ACE
Engineering Academy

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30 in 30 days for April / 19 - Detailed solutions

01. **Ans: (C)**

Exp:

➢ The International Union for Conservation of Nature (IUCN) is a membership Union uniquely composed of both government and civil society organisations.

➢ It provides public, private and non-governmental organisations with the knowledge and tools that enable human progress, economic development and nature conservation to take place together.

➢ It is created in 1948, IUCN has evolved into the world's largest and most diverse environmental network.

➢ IUCN is organised into six commissions dedicated to species survival, environmental law, protected areas, social and economic policy, ecosystem management, and education and communication.

➢ India became a State Member of IUCN in 1969, through the Ministry of Environment, Forest and Climate Change (MoEFCC).

➢ The IUCN India Country Office was established in 2007 in New Delhi.

➢ IUCN India works with Members and Commissions to reduce ecosystem and species loss by providing the necessary tools and knowledge to value, conserve and use biodiversity sustainability; enhance governance and policy for better management of ecosystems and habitats, including protected areas; and address challenges related to poverty alleviation, food security and climate change.

02. Ans: (B)

Exp:

- ➢ The Financial Sector Assessment Program (FSAP) is a joint program of the International Monetary Fund and the World Bank launched in 1999 in the wake of the Asian financial crisis

- ➢ The program brings together Bank and Fund expertise to help countries reduce the likelihood and severity of financial sector crises.

- ➢ The FSAP provides a comprehensive framework through which assessors and authorities in participating countries can identify financial system vulnerabilities and develop appropriate policy responses.

- ➢ The program also helps bring financial sector analysis closer to the centre of economic policy discussions within a country and with the Fund and the Bank.

- ➢ It also provides countries with an opportunity to measure their compliance with financial sector standards and codes and, therefore, to benchmark their regulatory and supervisory systems against internationally-accepted practices.

03. Ans: (D)

Exp:

- ➢ State of World Population-2019 report is released by the United Nations Population Fund (UNFPA)

- ➢ According to the report India's population grew at an average of 1.2% annually between 2010 and 2019 which is more than double the annual growth rate of China.

- ➢ The release of report marks 50 years of the UNFPA being established to support countries to bring down fertility levels and also marks 25 years of International Conference on Population and Development (ICPD) in 1994, where 179 governments agreed on a rights-based approach to sexual and reproductive health to address population growth.

- ➢ The world's population rose to 7.715 billion in 2019, up from 7.633 billion in 2018, with the global average life expectancy of 72 years.

- ➢ The least developed countries recorded the highest population growth, with countries in Africa registering an average of 2.7% a year.

- ➢ Much of the overall increase in global population till 2050 is projected to occur in high fertility countries, mostly in Africa, or in countries with large populations, such as Nigeria and India.

- ➢ Around half of India's population in 24 states have achieved the replacement fertility rates of 2.1 children per women, which is the desired family size when the population stops growing.

- In India, the total fertility rate per woman declined from 5.6 in 1969 to 3.7 in 1994 and 2.3 in 2019.

- As of 2019, India's population stood at 1.36 billion, growing from 942.2 million in 1994 and 541.5 million in 1969.

- 27% of India's population was in the age bracket of 0-14 years and 10-24 years, while 67% of the country's population was in the 15-64 age brackets. 6% of the country's population was of the age 65 and above.

- India registered an improvement in life expectancy at birth. The life expectancy at birth in 1969 was 47 years, growing to 60 years in 1994 and 69 years in 2019.

04. Ans: (B)

Exp:

- The Hong Kong stock exchange over took the Japan stock exchange to become the third largest stock exchange in the world

- Hong Kong is next to USA and China stock Exchange

- Hong Kong's market cap was $5.78 trillion compared with $5.76 trillion for Japan.

05. Ans: (C)

Exp:

- The 12th edition of joint military exercise between India and Singapore, BOLD KURUKSHETRA 2019, culminated on 11 April 2019 after an impressive closing ceremony held at Babina Military Station.

- The four day long joint training focused on developing interoperability and conduct of joint tactical operations in mechanised warfare.

- The troops learnt about each other's organisations and best practices being followed in combat.

06. Ans: (A)

Exp:

- EVMs, devised and designed by Election Commission of India in collaboration with two Public Sector undertakings viz., Bharat Electronics Limited, Bangalore and Electronics Corporation of India Limited, Hyderabad, is a major step in achieving free and fair elections.

- Electronic Voting Machines ("EVM") are being used in Indian General and State Elections to implement electronic voting in part from 1999 elections and in total since 2004 elections.

- The EVMs reduce the time in both casting a vote and declaring the results compared to the old paper ballot system. Bogus voting and booth capturing can be greatly reduced by the use of EVMs. Illiterate people find EVMs easier than ballot paper system. They are easier to transport the EVMs compared to ballot boxes.

- EVM has become the leitmotif of the world's largest democratic exercise and gets smarter with each avatar. Here is an attempt to briefly trace the evolution of the EVM and its use in the world's largest democracy.

- EVMs were first used in 50 polling stations of Parur Assembly Constituency of Kerala in May 1982.

- These machines could not be used after 1983 after a Supreme Court ruling that necessitated legal backing for the use of Voting machines in elections. The law was amended by Parliament in December, 1988 and a new section 61A was inserted in the Representation of the People Act, 1951 empowering the Commission to use voting machines. The amended provision comes into force w.e.f. 15th March, 1989.

- The matter regarding use of EVMs was referred by the Government of India to Electoral Reforms Committee, appointed by the Central Government in February, 1990 consisting of representatives of several recognized National and State parties.

- An Expert Committee was constituted by the Govt. of India, consisting of Prof. S. Sampath, then Chairman RAC, Defence Research and Development Organization, with Prof. P.V. Indiresan, then with IIT, Delhi and Dr C. Rao Kasarabada, the Director Electronics Research and Development Centre, Trivandrum. In its report, the committee concluded that these machines are tamper-proof.

- On 24th March, 1992, necessary amendment to the Conduct of Elections Rules, 1961 was notified by the Government in the Ministry of Law and Justice.

- The Commission again constituted Technical Expert Committee in December, 2005 comprising Prof. P.V. Indiresan, Prof. D.T. Shahani of IIT Delhi and Prof. A.K. Agarwala of IIT Delhi to get the new version EVMs evaluated before finally accepting these machines for actual use in elections.

- Subsequently, the Commission has been consulting a group of technical experts comprising Prof. (Late) P.V. Indiresan (member of the earlier committee), Prof. D.T. Shahani and Prof. A.K. Agarwala of IIT Delhi, on all EVM related technical issues. In November, 2010, the Commission has expanded its Technical Expert Committee by including two more experts, namely, Prof D.K. Sharma from Department of Electrical Engineering, IIT of Mumbai and

Prof. Rajat Moona from Department of Computer Science and Engineering, IIT of Kanpur (now Director General, C-DAC).

➢ Since, November 1998, EVMs have been using in each and every general/bye elections to Parliamentary and Assembly Constituency. India turned into an e-democracy in General Elections 2004 when 10.75 lakh EVMs were used across all polling Stations in the country. Since then, all elections were conducted by EVMs .

07. Ans: (C)

Exp:

➢ The Government of India has recently cleared the procurement of 464 T-90 Tanks from Russia

➢ Under the new deal, the tanks would be provided to the Armoured Corps of the force

➢ The new deal would increase the number of T-90s in the Army to close to 2,000 along with the remaining T-72 and T-55s

➢ Indian Army is also looking to develop new tanks under the Futuristic Main Battle Tank project.

08. Ans: (C)

Exp:

➢ The Information Technology Act, 2000 provides legal recognition to the transaction done via electronic exchange of data and other electronic means of communicationor electronic commerce transactions.

➢ This also involves the use of alternatives to a paper-based method of communication and information storage to facilitate the electronic filing of documents with the Government agencies.

➢ Further, this act amended the Indian Penal Code 1860, the Indian Evidence Act 1872, the Bankers' Books Evidence Act 1891, and the Reserve Bank of India Act 1934.

The objectives of the Act are as follows:

➢ Grant legal recognition to all transactions done via electronic exchange of data or other electronic means of communication or e-commerce, in place of the earlier paper-based method of communication.

➢ Give legal recognition to digital signatures for the authentication of any information or matters requiring legal authentication

- Facilitate the electronic filing of documents with Government agencies and also departments
- Facilitate the electronic storage of data
- Give legal sanction and also facilitate the electronic transfer of funds between banks and financial institutions
- Grant legal recognition to bankers under the Evidence Act, 1891 and the Reserve Bank of India Act, 1934, for keeping the books of accounts in electronic form.

09. Ans: (D)

Exp:

- Sri Lanka has recently banned covering of faces in public following a massive bomb blast at church
- The move comes just days after a parliamentarian submitted a Private Member's Motion to ban the burqa on security grounds.

10. Ans: (A)

Exp:

- A team of scientists at IIT Madras have developed a method for reading documents in Bharati script using a multi-lingual optical character recognition (OCR) scheme.
- Bharati is a unified script for nine Indian languages which is being proposed as a common script for India.
- Bharti script aims to bring down the communication barriers in India with a common script.
- The scripts that have been integrated include Devnagari, Bengali, Gurmukhi, Gujarati, Oriya, Telugu, Kannada, Malayalam and Tamil.

11. Ans: (C)

Exp:

- Cyclone is the atmospheric pressure distribution in which there is a low central pressure relative to the surrounding pressure.
- The resulting pressure gradient, combined with the Coriolis Effect, causes air to circulate about the core of lowest pressure in a counter clockwise direction in the Northern Hemisphere and in a clockwise direction in the Southern Hemisphere.
- Near the surface of the earth, the frictional drag on the air moving over land or water causes it to spiral gradually inward toward lower pressures. This inward movement of air is

compensated for by rising currents near the centre, which are cooled by expansion when they reach the lower pressures of higher altitudes.

➢ The cooling, in turn, greatly increases the relative humidity of the air, so that "lows" are generally characterized by cloudiness and high humidity; they are thus often referred to simply as storms.

12. Ans: (B)

Exp:

➢ Formally called One Belt and one Road initiative or BRI consisting of the land-based belt, 'Silk Road Economic Belt', and 'Maritime Silk Road', aims to connect the East Asian economic region with the European economic circle and runs across the continents of Asia, Europe and Africa.

➢ BRI is China's ambitious project announced in 2013.

➢ It covers about 65% of the world population, 60% of the world GDP and over 70 countries in six economic corridors.

➢ China is spending almost $1 trillion to revive and renew the overland and maritime trade links between China, Europe, West Asia, and East Africa through construction of modern ports linked to high-speed road and rail corridors.

13. **Ans: (C)**

Exp:

➢ Every April 26, World Intellectual Property Organisation celebrates World Intellectual Property Day to learn about the role that intellectual property (IP) rights play in encouraging innovation and creativity.

➢ The World Intellectual Property Organization (WIPO) works together with various government agencies, non-government organizations, community groups and individuals to hold different events and activities to promote World Intellectual Property Day each year.

14. **Ans: (A)**

Exp:

➢ WHO welcomed the Government of Malawi's launch of the world's first malaria vaccine in a landmark pilot program.

➢ The country is the first of three in Africa in which the vaccine, known as RTSS, will be made available to children up to 2 years of age; Ghana and Kenya will introduce the vaccine in the coming weeks of 2019.

➢ Malaria remains one of the world's leading killers, claiming the life of one child every two minutes. Most of these deaths are in Africa, where more than 250 000 children die from the disease every year. Children under 5 are at greatest risk of its life-threatening complications. Worldwide, malaria kills 435 000 people a year, most of them children.

15. **Ans: (C)**

Exp:

➢ The Insurance Regulatory and Development Authority of India (IRDAI) have formed a panel to review the existing regulatory framework on micro insurance and recommend measures to increase penetration.

➢ Suresh Mathur, Executive Director, IRDAI, is the chairman of the committee, which will have 13 members.

➢ It will suggest product designs with customer-friendly underwriting, including easy premium payment methods.

16. Ans: (B)

Exp:

- Indonesia released a special stamp on the theme of Ramayana for the first time underlining strong centuries old cultural bonds.

- As agreed during Prime Minister's Modi visit in May 2018, the Department of Posts of the Government of Indonesia released a special commemorative stamp on the theme of Ramayana to mark the event off the 70th anniversary commemorations of establishment of diplomatic relations.

17. Ans: (C)

Exp:

- Mount Agung is a currently active volcano in Bali, Indonesia, southeast of Mt Batur volcano, also in Bali.

- Gunung Agung strato volcano is the highest point on Bali. It dominates the surrounding area, influencing the climate, especially rainfall patterns. From a distance, the mountain appears to be perfectly conical.

- From the peak of the mountain, it is possible to see the peak of Mt Rinjani on the nearby island of Lombok, to the east, although both mountains are frequently covered in clouds.

- Gunung Agung is an active volcano, with a large and deep crater that occasionally emits smoke and ash.

- Having begun in 2017, this volcano's latest eruption is ongoing as of 2019.

18. Ans: (B)

Exp:

- The second statement is correct and the first statement is wrong

- The first Satellite of Nepal called NepaliSat – 1 is launched by NASA

- The satellite developed by the Nepalese scientists was launched at 2:31 am (Nepal time) from Virginia in United States

19. Ans: (C)

Exp:

- Indian and French Navies conduct Varuna 19.1 Bilateral Exercise Off Goa coast 1st – 10th May 19

- The exercise will be conducted in two phases. The harbour phase at Goa would include cross-visits, professional interactions and discussions and sports events.
- The sea phase would comprise various exercise across the spectrum of maritime operations.
- The second part, Varuna 19.2, is scheduled to be held at the end of May in Djibouti.
- The bilateral naval exercise initiated in 1983 and christened as 'Varuna' in 2001, form a vital part of the Indo-French strategic partnership.

20. Ans: (A)

Exp:

- The Seychelles is an archipelago of 115 islands in the Indian Ocean, off East Africa. Small island nations like the Seychelles are among the most vulnerable to the rise in sea levels caused by climate change.
- The broadcast was part of an expedition by Nekton Mission. The mission seeks to explore deep sections of the waters surrounding the Seychelles.
- The data will be used to help the Seychelles expand its policy of protecting 30% of its national waters by 2020.
- The initiative is particularly important for Seychelles' blue economy- the sustainable use of ocean to achieve economic growth.

21. Ans: (B)

Exp:

- The World Economic Outlook (WEO) is a report by the International Monetary Fund that analyzes key parts of the IMF's surveillance of economic developments and policies in its member countries. It also projects developments in the global financial markets and economic systems.
- The WEO is usually prepared twice a year and is used in meetings of the International Monetary and Financial Committee.
- The World Economic Outlook (WEO) is an IMF report that provides analysis and forecasts of economic developments and policies in its member countries.
- The report encapsulates state of the global economy and highlights risks and uncertainty that threaten growth.

22. Ans: (C)

Exp:

- RBI recently has issued guidelines for currency chest
- All banks in India have to maintain cash deposit in RBI 4% to 6% of their total Deposits as Cash with RBI which is called as Cash Reserve Ratio or C.R.R. Therefore RBI has to maintain a cash counter to accept cash deposit from every bank.
- In order to facilitate this cash deposit it allows banks to designate one of its branches to act as Centralized cash collecting branch on behalf of RBI and the amount deposited with that branch is treated as deposit with RBI immediately on that date .
- The officer in charge of chest has the powers of Asst Currency Officer who can pass mutilated notes and also sorts the currency for deposit with RBI or transferred to other banks as per their instructions.

23. Ans: (A)

Exp:

- David R. Malpass was selected as 13th President of the World Bank Group by its Board of Executive Directors on April 5, 2019. His five-year term began on April 9.
- Mr. Malpass previously served as Under Secretary of the Treasury for International Affairs for the United States.
- Mr. Malpass represented the United States in international settings, including the G-7 and G-20 Deputy Finance Ministerial, World Bank–IMF Spring and Annual Meetings, and meetings of the Financial Stability Board, the Organization for Economic Cooperation and Development, and the Overseas Private Investment Corporation.

24. Ans: (C)

Exp:

- The Battle of Kohima was the turning point of the Japanese U Go offensive into India in 1944 during the Second World War.
- The battle was fought in three stages from 3rd April to 22 June 1944 around the town of Kohima in Nagaland in northeast India.
- From 3 to 16 April, the Japanese attempted to capture Kohima ridge, a feature which dominated the road by which the besieged British and Indian troops of IV Corps at Imphal were supplied. By mid-April, the small British and Indian force at Kohima was relieved.

- From 18 April to 13 May, British and Indian reinforcements counter-attacked to drive the Japanese from the positions they had captured.
- The Japanese abandoned the ridge at this point but continued to block the Kohima–Imphal road.
- From 16 May to 22 June, the British and Indian troops pursued the retreating Japanese and reopened the road. The battle ended on 22 June when British and Indian troops from Kohima and Imphal met at Milestone 109, ending the Siege of Imphal.
- The battle is often referred to as the "Stalingrad of the East".
- In 2013, the British National Army Museum voted the Battle of Imphal and Kohima to be "Britain's Greatest Battle".

25. Ans: (C)

Exp:

- The first-ever global coalition on clean and efficient cooling was launched at the recently held First Global Conference on Synergies between the 2030 Agenda and Paris Agreement in Copenhagen, Denmark.
- The Global Cool Coalition is a unified front that links action across the Kigali Amendment, Paris Agreement and Sustainable Development Goals.

26. Ans: (A)

Exp:

Calendar	Date	Festival name	Religion / Regions
Lunar	varies, Mar/Apr	Ugadi	Andhra Pradesh, Telangana, Karnataka
Lunar	varies, Mar/Apr	Bighu	Jharkhand
Lunar	varies, Mar/Apr	Pratipada	Uttar Pradesh
Lunar	varies, Mar/Apr	Bikhu	Uttarakhand
Lunar	varies, Mar/Apr	Gudhi Padwa / Samsaar Padwo	Maharashtra, Goa, Konkan
Lunar	varies, Mar/Apr	Cheiraoba[2]	Manipur
Lunar	varies, Mar/Apr	Navreh	Kashmir
Lunar	varies, Mar/Apr	Navratra	Jammu
Lunar	varies, Mar/Apr	Cheti Chand	Sindh
Solar	fixed, April 13/14/15	Vaisakhi	Punjab
Solar	fixed, April 13/14/15	Rongali Bihu	Assam
Solar	fixed, April 13/14/15	Tamil puthandu	Tamil Nadu
Solar	fixed, April 13/14/15	Vishu	Kerala
Solar	fixed, April 13/14/15	Bishuva Sankranti	Odisha
Solar	fixed, April 13/14/15	Poila Boishakh	Bengal
Solar	fixed, April 13/14/15	Jud Sheetal	Mithila, part of Bihar
Lunar	varies, Oct/Nov	Nav Varas	Gujarat

27. Ans: (A)

Exp:

- **Yemen**, country situated at the south western corner of the Arabian Peninsula.
- It is mostly mountainous and generally arid, though there are broad patches with sufficient precipitation to make agriculture successful.
- The people speak various dialects of Arabic and are mostly Muslims (*see*Islam).
- The present Republic of Yemen came into being in May 1990, when the Yemen Arab Republic (North Yemen) merged with the People's Democratic Republic of Yemen (South Yemen).

28. Ans: (C)

Exp:

- The concept of 5G-enabled smartphones is picking up globally. Many companies are making sure their networks and devices lead in terms of 5G readiness.
- Also known as fifth generation wireless, the technology succeeds the 4G, 3G and 2G systems.
- The network targets high data rate, reduced latency, energy saving, cost reduction, higher system capacity, and massive device connectivity.
- According to a new report from Analysys Mason, a year ago, China and South Korea were leading in 5G readiness, with the US close behind.

29. Ans: (D)

Exp:

- India has signed an agreement with the National Bank for Agriculture and Rural Development Consultancy Service (NABCONS) for setting up the India-Africa Institute of Agriculture and Rural Development (IAIARD) in Malawi, a landlocked country in southeastern Africa.
- The agreement is a part of India's efforts to enhance capacity in the areas of agro-financing and entrepreneurship development for African countries.

30. Ans: (C)

Exp:

- International Solar Alliance mission is to provide a dedicated platform for cooperation among solar resource rich countries where the global community, including bilateral and multilateral organizations, corporates, industry, and other stakeholders, can make a positive contribution to assist and help achieve the common goals of increasing the use of solar energy in meeting

energy needs of prospective ISA member countries in a safe, convenient, affordable, equitable and sustainable manner.

➢ The ISA Framework Agreement was opened for signature during the CoP-22 at Marrakesh on 15th November, 2016.

➢ ISA promote solar technologies, new business models and investment in the solar sector to enhance prosperity

➢ ISA formulate projects and programmes to promote solar applications

➢ ISA develop innovative financial mechanisms to reduce cost of capital

➢ ISA build a common knowledge e-Portal

➢ ISA Facilitate capacity building for promotion and absorption of solar technologies and R&D among member countries