

**10 POINTER**  
Your Study Companion

# BPSC

## Previous Year Papers

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1.Which of the following smart cities has become India's first city to run on 100% renewable energy during the daytime?

- A. Bengaluru
- B. Jaipur
- C. Indore
- D. Diu
- E. None of the above

Answer ||| D

Solution ||| Diu has become India's first smart city that runs on 100% renewable energy during the daytime. In September 2016 Diu become the first city in India to run entirely on solar energy during the day and setting a new benchmark for other cities to become clean and green.

2.Mahmoud Abu Zeid has won the 2018 UNESCO/ Guillermo Cano World Press Freedom Prize He hails from which country?

- A. Israel
- B. Iraq
- C. Iran
- D. Egypt
- E. None of the above

Answer ||| D

Solution ||| Mahmoud Abu Zeid has won the 2018 UNESCO/Guillermo Cano World Press Freedom Prize. Mahmoud Abu Zeid is an Egyptian photojournalist.

3.The bilateral military exercise 'Harimau Shakti 2018' has been conducted between India and which country?

- A. Indonesia
- B. Malaysia
- C. New Zealand
- D. South Korea
- E. None of the above

Answer ||| B

Solution ||| The bilateral military exercise 'Harimau Shakti 2018' has been conducted between India and Malaysia. The first ever bilateral joint military training exercise Harimau Shakti 2018 between India and Malaysia began in dense forests of Sengai Perdik, Hulu Langat, Malaysia. The exercise aims at bolstering cooperation and coordination between armed forces of both nations.

4.Which Union Ministry has launched the Second Edition of the 'Unnat Bharat Abhiyan'?

- A. The Ministry of Home Affairs
- B. The Ministry of Agriculture and Farmers Welfare
- C. The Ministry of Human Resource Development
- D. The Ministry of Rural Development
- E. None of the above

Answer ||| C

Solution ||| The ministry of human resource development has launched the second edition of Unnat Bharat Abhiyan Government of India programme to uplift rural India. The programme is being launched in collaboration with the Indian Institutes of Technology (IITs) and National Institute of technology (NITS) National Institute of technical teachers Training and Research (NITTTR) and others engineering institutes.

5.Which Union Ministry in collaboration with Google India has launched a 360 Virtual Reality (VR) video of 'Incredible India'?

- A. The Ministry of Electronics and Information Technology
- B. The Ministry of Information and Broadcasting
- C. The Ministry of Social Justice and Empowerment
- D. The Ministry of Tourism
- E. None of the above

Answer ||| D

Solution ||| The ministry of Tourism in collaboration with Google India has launched a 360 ° virtual reality (V.R.) video of "Incredible India". Google Arts culture has partnered with the Ministry of Tourism to open a 360 ° virtual reality video for global. The video showcases a 360 ° view of some of the most iconic destination in India including Delhi's Qutub Minar,

Amritsar's Golden temple, Hampi's Vitthala temples, and Goa's easy-going vibe.

6.Which city hosted India's first ever nationwide food archaeology conference 'ArchaeoBroma'?

- A. Mumbai
- B. New Delhi
- C. Indore
- D. Surat
- E. None of the above

Answer ||| A

Solution ||| Mumbai hosted India's first ever nationwide food archaeology conference Titled as "Archaeo Broma". It was the first Nationwide conference on the Archaeology, Anthropology, Sociology of food is the first such conference held in India and discussed the history archaeology and sociology of food. The conference was held at the Indian study centre (INSTUCEN) and the centre for extra-mural studies (CEMS) of the University of Mumbai.

7.What is India's rank in the 2018 World Press Freedom Index [WPFI]?

- A. 136th
- B. 138th
- C. 135th
- D. 137th
- E. None of the above

Answer ||| B

Solution ||| India ranked 138th in the 2018 world press freedom Index (WPFI) amongst 180 countries. The index is released by France-based international non-governmental organisation report without borders (REB)or reporters sans frontiers. (RSF). Norway is ranked 1st. The index parameters include media pluralism and independence respect for the safety and freedom of journalists and the legislative, institutional and infrastructural environment in which the media operate. Declared by united nations general assembly the day of 3rd March is celebrated as WPF in every year.



8.Which institute has been awarded the 2018 National Intellectual Property Award in the category Top R & D Institution / Organization for Patents and Commercialization?

- A. The Council of Scientific and Industrial Research
- B. The Indian Space Research Organization
- C. The Bhabha Atomic Research Centre
- D. The Defence Research and Development Organization
- E. None of the above

Answer ||| A

Solution ||| Intellectual Property Award in the category Top R & D Institution / Organization for Patents and Commercialization. The council of scientific & industrial research is a contemporary R&D organisation. It has been ranked 9th in the world amongst the 1207 government institutions & overall global ranking 75 in the world.

9.Which State has topped the list of States with the most number of beggars, as per data released by the Union Ministry of Social Justice?

- A. West Bengal
- B. Andhra Pradesh
- C. Bihar
- D. Uttar Pradesh
- E. None of the above

Answer ||| A

Solution ||| West Bengal has topped the list of state with the highest number of beggars, as per data released by the union ministry of social justice. As per the data released by the union ministry of social justice, there are four lakh beggars in total. The West Bengal, topping the chart with 81,224 beggars, was followed by Uttar Pradesh, Andhra Pradesh, Bihar, Madhya Pradesh and Rajasthan.

10.Which district has become India's first district to have 100% solar powered health centres?

- A. Kolkata
- B. Chennai
- C. Bengaluru
- D. Surat
- E. None of the above

Answer ||| D

Solution ||| Surat district has become India's first district to have 100% solar powered primary health centres. There is a total of 52 PHCs in the district and all of them are now powered by the solar system. It will help bring down the electricity bill by 40% and also help to fight with global warming.

11.Which Indian sports person had bagged Gold in the Men's 25 m Rapid Fire Pistol Event at the 2018 ISSF Junior Shooting World Cup in Sydney?

- A. Rajkanwar Singh
- B. Anhad Jawanda
- C. B. Sainath
- D. Anish Bhanwala
- E. None of the above

Answer ||| D

Solution ||| Anish Bhanwala had bagged gold in the men's 25 m rapid fire pistol event at the 2018 ISSF Junior Shooting World Cup in Sydney. He belongs to Karnal Haryana in commonwealth game 2018 Anish won a gold medal for India and became the youngest India to win a gold medal in Commonwealth game at an early age of 15 years. In ISSF Junior World Championship 2017, Anish won two gold, two silver and one bronze for India.

12.Which State Government has signed a pact with Airport Authority of India (AAI) to develop villages in Kamrup?

- A. West Bengal
- B. Mizoram
- C. Nagaland
- D. Assam
- E. None of the above

Answer ||| D

Solution ||| Assam has signed a pact with Airport Authority of India [AAI] to develop villages in Kamrup. The Airport Authority of India today signed a MoU with Assam government under its corporate social responsibilities (CSR) initiative for the sustainable development of human settlements at villages in Kamrup district. AAI would provide financial assistance under its CSR initiative of rate 4.58 crore for the Kamrup district.

13.Which State has the highest number of fully covered tribal habitations with safe drinking water?

- A. Madhya Pradesh
- B. Odisha
- C. Rajasthan
- D. Jharkhand
- E. None of the above

Answer ||| A

Solution ||| Madhya Pradesh has the highest number of fully covered tribal habitations with safe drinking water with 55770 numbers of habitations, followed by Odisha (52427), Jharkhand (53476).

14.ISRO has successfully launched GSAT- 6A satellite from which rocket vehicle?

- A. GSLV – F07
- B. GSLV – F09
- C. GSLV – F05
- D. GSLV – F08
- E. None of the above

Answer ||| D

Solution ||| ISRO has successfully launched GSAT-6A satellite from GSLV-F08. India's geosynchronous satellite launch vehicle (GSLV-F08) successfully launched GSAT-6A satellite into geosynchronous transfer orbit (GTO) on March 29, 2018. Sriharikota (The space court of India). It was the 5th consecutive success achieved by GSLV carrying indigenously developed cryogenic upper stage.

15.What is the theme of the 2018 International Day of Forests?

- A. Forests and Water
- B. Forests and Energy
- C. Forests and Sustainable Cities
- D. Forests and Life
- E. None of the above

Answer ||| C

Solution ||| "Forests and Sustainable Cities" is the theme of 2018 the international day of forest (IDF). And also It will focus on how forest and tree in urban area regulate temperature and water flows, provide nutritious foods and shelter cleans the air and foster community cohesion and individual wellbeing among other benefits the UN General Assembly proclaimed 21st March the International day of forest in 2012. The day celebrates and raises awareness of the importance of all type of forests.

16.Who has been elected as a new President of Egypt?

- A. Moussa Mostafa Moussa
- B. El-Sayyid el-Badawi
- C. Abdel Fattah el-Sisi
- D. Ahmed ShafiqSisi
- E. None of the above

Answer ||| C

Solution ||| Abdel Fattah el-Sisi has elected as new President of Egypt. Abdel Fattah al- Sisi, (born November 19, 1954, Cario, Egypt), Egyptian military officer who became Egypt's de facto leader in July 2013, after the country's military, removed president Mohammed Morsi from power following mass protests against his rule. Sisi was elected president in May 2014 and elected to a second term in March 2018.

17.Who has been chosen for the prestigious J.C. Daniel Award for 2017?

- A. Sathyan Anthikkad
- B. K.G.Geogre
- C. SreekumaranThampi

- D. Adoor Gopalakrishnan
- E. None of the above

Answer ||| C

Solution ||| Shreekumaran Thampi has been chosen for the prestigious J.C Daniel award for 2017. The J.C Daniel award is Kerala's highest award in Malayalam cinema. It is presented annually by the Kerala state chalachitra academy, a non-profit institution under the department of cultural affairs of the government of Kerala. George is considered to be among one of the directors who revolutionised Malayalam cinema in the 1970s.

18. According to recent data released by Indian Cellular Association [ICA], India acquired what position in the world in producing mobile phones?

- A. First
- B. Second
- C. Third
- D. Fourth
- E. None of the above

Answer ||| B

Solution ||| According to recent data released by the Indian Cellular Association [ICA], India acquired the second position in the world in producing mobile phones after China. India replaced Vietnam to become the second largest producer of mobile phones in 2017.

19. Which State Government has rolled out 'Rupashree Scheme' for the marriage of poor girls?

- A. Tamil Nadu
- B. Odisha
- C. West Bengal
- D. Assam
- E. None of the above

Answer ||| C

Solution ||| West Bengal has rolled out 'Rupashree Scheme' for the marriage of poor girls. It started on the 1st of April 2018. The scheme provides a scholarship of Rs.500 and a one-time grant of Rs.25,000 to motivate teenage girls to stay in school and delay their marriage until they attain 18.

20.NITI Aayog has launched the 'Atal New India Challenge' that will provide grants of up to how much amount to innovative products and solutions?

- A. Rs.2 crore
- B. Rs.1 crore
- C. Rs.1.5 crore
- D. Rs.2.5 crore
- E. None of the above

Answer ||| B

Solution ||| NITI Aayog has launched the 'Atal New India Challenge' that will provide grants of up to Rs.1 crore. Applicants showing capability intent, and potential to productized technologies will be awarded grants up to Rs. One crore. This grant support will be supplemented by mentoring, handholding, and other assistance as needed at various stages of commercialisation.

21.Who chaired the first meeting of the think tank on the Framework for National Policy on E-commerce?

- A. Narendra Modi
- B. Arun Jaitley
- C. Suresh Prabhu
- D. Smriti Irani
- E. None of the above

Answer ||| C

Solution ||| Suresh Prabhu chaired the first meeting of the think tank on the Framework for National Policy on E-commerce. The think tank on the framework for National policy on E-commerce has been established recently by the Department of Commerce, It will provide a credible forum for an inclusive and fact-based dialogue leading to recommendations for informed policymaking.



22.Which of the following cities of Bihar does not share a border with Nepal?

- A. Madhubani
- B. Kishanganj
- C. Sitamarhi
- D. Purnia
- E. None of the above

Answer ||| D

Solution ||| Purnia city of Bihar doesn't share the border with Nepal. Madhubani Kishanganj, Sitamarhi West Champaran & East Champaran are the districts of Behar which share the border with Nepal. Madhubani is also famous far the Madhubani painting.

23.Which of the following is only UNESCO World Heritage Site present in Bihar State India?

- A. Mahabodhi Vihar
- B. Buddhist Monastery Nalanda
- C. Ancient site of Vikramasila Monastery
- D. Tomb of Sher Shah Sur
- E. None of the above

Answer ||| E

Solution ||| Mahabodhi Vihar and Buddhist Monastery Nalanda are the UNESCO world heritage site in Bihar. Mahabodhi temple is the place where Buddha got enlightenment, Bodh Gaya is about 96 km away from Patna. This site contains descendant of Bodhi tree under which Buddha got enlightenment.

24.The Union Cabinet has approved MoU between India and SACEP for cooperation on oil chemical pollution in the South Asian sea's region. What does SACEP stand for?

- A. South Asia Compatibility Environment Programme
- B. South Asia Cooperation Environment Programme
- C. South Asia Connective Environment Programme

- D. South Asia Coercive Environment Programme
- E. None of the above

Answer ||| B

Solution ||| SACEP Stands for South Asia Cooperation Environment Programme. The South Asia Co-operation Environment Programme, also known as SACEP, an intergovernmental organisation set up by the government of South Asia, back in 1982, to promote and support protection, management and enhancement of the environment and for ensuring sustainable development of the region.

25.Which State Government has recently signed MoU with South Korea to enhance tourism cooperation?

- A. Kerala
- B. Mizoram
- C. Tamil Nadu
- D. Uttar Pradesh
- E. None of the above

Answer ||| D

Solution ||| Uttar Pradesh has recently signed MoU with South Korea to enhance tourism cooperation. The Uttar Pradesh government signed a MoU with South Korea to strengthen cooperation in the field of tourism, skill development, culture and farming. An agreement was signed in 2000 to develop Ayodhya and Gimhae as sister cities.

26.The Indian Council of Forestry Research and Education [ICFRE] has signed MoU with a TIFAC for supporting forest-based communities. Where is the headquarters of ICFRE located?

- A. Hyderabad
- B. Bengaluru
- C. Allahabad
- D. Dehradun
- E. None of the above

Answer ||| D

Solution ||| Dehradun is the headquarters of the Indian Council of forestry research and education (ICFRE). The Indian Council of forestry research and education (ICFRE) is an autonomous organisation or governmental agency under the Ministry of environment and forests, Government of India. Its functions are to conduct forestry research, Transfer the technologies developed to the states of India and other user agencies, and to impart forestry education. The council has nine research institutes and four advanced centres.

27.Which of the following teams has won the Newton- Bhabha Fund for the project on Groundwater Atomic Research in Ganga River Basin?

- A. India – Russia Joint Team
- B. India – UK Joint Team
- C. India – Japan Joint Team
- D. India – Israel Joint Team
- E. None of the above

Answer ||| B

Solution ||| India – UK joint team, has won the Newton Bhabha fund for the project on groundwater atomic research in Ganga river basin. The Newton fund builds research and innovation partnerships with 18 partner countries to support economic development and social welfare, and to develop research and innovation capacity for long-term sustainable growth.

28.The Barh Super Thermal Power Station [BSTPS] is located in which State?

- A. Bihar
- B. Karnataka
- C. Rajasthan
- D. Punjab
- E. None of the above

Answer ||| A

Solution ||| The Barh Super Thermal Power Station [BSTPS] is located in Bihar. The mega power project was established by former P.M. Atal Bihari Vajpayee.

29.The International Solar Alliance [ISA] has recently signed a pact with which international organisation to promote solar deployment in Asia and the Pacific?

- A. Asian Infrastructure Investment Bank
- B. New Development Bank
- C. African Development Bank
- D. Asian Development Bank
- E. None of the above

Answer ||| D

Solution ||| The International Solar Alliance [ISA] has recently signed a pact with Asian Development Bank to promote solar deployment in Asia and Pacific.

30.India has signed a tripartite MoU with which countries civil nuclear cooperation?

- A. USA and Nepal
- B. Japan and Myanmar
- C. Russia and Bangladesh
- D. Germany and Sri Lanka
- E. None of the above

Answer ||| C

Solution ||| India has signed a tripartite MoU with Russia and Bangladesh for civil nuclear cooperation. Russia, India and Bangladesh signed a trilateral agreement to cooperate in the construction of the Rooppur Nuclear Power Plant in Bangladesh, work on which started late last year.

31.What is the most significant feature of the Indus Valley Civilization?

- A. Burnt brick buildings
- B. First true arches
- C. Buildings of worship
- D. Art and architecture
- E. None of the above

Answer ||| A

Solution ||| Burnt brick buildings are the most significant feature of the Indian valley civilisation. Most of the houses in Indus valley civilisation made by the Burnt bricks. Town planning is also a notable feature of Indus valley civilisation. Harappa Mohanjodaro, Lothal, Dholavira are some Indus valley sites famous for burnt bricks buildings

32.Megasthenes was the ambassador of

- A. Seleucus
- B. Alexander
- C. Darius
- D. The Greeks
- E. None of the above

Answer ||| A

Solution ||| Megasthenes was the ambassador of Seleucus who was the contemporary of Chandragupta Maurya. Megasthenes was the writer of "Indica" which contains information about Indian society and culture. Megasthenes came to India in the time of Chandra Gupta Maurya.

33.Kautilya's Arthashastra is a book on

- A. Economic Relations
- B. Principles and practice of statecraft
- C. Religious System
- D. Wealth Accumulation
- E. None of the above

Answer ||| B

Solution ||| Kautilya's Arthashastra is a book on principles and practice of statecraft. The Arthashastra refers to a practice of political diplomacy that arose in India. Kautilya was an eminent diplomat on that time, and he wrote his principles and ways of diplomacy in his worldwide famous book Arthashastra.

34.Tripitakas are the sacred books of the:

- A. Jains
- B. Hindus
- C. Parsees
- D. Buddhists
- E. None of the above

Answer ||| D

Solution ||| Tripitakas are the sacred books of the Buddhists. There are three categories in these books i.e

- (1) Vinaya Pitaka- It defines the rules and regulation for monastic life.
  - (2) Sutta Pitaka- It is a collection of Buddha's sermons.
  - (3) Abhidhamma Pitaka- It is a collection of the Buddhist philosophy.
- The Kalpa Sutra is a sacred book of Jainism

35.The central point in Ashoka's Dhamma is

- A. Loyalty to the king
- B. Peace and non-violence
- C. Respects to elders
- D. Religious toleration
- E. None of the above

Answer ||| E

Solution ||| The central point in Ashram Dhamma is more than above. The Ashoka's dhamma was not only the philosophical teaching of Buddha, but it contains the idea of humanism, the universal brotherhood and Ahimsa, Ashoka's pillar edicts gives the concept of his Dhamma. He had also appointed Dhamma Mahamatra to check out law and order in his kingdom.

36.The division of Maurya society into seven classes particularly mentioned in

- A. Kautilya's Arthashastra
- B. Ashokan edicts
- C. the Puranas
- D. the Indica of Megasthenes
- E. None of the above



Answer ||| D

Solution ||| The division of Maurya society into seven classes particularly mentioned in the Indica of Megasthenes.

Megasthenes was an ambassador of Seleucus who visited India in the time of Chandragupta Maurya.

Megasthenes wrote about the cutter and the nature of Indian society in his famous book Indica. Megasthenes was the Greek explorer and lithographer.

37.The famous Chinese pilgrim Fa-Hien visited India during the reign of

- A. Chandragupta I
- B. Chandragupta II
- C. Ramagupta
- D. Srigupta
- E. None of the above

Answer ||| B

Solution ||| The famous Chinese pilgrim Fa-Hien visited India during the reign of Chandragupta II.

Chandragupta II was also known as Chandragupta Vikramaditya.

Fa- Hien visited India to collect sacred Buddhist texts. He wrote down a detailed description about India during his visit.

38.The Chola age was most famous for -

- A. Village assemblies
- B. War with the Rashtrakutas
- C. Trade with Ceylon
- D. Advancement of Tribal culture
- E. None of the above

Answer ||| A

Solution ||| The Chola age was famous for village assemblies. The Chola created a watermark in the history of south India. They had a very strong naval base. Rajendra Chola 1 conquered northern India along the Ganga valley and built a new capital called "Gangaikonda Cholapuram".

39.The mighty gateways found at the temples of South India is called?

- A. Shikhars
- B. Gopurams
- C. Devalayas
- D. Mandaps
- E. None of the above.

Answer ||| B

Solution ||| The mighty gateways found at the temples of the south Indian called Gopurams. They were huge size gates at the entrance of the south Indian temples. Gopurams are one of the prominent features of the south Indian temple.

40.The remains of the Vijayanagara empire is found in:

- A. Bijapur
- B. Golconda
- C. Hampi
- D. Baroda
- E. None of the above

Answer ||| C

Solution ||| Hampi is a very famous site for the remains of the Vijayanagara empire. The remains found at the Hampi tell the story at the glory of Vijay Nagar empire. Hampi is located in Karnataka. The Hampi & Bakka established the Vijayanagara empire in 1336.

41.Who was the first Muslim ruler to formulate the 'theory of kingship' similar to the 'theory of divine right of the kings'?

- A. Aibak
- B. Iltutmish
- C. Balban
- D. Alauddin
- E. None of the above

Answer ||| C

Solution ||| The first Muslim ruler to formulate the 'theory of kingship' similar to the "theory of divine right of the kings" was Balban. Ghiyasuddin Balban was the ninth Sultan of the Mamluk dynasty of Delhi. The main principle of his theory of the kingship was the divine right of kings, Balban said that the king was the representative of God on the earth and kingship is the divine institution. He was also famous for his policy of blood and iron and also do the changes in administration and Spy system.

42. Paper came to be used in the:

- A. 12th century
- B. 13th century
- C. 14th century
- D. 15th century
- E. None of the above

Answer ||| A

Solution ||| Paper came to be used in India in the 12th century. The first papermaking process was documented in China during the Eastern Han period (25-220 AD). During the 8th Century, Chinese Papermaking spread to the Islamic world.

43. European paintings were introduced in the court of?

- A. Humayun
- B. Akbar
- C. Jahangir
- D. Shah Jahan
- E. None of the above

Answer ||| B

Solution ||| European paintings were introduced in the court of Akbar. It was introduced by the Portuguese priests.

44. Who was the ruler of India when the English East India Company was formed?

- A. Aurangzeb
- B. Akbar
- C. Jahangir
- D. Humayun
- E. None of the above

Answer ||| B

Solution ||| Akbar was the ruler of India when the English East India company was formed. The Company received a Royal Charters from Queen Elizabeth-I on 31 December 1600. Reign of Akbar was from 1556-1605. Originally chartered as the "Governor and Company of Merchants of London trading into East Indies", the company rose of account for half of the world's trade.

45.Which of the following Princely States was not annexed by the British?

- A. Sind
- B. Gwalior
- C. Awadh
- D. Satara
- E. None of the above

Answer ||| B

Solution ||| Gwalior residency was a political office in the British India Empire, which existed from 1782 until the British withdrawal from India in 1947. The Gwalior residency was placed under the central India Agency in 1854 and separated from it in 1921. The Gwalior residency was abolished upon Indian Independence at the stroke of midnight on 15 August 1947, when all treaty relations between the British crown and the princely state of India were nullified, the rulers of the states acceded to the government of India between 1947 and 1950, and most of the Gwalior residency .including Gwalior state.

46.What was the ultimate goal of Gandhiji's Salt Satyagraha?

- A. Repeal of Salt laws
- B. Curtailment of the government's power
- C. Economic relief to the common people
- D. 'PurnaSwaraj' for India

E. None of the above

Answer ||| E

Solution ||| Salt march also known as a Dandi march. Gandhi Ji started the salt march from Sabarmati Ashram to Dandi with 78 volunteers. This march had another goal of economic relief for coastal people. Which the declaration of Purna Swaraj came after the Dandi March. Dandi march started from 12th March to 6th April 1930

47.The Moplah Rebellion of 1921 broke out in:

- A. Assam
- B. Kerala
- C. Punjab
- D. Bengal
- E. None of the above

Answer ||| B

Solution ||| Moplah rebellion of 1921 broke out in Kerala. The Malabar region it made a watermark in the history of Indian independence as it created a mass uprising, against British colonisation leaders of the Moplah Variaclunnath Kunj Ahmad Haji, Seethi Koya, Ali Musliyar etc.

48.The Swadeshi Movement place in India during:

- A. the Champaran Satyagraha of Gandhiji
- B. the Anti-Bengal partition agitation
- C. the Protest against the Rowlatt Act
- D. the Non-Cooperation Movement
- E. None of the above

Answer ||| B

Solution ||| The Swadeshi movement took place in India during the anti-Bengal partition agitation. It was one of the most successful pre-Gandhian movement. It started after the partition of Bengal in 1905 by Lord Curzon. Main leaders were Arbindo Ghosh, Bal Gangadhar Tilak etc.

49. Bihar Provincial Kisan Sabha formed in:

- A. 1929
- B. 1930
- C. 1931
- D. 1932
- E. None of the above

Answer ||| A

Solution ||| Bihar Provincial Kisan Sabha formed in 1929. It was founded by Sahjanand Saraswati to mobilise peasant grievances against the Zamindari attacks on their occupancy right and thus sparking the farmer's movement in India.

50. By which Act, Bihar became separate province?

- A. The Government of India Act of 1935
- B. The Government of India Act of 1919
- C. The Indian Councils of 1909
- D. The Indian Independence Act of 1947
- E. None of the above

Answer ||| A

Solution ||| Bihar became a separate province by the government of India Act 1935. Before this Bihar, Orissa and Bengal were one province and Orissa became the separate state in 1936. The government of India Act 1935 said to be the longest of the British parliament in India.

51. Which one of the following Committees / Commissions recommended the creation of Nyaya Panchayats?

- A. Balwant Rai Mehta Committee
- B. Ashok Mehta Committee
- C. G.V.K. Rao Committee
- D. Sarkaria Commission
- E. None of the above

Answer ||| B



Solution ||| Ashok Mehta Committee recommended the creation of Nyaya Panchayats. In December 1977 Government appointed a committee for Panchayati Raj institution of power under the chairmanship of Ashok Mehta. This committee recommended that the three-tier system of the Panchayati Raj should be replaced by the two-tier system.

52. Which one of the following functions is not the concern of Local Self-Government?

- A. Public Health
- B. Sanitation
- C. Public Utility Services
- D. Maintenance of Public Order
- E. None of the above

Answer ||| D

Solution ||| The Maintenance of Public Order is not the concern of Local-self Government. It has been mentioned in the state list under schedule 7 of the constitution, hence its a concern of state governments. Maintenance of public order has been stipulated under the 10th chapter of CrPC 1973. Public health and sanitation is mentioned in the 12th schedule. Public utility services are also part of the local self-government.

53. The system of Panchayati Raj is mentioned in-

- A. The Union List
- B. The State List
- C. The Concurrent List
- D. All of the above
- E. None of the above

Answer ||| B

Solution ||| The system of Panchayati Raj is mentioned in the state list under the 7th schedule of the Indian constitution. The 7th schedule has all three list, state list union list & concurrent list.

54. 50% reservation for women Panchayati Raj Institutions is legalized in certain States such as

- I. Bihar
- II. Uttarakhand
- III. Madhya Pradesh
- IV. Himachal Pradesh

- A. Only III
- B. Only II and III
- C. II, III and IV
- D. I, II, III and IV
- E. None of the above

Answer ||| D

Solution ||| 50% reservation for women Panchayati Raj institution is legalized in all the four states.

All the state provide 33% reservation for women in Panchayati Raj institution but few states like- Andhra Pradesh, Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Kerala, Madhya Pradesh, Maharastra, Odisha, Rajasthan, Tripura and Uttarakhand provided 50% reservation for women Panchayati Raj.

55. Money Bill can be presented-

- A. Only in the Lok Sabha
- B. Only in the Rajya Sabha
- C. In both the Houses
- D. In a joint meeting of both the Houses
- E. None of the above

Answer ||| A

Solution ||| The money bill can be presented in Lok Sabha. Article 110 of the constitution talks about the money bill. A money bill is a bill that solely concerns ..... or government spending. If any question arises whether a bill is a money bill or not, the decision of the speaker of Lok Sabha there or shall be final.

56. What is the nature of the Indian Constitution?

- A. Federal
- B. Unitary
- C. Parliamentary

- D. Fedral in nature but unitary in spirit
- E. None of the above

Answer ||| D

Solution ||| The nature of the Indian Constitution is Federal in nature but unitary in spirit.

Federal feature:

- A. Distribution of power between central & state.
- B. A written constitution,
- C. The supremacy of the constitution
- D. Strong judiciary and bicameralism.

Unitary features:

- A. Strong centre single citizenship,
- B. Single constitution,
- C. The appointment of state governor by the centre.
- D. All Indian services and emergency provision.

57. Who appoints the Judges of the Supreme Court of India?

- A. The Prime Minister
- B. The President
- C. The Chief Justice of India
- D. The Ombudsman
- E. None of the above

Answer ||| B

Solution ||| The judges of the supreme court appointed by the president of India. Article 124 explains that the judge of the supreme court shall be appointed by president India his sign and seal. He also gives his resignation to the president.

58. Who is the Ex Officio Chairman of the Rajya Sabha?

- A. The President
- B. The Vice President
- C. The Prime Minister
- D. None of the above
- E. More than one of the above

Answer ||| B

Solution ||| The vice president is the Ex officio chairman of the Rajya Sabha. He is the principal a spokesman of the house and represents collecting voice. Article 63 of the Indian constitution states there shall be vice president of India. He performs the duty of the president when the president is not present.

59.The Prime Minister of India is responsible to whom?

- A. The Cabinet
- B. The President
- C. The Lok Sabha
- D. The Rajya Sabha
- E. None of the above

Answer ||| C

Solution ||| The Prime Minister of India is responsible to the Lok Sabha. Article 75 of the constitution of India says that the P.M being the head of the council of minister is collectively responsible to the Lok Sabha.

60.What is the minimum age for a Member of the Parliament?

- A. 18 years
- B. 21 years
- C. 25 years
- D. 30 years
- E. None of the above

Answer ||| C

Solution ||| 25 year is the minimum age for a Member of the Parliament i.e.

- A. Member of the Lok Sabha -25 years
  - B. Member of the Rajya Sabha-30 years
- For Others:  
President-35 years  
Governor-35 years

61.What is the retirement age of the Judges of the Supreme Court?

- A. 60 years
- B. 62 years
- C. 65 years
- D. 70 years
- E. None of the above

Answer ||| C

Solution ||| The retirement age of the judges of the supreme court is 65 years, and for the judges of the High court, it is 62 year.

62.Who is the highest Civil Service Office of the Central Government?

- A. The Attorney General India
- B. The Cabinet Secretary
- C. The Home Secretary
- D. The Finance Secretary
- E. None of the above

Answer ||| B

Solution ||| The highest Civil Service Office of the Central Government is the cabinet secretary.

The highest post in the state is that of the chief secretary. The cabinet secretary is under the direct charge of the prime minister

63.One of the problems calculating National Income India is:

- A. Underemployment
- B. Inflation
- C. Low level of savings
- D. Non-organized sector
- E. None of the above

Answer ||| D

Solution ||| One of the problems in calculating National Income in India is the non-organised sector. The other issues are the exclusion of real transactions, the value of leisure, cost of environmental damage, the

underground economy, transfer payments and capital gains, valuation of inventories, self-consumption, lack of official records, imputed income, valuation of government service, exclusion of household works of women etc.

64.The apex bank for providing agricultural refinance in India

- A. RBI
- B. NABARD
- C. SBI
- D. Imperial Bank
- E. None of the above

Answer ||| B

Solution ||| The apex bank for providing agricultural refinance in India is NABARD. NABARD came into existence on 12 July 1982 by transferring the agricultural credit functions of RBI and refinance functions of the then Agricultural Refinance and Development Corporation (ARDC). It was dedicated to the service of the nation by the late Prime Minister Smt. Indira Gandhi on 05 November 1982.

65.According to the 14th Finance Commission, the Percent share of States in the proceeds of the share central tax revenue should be:

- A. 32 Percent
- B. 35 Percent
- C. 40 Percent
- D. 42 Percent
- E. None of the above

Answer ||| D

Solution ||| According to the 14th Finance Commission, the Percent share of States in the proceeds of the share central tax revenue should be 42 Percent. The 14th Finance Commission was constituted in January 2014.

66.Which sector in India attracts the highest FDI equity flow?



- A. Construction Sector
- B. Energy Sector
- C. Automobile Sector
- D. Service Sector
- E. None of the above

Answer ||| D

Solution ||| Service Sector attracts the highest percentage of FDI equity flow. It is followed by Construction and telecommunication respectively.

67. Who amongst the following is the present Governor of the RBI?

- A. Bimal Jalan
- B. Arvind Subramanian
- C. Raghuram Rajan
- D. Urjit Patel
- E. None of the above

Answer ||| D

Solution ||| Urjit R Patel is the current governor of the RBI. While Raghuram G Rajan was the predecessor of Patel. Bimal Jalan is also one of the former governors of the RBI.

68. The size of the marginal landholding in India is:

- A. More than 5 hectares
- B. 2 hectares to 4 hectares
- C. 1 hectare to 2 hectares
- D. Less than 1 hectare
- E. None of the above

Answer ||| D

Solution ||| The size of marginal landholding in India is less than 1 hectare. An operational land holding is a techno-economic land unit used wholly or partly for agricultural production and operated (directed/managed) by one person alone or with the assistance of others, without regard to title, size or location.

69. Globalisation does not include

- A. Reduction in import duties
- B. Abolition of import licensing
- C. Free flow of FDI
- D. Disinvestment of Public Sector Equity
- E. None of the above

Answer ||| D

Solution ||| Globalisation doesn't include dis-investment of public sector equity. It is the sole prerogative of the domestic government to come to this decision. Globalisation represents the global integration of international trade, investment, information technology and cultures. Globalisation is also a social, cultural, political and legal phenomenon. In social terms, globalisation represents greater interconnectedness among global populations.

70. The Prevention of Laundering Act came into in India during:

- A. 1998
- B. 1999
- C. 2001
- D. 2005
- E. None of the above

Answer ||| D

Solution ||| The Prevention of Money Laundering Act (PMLA) came in to force in India during 2005. Prevention of Money Laundering Act, 2002 is an Act of the Parliament of India enacted by the NDA government to prevent money-laundering and provide for confiscation of property derived from money-laundering.

71. TRIMS stands for

- A. Trade-Related Income Measures
- B. Trade-Related Incentive Measures
- C. Trade-Related Investment Measures
- D. Trade-Related Innovative Measures

E. None of the above

Answer ||| C

Solution ||| TRIMS stands for Trade-Related Investment Measures. This Agreement, negotiated during the Uruguay Round, applies only to measures that affect trade in goods. The agreement on TRIMs of the WTO is based on the belief that there is a strong connection between trade and investment.

72.NITI Aayog came into existence on

- A. 1st January 2014
- B. 1st June 2014
- C. 1st January 2015
- D. 1st June 2015
- E. None of the above

Answer ||| C

Solution ||| The National Institution for Transforming India, also called NITI Aayog, was formed via a resolution of the Union Cabinet on January 1, 2015. NITI Aayog is the premier policy. 'Think Tank' of the Government of India, providing both directional and policy inputs. While designing strategic and long-term policies and programmes for the Government of India, NITI Aayog also provides relevant technical advice to the Centre and States.

73.'Gullak Bachcha Bank' is a bank based in:

- A. Delhi
- B. Patna
- C. Bhopal
- D. Jaipur
- E. None of the above

Answer ||| B

Solution ||| The 'Gullak Bacchcha Bank' is based in Patna. Children can deposit up to a minimum of 1 rupee in the bank. There are about 3500 accounts in this bank. The most interesting thing is that children studying

in Bal Bhavan only run this bank. The bank's manager, deputy manager or clerk, all are from about 14 to 16 years of age. At the same time, the monthly salary is also given to the children working in the bank.

74.The base year for Wholesale Price Index [WPI] has been changed by the Government of India from 2004 – 05 to\_\_\_\_\_.

- A. 2010-11
- B. 2011-12
- C. 2012-13
- D. 2013-14
- E. None of the above

Answer ||| B

Solution ||| The base year for All-India Whole Sale Price Index (WPI) in India has been changed by GOI from 2004-05 to 2011-12. In India, Office of Economic Advisor (OEA), Department of Industrial Policy and Promotion, Ministry of Commerce and Industry calculates the WPI. The index basket of the present 2011-12 series has a total of 697 items including 117 items for Primary articles, 16 items for Fuel & Power and 564 items for Manufactured Products.

75.According to Indian Population Census, 2011, the percentage of literacy among males and females both is lowest for the State of

- A. Arunachal Pradesh
- B. Andhra Pradesh
- C. Bihar
- D. Jammu and Kashmir
- E. None of the above

Answer ||| E

Solution ||| According to the Indian population census of 2011 the lowest literacy among males and females is in Bihar (63.82%) Bihar is the most densely populated state in India. Kerala has the highest percentage of literacy (93.74%).

76.The average size of landholdings in Bihar in comparison with other States is:

- A. Lowest
- B. Second lowest
- C. Highest
- D. Second highest
- E. None of the above

Answer ||| B

Solution ||| The average size of landholdings in Bihar in comparison with other States is second lowest while the lowest in Kerala. The highest average size of land holding is in Arunachal Pradesh.

77.The latest per capita income at current prices is the lowest for the Indian State of:

- A. Bihar
- B. Uttar Pradesh
- C. Odisha
- D. Nagaland
- E. None of the above

Answer ||| A

Solution ||| The latest per capita income at current prices is the lowest for the Indian State of Bihar while it is highest for Goa. The per capita income measures the average income earned per person in a specified year. It is calculated by dividing the area's total income by its total population.

78.The latest annual per capita consumption of electricity in Bihar is:

- A. Lowest
- B. Second lowest
- C. Highest
- D. Second highest
- E. None of the above

Answer ||| A

Solution ||| The latest annual per capita consumption of electricity in Bihar is lowest. It is 85% lower than the all average Indian consumption. Goa has the highest per capita consumption of electricity.

79.The average yield of cotton is highest in India for the State of:

- A. West Bengal
- B. Bihar
- C. Assam
- D. Andhra Pradesh
- E. None of the above

Answer ||| D

Solution ||| The average yield of cotton is the highest in India for the state of Andhra Pradesh. The figures of 2017-18 say that Andhra Pradesh tops the list with 686kg/Hectare yield of cotton. Wet and humid climate is the best condition for cotton cultivation.

80.The road length per lakh of population in Bihar is:

- A. Lowest
- B. Second lowest
- C. Highest
- D. Second highest
- E. None of the above

Answer ||| B

Solution ||| The road length per lakh of population in Bihar is second lowest. Road lengths per lakh population are the road density. Road density is highest for Arunachal Pradesh. Jammu & Kashmir has the lowest density of roads.

81.During 10000 BC, the population of the world was

- A. 2 million
- B. 3 million
- C. 4 million
- D. 5 million

E. None of the above.

Answer ||| E

Solution ||| The population of the world during 10000BC was approximately 1 million. The time taken by the earth to reach its 1st billion population was around 50,000 year, duration was around 1830 C.E. In the current time the human population estimated to have reached 7.6 billion.

It took only 200 years to reach 7 billion from 1 billion.

82.Cocos Plate lies between:

- A. Central America and Pacific Plate
- B. South America and Pacific Plate
- C. Red Sea and Persian Gulf
- D. Asiatic Plate and Pacific Plate
- E. None of the above.

Answer ||| A

Solution ||| Cocos plates lie between Central America and Pacific Plate. The worldwide famous Coco Island rested upon it. The oceanic plate creates the Island chain.

83.'Rust Bowl' of the USA is associated with which one of the following regions?

- A. Great Lakes region
- B. Alabama region
- C. California region
- D. Pittsburg region
- E. None of the above

Answer ||| D

Solution ||| The Pittsburg region of USA associated with Rust Bowl of the USA.

Rust bowl is a geographic area of the USA which is known for manufacturing heartland, of the nation. It is also known as 'Rust Belt'.

The steel city Pittsburgh has a sufficient number of industries located in this region.

84.Which one of the following approaches is associated with Prof. Amartya Sen?

- A. Basic needs Approach
- B. Capability Approach
- C. Income Approach
- D. Welfare Approach
- E. None of the above

Answer ||| B

Solution ||| Capability approach is associated with Prof. Amartya Sen. The capability approach (also referred to as the capabilities approach) is an economic theory conceived in the 1980s as an alternative approach to welfare economics. The core focus of the capability approach is on what individuals can do (i.e., capable of ). The basic needs approach is one of the major approaches to the measurement of absolute poverty in developing countries.

85.Which one of the following is known as the 'Coffee Port' of the world?

- A. Sao Paulo
- B. Santos
- C. Rio de Janeiro
- D. Buenos Aires
- E. None of the above

Answer ||| B

Solution ||| "Santos" is known as the 'Coffee Port' of the world, Santos is a port of Brazil. which is the world's largest producer of coffee, and the Santos port is one of the busiest port of Latin America

86.Which one of the following States has the highest percentage of area under forests?



- A. Himachal Pradesh
- B. Assam
- C. Andhra Pradesh
- D. Arunachal Pradesh
- E. None of the above

Answer ||| D

Solution ||| • Largest forest cover in the country in terms of area-  
Madhya Pradesh (77,414 s km)> Arunachal Pradesh (66,964 s km)>  
Chhattisgarh (55,547 s km)

• In terms of percentage of forest cover with respect to the total  
geographical area-  
Lakshadweep with (90.33%)> Mizoram (86.27%)> Andaman and Nicobar  
Island (81.73%)

87.Which one of the following soils is deposited by rivers?

- A. Red Soil
- B. Black Soil
- C. Alluvial Soil
- D. Laterite Soil
- E. None of the above

Answer ||| C

Solution ||| Alluvial soil is deposited by the rivers. It is the most fertile  
soil dominated the Northern plain of India.

Red soil formed by decomposition of granite, gneiss and diorite rocks.  
The black soil is formed by weathering of lava and is famous for the  
cotton and also known as cotton soil.

88.What is the share of hydroelectric power in the total electricity  
produced in India?

- A. 10 percent
- B. 12 percent
- C. 20 percent
- D. 22 percent
- E. None of the above

Answer ||| D

Solution ||| The share of hydroelectric power in the total electricity produced in India is 22 percent.

India is the 7th largest producer of the hydroelectricity of the world.

The hydropower project at Siang will alone generate between 10,000 and 12,000 MW, hydroelectricity once it completed and it will be the largest hydroelectric dam in South Asia.

89.Which Census year is called 'Demographic Divide' in the population study of India?

- A. 1911
- B. 1921
- C. 1931
- D. 1941
- E. None of the above

Answer ||| B

Solution ||| The year of 1921 known the Demographic Divine in India. Before 1921 the population was not stable. After 1921, we can see a continuous increase in the population.

90.The largest number of cotton mills in Tamil Nadu are found in:

- A. Chennai
- B. Coimbatore
- C. Madurai
- D. Salem
- E. None of the above

Answer ||| B

Solution ||| The largest number of cotton mills in Tamil Nadu are found in Coimbatore. Coimbatore often referred to as the Manchester of South India due to its cotton production and textile industries.' Kovai Cora cotton" recognised as a geographical indication by Government of India.

91.Which one of the following States is the leading producer of rubber in India?

- A. Tamil Nadu
- B. Kerala
- C. Karnataka
- D. Andhra Pradesh
- E. None of the above

Answer ||| B

Solution ||| Kerala is the leading producer of rubber in India. Almost 90 % of the rubber produces in Kerala alone. Most of the hilly regions of Kerala grow rubber. This crop brought to India during The British rule.

92.National Waterway -1 connects:

- A. Kottapuram to Kollam
- B. Sadiya to Dhubri
- C. Haldia to Allahabad
- D. Haldia to Kolkata
- E. None of the above

Answer ||| C

Solution ||| National Waterway -1 connects Haldia to Allahabad. It runs across the Ganges, Bhagirathi and Hoogli river system. It is the longest waterway in India (1,620km)

National Waterway-2 connects Sadiya to Dhubri.

National Waterway-3 connects Kollam to Kozhikode.

National Waterway-1

93.Khetri Belt of Rajasthan State is famous for:

- A. Copper mining
- B. Gold Mining
- C. Mica mining
- D. Iron ore mining
- E. None of the above

Answer ||| A

Solution ||| Khetri Belt of Rajasthan is famous for copper mining. Khetri region is known for copper since the Indus valley civilisations. Copper is the first metal discovered by the human being. There are so many things made by copper found in the Indus civilisation. Khetri is located in Jhunjhunu of the district of Rajasthan.

94.Which one of the following rivers join the Ganga at Fatuha?

- A. Son
- B. Punpun
- C. Sakri
- D. Balan
- E. None of the above

Answer ||| B

Solution ||| Punpun river joins Ganga at Fatuha. Punpun river is a tributary of Ganga. It originates in Palam district of Jharkhand. The other main tributaries of the Ganga river are son river, Ghaghara river, Gomti river, Yamuna river. River son joins at just above Patna.

95.According to Koppen's climatic classification, the climate of North Bihar may be explained as:

- A. Cwg
- B. Aw
- C. CA'w
- D. CB'w
- E. None of the above

Answer ||| A

Solution ||| According to Koppen's climatic classification, the climate of North Bihar may be explained as Cwg.

The climate is warm and temperate in North Bihar. The summers have ample amount of rainfall while there is very less rain in winters.

96.Which soil is predominantly found in the districts of Muzaffarpur, Darbhanga and Champaran?

- A. Black Soil
- B. Newer Alluvium
- C. Older Alluvium
- D. Red Soil
- E. None of the above

Answer ||| B

Solution ||| Newer alluvium is predominately found in districts of Muzaffarpur, Darbhanga, and Champaran.

The alluvium soil is the most fertile soil, and it is predominantly found in the northern plain of India, and it is divided into two varieties viz khadar and banger.

The Khadar is composed of newer alluvium and form most of the fertile Ganges plain.

The Banger is the older one and is less fertile as compare to Khadar.

97.The largest jute-producing district of Bihar is:

- A. Siwan
- B. Gaya
- C. Vaishali
- D. Purnia
- E. None of the above

Answer ||| D

Solution ||| The largest jute producing district of Bihar is Purina. It provides the climatic condition for the production of jute in a particular region. India's first jute park named Punrasar Jute Park is coming up at in Purina district of Bihar. West Bengal is the largest jute producer in India, while India is the largest jute producer in the world followed by China.

98.Triveni Canal has been constructed on the river:

- A. Kosi
- B. Son
- C. Gandak
- D. Kamla
- E. None of the above

Answer ||| C

Solution ||| Triveni canal has been constructed on the river Gandak. It has been constructed for the irrigation in Champaran district of Bihar. It was started in 1979. Gandak river is also called 'Narayani' river. It is located in central Nepal and northern India. It is made up of the confluence of the Black and Trishuli rivers, which emerge from the higher Himalayan range of Nepal.

99.The salvation place of Mahavirji, the originator of Jain religion, is located at

- A. Maner
- B. Rajgir
- C. Pavapuri
- D. Jalan Fort
- E. None of the above

Answer ||| C

Solution ||| The salvation place of Mahavir Ji, the originator of the Jain religion is Pavapuri. Pavapuri is located in the Nalanda district of Bihar. Pavapuri is a sacred place in the Jainism as it was a cremation area of Mahavir Ji. The Jal Mandir meaning Water Temple, also known as Apapuri, in Pawapuri, meaning a town without sins, in the Indian state of Bihar, is a highly revered temple dedicated to Lord Mahavira, the 24th Thirthankara

100.Kaimur Plateau is famous for:

- A. Copper
- B. Limestone
- C. Lithium
- D. Bauxite
- E. None of the above

Answer ||| B

Solution ||| Kaimur plateau is famous for limestone. The Kaimur Plateau is situated in Bihar. It extends in the eastern zone of Vindhya Range. A type of hard white sedimentary rock that is used for building or for

making cement. Its major materials are the minerals calcite and aragonite, which are different crystal forms of calcium carbonate.

101. Swami Sahajanand Saraswati published a journal named:

- A. Jankranti
- B. Hunkar
- C. Krishak Samachar
- D. Vidrohi
- E. None of the above

Answer ||| D

Solution ||| Swami Sahajanand Saraswati published a journal called "Hunkar". Sahajanand Saraswati was born in Deva Village near Dullahpur, Ghazipur district in eastern North-Western Provinces in 1889 to a family of the Bhumihaar caste. He established Bihar Kisan Sabha. He dedicated his whole life to the nation and the nationalism.

102. Who established a branch of Anushilan Samiti at Patna in 1913?

- A. Rewati Nag
- B. Yadunath Sarkar
- C. Sachindra Nath Sanyal
- D. Mazharul Haque
- E. None of the above

Answer ||| C

Solution ||| Anushilan Samiti was a revolutionary organization of Bengal which was established in 1900. It was led by Sri Aurobindo Ghosh with the help of other prominent members. Sachindra Sanyal created a branch of Anushilan Samiti in Patna. The Samiti challenged British rule in India by engaging in militant nationalism, including bombings, assassinations, and politically-motivated violence

103. Who organized Kisan Sabha at Munger in 1922-23?

- A. Swami Sahajanand Saraswati
- B. Shri Krishna Singh

- C. Mohammed Jubair
- D. K.N.Singh
- E. None of the above

Answer ||| E

Solution ||| More than one of the above organized the Kisan Sabha at Munger in 1922-23. Kisan Sabha was organised in 1922 by Mohammad Zubair and Sri Krishna Singh in Munger. Zubair was the Sardar of Kisan Sabha while Krishna Singh was the Naib Sardar of the Kisan Sabha. This organization was made for poor peasants.

104. Bihar Socialist Party was born in 1934 with its Secretary?

- A. Acharya Narendra Dev
- B. Jayaprakash Narayan
- C. Rambriksh Benipuri
- D. Kapoor Thakur
- E. None of the above

Answer ||| B

Solution ||| Bihar socialist party was born in 1934 with its secretary Jayaprakash Narayan. Rambriksh Benipuri & Narayan convened a meeting in Patna on 17 May 1934, which founded the Bihar Congress socialist party. Narayan became general secretary of the party, and Acharya Narendra Deva became president.

105. Who was the member of the Constituent Assembly of India from Bihar?

- A.
- A. N. Sinha
- B. Rajendra Prasad
- C. Jagjivan Ram
- D. Shyam Nandan Prasad Mishra
- E. None of the above

Answer ||| E



Solution ||| More than one of the above was the member of the constituent assembly of India from Bihar. The constitution-making body was elected by the provincial Legislative Assembly constituting of 389 members who include 93 from princely states and 296 from British India. Anugrah Narayan Dip Narayan Sinha, Jagjivan Ram, Sachchidanand Sinha, Raghunandan Prasad, Rajendra Prasad, Shyam Nandan Mishra were some of the prominent members.

106.The first Indian Ministry in Bihar in 1937 came into existence under whose leadership?

- A. Shri Krishna Singh
- B. Md.Yunus
- C. G.S. Lal
- D. Wahab Ali
- E. None of the above

Answer ||| B

Solution ||| The first Indian ministry in Bihar in 1937 came into existence under Md.Yunus. Mohammad Yunus was the first prime minister of Bihar province in British India. He served for three months in 1937 during the state's first democratic election.

107.Whom did Rajendra Prasad consider as the father of Pakistan?

- A. Md. Jinnah
- B. Lord Mountbatten
- C. Lord Minto
- D. Liaquat Ali Khan
- E. None of the above

Answer ||| C

Solution ||| Rajendra Prasad considered Lord Minto as the father of Pakistan. Lord Minto is known as the father of communal electorate. Govt of India Act 1909 was amended in his reign in which provision of separate election for Muslims was introduced. Muhammad Ali Jinnah was a lawyer, politician, and the founder of Pakistan. Lord Mountbatten was the last viceroy of British India. Liaquat Ali Khan was the first prime minister of Pakistan.

108. When was Patna Lawn renamed as Gandhi Maidan?

- A. During Quit India Movement
- B. During Anti-Simon Commission Rally
- C. During Champaran Satyagrah
- D. On the eve of Independence
- E. None of the above

Answer ||| C

Solution ||| Patna Gandhi Maidan is a historic park. Under the British rule, it was used as Golf course & horse racing track and called as Patna Lawn. But when Mahatma Gandhi came to this place to launch the Champaran satyagraha (1917), a huge crowd gathered here to hear his speech, and it was the first time when the ordinary Indian people entered the ground. Thus the park was re-named to Gandhi Maidan in honour of the great Mahatma.

109. Bombay Presidency Association was established by:

- A. Ferozshah Mehta
- B. K.T. Tailang
- C. W.
- C. Banerjee
- D. Tayabjee
- E. None of the above

Answer ||| E

Solution ||| Bombay Presidency Association established by Badruddin Taiyabjee, Pherozeshah Mehta and K. T. Telang in 1885 .

110. Who established Imperial Commission Corps?

- A. Lord Minto
- B. Lord Curzon
- C. Lord Lytton
- D. Lord Ripon
- E. None of the above

Answer ||| B

Solution ||| Lord Curzon established imperial cadet corps. In 1901, military training was extended for the first time to the Raj's Indian subjects, in the form of the imperial cadet corp (ICC) by Lord Curzon. Lord Minto Served as Governor General and Viceroy of India from 1905 to 1910.

111.The Declaration of Partition of Bengal was done on:

- A. 19th July, 1905
- B. 7th August, 1905
- C. 15th August, 1905
- D. 16th October, 1905
- E. None of the above

Answer ||| A

Solution ||| The declaration of the partition of Bengal was done on 19th July 1905. The decision to effect the partition of Bengal was announced on 19 July 1905 by the Viceroy Lord Curzon. Partition took place on 16 October 1905 and separated the largely Muslim eastern areas from the largely Hindu western areas.

112.Who was given life punishment for the murder of Colonel Wyllie?

- A. Madan Lal Dhingra
- B. Udham Singh
- C. Bhagat Singh
- D. Manmathanath
- E. None of the above

Answer ||| A

Solution ||| Madan Lal Dhingra was given life punishment for the murder of Colonel Wyllie. He was an Indian revolutionary independence activist. Udham Singh was a Punjabi revolutionary and freedom fighter belonging to the Ghadar party best known for assassinating Michael O' Dwyer.

113.The post of the Indian High Commission was created by which Act?

- A. The Indian Councils Act, 1909
- B. The Government of India Act, 1919
- C. The Government of India Act, 1935
- D. The Indian Independence Act, 1947
- E. None of the above

Answer ||| B

Solution ||| The post of the Indian High Commission was created by the Government of India Act, 1919.

The first high commissioner for India was Indian civil service officer sir William Stevenson Meyer, and the first of Indian origin was sir Dadiba Merwanji Dalal.

114. The Indian National Congress did not take part in which of the following Round Table Conferences?

- A. First
- B. Second
- C. Third
- D. Participated in all
- E. None of the above

Answer ||| E

Solution ||| The First Round Table Conference was conducted between November 1930 and January 1931. Neither Indian National Congress nor any prominent political or business leaders from India participated in it because most of them were lodged into jails.

Second Round Table Conference was held between September and December 1931. In this conference, INC took part and Mahatma Gandhi was appointed as sole representative of Indian National Congress.

Third Round Table Conference was held in London on November 17, 1932. Congress refused to attend it.

115. Mahatma Gandhi presided over which Session of the Indian National Congress?

- A. 1922
- B. 1924
- C. 1928

- D. 1930
- E. None of the above

Answer ||| B

Solution ||| W.C Bannerjee presided over the first session of the Indian National Congress which was held at Bombay in 1885 from 28 Dec to 31 Dec.

Mahatma Gandhi chaired over 1924 session of the Indian National Congress which was held at Belgaum.

116. Who was not a member of the Cabinet Mission?

- A. Pethick – Lawrence
- B. Wavell
- C. Stafford Cripps
- D. A.V. Alexander
- E. None of the above

Answer ||| B

Solution ||| Wavell was not a member of the Cabinet Mission.

The Cabinet mission of 1946 aimed to discuss the transfer of power from the British government to the Indian leadership, with the aim of preserving India's unity and granting it independence. Members of the mission are : Lord Pethick – Lawrence, the secretary of state for India, Sir Stafford Cripps, president of the board of trade, and A V Alexander, the first Lord of the Admiralty.

117. Who wrote the pamphlet 'Now or Never'?

- A. Md. Jinnah
- B. Md. Iqbal
- C. Rahmat Ali
- D. Khafi Khan
- E. None of the above

Answer ||| C

Solution ||| Rahmat Ali wrote the pamphlet 'Now or Never'. The Pakistan declaration (Titled Now or Never, Are we to live or perish forever ) was a

pamphlet written and published by Choudhary Rahmat Ali, on 28 January 1933, in which the word Pakistan was used for the first time and was presented in the round table time and was presented in the round table conference in 1933.

118. Who declared 'Sati' illegal?

- A. Warren Hastings
- B. William Bentinck
- C. Cornwallis
- D. Curzon
- E. None of the above

Answer ||| B

Solution ||| 'Sati' is declared illegal by Lord William Bentinck on 4 December 1829. He reformed the finances, Opened up judicial posts to Indians, and suppressed such practices as suttee, or widow burning, and thuggee, or ritual murder by robber gangs.

119. When was the Punjab Land Alienation Act passed?

- A. 1850
- B. 1895
- C. 1900
- D. 1905
- E. None of the above

Answer ||| C

Solution ||| Punjab Land Alienation Act was passed in 1900. The Punjab Land Alienation Act of 1900 was a piece of legislation introduced by the British Raj with the aim of limiting the transfer of land ownership in Punjab province. It created an "Agricultural tribes" category, the membership of which was almost compulsory to buy or sell land.

120. The Department of State was established under whose headship?

- A. Mahatma Gandhi
- B. J.L. Nehru

- C. G.B. Pant
- D. Sardar Patel
- E. None of the above

Answer ||| D

Solution ||| The department of state was established under Sardar Patel. Sardar Patel took charge of the state's department in July 1947. He sensed the urgent and imperative need of the integration of princely states.

121. A number, when divided by 342, gives a remainder 47. When the same number is divided by 19, what would be the remainder?

- A. 0
- B. 9
- C. 18
- D. 8
- E. None of the above

Answer ||| B

Solution ||| Let the number =  $x$   
A number  $x$  divided by 342 gives a remainder 47.  
Means  $x = 389$   
Now 389 divided by 19 the remainder is 9.

122. A person who spends  $66\frac{2}{3}\%$  of his income is able to save Rs. 1,200 per month. His monthly expenses (in Rs.) are

- A. 2,400
- B. 3,000
- C. 2,000
- D. 3,600
- E. 2,800

Answer ||| A

Solution ||| Given that spends his income is =  $66\frac{2}{3}\%$   
=  $200/3\%$   
So save amount % is  $= (1 - 200/3)\%$   
=  $100/3\%$   
 $100/3\% = 1200\text{rs}$  (given save amount)  
 $200/3\% = 2400\text{rs}$  (expenses)

123. A man gains 20% by selling an article for a certain price. If he sells it at the double the price, the percentage of profit will be

- A. 140
- B. 200
- C. 100
- D. 160
- E. 120

Answer ||| A

Solution ||| We know that  
Cp = cost price  
Sp = selling price  
Profit% = profit/cp  
Profit% =  $20/100$   
=  $1/5$   
Profit = 1  
Cp = 5  
Profit = sp - cp  
 $1 = \text{sp} - 5$   
Sp = 6  
Sp is double so sp = 12  
Profit% =  $\frac{\text{sp} - \text{cp}}{\text{cp}} \times 100$   
=  $\frac{7}{5} \times 100$   
= 140%

124. 10 women can complete a work in 7 days, and 10 children take 14 days to complete the work. How many days will 5 women and 10 children taken to complete the work?

- A. 6
- B. 5
- C. 3
- D. 7



E. 4

Answer ||| D

Solution ||| We know that the formula

$$w_1 \cdot d_1 = w_2 \cdot d_2$$

$$10w \cdot 7 = 10c \cdot 14$$

$$w = 2c \dots\dots\dots(1)$$

$$5w + 10c = 5w + 5w \text{ (putting } 10c = 5w \text{ from equation 1)}$$
$$= 10w$$

We know that  $10w = 7 \text{ days}$

5 women and 10 children = 7 days

125. How many numbers between 11 and 90 are divisible by 7?

A. 10

B. 9

C. 13

D. 12

E. 11

Answer ||| E

Solution ||| Between 11 and 90 divisible by 7 is

14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84

Total divisible by 7 between 11 and 90 is 11

126. A man can row 7.5 Km per hour in still water. If in a river running at 1.5 Km an hour, it takes him 50 minutes to row to a place and back, how far off is the place?

A. 3 Km

B. 4 Km

C. 2 Km

D. 5 Km

E. 7 Km

Answer ||| A

Solution ||| Let distance is  $x$

Man can row in still water = 7.5 km/hr

In a River running = 1.5km/hr  
Downstream is = 7.5+1.5=9km/hrs  
Upstream is = 7.5-1.5=6km/hrs  
We know that  
 $x/9 + x/6 = 50/60$   
 $(2x+3x)/18 = 5/6$   
 $5x/3 = 5$   
 $x = 3\text{km}$

127. A sum of money invested at compound interest amounts to Rs 4624 in 2 years and to Rs 4913 in 3 years. The sum of money is

- A. Rs 4240
- B. Rs 4280
- C. Rs 4096
- D. Rs 4346
- E. Rs 4406

Answer ||| C

Solution ||| We know that the formula of CI

$$A = P(1 + r/100)^n$$

$$4624 = P(1 + r/100)^2 \dots\dots\dots(1)$$

$$4913 = P(1 + r/100)^3 \dots\dots\dots(2)$$

On dividing equation 2 by 1 we get

$$4913/4624 = (1 + r/100)^3 / (1 + r/100)^2$$

$$4913/4624 = 1 + r/100$$

$$r/100 = 4913/4624 - 1$$

$$r/100 = (4913 - 4624)/4624$$

$$r/100 = 289/4624$$

$$r = 6.25\%$$

Putting the value of r in equation 1 we get

$$4624 = P(1 + 6.25/100)^2$$

$$P(106.25/100) = 68$$

$$P = 6800/106.25$$

$$P = 4096\text{Rs.}$$

128. A man buys Rs 20 shares paying 9% dividend. The man wants to have an interest of 12% on his money. The market value of each share is:

- A. Rs 18
- B. Rs 15
- C. Rs 21

D. Rs 25

E. Rs 20

Answer ||| B

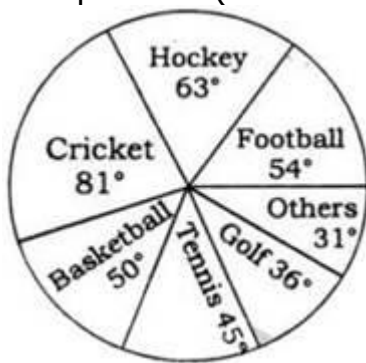
Solution ||| Dividend on Rs 20 =  $9 \times 20 / 100 = 9/5$

Let He have 12 Rs. income on Rs 100

So  $9/5$  Rs income =  $(100 \times 9) / (12 \times 5)$

= 15 Rs.

129. The following pie chart shows the spending of the country on various sports during the particular year. Study the chart carefully and answer the question (Note: Refer your question paper for chart)



How much percent less is spent on football than that of cricket?

A. 35.5

B. 29

C. 32.5

D. 31

E. 33.33

Answer ||| E

Solution ||| Percentage decrease

$$= (81 - 54) / 81 \times 100$$

$$= 2700 / 81$$

$$= 100 / 3$$

$$= 33.33\%$$

So, 33.33% less is spent on football than that on cricket.

130.A invested Rs 76,000 in a business. After few months, B joined him with Rs 57, 000. At the end of the year, the total profit was divided between them in the ratio 2:1, After how many months did B join?

- A. 6
- B. 4
- C. 3
- D. 8
- E. 5

Answer ||| D

Solution ||| Let B join after x month  
 $(76000 \times 12) / (57000 \times x) = 2/1$

On solving we get  
 $x = 8$  month

131.Quartz crystals used in clocks are?

- A. Sodium silicate
- B. Silicon dioxide
- C. Germanium dioxide
- D. Titanium dioxide
- E. None of the above/More than one above.

Answer ||| B

Solution ||| Quartz crystal used in the clock is compound of silicon dioxide. This crystal forms a signal with a very accurate frequency so that quartz watches can give accurate precision as compared to at least mechanical watches. Sodium silicate is a compound made of sodium and silica and extensively used in foundry, Germanium dioxide is an inorganic compound used in the optical fibre. Titanium dioxide is also an inorganic compound.

132.Bromine is a

- A. Colourless gas
- B. Brown solid
- C. Highly inflammable gas
- D. Red liquid

E. None of the above/More than one above.

Answer ||| D

Solution ||| Bromine is a red liquid element. It is a fairly abundant element but has a rare property it is the only non-metal to exist in liquid form at room temperature. It is toxic. Bromine is used in many areas such as agricultural chemicals, dyestuffs, insecticides, pharmaceuticals and chemical intermediates. Bromine compounds can be used as flame retardants.

133. Gases used in welding are

- A. Oxygen and hydrogen
- B. Oxygen and nitrogen
- C. Oxygen and acetylene
- D. Hydrogen and acetylene
- E. None of the above/More than one above.

Answer ||| C

Solution ||| Gases used in welding are, and acetylene. Welding is a fabrication or sculptural process that joins materials metals or thermoplastics, by causing fusion. Oxy-fuel processes may use a variety of fuel gases, the most common being acetylene, liquefied petroleum gas (LPG), propane natural gas, hydrogen, and MAPP gas.

134. Galvanised iron pipes have a coating of

- A. Zinc
- B. Mercury
- C. Lead
- D. Chromium
- E. None of the above/More than one above.

Answer ||| A

Solution ||| Galvanised iron pipes have a coating of zinc. Galvanisation or Galvanising is the process of applying a protective zinc coating to steel or iron, to prevent rusting zinc oxide is widely used in the manufacture of

many products such as paints, rubber, cosmetics, pharmaceuticals, plastic, inks soap, batteries, textiles and electrical equipment.

135.The wavelength of the visible spectrum is in the range:

- A. 1300 A-3900 A
- B. 3900 A-7600 A
- C. 7800 A-8200 A
- D. 8500 A-9800 A
- E. None of the above/More than one above.

Answer ||| B

Solution ||| The wavelength of the visible spectrum is in the range of 3900A-7600A. The visible spectrum is the portion of the electromagnetic spectrum that is visible to the human eye.

136.Detergents used for cleaning clothes are:

- A. Carbonates
- B. Bicarbonates
- C. Bismuthates
- D. Sulfonates
- E. None of the above/More than one above.

Answer ||| D

Solution ||| Detergents used for cleaning clothes are Sulfonates. A detergent is a surfactant or a mixture of surfactant with cleaning properties in dilutes solutions. These substances, are usually Alkylbenzene sulfonates, a family of compounds that are similar to soap but are more soluble in hard water.

137.The element excreted through human sweat is

- A. Sulfur
- B. Iron
- C. Magnesium
- D. Zinc

E. None of the above/More than one above.

Answer ||| E

Solution ||| The elements excreted through human sweat are more than one above. Sweat is mostly water. Dissolved in the water are trace amounts of minerals, lactic acid and urea. Although the mineral content varies, some measured concentrations are sodium, potassium, calcium and magnesium. Many other trace elements are also excreted in sweat such as zinc, copper, iron, chromium, nickel and lead.

138. Blue vitriol is chemically:

- A. Sodium sulphate
- B. Nickel Sulphate
- C. Copper Sulphate
- D. Iron Sulphate
- E. None of the above/More than one above.

Answer ||| C

Solution ||| Blue vitriol is chemically copper Sulphate. Vitriol is an archaic name for a sulphate. Copper sulphate, blue stone, blue vitriol are all common names for pentahydrate cupric sulphate,  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ , sodium Sulphate is mainly used for the manufacture of detergents and in the kraft process of paper pulping. Nickel Sulphate is used to make other nickel compounds.

139. The positively charged part at the centre of the atom is called

- A. Proton
- B. Neutron
- C. Electron
- D. Nucleus
- E. None of the above/More than one above.

Answer ||| D

Solution ||| The positively charged part at the centre of atoms is called Nucleus. All substances are made from atoms. Each atom is made of a nucleus containing protons and neutrons surrounded by electrons. The

nucleus is very much smaller than the atom as a whole. Protons and neutrons, each with masses of approximately one atomic mass unit is collectively referred to as Nucleons.

140.The conversion of solid directly into gas

- A. Sublimation
- B. Condensation
- C. Evaporation
- D. Boiling
- E. None of the above/More than one above.

Answer ||| A

Solution ||| The conversion of solid directly into gas is called as sublimation. Sublimation is a type of phase transition, just like melting, freezing, and evaporation. Through sublimation, a substance changes from a solid to a gas without even passing through a liquid phase such as dry ice, solid  $\text{CO}_2$ .

141.In the human system, insulin controls the metabolism of

- A. Fats
- B. Carbohydrates
- C. Proteins
- D. Nucleic acids
- E. None of the above/More than one above.

Answer ||| B

Solution ||| In the human system, insulin controls the metabolism of carbohydrates. Carbohydrates is an organic material which contains carbon, hydrogen, and oxygen. It is an essential source of energy in our body. Insulin, secreted by the pancreatic beta-cell is a crucial hormone in the adaptations of metabolic pathway linked to glucose homeostasis.

142.The antibiotic among the following is:

- A. penicillin
- B. aspirin



- C. paracetamol
- D. sulfadiazine
- E. None of the above/More than one above.

Answer ||| E

Solution ||| Among the above more than one above is antibiotics. Antibiotic is a type of antimicrobial drug used in treatment and prevention of bacterial infection and the growth of bacteria. Penicillin V potassium is used to treat certain infections caused by bacteria. Aspirin is an antipyretic and analgesic used to reduce fever and relieve mild to moderate pain from conditions such as muscle aches, toothaches, common cold, and headaches. Paracetamol is an antipyretic and NSAID used to treat pain and fever. Sulfadiazine is an antibiotic.

143.Which of the following is mostly carbohydrate:

- A. Wheat
- B. Barley
- C. Rice
- D. Maize
- E. None of the above/More than one above.

Answer ||| C

Solution ||| Rice is mostly carbohydrate. Carbohydrates are the sugars, starches and fibres found in fruits, grains, vegetables and milk products. They are a source of energy for the body. Wheat, Maize, Barley subsequently contain carbohydrate after rice. The maize kernel contains two fat-soluble vitamins: provitamin A and vitamin E. Barley has a nutlike flavour and is high in carbohydrates.

144.The heaviest metal among the following is

- A. Gold
- B. Silver
- C. Mercury
- D. Platinum
- E. None of the above/More than one above.

Answer ||| C

Solution ||| Mercury is the heaviest metal among the following, followed by Gold, Platinum and silver subsequently. Mercury (Hg), (Atomic mass: 200.59 amu) is used in batteries, fluorescent lights, felt production, thermometers and barometers. Gold (Au) is a chemical element having atomic mass number 199.966 amu making it one of the higher atomic number elements that occur naturally.

145. Stainless steel is an alloy of:

- A. Iron and nickel
- B. Iron and chromium
- C. Copper and chromium
- D. Iron and zinc
- E. None of the above/More than one above.

Answer ||| B

Solution ||| Stainless steel is an alloy of iron and chromium. An alloy is a combination of metals or a metal and another element. Stainless steel is a metal alloy, made up of steel mixed with elements such as chromium, nickel, molybdenum, silicon, aluminium, and carbon. Iron mixed with carbon to produce steel is the main component of stainless steel.

146. To protect broken bones, plaster of Paris is used. It is:

- A. Slaked lime
- B. Calcium carbonate
- C. Calcium oxide
- D. Gypsum
- E. None of the above/More than one above.

Answer ||| D

Solution ||| To protect broken bones, plaster of Paris is used. Plaster of Paris is a quick-setting gypsum plaster consisting of a fine white powder (calcium Sulphate hemihydrate), which hardens when moistened and allowed to dry.

147. A hydrocarbon in which two carbon atoms are joined by a double bond is called as an:

- A. Alkane
- B. Alkene
- C. Alkyne
- D. Ionic bond
- E. None of the above/More than one above.

Answer ||| B

Solution ||| A hydrocarbon in which two carbon atoms are joined by a double bond is called as an Alkene. Hydrocarbons are organic compounds that are made of only hydrogen and carbon atoms. Alkanes ( $C_nH_{2n+2}$ ) are identified because the carbon chain has only single bonds such as methane (natural gas), propane (heating and cooking fuel), butane (lighter fluid) and octane (automobile fuel). Alkenes ( $C_nH_{2n-2}$ ) have at least one triple bond.

148.The chemical name of vinegar is

- A. methanol
- B. ethanol
- C. acetic acid
- D. ethyl acetate
- E. None of the above/More than one above.

Answer ||| C

Solution ||| The chemical name of vinegar is Acetic acid ( $CH_3COOH$ ). Vinegar is now mainly used as a cooking ingredient, or in pickling. Methanol is the simplest alcohol, consisting of a methyl group linked to a hydroxyl group. It is a light, volatile, colourless, flammable liquid with a distinctive odour. Ethanol, also called alcohol, ethyl alcohol, grain alcohol, and drinking alcohol, is a chemical compound, simple alcohol with the chemical formula  $C_2H_5OH$ .

149.The acid used in a car battery is:

- A. Acetic acid
- B. Hydrochloric acid
- C. Nitric acid
- D. Sulfuric acid
- E. None of the above/More than one above.

Answer ||| D

Solution ||| The acid used in a car battery is sulfuric acid. Each cell of a lead storage battery consists of alternate plates of lead (cathode) and lead coated with lead dioxide (anode) immersed in an electrolyte of the sulfuric acid solution. The major use of sulfuric acid is in the production of fertilisers.

150.The gas, which comes out on opening a soda water bottle is

- A. Carbon dioxide
- B. Hydrogen
- C. Nitrogen
- D. Sulfur dioxide
- E. None of the above/More than one above.

Answer ||| A

Solution ||| The gas, which comes on opening a soda water bottle is carbon dioxide. Soda water, like other carbonated beverages, contains carbon dioxide that has dissolved under pressure. When the pressure is released by opening the soda container, the liquid cannot hold as much carbon dioxide, so the excess bubbles out of the solution.