

ANSWERS WITH RATIONALE

SAMPLE QUESTION PAPER

01

ENGLISH LANGUAGE

1. The Correct option is (d)

Rationale : In the second paragraph, it is mentioned that FDI inflows to India expanded by 10 per cent on average during 2010-2015.

2. The Correct option is (a)

Rationale : In the last paragraph it is mentioned that these aggregates, however, conceal the fall in the region's export and import of services by 4.5 per cent and 4.9 per cent in 2015, respectively.

3. The Correct option is (d)

Rationale : In the fifth paragraph, it is mentioned that a worrying trend on another front is the increased usage of restrictive trade policies, especially non-tariff measures, within the Asia-Pacific region, which is partly driven by past distorted trade measures and current excess capacity in several key sectors, ESCAP said.

4. The Correct option is (d)

Rationale : In the second last paragraph, it is mentioned that the report revealed that the region had improved its market share in the commercial services trade, with the services trade more than doubling between 2005 and 2015, from just under \$600 billion to close to \$1,400 billion.

5. The Correct option is (d)

Rationale : It is mentioned in the passage that additionally, the region is seeing a proliferation of preferential trade agreements (PTA), with Asia and the Pacific rim contributing to almost 63 per cent of world PTAs, curbing a momentum towards region-wide free trade, it added. Here in this statement, the word proliferation means rapid increase.

6. The Correct option is (a)

Rationale : It is mentioned in the second paragraph, that Chughtai critiques the mercenary aspect of marriage that dehumanizes women to fulfil societal obligations and aspirations of upward mobility.

7. The Correct option is (c)

Rationale : The word subjugation means to control or dominate, so is the meaning of pacify.

8. The Correct option is (a)

Rationale : The meaning of brink is at the edge of something. Therefore, its antonym would be 'center'.

9. The Correct option is (c)

Rationale : In the passage, the author is criticizing the mercenary aspect of marriage and the subjugation of women and the societal norms. It is not concerned with issues such as dowry and bride burning.

10. The Correct option is (d)

Rationale : The whole passage discusses that Chughtai raises important questions on marriage as an economic and social enterprise. The rest of the statements do not merge with the theme of the passage.

11. The Correct option is (b)

Rationale : In the first paragraph, the author starts his speech by the words, "At this second appearing to take the oath of the presidential office, there is less occasion for an extended address than there was at the first." These words imply that the author is giving the speech for his second presidential term.

12. The Correct option is (b)

Rationale : In the third paragraph, the author mentioned that the slaves constituted a peculiar and powerful interest. All knew that this interest was, somehow, the cause of the war. Therefore, according to the author, the peculiar interest of the slaves of the Southern part of the Union was indirectly the cause of the war.

13. The Correct option is (c)

Rationale : In the sixth paragraph, the author said, "that he gives to both North and South this terrible war, as the woe due to those by whom the offense came". It can be implied that the war happened between Northern America and Southern America.

14. The Correct option is (a)

Rationale : In the fifth paragraph, the author said, "It may seem strange that any men should dare to ask a just God's assistance in wringing their bread from the sweat of other men's faces". Therefore, the author is trying to describe God as just and fair

- who cannot assist people who take other men's hard-earned money.
15. **The Correct option is (d)**
Rationale : In the seventh paragraph, the author calls the bondsman's 250 years of slavery as the unrequited toil. We can understand from the sentence that the hard work of slavery is unrequited because it has never been rewarded or acknowledged.
16. **The Correct option is (c)**
Rationale : In the seventh paragraph, the author mentions that he has one matchless blessing, enjoyed by so many of you, and not bestowed on me - a happy home with his wife and children. Therefore, this blessing has been missing in the author's life.
17. **The Correct option is (a)**
Rationale : In the second paragraph, the author mentions that "I want you to understand that in making up my mind I did not forget the country or the empire, which, as Prince of Wales and lately as King, I have for twenty- five years tried to service". Therefore, he has been Prince of Wales before he became King.
18. **The Correct option is (c)**
Rationale : In the passage, all the positions like Prince of Wales, Duke of York, King, Constitutional heads like Prime minister. Such type of system is only prevalent in England where both the royal family and democratic leaders rule.
19. **The Correct option is (a)**
Rationale : In the passage, the author mentions his complete allegiance to the new king. The word allegiance with the help of the passage can be understood as complete support and loyalty. The antonym of that will be treachery which means disloyalty. This also eliminates the other options which are either the synonym of 'allegiance' or not related to it all.
20. **The Correct option is (b)**
Rationale : In the fifth paragraph, the author mentions I want you to know that the decision I have made has been mine and mine alone. This was a thing I had to judge entirely for myself.
21. **The Correct option is (a)**
Rationale : In the second paragraph, it is mentioned that the Trinity of gods in Hinduism is Brahma, the deity of creation, Vishnu, the deity of maintenance, and Shiva, of destruction or dissolution of the universe.
22. **The Correct option is (b)**
Rationale : In the sixth paragraph, the author describes the idea of oneness as the one who perceives life in different forms, is distanced from the inner reality of Self. This world, gods, Vedas, beings, and everything present in existence are all part of our inner self. Everything is united in one deep state of unity. Therefore, the unity of the inner self can be described as the idea of oneness.
23. **The Correct option is (c)**
Rationale : In the fourth paragraph, it is mentioned that Since shiva essentially means the formless, we do not keep pictures of Shiva in temples.
24. **The Correct option is (d)**
Rationale : In the passage, the author discusses how the opposite things that we see in life are not just opposites but instead one integrated thing. He also mentions that the misery is not separate from happiness, but rather the absence of the latter. We see them as two because our minds cannot see through opposites, but when the mind is dropped, we are simply looking at life with totality and in unity.
25. **The Correct option is (a)**
Rationale : In the last paragraph, the author explains that in the concept of Ardhanarishwara, Shakti is feminine and Shiva is masculine but both are inseparable and united in total unity and harmony. Every individual has the traits of Ardhanarishwara.
26. **The Correct option is (a)**
Rationale : In the passage, the author is trying to give a message that whatever comes our way we should always have gratitude towards life, for whatever we have, and always be determined and positive for the future. But it is also emphasized that for a better future, we always forget to enjoy the present.
27. **The Correct option is (d)**
Rationale : In the fourth paragraph, it is discussed by the author that whenever his eyes fell upon someone genuinely poor and hungry, usually covered in torn clothes, he felt compassion. Therefore, he realized a sense of gratitude whenever he saw someone poor and miserable.
28. **The Correct option is (b)**
Rationale : In the second paragraph, the author described that we always run, madly-blindly, for a better future. And when that future finally comes, we simply forget that we have always been waiting for this. Even if we remember, it's momentary. Therefore, we can say that the future for which we run is short-lived and unsatisfactory.
29. **The Correct option is (d)**
Rationale : In the passage, the author mentioned that one should never lose hope and positivity to achieve one's goal in life even in miserable times. That hope and determination to achieve the goal will always help to pass through that time like a fighter.
30. **The Correct option is (a)**
Rationale : In the passage, the author mentions the words 'zealful perseverance' to connote patience, endurance, persistence to achieve something despite all the difficulties.

CURRENT AFFAIRS INCLUDING GENERAL KNOWLEDGE**31. The Correct option is (a)****Rationale :**

- The tour of duty is a program that will be launched by the Indian army to allow the civilians of the country to join the Indian Army for three years and serve the country as an army soldier.
- Initially, it will be launched as a pilot project with around 100 vacancies for officers and 1000 for jawans.
- The Tour of Duty officer level will have a salary of ₹ 80000 to ₹ 90000 per month.
- This will also help to fight the unemployment situation that has arisen out of the COVID-19 lockdown in the country.
- The Chief of Army Staff is General Manoj Mukund Naravane.
- The Chief of Defence Staff is General Bipin Rawat.
- The Union Defence Minister of India is Rajnath Singh.

32. The Correct option is (b)**Rationale :**

- The Chief Of Army Staff (COAS) is General Manoj Mukund Naravane.
- He took over the charge from the outgoing COAS General Bipin Rawat on 31 December 2019.
- COAS is the highest ranking military officer in the Indian army and is always given to a full general.
- The Appointments Committee of the Cabinet (ACC) makes appointments for this post.
- The COAS reaches superannuation upon three years in the office or at the age of 62, whichever is earlier.
- Rajendrasinhaji became General following the retirement of General K. M. Cariappa, 1953. This post was first created in the year 1955 and the Maharaja Rajendrasinhji Jadeja was the first COAS.
- The President of India is the commander-in-chief of the Indian Armed Forces.

33. The Correct option is (a)**Rationale :**

- India's first Chief of Defence Staff is General Bipin Rawat and he assumed charge on 1 January 2020.
- CDS is the head of Indian Armed Forces and reports to the Union Minister of Defence.
- CDS will also head the newly established Department of Military Affairs within the Ministry of Defence.
- He will have an important role in integrating the operations of the three armed forces *i.e.*, the Indian Army, Indian Air Force, and the Indian Navy.
- He also will be the military advisor on important defense and strategic issues for the Prime Minister and Union Defence Minister.
- A CDS serves for three years or until the age of 65 whichever is earlier.

- PM Modi had announced the creation of this post during his independence day speech on 15 August 2019.
- The creation of this post was first recommended in 1999 by the K. Subrahmanyam committee after the Kargil war followed by recommendations of the Naresh Chandra task force in 2012 and the Lieutenant General D. B. Shekatkar Committee in 2016.

34. The Correct option is (c)**Rationale :**

- The world's only horse serving cavalry of the Indian army is situated in Jaipur and is known as 61 Cavalry. It is the last mounted Cavalry regiment of the Indian Army.
- The government is considering to transition the Cavalry regiment of the Indian army and equip it with T-55 tanks instead of horses.
- The proposal to change the regiment's role to an active armoured regiment is based on the recommendations of the Shekatkar Committee.
- The regiment had a mostly ceremonial role and was also deeply involved in equestrian events and has many famous riders.
- With the mechanisation of 61 Cavalry, the President's Bodyguards (PBG) will be the only horsed element remaining in the Army.

35. The Correct option is (d).

- Sampriti-IX was a joint military exercise between India and Bangladesh, conducted in Meghalaya.
- It was the ninth edition of this exercise and was conducted at the Joint Training Node at Umroi Cantonment, about 25 km from Shillong.
- It was a 14-day long exercise to train counter-terrorism to the armies of both the countries conducted from 4 February 2020 to 16 February 2020.
- A Command Post Exercise (CPX) and a Field Training Exercise (FTX) was conducted during this exercise.
- Bangladesh's Capital-Dhaka
- Bangladesh's currency-Bangladeshi Taka
- Bangladesh's Prime Minister- Sheikh Hasina

36. The Correct option is (b)**Rationale :**

- Switzerland has expressed solidarity with India in its fight against the novel Coronavirus pandemic. They did so by projecting the tricolour on the Matterhorn mountain in the Swiss Alps to give 'hope and strength' to all Indians.
- The lightning was done by Swiss light artist Gerry Hofstetter.
- Indian Tricolour of more than 1,000 meters in size was projected on the mountain.

**37. The Correct option is (b)****Rationale :**

- WHO stands for World Health Organization. Its headquarters are situated in Geneva, Switzerland.
- It is a specialized agency of the United Nations responsible for international public health.
- It was established on 7 April 1948. This day is celebrated as the World Health Day across the world.
- Tedros Adhanom is the Director General of WHO.
- Soumya Swaminathan and Jane Ellison are deputy Director-General of WHO.

38. The Correct option is (c)**Rationale :**

- Tedros Adhanom is the Director General of WHO. He belongs to Ethiopia and is the eighth DG of WHO.
- He is the first non-physician and first African to be appointed as the Director General.
- He had earlier served as the Minister of Health and Minister of Foreign Affairs of Ethiopia.
- He has been criticised for his ways of handling the situation of the spread of Coronavirus pandemic.
- Ethiopia's Capital-Addis Ababa.
- Ethiopia's currency- Birr.
- Ethiopia's Prime Minister- Abiy Ahmed Ali.
- Ethiopia's President- Sahle-Work Zewde.

39. The Correct option is (b)**Rationale :**

- Matterhorn mountain is situated in the Swiss Alps on the borders between Switzerland and Italy.
- It has a height of 4,478 m and is the highest summer ski region in Europe and is open 365 days a year.
- It has a symmetric pyramid shape, and a rocky tooth.

40. The Correct option is (a)

- The Headquarters of International Labour Organisation (ILO) is situated in Geneva, Switzerland.
- It is a United Nations agency and is the oldest agency of the United Nations.
- It aims to advance social and economic justice through setting international labour standards.
- It was formed on 29 October 1919 and it celebrated its 100 years of formation in 2019.
- Director General of ILO - Guy Ryder.

41. The Correct option is (c)**Rationale :**

- FELUDA stands for FNCAS9 Editor-Linked Uniform Detection Assay.
- It is India's first COVID-19 detecting paper slip test that can detect the Coronavirus disease (COVID-19) within one hour.
- It uses CRISPR gene-editing technology to identify and target the genetic material of Sars-CoV2, the virus that causes COVID-19.

- It has been developed by senior scientists Dr. Debojyoti Chakraborty and Dr Souvik Maiti at the Council of Scientific & Industrial Research-Institute of Genomics and Integrative Biology (CSIR-IGIB) in New Delhi.
- It works by combining CRISPR biology and paper strip chemistry.
- The test is based on a bacterial immune system protein called Cas9. It uses cutting-edge gene-editing tool Crispr-Cas9 system. The team has repurposed it for diagnosis of COVID-19 genetic material.
- Cas9 protein is barcoded to interact specifically with the Sars-CoV2 sequence in the patient's genetic material.
- The complex of Cas9 with Sars-CoV2 is then applied to a paper strip, where using two lines (one control, one test) make it possible to determine if the test sample was infected with COVID-19.

42. The Correct option is (b)**Rationale :**

- Dr. Balram Bhargava is the Secretary & Director General of Indian Council of Medical Research (ICMR).
- ICMR is funded by the Government of India through the Department of Health Research, Ministry of Health and Family Welfare.
- Its headquarters is situated in New Delhi.
- It is the apex body for the formulation, coordination and promotion of biomedical research.
- It was founded in 1911 as the Indian Research Fund Association (IRFA) and later it was renamed as the Indian Council of Medical Research (ICMR) in 1949.

43. The Correct option is (d)**Rationale :**

- Israel has claimed to isolate the monoclonal antibodies for the first time to fight against the Coronavirus.
- These have been developed at the Israel Institute for Biological Research (IIBR) and can neutralise the disease-causing C Coronavirus inside carriers' bodies.
- Monoclonal antibodies, as the name suggests, are cloned from a single recovered cell. Thus, they are much easier to create and use, as opposed to polyclonal antibodies which will have to be derived from multiple cells.
- Normally, neutralisation occurs when the laboratory-developed antibodies mimic the body's natural immune response and attack the virus when exposed to it.
- Israel is looking for an international manufacturer would mass-produce it.

44. The Correct option is (a)

Rationale :

- India's first COVID-19 bus was launched in Mumbai, Maharashtra.
- It is based on indigenous Kodoy Technology Stack, which involves e-vehicles for sample selection and telemedicine, algorithm-based pooled genetic testing and indigenous megalabs capable of up to 5 million tests per month per lab.
- It has been launched by IIT Alumni Council, which is the largest global body of alumni, students & faculty across all 23 Indian Institutes of Technology (IITs).
- It is designed for mass screening by using a combination of fever, O₂ saturation and AI based X-rays's to detecting coronavirus.

45. The Correct option is (a)

- FLEUDA is India's first paper strip test for detecting COVID-19.
- The test is named after a fictional detective created by the late Satyajit Ray.
- Dr Souvik Maiti and Dr Debojyoti Chakraborty led the team that developed this test.
- There are two other technologies developed by MIT and the University of California, Berkeley which also use Crispr systems, but different technology and proteins. Their technologies are named Detector and Sherlock. These all are names of fictional detectives, so when the team developed something completely Indian, it decided it can keep the acronym as an Indian Detective.

46. The Correct option is (b)

Rationale :

- The Border Roads Organisation (BRO) has completed construction of 80 km road stretch that connects Dharchula to Lipulekh, popularly known as Kailash-Mansarovar yatra route.
- The road was inaugurated by Defence Minister Rajnath Singh, who flagged off the first convoy of vehicles from Pithoragarh via video conferencing.
- The road is an extension of Pithoragarh-Tawaghat-Ghatiabagarh road.
- It originates from Ghatiabagarh and terminates at Lipulekh, the gateway to Kailash Mansarovar.

47. The Correct option is (a)

Rationale :

- The Kailash mountain is situated in Tibet, China.
- It is located near Lake Manasarovar and Lake Rakshastal and is sacred in four religions : Hinduism, Bon, Buddhism, and Jainism.
- The pilgrimage to Kailash, and to the sacred Mansarovar lake that lies 30 km to its south, is run exclusively by a government organization, the Kumaon Mandal Vikas Nigam (KMVN).
- It works in collaboration with the Government of India's Ministry of External Affairs, and the Government of China to allow the pilgrims visit the holy place.

48. The Correct option is (b)

Rationale :

- India and Nepal share a border dispute for the Kalapani, Limpiyadhura and Lipulekh of Uttarakhand.
- Nepal claims the three of them to be a part of its territory and it released a new map with these three along with the area of Susta (West Champaran district, Bihar) as a part of its geographical boundary.
- India has however rejected these claims made by Nepal as these were not based on historical facts and evidence.
- Nepal's Capital-Kathmandu
- Nepal's PM- Khadga Prasad Sharma Oli
- Nepal's Currency-Nepalese Rupee

49. The Correct option is (c)

Rationale :

- The Borders Road Organisation (BRO) takes care of development and maintenance of road networks in India's border areas and friendly neighbouring countries.
- It functions under the Union Ministry of Defence.
- The Director General of BRO is Lt. Gen.Harpal Singh.
- It operates in 18 projects.

50. The Correct option is (a)

| Rajnath Singh | Union Defence Minister |
|-------------------------|--|
| Ravi Shankar Prasad | Union Minister of Law and Justice of India |
| Subrahmanyam Jaishankar | Union External Affairs Minister |
| Nitin Gadkari | Union Minister of Road Transport and Highways of India |

51. The Correct option is (b)

Rationale :

- BharatPe launched Paisa Bolega mobile application that allowed voice alerts of transactions to be heard by shopkeepers.
- The shopkeepers will be able to hear a loud instant confirmation of all payments received through their BharatPe QR, without touching the phone.
- It is a button introduced in BharatPe App. This converts the shopkeeper's smartphone into a loudspeaker, announcing the value of transaction received.
- This does away the need for the merchant to check his phone repeatedly to see if money has come in.

52. The Correct option is (b)

Rationale :

- NPCI is the umbrella organisation for retail payments across the country.
- It stands for National Payments Corporation of India.
- It was founded in the year 2008 and is registered under Section 8 of the Companies Act 2013.

- It is headquartered in Mumbai, Maharashtra.
 - MD & CEO of NPCI is Dilip Asbe.
53. **The Correct option is (c)**
Rationale :
- BHIM stands for Bharat Interface for Money.
 - It was launched on 30 December 2016 and named after Dr. B.R. Ambedkar.
 - It allows banks' customers to transfer their money instantly using the mobile application.
 - One can make direct bank payments to anyone on UPI using their UPI ID or scanning their QR with the BHIM app.
54. **The Correct option is (c)**
Rationale :
- VPA stands for Virtual Payment Address.
 - It forms the basis of the Unified Payment Interface (UPI).
 - VPA is an identifier that can be uniquely mapped to an individual account. It can be used to send and receive money.
 - In the UPI, fund transfers can be initiated without IFSC code or bank account.
 - These can be transferred throughout the day.
55. **The Correct option is (c)**
- QR stands for Quick Response. These are a type of barcodes that can be scanned using mobile device. It contains black squares arranged on a white background.
 - This was first designed in 1994 in Japan.
 - These codes often contain data for a locator, identifier, or tracker that points to a website or application.
56. **The Correct option is (b)**
Rationale :
- The Union Cabinet has approved an ordinance that allowed a 30% cut in the salaries of all Members of Parliament.
 - All Members of Parliament (MPs), including Prime Minister Narendra Modi and his Council of Ministers, would be taking the cut due to the impact of the novel Coronavirus for a year.
 - President Ram Nath Kovind, Vice-President Venkaiah Naidu and all state governors have also voluntarily decided to take a pay cut.
 - The cabinet approved an ordinance amending the Salary, Allowances and Pension of Members of Parliament Act, 1954 reducing allowances and pension from April 1 2020 for one year.
57. **The Correct option is (c)**
Rationale :
- The Members of Parliament Local Area Development Scheme (MPLADS) was launched on 23 December 1993.
 - The Ministry of Statistics and Programme Implementation looks into this scheme.
 - MPs from both Lok Sabha and Rajya Sabha, including nominated ones, can do so.
- MPs and MLAs do not receive any money under these schemes. The government transfers it directly to the respective local authorities. The legislators can only recommend works in their constituencies based on a set of guidelines.
58. **The Correct option is (b)**
Rationale :
- Each MP is allocated ₹ 5 crore per year since 2011-12 to carry out developmental activities in their constituencies.
 - MPs from both Lok Sabha and Rajya Sabha, including nominated ones, can do so.
 - States have their version of this scheme with varying amounts per MLA. Delhi has the highest allocation under MLALAD; each MLA can recommend works for up to ₹ 10 crore each year.
 - In Punjab and Kerala, the amount is ₹ 5 crore per MLA per year; in Assam, Chhattisgarh, Maharashtra and Karnataka, it is ₹ 2 crore; in Uttar Pradesh, it was recently increased from ₹ 2 crore to ₹ 3 crore.
59. **The Correct option is (b)**
Rationale :
- The Consolidated Fund of India includes revenues and expenses of the government. The revenues are received by the government through taxes and expenses incurred in the form of borrowings and loans.
 - It was created under Article 266 of the Constitution.
 - It represents one of the three parts of the Annual Financial Statement with the other two : the Contingency Fund and Public Account.
60. **The Correct option is (d)**
- Article 106 of the Constitution of India provides that the members of either House of Parliament shall be entitled to receive salaries and allowances as may from time to time be determined by Parliament.
 - The Salary, Allowances and Pension of Members of Parliament Act, 1954 governs the salaries and allowances of the members.
 - The Cabinet approved an ordinance to amend the Salaries, Allowances and Pension of Members of Parliament Act, 1954, to cut the salaries of MPs by 30%.
61. **The Correct option is (d)**
Rationale :
- Iran has successfully launched its first-ever military satellite named "Noor" into the orbit.
 - This satellite is launched by the Islamic Revolutionary Guard Corps (IRGC), a branch of the country's armed forces.
 - It was launched by a three-stage rocket which was powered by a combination of solid and liquid fuels.
 - The satellite reached an orbit of 425 km after being carried by a three-stage Ghased launcher.
62. **The Correct option is (a)**
Rationale :
- Iran signed a Joint Comprehensive Plan of Action with a group of world powers known as the P5+1

- the US, UK, France, China, Russia and Germany in 2015.
- It was a long-term deal on its nuclear programme.
- Under this, Iran agreed to eliminate its stockpile of medium-enriched uranium.
- It decided to cut its stockpile of low-enriched uranium by 98%.
- It decided that it will only enrich uranium up to 3.67%. However, the US pulled out of the deal in 2018.

63. The Correct option is (b)

Rationale :

- US President Donald Trump-authorized airstrikes at the international airport of the Iraqi capital Baghdad that killed General Qassem Suleimani, the head of Iran's Islamic Revolutionary Guard Corps' (IRGC's) Quds Force, and top Iraqi militia commander Abu Mahdi al-Muhandis, along with four other top commanders.
- His death has heightened tensions between the two countries.
- General Qassem Suleimani was not only one of the most influential people in Iran but also in Syria, Lebanon and Iraq.
- Touted by many as the future president of Iran, Suleimani had survived over a dozen of assassination plots in the past against him.
- He was responsible for carrying out operations beyond Iran and was a major adversary of the United States, Israel and Saudi Arabia.

- At a time when the US was up against the Bashar Al-Assad regime in Syria, he gathered support for the controversial president. He also helped armed groups defeat ISIS in Iraq.
- He took command of the Quds Forces around 21 years ago with an aim to make Iran a supreme power in the Middle East.

64. The Correct option is (b)

Rationale :

- Iran launched a new currency named toman to tackle inflation.
- 1 toman = 10,000 rial
- In 1930, Iran changed its basic monetary unit from dinar to the rial.
- The idea of removing four zeros has been in talks since 2008 but gained strength after 2018 when U.S. President Donald Trump exited Iran's 2015 nuclear deal and reimposed sanctions because the rial lost quite 60% of its value.

65. The Correct option is (b)

- Iran signed a Joint Comprehensive Plan of Action with a group of world powers known as the P5+1 - the US, UK, France, China, Russia and Germany in 2015.
- Under this, Iran agreed to eliminate its stockpile of medium-enriched uranium.
- It decided to cut its stockpile of low-enriched uranium by 98%.
- It decided that it will only enrich uranium up to 3.67% for 15 years.

LEGAL REASONING

66. The Correct option is (c).

Rationale : In the second paragraph, it is mentioned that the bill was passed by the parliament on Wednesday December 11, 2019. However, later on, the author also mentions the date when the bill was passed by Lok Sabha but that is not asked in the question. It only asks about the passing of the bill (final).

67. The Correct option is (c).

Rationale : In the second paragraph, it is mentioned that the Citizenship (Amendment) Act, 2019 will provide Indian citizenship for members of Hindu, Sikh, Buddhist, Jain, Parsi, and Christian religious minorities, who had fled persecution from Pakistan, Bangladesh and Afghanistan before December 2014.

68. The Correct option is (b)

Rationale : In the second paragraph, it is mentioned that the Citizenship (Amendment) Act, 2019 will provide Indian citizenship for members of Hindu, Sikh, Buddhist, Jain, Parsi, and Christian

religious minorities, who had fled persecution from Pakistan, Bangladesh and Afghanistan before December 2014.

69. The Correct option is (b).

Rationale : In the last paragraph, the author mentions that the cut-off date for citizenship was December 31, 2014 which means the applicant should have entered India on or before that date.

70. The Correct option is (c).

Rationale : Citizenship by naturalization is the other name of obtaining citizenship just by residing in the country if one is not born in that country. The author mentions in the last para that Indian citizenship, under previous law, was given either to those born in India or if they have resided in the country for a minimum of 11 years.

71. The Correct option is (b)

Rationale : High Court will entertain the petition and rule in favour of Rajesh because Vikas has Instituted a criminal proceeding against Rajesh which manifests his malicious or bad intention.

72. The **Correct option is (b)**.
Rationale : Centiomani writ issued by a superior court to dried that. The record of the lower court be sent to the superior court for review.
73. The **correct option is (d)**.
Rationale : Section 125 of Criminal Procedure Code states for maintenance not only to wife but also to child and parents. Court may order a husband who has sufficient means but neglects are refused to maintain his wife who is unable to maintain herself to provide monthly Installments.
74. The **Correct option is (b)**.
Rationale : The court has to confine to the legality and propriety of the findings and also whether the subordinate court has kept itself within the bounds of its jurisdiction.
75. The **Correct option is (a)**.
Rationale : As per section 482 of the constitution the decision given by high court is partly judicial and partly administration as the high court give decisions that are palpable.
76. The **Correct option is (b)**.
Rationale : The passage is a discussion about the new amendment and its shortcomings. It is also discussed that there is no differentia in the new classification brought about by the new amendment. The rest of the options are not thoroughly discussed in the passage like children's involvement in prostitution or the quantum of punishment or validity of the death penalty.
77. The **Correct option is (c)**.
Rationale : The Differentia is vague because the classification is uncertain based on the determination of the age of maturity. In the fifth paragraph. It is discussed that the differentia is vague also because it is not able to relate to the objects sought to be achieved by such differentia.
78. The **Correct option is (c)**.
Rationale : In the last paragraph, the author is talking about 'sexual intent'. Section 11 states that any question which involves "sexual intent" shall be a question of fact. Here in this question, there is a question of intent. Hence it is relevant and can be proved.
79. The **Correct option is (a)**.
Rationale : If the age of A is 19 years then, this will be covered by Indian Penal code because legislature defines 'child' as 'any person below the age of eighteen years', for POCSO Act. Therefore, any adult complaining of sexual harassment will be covered under IPC wherein there is no requirement of the intention of the accused to commit sexual harassment. See the last paragraph.
80. The **Correct option is (c)**.
Rationale : In the fourth paragraph, it is mentioned that the new amendment provides punishment for the offenders who commit penetrative sexual assault on a child below sixteen years of age.
81. The **Correct option is (c)**.
Rationale : If you will look into the second paragraph, you will find that the author mentions that the elements of a contract are "offer" and "acceptance" by "competent persons" having legal capacity who exchanges "consideration" to create "mutuality" of obligation. Here consideration is an important element but not adequate consideration, a consideration can be an inadequate one.
82. The **Correct option is (d)**.
Rationale : here the doctrine of restitution will apply as law cannot allow minors to benefit from void contracts by misrepresentation. Therefore, if the guitar can be traced back to the minor, the court can force Ms. Anamika to return it to the shopkeeper.
83. The **Correct option is (d)**.
Rationale : In the case of Leslie Ltd. V. Sheil, the money could not be traced back to minor, and hence the doctrine of restitution could not be followed.
84. The **Correct option is (c)**.
Rationale : From the options, Ms. Gita who is a physically handicapped person is competent to enter into a contract as physical disability is not a disqualification whereas minority and unsoundness of mind is.
85. The **Correct option is (a)**.
Rationale : From the passage, it is very clear that a contract with minor is void ab-initio (since its inception) and minors cannot make wrongful gains by entering into void contracts and commit fraud on others. Hence, the doctrine of restitution was found.
86. The **Correct option is (b)**.
Rationale : The effect and status of commercial contracts in the time of pandemic COVID-19 is discussed at great length in the paragraph.
87. The **Correct option is (c)**.
Rationale : In the sixth paragraph, it is mentioned that the time taken in arriving at a final determination of such a dispute can be horrendously long. Even if an arbitral tribunal publishes its award fairly quickly, challenges to such an award before the High Court and the Supreme Court are inevitable. This statement clearly shows that long delay is due to the option available with the litigant to challenge it before higher courts.
88. The **Correct option is (d)**.
Rationale : in the last paragraph, the author suggests that such an informal mediator can rewrite and redesign the contract that causes minimal damage or disruption to both disputing parties. As obvious it is, courts are not in business to rewrite the contracts for parties. If parties would opt for mediation, it has no legal binding. The

addition of arbitration would be a suggestion for future contracts but the passage is concerned more about the current commercial contracts in the time of COVID-19.

89. The Correct option is (b)

Rationale : In the fifth paragraph, it is stated that The doctrine of commercial impracticability to perform a contract, developed under New York law, has not found much favor with the Indian Supreme Court.

90. The Correct option is (c).

Rationale : In the seventh paragraph, it is given that The privy council has caustically observed that the trouble of a litigant in India begins when he gets hold of a decree. To implement or execute such a judgment is another long-drawn-out process. Hence the answer would be because of the difficulty in the implementation and execution of the decrees.

91. The Correct option is (a).

Rationale : The made of law implies that the creation of laws. Their enforcement and the relationship among legal rules are themselves legally regulated, so that no one-ever the most highly placed official – is above the law.

92. The Correct option is (b).

Rationale : The High Court has no power to amend the law because amending law is a part of power of the legislature and High Court belongs to the judiciary institutions. The legislative, Judiciary and executive are independent of each other.

93. The Correct option is (c).

Rationale : Despotism – is a form of government in which a single entity rules with absolute power. In this case, Hitler is the dictation possessing absolute power.

94. The Correct option is (b).

Rationale : She will be held liable as accepting bribe from ABC company for selecting them for construction work is illegal – is contradictory to her part of the official duty.

95. The Correct option is (c).

Rationale : In the last paragraph the basic assumption of Indian jurisprudence is mentioned *i.e.*, one is innocent until proven guilty.

96. The Correct option is (d)

Rationale : The second paragraph, it is given that Section 498A was enacted with the commendable

aim of cracking down on dowry deaths and cruelty against women in their matrimonial homes. Also, little further it is given that cruelty also includes mental cruelty.

97. The Correct option is (b).

Rationale : In the second paragraph specifies that in many cases the accused include the plaintiff's women in-laws who are ailing or residing outside the country. It can be thus interpreted that all the relatives of the husband whether old or young, whether residing with or with not with the victim can be charged.

98. The Correct option is (c).

Rationale : In the third paragraph, the author tells us that the Supreme Court has directed the police to first satisfy themselves of the necessity for arrest under Section 41 of the Criminal Procedure Code before making arrests in anti-dowry cases. Further, the magistrate too would have to record its satisfaction before authorizing detention of the accused.

99. The Correct option is (c).

Rationale : in the above question we discussed that any relative who is not even residing with the victim can also be charged with cruelty. Therefore, a charge can be made against the sister-in – law.

100. The Correct option is (b).

Rationale : Basic elements of theft dishonestly taking any movable property act of possession of any person without that person's absent. These elements are absent end thus it odes not amount to theft.

101. The Correct option is (a).

Rationale : Criminal Damage offence without lawful excuse destroys or damages any property belonging to the intention to damage. Sumitra has no intention to damage the painting.

102. The Correct option is (c).

Rationale : No, not guilty of theft Anshuman had told her to dumb them *i.e.* the painting was not in his possession he had consented Sumitra to take those.

103. The Correct option is (c).

Rationale : Yes, Maltic guilty of theft She dishonestly took the painting out of Sumitra.

104. The Correct option is (c).

Rationale : Maltic is guilty of criminal offence as she has stolen the picture.

LOGICAL REASONING

105. The correct option is (a)

Rationale : As per the 6th line of the 2nd paragraph of the passage it is stated that "The two scenarios presented in the model (ESCIMO) look at a 'dark' future for the blue planet". Rest statements given in the options b) and c) are incorrect here. As per the opening lines of the 2nd paragraph of the passage, the "Melting of the Arctic ice has further increased

the temperature of the planet" and few lines of the last paragraph of the passage mention that "Hurricanes are causing more destruction than the landfall. So, the option a) is the only correct answer here.

106. The correct option is (a)

Rationale : The 4th line of the 1st paragraph of the passage and the 6th line of the 2nd paragraph of



the passage state that “even if there is a cut in the greenhouse emission there would be a constant rise in the temperature of the earth. Hence, statement in the option (a) is against this idea stated in the passage which is the correct answer.

Rest statements in the option (b) as mentioned in the 2nd line of the 1st paragraph, option (c) as mentioned in the 5th line of the last paragraph and (d) as mentioned in the last line of the 1st paragraph are true in the context of the passage.

107. The correct option is (b)

Rationale : As mentioned in the 5th line of the 2nd paragraph of the passage, it’s mentioned that the global temperature will eventually rise, no matter how much GHG emissions are cut by humanity. So, option no. (b) is the correct answer.

108. The correct option is (c)

Rationale : The entire passage discusses about the rise of global temperature in the coming years irrespective of the greenhouse emission cut or control and hence the climate change is irreversible. The same is mentioned in the option (c) that summarizes the central idea of the passage.

109. The correct option is (d)

Rationale : As mentioned in the concluding lines of the passage, the author states that developing and poor nations will have to face serious aftermaths and repercussions of the rising temperature and global warming. Hence, the option (d) is the correct answer.

110. The correct option is (b)

Rationale : As given in the concluding lines of the 1st paragraph of the passage, the author clearly states that the closing of schools, anganwadis and other childcare centres has increased ‘the motherhood penalty’ across classes and across countries and the working mothers are able to give not more than one hour of uninterrupted work as compared to men who get more time.

The statement in the option (b) states the same which is the correct answer.

111. The correct option is (b)

Rationale : As per the 2nd line of the 2nd paragraph of the passage, it states that “In India the average woman spends 19.5% of her time in unpaid domestic work”. The option (b) states the same which is the correct answer here. Rest statements given in options (a), (c) and (d) are incorrect in the context of the passage.

112. The correct option is (c)

Rationale : As mentioned in the passage, the Author states that in society one can reduce the discrimination between men and women, also reduce the side-effects of the resulting misogyny in the society if men also take and share unpaid work and responsibilities like women do. If work and respect is given equally to both men and women irrespective of the gender biasness in the society, one can build a healthier society. Hence, options (c)

is the correct answer that comprises 1st and the 3rd statements as the correct answers together.

113. The correct option is (b)

Rationale : As per the concluding lines of the passage, the author states that for better economic progress of the nation and hence the better GDP, a nation should also include the unpaid work and contribution of the women. Option (b) here states the same which is the correct answer here.

114. The correct option is (d)

Rationale : As per the passage the statements given in the options (a), (b) and (c) are true and mentioned in the passage by the author. The statement given in the option (d) is the correct answer which is “False” as given in the passage. The opening lines of the passage state that “If women do a lot more unpaid work than men but society does not value their unpaid work, this structural inequality perpetuates an asymmetric power relationship, both materially and in the mind”.

115. The correct option is (a)

Rationale : The opening lines and the concluding statement of the passage clearly mention the statements given in the options (a) and (b) here as the observation of the COVID-19 mentioned by the author. Hence, (a) option is the correct answer that comprises both the statements (1) and (2) as the correct options.

116. The correct option is (a)

Rationale : The last few lines of the passage mention that “It will take out-of-the-box thinking during the pandemic to come up with interventions that are a substitute for traditional methods and prevent 2020 becoming a zero year, as parents everywhere remain wary of sending children to school” and also the 1st and the 2nd paragraphs of the passage state some examples of the new methods adopted by some teachers and states that have given good ways to make the virtual mode of learning interesting during this pandemic. So, the option (a) is correct here that conveys the same as the main idea of the passage. Rest statements given in the options (b), (c) and (d) do not match here.

117. The correct option is (b)

Rationale : The expression ““out-of-the-box thinking” means “to think differently” or “to have a divergent thinking”. Option (b) is the correct answer that mentions the same here. Rest all the meanings given in the options (a), (c) “glitched” “something that needs a repair” and (d) “flawless” means “perfect” are incorrect and do not match here.

118. The correct option is (c)

Rationale : The 7th line of the opening paragraph of the passage states that “The ASER 2020 survey covering 26 States and four Union Territories has come up with striking findings”. Hence, the option (c) is the correct answer here that states the same.

119. The correct option is (a)

Rationale : The 7th line of the 2nd paragraph of the passage states that “Students could use the safety of the open countryside to learn, under guidance from teachers, a host of topics by doing things themselves. This is particularly feasible for lower classes, where observational learning creates a strong foundation”. Hence, the (a) option is the correct answer here.

120. The correct option is (d)

Rationale : Neither the statement given in option (a) nor (b) weakens the argument in the statement given here. As both the statements state that “the author used to eat a stale chapati with little butter on it given by his grandmother and used to go to school after that with her” which actually go in the favour of the argument. So, the option (d) is the correct answer here.

121. The correct option is (a)

Rationale : The entire passage focusses on different incidents that show that the author shared a loving and close friendship with his grandmother whom he loved a lot. The same has been mentioned here in the option (a) which is the correct answer. Rest statements mentioned in the options (b) and (c) go against the main idea conveyed in the passage.

122. The correct option is (d)

Rationale : As per the passage, after shifting to the city the author’s grandmother could not accompany him to his school as before as he used to go there by school bus and she started feeding the sparrows in the courtyard instead of feeding the dogs as before. The author used to stay with his grandmother in the same room but their friendship has a twist as he became busier in the city. So, as none of these options are given as a reason of happenings after shifting of the city. Hence, the correct answer is d) option.

123. The correct option is (a)

Rationale : The opening lines of the passage state that the author and his grandmother were good friends when his parents left him to stay with her when they moved to the city. Hence the same statement mentioned in the option (a) is the correct answer. Rest options (b), (c) and (d) are incorrect as given in the passage.

124. The correct option is (b)

Rationale : The 5th line of the 1st paragraph of the passage states that the author loved to listen his grandmother singing the morning prayer as he loved her voice. Hence, the (b) option is the correct answer which states the same. Rest options (a), (c) and d) are incorrect as mentioned in the passage.

125. The correct option is (a)

Rationale : The statement in the option (b) is mentioned in the last few lines of the concluding

paragraph of the passage. The statement given in then option (c) is mentioned in the 7th line of the 1st paragraph of the passage. Only the statement given in option (a) cannot be inferred from the passage as it’s not mentioned anywhere in the passage that “Women perform better in the managerial roles as compared to men”. Hence, the option (a) is the correct answer here.

126. The correct option is (d)

Rationale : The opening lines of the passage clearly state that- The army’s short service commission women are entitled to permanent commission, no matter how long they have served. Hence, the option (d) is the correct answer here that conveys the same.

127. The correct option is (a)

Rationale : The 6th line of the 1st paragraph of the passage states that women serve 13.2% in the Air Force which is the maximum percentage as compared to Army which is 3.89% and Navy which is 6.7%. The same has been mentioned in the (a) option here which is the correct answer.

128. The correct option is (b)

Rationale : The concluding lines of the passage state that the mindsets have changed, young men today are more used to seeing women as peers, and occupying leading public roles. A woman commanding them in combat would not blow their mind, as it might have older generations of army men. The same idea is mentioned in the (b) option which is the correct answer.

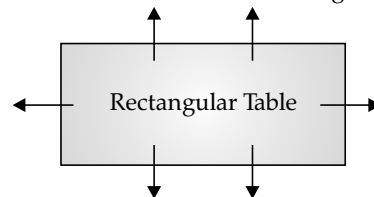
129. The correct option is (b)

Rationale : The 3rd line of the 1st paragraph of the passage mention that-this case only covers women in ten streams like army air defence, signals, engineers, service and intelligence corps – but is still a win for equal work opportunities. The (b) option mentions the same which is the correct answer here.

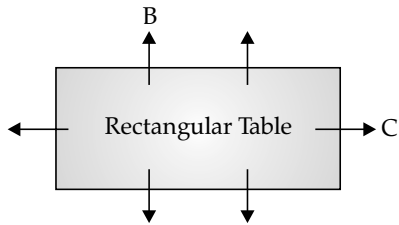
Passage 6

According to the given information, 6 people are sitting around a rectangular table facing outside with four of them seating at the longer sides (two people on each of the longer side) and remaining are seating at the shorter sides (one person on each of the shorter side)

So, let us consider the below arrangement.



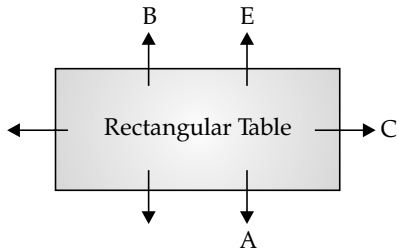
- (1) B is sitting second to the left of C, who is sitting at the shorter side of the table.



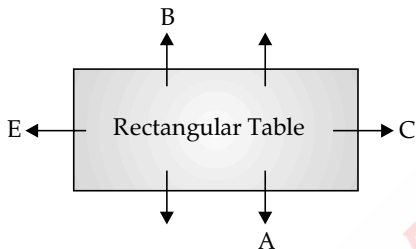
(2) A is sitting diagonally opposite to B. E is sitting two places away from A.

So, two cases are possible.

Case 1



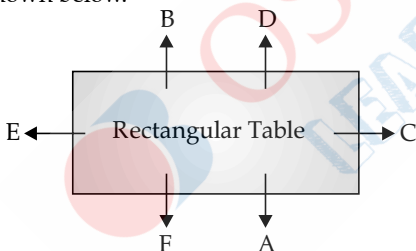
Case 2



(3) F and D sit diagonally opposite to each other. D and E are not immediate neighbours.

So, Case 1 is not possible.

Now, the final arrangement of all six people is shown below.



130. Correct option is (c)

From the above arrangement,

If we count persons between C and E in clockwise direction, B and D are sitting *i.e.*, 2 persons And, if we count in anti-clockwise direction, A and F are sitting *i.e.*, 2 persons,

So, only 2 persons are sitting between C and E from both the direction.

131. Correct option is (d)

From the above arrangement,

If we count position of F from D in clockwise direction of D, then F is third to the right of D.

And, if we count position of F from D in anti-clockwise direction of D, then F is third to the left of D.

So, F is third to the right of D.

132. Correct option is (d)

From the above arrangement, B and F are the immediate neighbours of E.

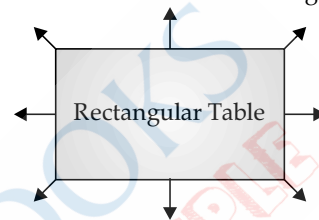
133. Correct option is (d)

From the above arrangement, D is sitting second to the left of A.

Passage 7

According to the given information, eight friends are sitting around a rectangular table with four persons, who sit on middle side of rectangular table faces opposite to centre of table while other four persons, who sit on the corner of table faces towards the centre of table.

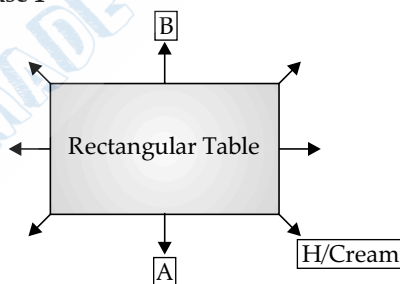
So, let us consider the below arrangement.



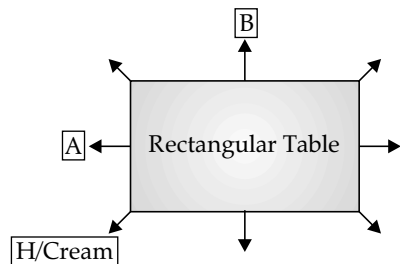
(1) B sits on middle side of the table. Two persons sit between B and H who likes cream colour. A sits immediately left of H.

So, two cases are possible.

Case 1



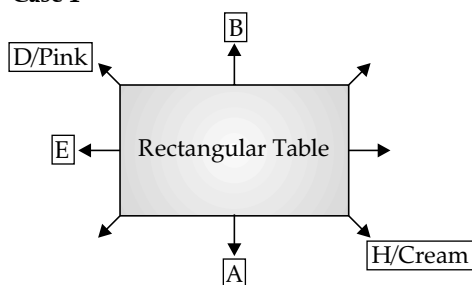
Case 2



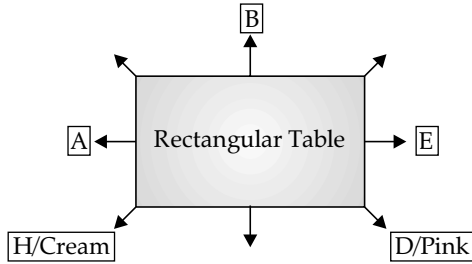
(2) D who likes pink colour sits immediate right of E. E faces opposite the centre of table.

So, above two cases can be represented as

Case 1

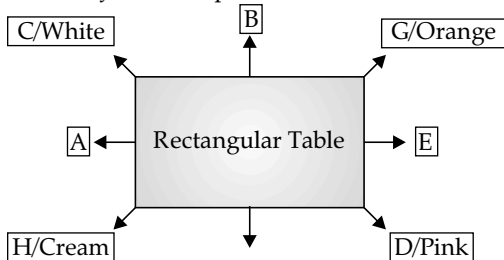


Case 2



- (3) Two persons sit between A and G who likes orange colour. C who likes white colour sits second to right of G.

So, only Case 2 is possible.

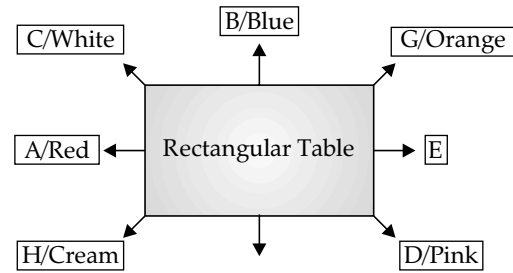


- (4) One neighbour of H likes red colour. The one who like red sits second to the left of the one who likes Blue colour. A does not like blue.

Now, there are two possibilities.

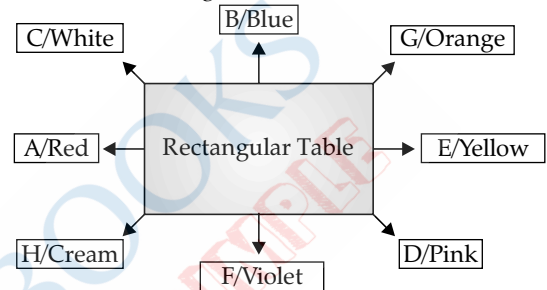
- (i) If, A likes red colour, then B likes Blue colour.
 (ii) If, the person sitting immediate right to H likes red colour, then A likes blue colour. But it is not possible as A does not like blue colour.

So, the arrangement is



- (5) Immediate neighbour of H does not like Yellow colour. It means, E like yellow colour and F sit immediate right to H and likes violet colour.

So, the final arrangement is



134. **Correct option is (d)**
 From the above arrangement,
 The person who likes red colour is A and the immediate left to A is H.
 So, the person sitting diagonally opposite to H is G.
 And, the person sitting second to the right of G is D.

135. **Correct option is (a)**
 From the above arrangement,
 The person who likes yellow colour is E.
 And the person sitting third to the left of E likes white colour.

136. **Correct option is (a)**
 From the above arrangement,
 The colour which F likes is violet.

QUANTITATIVE TECHNIQUES

137. **Correct option is (b).**
 According to table,
 No. of families for Colony C and F are 8 and 15 respectively and,
 Average member per family for colony C and F are 12 and 9 respectively
 Using formula,

$$\text{Average} = \frac{\text{Sum of observations}}{\text{No. of observations}}$$

Sum of observations (Total members in family)
 = Average members per family × No. of Families
 Total members in Colony C = 12 × 8 = 96 members
 Total members in colony F = 9 × 15 = 135 members
 Now, Let us consider the no. of men, women and children in Colony C is 13x, 7x and 4x respectively

Also, no. of men, women and children in Colony F is 8y, 6y and 13y respectively
 So, total members in colony C = 13x + 7x + 4x = 24x
 24x = 96
 x = 4

Also, total members in colony
 F = 8y + 6y + 13y = 27y
 27y = 135
 y = 5

Using the values of x and y,
 No of children in colony C = 4x = 4 × 4 = 16
 No of children in colony F = 13y = 13 × 5 = 65
 So difference between the no. of children in colony C and F = 65 – 16 = 49



138. Correct option is (a).

According to the table,

- (a) Let us consider the no. of men in colony A = $5x$
 Let us consider the no. of men in colony F = $8y$
 Total members in Colony A = $10 \times 4 = 40$ members
 Total members in Colony F = $15 \times 9 = 135$ members
 So, for colony A,

$$\begin{aligned} \text{Total members} &= 5x + 3x + 2x = 10x \\ 10x &= 40 \\ x &= 4 \end{aligned}$$

So no. of men in colony A = $5x = 5 \times 4 = 20$
 So, for colony F,

$$\begin{aligned} \text{Total members} &= 8y + 6y + 13y = 27y \\ 27y &= 135 \\ y &= 5 \end{aligned}$$

So no. of men in colony F = $8y = 8 \times 5 = 40$

- (b) Hence, no. of men in colony F is twice the no. of men in colony A.

Let us consider the no. of men in colony B = $3x$
 Let us consider the no. of men in colony C = $13y$
 Total members in Colony B = $17 \times 6 = 102$ members
 Total members in Colony C = $8 \times 12 = 96$ members
 So, for colony B, Total members = $3x + 2x + x = 6x$

$$\begin{aligned} 6x &= 102 \\ x &= 17 \end{aligned}$$

So no. of men in colony B = $3x = 3 \times 17 = 51$

So, for colony C,

$$\begin{aligned} \text{Total members} &= 13y + 7y + 4y = 24y \\ 24y &= 96 \\ y &= 4 \end{aligned}$$

So no. of men in colony C = $13y = 13 \times 4 = 52$

- (c) Let us consider the no. of men in colony F = $8x$
 Let us consider the no. of men in colony C = $13y$
 Total members in Colony F = $15 \times 9 = 135$ members
 Total members in Colony C = $8 \times 12 = 96$ members
 So, for colony F,

$$\begin{aligned} \text{Total members} &= 8x + 6x + 13x = 27x \\ 27x &= 135 \\ x &= 5 \end{aligned}$$

So no. of men in colony F = $8x = 8 \times 5 = 40$

So, for colony C,

$$\begin{aligned} \text{Total members} &= 13y + 7y + 4y = 24y \\ 24y &= 96 \\ y &= 4 \end{aligned}$$

So no. of men in colony C = $13y = 13 \times 4 = 52$

- (d) Let us consider the no. of men in colony D = $5x$
 Let us consider the no. of men in colony E = $13y$
 Total members in Colony

$$D = 14 \times 13 = 182 \text{ members}$$

Total members in Colony

$$E = 12 \times 16 = 192 \text{ members}$$

So, for colony D,

$$\begin{aligned} \text{Total members} &= 5x + 7x + 2x = 14x \\ 14x &= 182 \\ x &= 3 \end{aligned}$$

So no. of men in colony

$$D = 5x = 5 \times 3 = 15$$

So, for colony E,

$$\begin{aligned} \text{Total members} &= 13y + 12y + 7y = 32y \\ 32y &= 192 \\ y &= 6 \end{aligned}$$

So no. of men in colony E = $13y = 13 \times 6 = 78$

139. Correct option is (d).

According to graph,

No. of families for Colony C and E are 8 and 12 respectively and, Average member per family for colony C and F are 12 and 16 respectively

Using formula,

$$\text{Average} = \frac{\text{Sum of observations}}{\text{No. of observations}}$$

Sum of observations (Total members in family) = Average members per family \times No. of Families

Total members in Colony C = $12 \times 8 = 96$ members

Total members in colony

$$E = 12 \times 16 = 192 \text{ members}$$

Now, Let us consider the no. of men, women and children in Colony C is $13x, 7x$ and $4x$ respectively.

Also, no. of men, women and children in Colony E is $13y, 12y$ and $7y$ respectively.

So, total members in colony

$$C = 13x + 7x + 4x = 24x$$

$$24x = 96$$

$$x = 4$$

Also, total members in colony

$$F = 13y + 12y + 7y = 32y$$

$$32y = 192$$

$$y = 6$$

Using the values of x and y ,

No. of women in colony C = $7x = 7 \times 4 = 28$

No. of women in colony E = $12y = 12 \times 6 = 72$

$$\text{Percent} = \frac{\text{No. of women in colony C}}{\text{No. of women in colony E}} \times 100$$

$$\text{Percent} = \frac{28}{72} \times 100$$

$$\text{Percent} = 38.88\% = 39\% \text{ (approx.)}$$

140. Correct option is (c).

According to graph,

No. of families for Colony D and E are 14 and 12 respectively and, Average members per family for colony D and E are 13 and 16 respectively

Using formula,

$$\text{Average} = \frac{\text{Sum of observations}}{\text{No. of observations}}$$

Sum of observations (Total members in family) = Average members per family \times No. of Families.

Total members in Colony D = $14 \times 13 = 182$ members

Total members in colony E = $12 \times 16 = 192$ members

Now, Let us consider the no. of men, women and children in Colony D is $5x, 7x$ and $2x$ respectively.

Also, no. of men, women and children in Colony E is $13y, 12y$ and $7y$ respectively.

So, total members in colony

$$D = 5x + 7x + 2x = 14x$$

$$14x = 182$$

$$x = 13$$

Also, total members in colony

$$F = 13y + 12y + 7y = 32y$$

$$32y = 192$$

$$y = 6$$

Using the values of x and y ,

$$\text{No. of women in colony D} = 7x = 7 \times 13 = 91$$

$$\text{No. of children in colony E} = 7y = 7 \times 6 = 42$$

Ratio of no. of women in colony D to no of children in colony E = 91 : 42 = 13 : 6.

141. Correct option is (a).

According to the graph,

Total number of boys visited the place on Wednesday and Friday together = 350 + 400 = 750

Total number of girls visited the place on Monday and Thursday together = 390 + 300 = 690

$$\text{Ratio} = \frac{\text{Total number of boys visited the place on Wednesday and Friday together}}{\text{Total number of girls visited the place on Monday and Thursday together}}$$

$$\text{Ratio} = \frac{750}{690}$$

$$\text{Ratio} = 25 : 23$$

142. Correct option is (c).

According to the graph,

Total number of boys and girls together visited the place on Tuesday = 300 + 600 = 900

Total number of boys and girls together visited the place on Thursday = 200 + 300 = 500

Using formula,

$$\text{Percent change} = \frac{\text{Final} - \text{Initial}}{\text{Initial}} \times 100$$

$$\text{Percent more} = \frac{900 - 500}{500} \times 100$$

$$= \frac{400}{500} \times 100$$

$$\text{Percent more} = 80\%$$

143. Correct option is (c).

According to the graph,

Number of boys visited on Thursday = 200

Increase in boys visit on Sunday

$$= 21.5\% \text{ of } 200 = 43$$

No. of boys visit on Sunday compared to Thursday = 200 + 43 = 243.

Number of girls visited on Thursday = 300

Increase in girls visit on Sunday = $16\frac{2}{3}\%$ of 300

$$= 50$$

No. of girls visit on Sunday compared to Thursday = 300 + 50 = 350

Total number of boys and girls together visited the place on Sunday = 243 + 350 = 593

Passage 3

According to the given information,

Total Employees (in both companies P and Q) = 4800

Ratio of employees in company P and Q = 5 : 7

Let the no. of employees in company P and Q be $5x$ and $7x$ respectively

$$\text{Total employees} = 5x + 7x = 12x$$

$$12x = 4800$$

$$x = 400$$

No. of employees in company P and Q are 2000 and 2800 respectively.

In company P,

No. of male employees = 70% of total employees = 70% of 2000 = 1400

No. of male employees travel in bus = 60% of 1400 = 840

Remaining male employees = 1400 - 840 = 560

No. of male employees travel in train = $\frac{1}{8}$ of 560 = 70

No. of remaining male employees travel in car = 560 - 70 = 490

No. of Female employees = 2000 - 1400 = 600

No. of Female employees travel in train = 24% of 600 = 144

Remaining female employees = 600 - 144 = 456

No. of female employees travel in bus = $\frac{5}{8}$ of

remaining female employees = $\frac{5}{8}$ of 456 = 285

No. of remaining female employees travelling in car = 456 - 285 = 171

In company Q,

No. of male employees = 80% of total employees = 80% of 2800 = 2240

No. of male employees travel in bus = 65% of 2240 = 1456

Remaining male employees = 2240 - 1456 = 784

No. of male employees travel in car in company Q = 120% of No. of male employees travel in car in Company P.

No. of male employees travel in car in company Q = 120% of 490 = 588

Remaining male employees travel in car = 784 - 588 = 196

No. of female employees = 2800 - 2240 = 560

No. of female employees travel in bus in company Q = 75% less than the number of male employees who travel in 'Bus' in the same Company

No. of female employees travel in bus in company Q = 25% of 1456 = 364

Remaining female employees = 560 - 364 = 196

No. of female employees travel in train = $\frac{1}{4}$ of

$$196 = 49$$

No of remaining female employees travel in car = 196 - 49 = 147

All the above data is shown in the table below.

| Companies (→) | Company P (TOTAL = 2000) | | Company Q (TOTAL = 2800) | |
|---------------|-----------------------------|--------|-----------------------------|--------|
| | Male | Female | Male | Female |
| BUS | 840 | 285 | 1456 | 364 |
| TRAIN | 70 | 144 | 196 | 49 |
| CAR | 490 | 171 | 588 | 147 |
| Total | 1400 | 600 | 2240 | 560 |

144. **Correct option is (b).**

According to the table above,

No. of female employees of company Q who travel in train = 49

Total female employees of company Q = 560

$$\text{Percent} = \frac{49}{560} \times 100$$

$$\text{Percent} = 8.75\%$$

145. **Correct option is (c).**

Average no. of males travelling in train for both the

$$\text{companies} = \frac{70 + 196}{2} = \frac{266}{2} = 133$$

Average no. of females travelling in car for both the

$$\text{companies} = \frac{171 + 147}{2} = \frac{318}{2} = 159$$

$$\text{Difference} = 159 - 133 = 16$$

146. **Correct option is (b).**

According to the table,

In company Q,

Total number of employees (both male and female) who travel in "Train" = 196 + 49 = 245

Total number of employees (both male and female) who travel in "Car" = 588 + 147 = 735

$$\text{Ratio} = \frac{\text{Total number of employees (both male and female) who travel in "Train"}}{\text{Total number of employees (both male and female) who travel in "Car"}}$$

$$= \frac{245}{735}$$

$$\text{Ratio} = 1 : 3$$

147. **Correct option is (d).**

According to the table above,

No. of male employees of company P who travel in Car and did not come to office

$$= 20\% \text{ of } 490 = 98$$

No. of female employees of company Q who travel in train and did not come to office

$$= 14.28\% \text{ of } 49 = 7$$

Total employees who did not come to office

$$= 98 + 7 = 105$$

Total employees who came to office

$$= 4800 - 105 = 4695$$

$$\text{Percent} = \frac{4695}{4800} \times 100$$

$$= 97.81\%$$

$$\text{Percent} = 98\% \text{ (approx.)}$$

148. **Correct option is (a).**

According to given bar graph,

Average no of people using JIO in all years together

$$\text{No. of people using JIO from 2014 to 2019 Combined} = \frac{\quad}{6}$$

Average no of people using JIO in all years together

$$= \frac{5000 + 7500 + 25000 + 17500 + 22500 + 12500}{6}$$

$$= \frac{90,000}{6} = 15000$$

149. **Correct option is (b).**

According to the bar graph,

Number of people using mobile service of AIRTEL in 2015 = 15000

Number of people using mobile service of AIRTEL in 2014 = 10000

$$\text{Ratio} = \frac{\text{Number of people using mobile service of AIRTEL in 2015}}{\text{(Number of people using mobile service of AIRTEL in 2014)}}$$

$$\text{Ratio} = \frac{15000}{10000}$$

$$\text{Ratio} = 3 : 2$$

150. **Correct option is (d).**

According to the bar graph,

Total number of people using all the three mobile services in the year 2017

$$= 15000 \text{ (AIRTEL)} + 17500 \text{ (JIO)} + 20000 \text{ (IDEA)}$$

Total number of people using all the three mobile services in the year 2017 = 52500

Total number of people using all the three mobile services in the year 2018

$$= 10000 \text{ (AIRTEL)} + 22500 \text{ (JIO)} + 25000 \text{ (IDEA)}$$

Total number of people using all the three mobile services in the year 2018 = 57500

Percent

$$= \frac{\text{Total number of people using all the three mobile services in the year 2017}}{\text{(Total number of people using all the three mobile services in the year 2018)}} \times 100$$

$$\text{Percent} = \frac{52500}{57500} \times 100$$

$$\text{Percent} = 91.30\% \text{ (rounded to 2 digits after decimal)}$$