative index during April to June 2016-17 increased by

11.0 % over the corresponding period of previous year.

**91. Ans. (b) Infosys Technologies Limited**

eBiz – India's Government-to-Business (G2B) portal was conceptualized with support from National Institute of Smart Government (NISG) as the consulting partner and developed by M/s. Infosys Ltd., Bangalore in a Public Private Partnership (PPP) Model for a period of 10 years.

Through eBiz portal, a business user can fill the e-Forms online/offline, upload the attachments, make payment online and submit the forms for processing of the department.

**92. Ans. B, 1 and 2 only**

The Olive ridley turtles are the smallest and most abundant of all sea turtles found in the world, inhabiting warm waters of the Pacific, Atlantic and Indian oceans.

These turtles, along with their cousin the Kemps ridley turtle, are best known for their unique mass nesting called Arribada, where thousands of females come together on the same beach to lay eggs.

Though found in abundance, their numbers have been declining over the past few years, and the species is recognized as Vulnerable by the IUCN Red list.

The coast of Orissa in India is the largest mass nesting site for the Olive-ridley, followed by the coasts of Mexico and Costa Rica.

**93. Ans. C, Mahatma Gandhi**

According to Gandhiji,

A sound body means one which bends itself to the spirit and is always a ready instrument at its service. Such bodies are not made, in my opinion, on the football field. They are made on cornfields and farms.

**94. Ans. (a) Mahatma Gandhi**

The Phoenix Settlement, established by Gandhiji near Durban in 1904, was formally reopened on February 27, 2000, at a ceremony attended by the President of South Africa, the Zulu King Goodwill Zwelithini and many other leaders.

The settlement - the first Ashram of Gandhiji - had been damaged in 1985 riots when some African squatters occupied much of the settlement and named it Bambayi.

Though the Indian community was deeply distressed, it refrained from seeking the forcible eviction of the squatters.

The Phoenix Settlement Trust, with financial assistance from the Government of India, recently restored Gandhiji's house and established a clinic, an HIV/Aids Centre and other facilities to serve all the people in the area, African and Indian

**95. Ans. A, Mahanavami Dibba**

Dasara Dibba or the Mahanavami Dibba is a beautiful stone platform located within the Royal Enclosure of Hampi.

It was built during the Vijayanagara period by King Krishnadevaraya to commemorate his victory over Udaygiri.

It was here where the King of Vijayanagar used to celebrate the festival of Dasara (Dussehra).

**96. Ans. A, Shihabuddin Suhrawadi**

Abul Fazl placed Mughal kingship as the highest station in the hierarchy of objects receiving light emanating from God (farr-i izadi).

Abul Fazl was inspired by a famous Iranian Sufi, Shihabuddin Suhrawardi who first developed this idea.

According to this idea, there was a hierarchy in which the Divine Light was transmitted to the king who then became the source of spiritual guidance for his subjects.

**97. Ans. D, Mahavamsa**

The contents of the Mahavamsa can be broadly divided into four categories:

**The Buddha's Visits to Ceylon:** This material recounts three legendary visits by the Buddha to the island of Ceylon.

**Chronicles of Kings of Ceylon:** This material consists of genealogies and lineages of kings of Ceylon, sometimes with stories about their succession or notable incidents in their reigns

**History of the Buddhist Sangha:** This section of the Mahavamsa deals with the mission sent by Emperor Ashoka to Ceylon, the transplantation of the bodhi tree, and the founding of the Mahavihara. It includes the names of prominent monks and nuns in the early Sri Lankan sangha. It also includes accounts of the early Buddhist councils and the first recording of the Pali canon in writing.

**Chronicles of Ceylon:** This material begins with the immigration of King Vijaya from India with his retinue and continues until the reign of King Mahasena, recounting wars, succession disputes, building of stupas and reliquaries, and other notable incidents.

**98. Ans. c) They were located in rural areas.**

A stupa is a mound-like or hemispherical structure containing relics that is used as a place of meditation.

Buddhist sources claim that during the 3rd century BCE, the Mauryan Emperor Ashoka the Great ordered these eight stupas to be opened, further distributed the relics of the Buddha into 84,000 portions, and had stupas built over them all over the expanding Buddhist world.

They were located on trade routes in order to propagate Buddhism.

However, there were no evidence of them being located in rural areas.

**99. Ans. (a) West Bengal**

West Bengal: 295

Bihar: 243

Madhya Pradesh: 231

Tamil Nadu: 235

**100. Ans. d) Neither 1 nor 2**

The State Executive has temporary law-making power in emergent situations under the Constitution of India. And the Governor is the head of the State Executive. So, the ordinance making power confers on him by the Constitution itself. But this is not a discretionary power.

The ordinance making power of the Governor is co-extensive with the legislative power of the State Legislature to make laws. He can promulgate ordinances only on the subjects on which the State Legislature has power to make laws under the Constitution.

**101. Ans. a) Inauguration of the SWIFT system of electronic interbank fund transfer worldwide-1985**

- SWIFT was founded in the 1970s, based on the ambitious and innovative vision of creating a global financial messaging service, and a common language for international financial messaging.
- The Uruguay Round was the 8th round of multilateral trade negotiations (MTN) conducted within the framework of the General Agreement on Tariffs and Trade (GATT), spanning from 1986 to 1994 and embracing 123 countries as "contracting parties".
- The World Trade Organization (WTO) is an intergovernmental organization that regulates international trade. The WTO officially commenced on 1 January 1995 under the Marrakesh Agreement.
- Founded by the National Association of Securities Dealers, the NASDAQ began trading on February 8, 1971, as the world's first electronic stock market.

**102. Ans. d) 1, 2 and 3 only**

At present, the ITBP has 62 (including 4 service battalions) operational battalions which has close to 62,000 personnel and officers in them. So 4<sup>th</sup> statement is incorrect.

The Indo-Tibetan Border Police (ITBP) is one of the five Central Armed Police Forces of India, raised on 24 October 1962, under the CRPF Act, in the wake of the Sino-Indian War of 1962.

**103. Ans. a) International Covenant on Civil and Political Rights**

The International Bill of Human Rights has been further supplemented by various other international treaties, conventions and declarations. They are usually regarded as "human rights instruments". The important among them are as follows....

- Convention on the Elimination of All Forms of Discrimination Against Women (1979)
- Declaration on the Right to Development (1986)
- Convention on the Rights of Persons with Disabilities (2006).

**104. Ans. (c) Voter Verifiable Paper Audit Trail**

Voter Verifiable Paper Audit Trail (VVPAT) machines are used during election process to verify that the vote polled by a voter goes to the correct candidate. VVPATs are a second line of verification particularly and are particularly useful in the time when allegations around Electronic Voting Machines' tampering crop up.

**105. Ans. (d)**

The major objective of the PMKSY is to achieve

- convergence of investments in irrigation at the field level,
- expand cultivable area under assured irrigation (Har Khet ko pani),
- improve on-farm water use efficiency to reduce wastage of water,
- enhance the adoption of precision-irrigation and other water saving technologies (More crop per drop),
- enhance recharge of aquifers and introduce sustainable water conservation practices by exploring the feasibility of reusing treated municipal based water for peri-urban agriculture and attract greater private investment in precision irrigation system.

**106. Ans. (a) It is a scheme for mentoring first generation entrepreneurs.**

The objective of the Niryat Bandhu Scheme is to reach out to the new and potential exporters and mentor them through orientation programmes, counselling sessions, individual facilitation, etc., for being able to get into international trade and boost exports from India.

**107. Ans. (a) It is a placement-linked skill training programme exclusively for rural girls.**

The Ministry of Rural Development (MoRD) announced the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) Antyodaya Diwas, on 25th September 2014.

DDU-GKY is a part of the National Rural Livelihood Mission (NRLM), tasked with the dual objectives of adding diversity to the incomes of rural poor families and cater to the career aspirations of rural youth.

DDU-GKY is uniquely focused on rural youth between the ages of 15 and 35 years from poor families.

Over 180 million or 69% of the country's youth population between the ages of 18 and 34 years, live in its rural areas. Of these, the bottom of the pyramid youth from poor families with no or marginal employment number about 55 million.

**108. Ans. (b) Sri Lanka**

The Hambantota Port (also known as the Port of Hambantota) is a maritime port in Hambantota, Sri Lanka.

<http://www.thehindu.com/news/international/sri-lanka-formally-hands-over-hambantota-port-on-99-year-lease-to-china/article21380382.ece>

**109. Ans. A**

<http://pib.nic.in/newsite/PrintRelease.aspx?relid=177177>

The Union Ministry of Shipping has extended period of Coastal Berth scheme of flagship Sagarmala Programme for three years upto March, 2020. Besides, its scope was also expanded to cover capital dredging at Major Ports and preparation of detailed project report (DPR) for coastal berth project.

The projects under Coastal Berth Scheme are distributed over eight states with highest number of projects in Maharashtra (12 projects), Andhra Pradesh and Goa (10 projects), Karnataka (6 projects), Kerala and Tamil Nadu (3 projects), Gujarat (2 projects) and West Bengal (1 project).

**110. Ans. (c) The Indian Council of Agricultural Research is the national implementing entity for the fund.**

Government has established the National Adaptation Fund on Climate Change (NAFCC) with a budget provision of Rs.350 crores for the year 2015-16 and 2016-17, with an estimated requirement of Rs.181.5 crores for financial year 2017-18.

The objective of the fund is to assist State and Union Territories that are particularly vulnerable to the adverse effects of climate change in meeting the cost of adaptation.

The National Bank for Agriculture and Rural Development (NABARD) has been appointed as National Implementing Entity (NIE) responsible for implementation of adaptation projects under the (NAFCC).

**111. Ans. (b) Bangladesh**

Closing ceremony for the seventh Indo-Bangladesh joint exercise SAMPRITI was held at Counter Insurgency and Jungle Warfare School, Vairengte in Mizoram.

Exercise SAMPRITI is an important bilateral defence cooperation endeavour between India and Bangladesh.

The exercise is aimed at strengthening and broadening the aspects of interoperability and cooperation between the Indian and Bangladesh Armies while working together in a counter-insurgency and counter-terrorism environment under the UN mandate.



**112. Ans. (a) sexual harassment in the workplace**

Vishakha and others v State of Rajasthan was a 1997 Indian Supreme Court case where Vishakha and other women groups filed Public Interest Litigation (PIL) against State of Rajasthan and Union of India to enforce the fundamental rights of working women under Articles 14, 19 and 21 of the Constitution of India.

The court decided that the consideration of "International Conventions and norms are significant for the purpose of interpretation of the guarantee of gender equality, right to work with human dignity in Articles 14, 15, 19(1)(g) and 21 of the Constitution and the safeguards against sexual harassment implicit therein.

**113. Ans. B**

The Summit at Sanya will mark the admission of South Africa to the group, which will extend the geographic representation of the mechanism in a moment when the financial system reform is sought worldwide, as well as a greater democratization of global governance in general.

On 14 April 2011, 3rd BRICS (Brazil, Russia, China and South Africa) Summit is to be held in the Chinese city of Sanya, alongside the President of China, Hu Jintao, the President of Russia, Dmitri Medvedev, the Prime Minister of India, Manmohan Singh, and the President of South Africa, Jacob Zuma.

The previous Summits were held in Yekaterinburg (June 2009) and Brasília (April 2010).

**114. Ans. (d) James Prinsep**

The inscriptions of Asoka were first deciphered by James Prinsep in 1837. They are written in Pali language and in some places Prakrit was used. The Brahmi script was employed for writing.

In the northwestern India Asokan inscriptions were found in Karoshti script.

**115. Ans. (c) 1 and 2**

The first 2 statements are true with respect to the Brahmadeya Grants during 600-1200 AD.

**116. Ans. (b) Sathanar**

One of the finest jewels of Tamil poetry, the epic poem Manimekalai was written by Sathanar in 2nd century A.D.

It is unique for the deep spirituality and mysticism it unfolds against the historical and geographical background of South India and of adjacent Jaffna.

**117. Ans. B**

The Elephanta Caves are located in Western India on Elephanta Island (otherwise known as the Island

of Gharapuri), which features two hillocks separated by a narrow valley.

The name Ardhhanarishvara (famous statue of Elephanta) means the Lord Who is half woman, Ardhhanarishvara is also known by other names. The Gupta-era writer Pushpadanta in his Mahimnastava refers to form as dehardhaghatana. Utpala, commenting on the Brihat Samhita, calls this form Ardha-gaurishvara, the Vishnudharmottara Purana simply calls this form Gaurishvara.

Buddhist caves in Elephants and the caves built by the followers of Pashupata cult (a Shaivite Hindu school).

The island and its resident caves received the name 'Elephanta' from Portuguese invaders after the discovery of a black stone sculpture of an elephant on the island.

**118. Ans. (d) 1 and 4**

Statements 1 & 4 are true with respect to Sir Syed Ahmad Khan.

**119. Ans. (c) Both 1 and 2**

Only if either demand or supply was either completely elastic or inelastic will the tax burden fall entirely on either the buyer or the seller.

Between these 2 extremes, tax incidence varies continuously from a perfectly inelastic supply or perfectly elastic demand, where the sellers assumes the entire burden of the tax to the perfectly elastic supply or perfectly inelastic demand where the buyers bear the entire burden.

To better see how the elasticity of supply and demand affects tax incidence, consider a 20% tax on a can of soda. Suppose the government decides that the buyer should pay the 20% tax. Does this mean that the buyers will be paying 20% more, or will sellers have to share some of the tax burden? Since higher prices decrease demand, regardless of the reason for the higher prices, sellers will share some of the burden. How much of the burden will be determined by the elasticity of supply and demand for the product?

**120. Ans. (b) diminish**

Economists use the concept of marginal utility to measure happiness and pleasure and how that affects consumer decision making. They have also identified the law of diminishing marginal utility, which means that the first unit of consumption of a good or service has more utility than the next units of consumption.

Hence, the marginal utility of the good diminishes as the amount of good consumed increases.