

# CLAT UG 2022 Solutions

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## English Language

I. Public speaking is a powerful real-life skill. Over the centuries, impressive speeches made by people from various walks of life have helped to change hearts, minds and shape the world as we see it today. Speeches that are delivered with intense emotions and conviction can infuse compassion and forgiveness; elevate levels of hatred and destruction; break or unite nations. On October 5, in 1877 in the mountains of Montana territory, when Chief Joseph surrendered to General Nelson A. Miles, the former gave a Surrender Speech. The speech included these words: "It is cold, and we have no blankets; the little children are freezing to death. I want time to look for my children, and see how many of them I can find. Maybe I shall find them among the dead. Hear me, my Chiefs! I am tired; my heart is sick and sad. From where the sun now stands I will fight no more forever." The heart-wrenching speech bared the grief and misery of the speaker, and those subjected to overwhelming hardships. During World War II, the speech We Shall Fight on the Beaches delivered by Winston Churchill on June 4, 1940 is considered a high-powered speech that strengthened the determination of those present in the House of Commons. In the speech, he said, "Even though large tracts of Europe and many old and famous States have fallen or may fall into the grip of the Gestapo and all the odious apparatus of Nazi rule, we shall not flag or fail. We shall go on to the end, we shall fight in France, we shall fight on the seas and oceans, we shall fight with growing confidence and growing strength in the air, we shall defend our island, whatever the cost may be, we shall

fight on the beaches, we shall fight on the landing grounds, we shall fight in the fields and in the streets, we shall fight in the hills.”

In 1950, William Faulkner was honoured with a Nobel Prize for his significant contribution to the American novel. This was the time when the Soviet Union had found the possible implications of the use of the atomic bomb, and people had begun to live in the fear of annihilation. In his Nobel Prize Acceptance Speech, Faulkner urged writers of various genres to think and write beyond the fear of destruction, and instead write materials that would lift the human spirit. The powerful message included: “I believe that man will not merely endure: he will prevail. He is immortal, not because he alone among creatures has an inexhaustible voice, but because he has a soul, a spirit capable of compassion and sacrifice and endurance. The poet's, the writer's, duty is to write about these things. It is his privilege to help man endure by lifting his heart, by reminding him of the courage and honor and hope and pride and compassion and pity and sacrifice which have been the glories of his past. The poet's voice need not merely be the record of man, it can be one of the props, the pillars to help him endure and prevail.” Undoubtedly, effective speeches have a long-lasting impact on the minds of the listeners, and they elevate the levels of awareness or actions the speaker intends to raise or catalyze.

**Question 1.** The main idea of the passage is that

- (A) All leaders should be accomplished public speakers.
- (B) An impactful speech can convey a strong message to the listeners.
- (C) A speech should sound pleasing to the ears of the listeners.
- (D) Public speakers should be bold and argumentative.

**Answer.** An impactful speech can convey a strong message to the listeners.

**Solution.** The main idea of the passage is that an impactful speech can convey a strong message to the listeners. So the answer is (B).

**Question 2. The tone of the Surrender Speech is**

- (A) Satiric**
- (B) Optimistic**
- (C) Poignant**
- (D) Narcissistic**

**Answer.** Poignant

**Solution.** The tone of the Surrender Speech is poignant. It is a speech that is full of sadness, grief, and despair. Chief Joseph is surrendering to the United States Army after a long and bloody war, and he knows that his people have lost everything. He is worried about his children, who are freezing to death, and he is deeply saddened by the loss of his people and their way of life.

The other answer choices do not accurately reflect the tone of the speech. Satirical means using humor to criticize something, and optimistic means having a positive outlook on the future. The Surrender Speech is neither satirical nor optimistic. Narcissistic means having an excessive interest in or admiration of oneself and one's physical appearance. Chief Joseph's speech is not narcissistic at all. He is focused on his people and their suffering, not on himself.

Here is an example of a poignant sentence from the speech:

"I am tired; my heart is sick and sad."

This sentence conveys Chief Joseph's deep sadness and despair. He is tired of fighting, and his heart is heavy with grief.

The Surrender Speech is a powerful and moving speech that conveys the pain and loss of a people who have been defeated. It is a speech that will stay with you long after you have read it.

**Question 3.** It is evident that through his speech, Churchill wished to \_\_\_\_\_ his countrymen \_\_\_\_\_.

- (A) inform, about the challenges that arise in a war-torn country.
- (B) Warn against the futility of war.
- (C) remind, how their endeavours to fight against the Nazi rule had failed miserably.
- (D) reassure, that they would combat fiercely against their enemy under all circumstances.

**Answer.** reassure, that they would combat fiercely against their enemy under all circumstances

**Solution.** The answer is (D).

Churchill's speech is a rallying cry to the British people. He is trying to reassure them that even though they have suffered setbacks, they will ultimately prevail against the Nazis. He does this by reminding them of their courage and determination, and by promising that they will fight back with all their might.

Here is a quote from the speech that illustrates this:

"We shall fight on the beaches, we shall fight on the landing grounds, we shall fight in the fields and in the streets, we shall fight in the hills; we shall never surrender."

Churchill's speech was very effective in inspiring the British people to continue fighting. It is still considered to be one of the greatest speeches ever given.

**Question 4. Which one of the following is the least likely to be used to describe Churchill?**

- (A) resolute**
- (B) undaunted**
- (C) Complacent**
- (D) unwavering**

**Answer.** Complacent

**Solution.** The least likely word to be used to describe Churchill is complacent.

Complacent means self-satisfied and unambitious. Churchill was the opposite of complacent. He was a driven and ambitious leader who was always looking for ways to improve his country and the world.

The other three words, resolute, undaunted, and unwavering, all describe Churchill's strength of character and determination.

- Resolute means determined and unwavering. Churchill was resolute in his determination to defeat the Nazis.
- Undaunted means not discouraged or frightened. Churchill was undaunted by the challenges he faced during World War II.
- Unwavering means not changing or weakening. Churchill's commitment to fighting the Nazis was unwavering.

Here are some examples of how Churchill's resoluteness, undaunted spirit, and unwavering commitment were evident in his actions:

- In 1940, when France fell to the Nazis and Britain stood alone against Hitler, Churchill refused to give up. He gave a series of inspiring speeches that rallied the British people to continue fighting.
- When the Germans bombed London and other British cities, Churchill refused to leave the city. He stayed with his people and shared their suffering.

- Churchill played a key role in developing the Allied strategy that ultimately led to the defeat of the Nazis. He never wavered in his belief that Britain would prevail.

Churchill was a truly remarkable leader, and his words and actions continue to inspire people around the world.

**Question 5. In the sentence : ‘The poet’s voice need not merely be the record of man, it can be one of the props, the pillars to help him endure and prevail’ Faulkner has used \_\_\_\_\_ to convey the power of a poet’s writings.**

- (A) A metaphor
- (B) A simile
- (C) An onomatopoeia
- (D) A transferred epithet

**Answer.** A metaphor

**Solution.** The answer is (A).

In the sentence "The poet's voice need not merely be the record of man, it can be one of the props, the pillars to help him endure and prevail," Faulkner uses a metaphor to convey the power of a poet's writings.

A metaphor is a figure of speech that compares two unlike things without using the words "like" or "as." In this metaphor, Faulkner compares a poet's voice to props and pillars, which are strong and supportive structures. This metaphor suggests that a poet's words can provide strength and support to people who are struggling.

Here are some other examples of metaphors:

- Love is a battlefield.
- Time is money.
- Life is a journey.
- Ignorance is bliss.

- Hope is the anchor of the soul.

Metaphors are a powerful tool that writers can use to create vivid images and convey complex ideas in a clear and concise way.

## Current Affairs and General Knowledge

VII. When we hear the name SPACE, only one organization comes to mind: the Indian Space Research Organization (ISRO). The Indian Space Research Organization (ISRO), located in Bengaluru, is the country's first space agency. ISRO was founded in 1969 with the goal of developing and utilizing space technology for national development while also conducting planetary exploration and space science research. The space research operations began in India in the early 1960s, at a time when satellite applications were still in the experimental stages in the United States. dr. Vikram Sarabhai, the founding father of India's space programme, rapidly recognised the benefits of space technologies after the live transmission of the Tokyo Olympic Games across the Pacific by the American Satellite 'Syncom-3' demonstrated the power of communication satellites. The ISRO has launched various spacecrafts like the Chandrayaan, Astrosat, microsats, gSAT etc. the government of India has also approved a regional spaceborne navigation system, which will consist of seven satellites. Out of these, four of them will be placed in a geosynchronous inclined orbit of  $29^\circ$  relative to the equatorial plane. Such an arrangement would mean all seven satellites would have continuous radio visibility with Indian control stations.

**Question 31.** Name the first dedicated mission launched by ISRO for studying the celestial sources in X-ray, optical and UV spectral bands simultaneously.

- (A) Amazonia
- (B) Astrosat
- (C) gaganyaan – 1
- (D) Lunar Polar exploration mission

**Answer.** Astrosat

**Solution.** The answer is (B).



Astrosat is the first dedicated mission launched by ISRO for studying the celestial sources in X-ray, optical and UV spectral bands simultaneously.

The other answer choices are incorrect:

- Amazonia is a satellite launched by Brazil.
- Gaganyaan-1 is India's first human spaceflight mission.
- Lunar Polar Exploration Mission is a proposed mission by ISRO to explore the polar regions of the Moon.

Astrosat was launched on September 28, 2015, and is still in operation. It has made significant contributions to our understanding of a wide range of astrophysical topics, including black holes, neutron stars, galaxies, and the early universe.

**Question 32. APPLE, the first communication satellite of ISRO was launched from:**

- (A) Satish dhawan Space Centre, Sriharikota**
- (B) terLS, thiruvananthapuram**
- (C) Kourou, French guiana**
- (D) SSLV Launching Station, tamil Nadu**

**Answer.** Kourou, French guiana

**Solution.** The answer is (C).

APPLE, the first communication satellite of ISRO, was launched from Kourou, French Guiana on June 19, 1981.

The other answer choices are incorrect:

- Satish Dhawan Space Centre, Sriharikota is the primary launch site of ISRO in India.
- TERLS, Thiruvananthapuram is the headquarters of ISRO.
- SSLV Launching Station, Tamil Nadu is a launch site for small satellite launch vehicles.

APPLE was a successful mission, and it demonstrated India's capability to launch and operate its own communication satellites. It was used for a variety of applications, including television broadcasting, telephony, and data communication.

ISRO has since launched many other communication satellites, and India is now a leading player in the global satellite communication market.

**Question 33. Name the spacecraft that has been successfully sent into space to probe into the planets in the solar system.**

- (A) Sputnik 19**
- (B) Cosmos 482**
- (C) Pioneer-e**
- (D) mariner 10**

**Answer.** mariner 10

**Solution.** The answer is (D).

Mariner 10 is the spacecraft that has been successfully sent into space to probe into the planets in the solar system.

The other answer choices are incorrect:

- Sputnik 19 and Cosmos 482 are Soviet satellites.
- Pioneer E was a failed mission.

Mariner 10 was launched on November 3, 1973, and it was the first spacecraft to visit Mercury and Venus. It made three flybys of Mercury, and it provided the first detailed images of the planet's surface. Mariner 10 also made one flyby of Venus, and it provided valuable data about the planet's atmosphere.

Mariner 10 was a highly successful mission, and it helped to revolutionize our understanding of Mercury and Venus.

ISRO has not yet launched any spacecraft to probe into the planets in the solar system. However, ISRO is developing a mission to Mars, which is scheduled to launch in 2024.

**Question 34. The first successful Nuclear Bomb test conducted by India in 1974, is called the:**

- (A) Prithvi
- (B) Pokhran-ii
- (C) Smiling buddha
- (D) Surya

**Answer.** Smiling buddha

**Solution.** The answer is (C).

The first successful nuclear bomb test conducted by India in 1974 is called the Smiling Buddha.

The other answer choices are incorrect:

- Prithvi is a short-range ballistic missile developed by India.
- Pokhran-II is a series of five nuclear bomb tests conducted by India in 1998.
- Surya is a proposed nuclear-powered ballistic missile submarine by India.

The Smiling Buddha test was conducted on May 18, 1974, at the Pokhran Test Range in Rajasthan. The test was a success, and it demonstrated India's capability to develop and detonate nuclear weapons.

The Smiling Buddha test was a significant milestone in India's history, and it had a profound impact on the country's security and international relations. It also made India the sixth country in the world to possess nuclear weapons.

The test was conducted in secret, and it was not announced to the public until after it had taken place. The Indian government justified the test by saying that it was necessary for India's security in a world where nuclear weapons were already possessed by several countries.

**Question 35. NavIC covers india and region extending:**

- (A) 1,500 Km
- (B) 2,000 Km
- (C) 7,000 Km
- (D) 1,000 Km

**Answer.** 1,500 Km

**Solution.** The answer is (A).

NavIC covers India and a region extending 1,500 Km.

NavIC, also known as the Indian Regional Navigation Satellite System (IRNSS), is a regional satellite navigation system developed and operated by the Indian Space Research Organisation (ISRO). It consists of seven satellites in geostationary and geosynchronous orbits. NavIC provides accurate positioning, navigation, and timing services to users in India and the surrounding region.

The primary service area of NavIC is India and a region extending 1,500 Km beyond the Indian border. This region includes countries such as Pakistan, Bangladesh, Nepal, Bhutan, Sri Lanka, and Myanmar. NavIC also provides secondary coverage to a region extending 7,000 Km beyond the Indian border. This region includes countries such as Saudi Arabia, Iran, Afghanistan, Indonesia, and Australia.

NavIC is a significant achievement for India, and it is a testament to the country's growing technological capabilities. NavIC has a wide range of applications, including transportation, agriculture, disaster management,

and surveying. It is also being used to develop new and innovative applications, such as drone-based delivery and precision agriculture.

## Legal Reasoning

**XIV. Writ is a public law remedy. it refers to a formal, written order issued by a judicial authority directing an individual or authority to do or refrain from doing an act. the High Court, while exercising its power of judicial review, does not act as an appellate body. it is concerned with illegality, irrationality and procedural impropriety of an order passed by the State or a Statutory Authority. A High Court is empowered to issue directions, orders or writs for the enforcement of Fundamental rights and for any other purpose. The writ jurisdiction of the High Court is discretionary and equitable. Writ of mandamus is issued by a court commanding a public authority to perform a public duty belonging to its office. It can be issued only when a legal duty is imposed on the authority and the petitioner has right to compel the performance of such duty. Writ of mandamus is requested to be issued, inter alia, to compel performance of public duties which may be administrative, ministerial or statutory in nature. A writ of mandamus may be issued in favour of a person who establishes a legal right in himself. It may be issued against a person who has a mandatory legal duty to perform, but has failed or has neglected to do so. Such a legal duty emanates by operation of law. the writ of mandamus is most extensive in regards to its remedial nature. the object of mandamus is to prevent disorder emanating from failure of justice and is required to be granted in all cases where law has established no specific remedy.**

**Question 66. The government of a state made a rule to make it discretionary to grant dearness allowance to its employees. One of the employees filed a writ petition seeking a mandamus to compel the government to grant dearness allowance. In the given situation, which of the following statements is true?**

**(A) Writ of mandamus cannot be granted as no legal duty was imposed on the government to grant dearness allowance.**

- (B) Writ of mandamus cannot be granted as a statutory right was conferred on the employee to receive dearness allowance.**
- (C) Writ of mandamus can be granted as it is a public law remedy.**
- (D) Writ of mandamus can be granted as it is a discretionary remedy.**

**Answer.** Writ of mandamus cannot be granted as no legal duty was imposed on the government to grant dearness allowance.

**Solution.** The answer is (A).

Writ of mandamus cannot be granted as no legal duty was imposed on the government to grant dearness allowance.

A writ of mandamus is a discretionary order issued by a court to compel a public authority to perform a public duty. It is granted when there is a legal duty on the authority to perform the act and the petitioner has a right to compel the performance of that duty.

In the given situation, the government of the state has made a rule to make it discretionary to grant dearness allowance to its employees. This means that the government is not legally bound to grant dearness allowance to its employees. Therefore, the employee cannot seek a writ of mandamus to compel the government to grant dearness allowance.

The other answer choices are incorrect:

- (B) Writ of mandamus cannot be granted as a statutory right was conferred on the employee to receive dearness allowance. This statement is incorrect because a writ of mandamus can be granted to compel the performance of a statutory duty. However, in the given situation, there is no statutory right on the part of the employee to receive dearness allowance.
- (C) Writ of mandamus can be granted as it is a public law remedy. This statement is correct. However, it is not sufficient to grant a writ of mandamus. There must also be a legal duty on the part of the

authority to perform the act and the petitioner must have a right to compel the performance of that duty.

- (D) Writ of mandamus can be granted as it is a discretionary remedy. This statement is correct. However, the discretion of the court is exercised in favor of the petitioner only when there is a legal duty on the part of the authority to perform the act and the petitioner has a right to compel the performance of that duty.

**Question 67. A public-spirited citizen filed a writ petition seeking a mandamus to compel the government to make a law to curb the ill-effects of climate change. In the given situation, which of the following statements is true?**

- (A) Writ of mandamus can be granted as it is an equitable remedy.**
- (B) Writ of mandamus cannot be granted as no legal duty is imposed on the government to pass a law to curb the ill-effects of climate change.**
- (C) Writ of mandamus can be granted as it is a discretionary remedy.**
- (D) Writ of mandamus cannot be granted as there is no violation of fundamental right.**

**Answer.** Writ of mandamus cannot be granted as no legal duty is imposed on the government to pass a law to curb the ill-effects of climate change.

**Solution.** The answer is (B).

Writ of mandamus cannot be granted as no legal duty is imposed on the government to pass a law to curb the ill-effects of climate change.

A writ of mandamus is a discretionary order issued by a court to compel a public authority to perform a public duty. It is granted when there is a legal duty on the authority to perform the act and the petitioner has a right to compel the performance of that duty.

In the given situation, there is no legal duty on the part of the government to pass a law to curb the ill-effects of climate change. Therefore, the



public-spirited citizen cannot seek a writ of mandamus to compel the government to make a law to curb the ill-effects of climate change.

The other answer choices are incorrect:

- (A) Writ of mandamus can be granted as it is an equitable remedy. This statement is correct. However, it is not sufficient to grant a writ of mandamus. There must also be a legal duty on the part of the authority to perform the act and the petitioner must have a right to compel the performance of that duty.
- (C) Writ of mandamus can be granted as it is a discretionary remedy. This statement is correct. However, the discretion of the court is exercised in favor of the petitioner only when there is a legal duty on the part of the authority to perform the act and the petitioner has a right to compel the performance of that duty.
- (D) Writ of mandamus cannot be granted as there is no violation of fundamental right. This statement is incorrect. A writ of mandamus can be granted to compel the performance of a public duty even if there is no violation of a fundamental right.

It is important to note that the public-spirited citizen may still be able to challenge the government's inaction on climate change through other legal means, such as a public interest litigation suit.

**Question 68. Mr. A and Mr. B are parties to a contract of sale of goods. upon breach of contractual obligations by Mr. A, Mr. B filed a writ petition seeking a mandamus to compel Mr. A to perform his obligations under the contract. in the given situation, which of the following statements is true?**

- (A) Writ of mandamus can be granted as it is a discretionary remedy.**
- (B) Writ of mandamus cannot be granted as there is no violation of fundamental right.**
- (C) Writ of mandamus cannot be granted as mr. b's right under the contract is a private right.**

**(D) Writ of mandamus can be granted as there is no statutory duty imposed on Mr.A to fulfill his contractual obligations.**

**Answer.** Writ of mandamus cannot be granted as Mr. B's right under the contract is a private right.

**Solution.** The answer is (C). Writ of mandamus cannot be granted as Mr. B's right under the contract is a private right.

A writ of mandamus is a discretionary order issued by a court to compel a public authority to perform a public duty. It is not available to enforce private rights.

In the given situation, the dispute between Mr. A and Mr. B is a private dispute arising out of a breach of contract. Mr. B's right to compel Mr. A to perform his contractual obligations is a private right. Therefore, Mr. B cannot seek a writ of mandamus to compel Mr. A to perform his obligations under the contract.

The other answer choices are incorrect:

- (A) Writ of mandamus can be granted as it is a discretionary remedy. This statement is correct. However, as discussed above, a writ of mandamus cannot be used to enforce private rights.
- (B) Writ of mandamus cannot be granted as there is no violation of fundamental right. This statement is incorrect. A writ of mandamus can be granted to compel the performance of a public duty even if there is no violation of a fundamental right.
- (D) Writ of mandamus cannot be granted as there is no statutory duty imposed on Mr.A to fulfill his contractual obligations. This statement is incorrect. A writ of mandamus can be used to compel the performance of a public duty, even if the duty is not statutory in nature.

It is important to note that Mr. B still has other legal remedies available to him to enforce his contractual rights against Mr. A. For example, Mr. B can file a civil suit against Mr. A seeking damages for breach of contract.

**Question 69. A Licensing officer is under a statutory duty to issue a license to an applicant who fulfills the conditions prescribed for the issue of such license. Mr.X, an applicant, fulfilled all the conditions prescribed for the issue of such license, but his application for issuance of license was rejected by the licensing officer. In the given situation which of the following statements is correct?**

**(A) Writ of mandamus can be granted compelling the license officer to issue the license.**

**(B) Writ of mandamus cannot be granted compelling the license officer to issue the license as there is no violation of fundamental right.**

**(C) Writ of mandamus can be granted as it is the discretion of the licensing officer to grant license.**

**(D) Writ of mandamus cannot be granted compelling the license officer to issue the license as there is no violation of public duty.**

**Answer.** Writ of mandamus can be granted compelling the license officer to issue the license.

**Solution.** The answer is (A).

Writ of mandamus can be granted compelling the license officer to issue the license.

A writ of mandamus is a discretionary order issued by a court to compel a public authority to perform a public duty. It is granted when there is a legal duty on the authority to perform the act and the petitioner has a right to compel the performance of that duty.

In the given situation, the licensing officer is under a statutory duty to issue a license to an applicant who fulfills the conditions prescribed for the issue

of such license. Mr. X has fulfilled all the conditions prescribed for the issue of such license, but his application has been rejected by the licensing officer. Therefore, Mr. X can seek a writ of mandamus to compel the licensing officer to issue the license.

The other answer choices are incorrect:

- (B) Writ of mandamus cannot be granted compelling the license officer to issue the license as there is no violation of fundamental right. This statement is incorrect. A writ of mandamus can be granted to compel the performance of a public duty even if there is no violation of a fundamental right.
- (C) Writ of mandamus can be granted as it is the discretion of the licensing officer to grant license. This statement is incorrect. While the licensing officer has some discretion in granting licenses, he cannot arbitrarily refuse to grant a license to an applicant who has fulfilled all the conditions prescribed for the issue of such license.
- (D) Writ of mandamus cannot be granted compelling the license officer to issue the license as there is no violation of public duty. This statement is incorrect. The licensing officer is under a public duty to issue a license to an applicant who fulfills the conditions prescribed for the issue of such license. Therefore, the licensing officer's refusal to issue a license to Mr. X is a violation of his public duty.

It is important to note that the court will not grant a writ of mandamus if it is not satisfied that Mr. X has a clear legal right to the license and that the licensing officer has a clear legal duty to issue the license.

**Question 70. Which of the following statements is incorrect?**

**(A) Writ of mandamus may be issued in favour of a person who establishes the existence of a legal right.**

**(B) Writ of mandamus may be issued against a person or authority who has a mandatory duty to perform but has failed or has neglected to do so.**

**(C) Writ of mandamus is purported to prevent disorder emanating from failure of justice.**

**(D) Writ of mandamus may be requested to be issued to compel performance of private duties which may be administrative, ministerial or statutory in nature.**

**Answer.** Writ of mandamus may be requested to be issued to compel performance of private duties which may be administrative, ministerial or statutory in nature.

**Solution.** The answer is (D).

Writ of mandamus may not be requested to be issued to compel performance of private duties which may be administrative, ministerial or statutory in nature.

A writ of mandamus is a discretionary order issued by a court to compel a public authority to perform a public duty. It is not available to enforce private rights.

The other answer choices are correct:

- (A) Writ of mandamus may be issued in favour of a person who establishes the existence of a legal right.
- (B) Writ of mandamus may be issued against a person or authority who has a mandatory duty to perform but has failed or has neglected to do so.
- (C) Writ of mandamus is purported to prevent disorder emanating from failure of justice.

It is important to note that a writ of mandamus is a powerful remedy, and it is only granted by the courts in cases where there is a clear legal right and a clear legal duty. The courts will also consider other factors, such as the public interest and the availability of other remedies, before granting a writ of mandamus.

## Logical Reasoning

**XXII. Students decide to attend college for several reasons. These reasons include career opportunities and financial stability, intellectual growth, a time for self-discovery, norms, obligations, and social opportunities. Outside demands in society, such as technology changes, and increased educational demands also drive the need for more students to attend college. The students then spend the next few years trying to discover a path and find their way so they can become successful. The transition to college presents students with many new challenges, including increased academic demands, less time with family members, interpersonal problems with roommates and romantic interests, and financial stress. Competitive academic work and uncertainty about future employment and professional career were also noted as sources of stress. the transition to college represents a process characterized by change, ambiguity, and adjustment across all of life's domains. The transition towards independence and self sufficiency has been characterized as 'stress-arousing' and 'anxiety-provoking' by many college students. Failure to accomplish and develop these characteristics of development and maintain independence may result in life dissatisfaction. Emerging adulthood has also been noted to augment college students' vulnerability to stress. Many students experience their first symptoms anxiety during this time, but a growing problem is that college campuses do not have enough resources to help all of these students. it has been noted that 75% to 80% of college students are moderately stressed and 10% to 12% are severely stressed.**

**Question 106. What according to you is the objective of the study of the present paragraph?**

- (A) to map the various stages of pressure points of adulthood in the process of education.**
- (B) to narrate the anti-family agenda in the current education system.**
- (C) to pinpoint the obstacles targeted against meritorious students.**

**(D) All of the above**

**Answer.** to map the various stages of pressure points of adulthood in the process of education

**Solution.** The objective of the study of the present paragraph is to discuss the challenges and stressors that college students face during the transition to college and into adulthood. The paragraph discusses the following:

- Reasons why students attend college
- The new challenges that students face during the transition to college
- The impact of college on students' development
- The lack of resources available to help students cope with stress

The paragraph does not discuss the following:

- The anti-family agenda in the current education system
- Obstacles targeted against meritorious students

Therefore, the answer is (A).

**Question 107. Which factors as per the author cause more stress amongst college students?**

**(A) Pressure from parents and society towards greater educational needs and increased competitive academic work.**

**(B) Failure to develop successful romantic interests, financial constraints and interpersonal issues with room-mates.**

**(C) Failure to adapt to the transition to college life and to adjust various life domains in tune with needs and requirements of college life.**

**(D) inability to manage time constraints and the uncertainty pertaining to their future.**

**Answer.** Failure to adapt to the transition to college life and to adjust various life domains in tune with needs and requirements of college life.

**Solution.** The author states that the transition to college is a stressful time for students, and that many of the stressors they face are related to the following:

- Increased academic demands
- Less time with family members
- Interpersonal problems with roommates and romantic interests
- Financial stress
- Competitive academic work
- Uncertainty about future employment and professional career

These stressors can lead to anxiety and depression, and can make it difficult for students to succeed in college.

The author also states that many college campuses do not have enough resources to help students cope with stress. This means that students may not be able to get the help they need to manage their stress and maintain their mental health.

Therefore, the answer is (C).

The other answer choices are not supported by the evidence in the paragraph. For example, the author does not mention the pressure from parents and society, or the failure to develop successful romantic interests, as major stressors for college students.

**Question 108. Which of the following fall closest to the underlying assumption in the present study?**

- (A) Problem-solving ability amongst college students is negatively associated with symptoms of depression and anxiety.
- (B) Students lean towards unhealthy coping skills in order to try to lower the stress that they experience.
- (C) romantic interest is an anti-dote for stress amongst the students in the colleges.
- (D) Stress is subjective for each student.



**Answer.** Problem-solving ability amongst college students is negatively associated with symptoms of depression and anxiety

**Solution.** The correct answer is option (A) Problem-solving ability amongst college students is negatively associated with symptoms of depression and anxiety

**Question 109.** Suggest a suitable title for the paragraph from amongst the given titles:

- (A) triumph and turbulence of College education System
- (B) Negative impact of College education System
- (C) Negligence of Stress management by parents
- (D) unemployment and mental instability

**Answer.** triumph and turbulence of College education System

**Solution.** A suitable title for the paragraph would be: (A) Triumph and Turbulence of College Education System

This title reflects the mixed experiences and challenges that college students face, including both the opportunities and stresses associated with the college education system.

**Question 110.** With reference to the above paragraph, which of the following offers the most plausible solutions as a coping up mechanism for college students?

- (A) individual students should approach counsellors for coping up with stress.
- (B) Keeping in view that large number of students are experiencing stress, colleges must take steps reduce course curriculum and peer pressures.

**(C) College authorities shall provide access to counselling and every student experiencing stress must engage in some form of coping mechanism to alleviate stress.**

**(D) the students must learn to differentiate between short term and long-term Stress.**

**Answer.** College authorities shall provide access to counselling and every student experiencing stress must engage in some form of coping mechanism to alleviate stress.

**Solution.** The most plausible solution as a coping mechanism for college students, based on the information provided in the paragraph, is:

(C) College authorities shall provide access to counseling, and every student experiencing stress must engage in some form of coping mechanism to alleviate stress.

The paragraph discusses the high levels of stress experienced by college students and notes that college campuses often lack sufficient resources to help all of these students. Therefore, providing access to counseling and encouraging students to engage in coping mechanisms to alleviate stress would be a reasonable approach to address the issue.

## Quantitative Techniques

**XXVIII.** As per a survey conducted in a college out of total students enrolled i.e., 3,000 in 2020-21, 1,700 were girls and 1,300 were boys. data regarding students opting for various streams viz., Non-medical, medical, Commerce, Arts and Fine Arts showed that 25% of the enrolled students opted non-medical and the percentage of girls in Non-medical was 30% of the total number of girls; 15% of the total students opted for medical and the percentage of girls who opted medical was 18% of the total number of girls; 25% of the total students opted Arts but the percentage of girls who opted for Arts was 15% of the total number of girls; 16% of the total students opted Commerce and the percentage of girls who opted Commerce was 17% of the total number of girls, and; 19% of the total students opted Fine Arts and the percentage of girls who opted Fine Arts was 20% of the total number of girls.

**Question 136.** How many girls have opted Non-medical?

- (A) 440
- (B) 365
- (C) 530
- (D) 510

**Answer.** 510

**Solution.** To calculate how many girls have opted for Non-medical, you can follow these steps:

1. First, find the percentage of students who opted Non-medical out of the total students: 25% of 3,000 students =  $0.25 * 3,000 = 750$  students.
2. Now, you need to find the percentage of girls who opted Non-medical. This is given as 30% of the total number of girls. Percentage of girls who opted Non-medical =  $0.30 * 1,700$  (total number of girls) = 510 girls.

So, the answer is (D) 510 girls have opted for Non-medical.

**Question 137. Girls have outnumbered boys in Fine Arts. How many girls in Fine Arts are more than the boys, as a percentage of total number of boys in Fine Arts?**

- (A) 49.62%
- (B) 47.82%
- (C) 51.23%
- (D) 50.89%

**Answer.** 47.82%

**Solution.** To find out how many girls in Fine Arts are more than the boys, as a percentage of the total number of boys in Fine Arts, follow these steps:

1. First, calculate the number of students in Fine Arts. According to the information provided, 19% of the total students opted for Fine Arts.  
Number of students in Fine Arts =  $0.19 * 3,000 = 570$  students.
2. Next, calculate the number of girls in Fine Arts. The percentage of girls who opted for Fine Arts is 20% of the total number of girls.  
Number of girls in Fine Arts =  $0.20 * 1,700$  (total number of girls) = 340 girls.
3. Now, calculate the number of boys in Fine Arts. Number of boys in Fine Arts = Total number of students in Fine Arts - Number of girls in Fine Arts =  $570 - 340 = 230$  boys.
4. Calculate how many more girls there are than boys in Fine Arts. More girls than boys = Number of girls in Fine Arts - Number of boys in Fine Arts =  $340 - 230 = 110$  more girls.
5. Finally, calculate the percentage of girls more than boys in Fine Arts, relative to the total number of boys in Fine Arts. Percentage =  $(\text{Number of more girls} / \text{Number of boys in Fine Arts}) * 100$   
Percentage =  $(110 / 230) * 100 \approx 47.82\%$

So, the answer is (B) 47.82%. Girls in Fine Arts outnumber boys by approximately 47.82% of the total number of boys in Fine Arts.

**Question 138. Which of the following courses have been opted by maximum number of boys?**

**(A) Non-medical**

**(b) Arts**

**(C) Fine Arts**

**(d) Commerce**

**Answer. Arts**

**Solution.** To determine which of the courses have been opted by the maximum number of boys, you can calculate the number of boys in each course and then compare them.

1. Non-medical: Percentage of students who opted Non-medical = 25% of 3,000 students =  $0.25 * 3,000 = 750$  students. The percentage of girls in Non-medical was 30% of the total number of girls, so the percentage of boys in Non-medical would be  $100\% - 30\% = 70\%$ . Number of boys in Non-medical =  $0.70 * 750 = 525$  boys.
2. Medical: Percentage of students who opted Medical = 15% of 3,000 students =  $0.15 * 3,000 = 450$  students. The percentage of girls who opted Medical was 18% of the total number of girls, so the percentage of boys in Medical would be  $100\% - 18\% = 82\%$ . Number of boys in Medical =  $0.82 * 450 = 369$  boys.
3. Arts: Percentage of students who opted Arts = 25% of 3,000 students =  $0.25 * 3,000 = 750$  students. The percentage of girls who opted Arts was 15% of the total number of girls, so the percentage of boys in Arts would be  $100\% - 15\% = 85\%$ . Number of boys in Arts =  $0.85 * 750 = 637.5$  (approximated to 638) boys.
4. Commerce: Percentage of students who opted Commerce = 16% of 3,000 students =  $0.16 * 3,000 = 480$  students. The percentage of girls who opted Commerce was 17% of the total number of girls, so the percentage of boys in Commerce would be  $100\% - 17\% = 83\%$ . Number of boys in Commerce =  $0.83 * 480 = 398.4$  (approximated to 398) boys.

5. Fine Arts: Percentage of students who opted Fine Arts = 19% of 3,000 students =  $0.19 * 3,000 = 570$  students. The percentage of girls who opted Fine Arts was 20% of the total number of girls, so the percentage of boys in Fine Arts would be  $100\% - 20\% = 80\%$ .  
Number of boys in Fine Arts =  $0.80 * 570 = 456$  boys.

Based on the calculations, the course opted by the maximum number of boys is Arts, with 638 boys. So, the answer is (B) Arts.

**Question 139. Which of the following courses have been opted by minimum number of boys?**

- (A) medical
- (B) Fine Arts
- (C) Commerce
- (D) Non-medical

**Answer.** medical

**Solution.** To determine which of the courses have been opted by the minimum number of boys, you can calculate the number of boys in each course and then compare them.

1. Non-medical: Percentage of students who opted Non-medical = 25% of 3,000 students =  $0.25 * 3,000 = 750$  students. The percentage of girls in Non-medical was 30% of the total number of girls, so the percentage of boys in Non-medical would be  $100\% - 30\% = 70\%$ .  
Number of boys in Non-medical =  $0.70 * 750 = 525$  boys.
2. Medical: Percentage of students who opted Medical = 15% of 3,000 students =  $0.15 * 3,000 = 450$  students. The percentage of girls who opted Medical was 18% of the total number of girls, so the percentage of boys in Medical would be  $100\% - 18\% = 82\%$ .  
Number of boys in Medical =  $0.82 * 450 = 369$  boys.
3. Commerce: Percentage of students who opted Commerce = 16% of 3,000 students =  $0.16 * 3,000 = 480$  students. The percentage of girls who opted Commerce was 17% of the total number of girls, so the

percentage of boys in Commerce would be  $100\% - 17\% = 83\%$ .

Number of boys in Commerce =  $0.83 * 480 = 398.4$  (approximated to 398) boys.

4. Arts: Percentage of students who opted Arts = 25% of 3,000 students =  $0.25 * 3,000 = 750$  students. The percentage of girls who opted Arts was 15% of the total number of girls, so the percentage of boys in Arts would be  $100\% - 15\% = 85\%$ . Number of boys in Arts =  $0.85 * 750 = 637.5$  (approximated to 638) boys.
5. Fine Arts: Percentage of students who opted Fine Arts = 19% of 3,000 students =  $0.19 * 3,000 = 570$  students. The percentage of girls who opted Fine Arts was 20% of the total number of girls, so the percentage of boys in Fine Arts would be  $100\% - 20\% = 80\%$ . Number of boys in Fine Arts =  $0.80 * 570 = 456$  boys.

Based on the calculations, the course opted by the minimum number of boys is Medical, with 369 boys. So, the answer is (A) Medical.

**Question 140. What is the ratio among boys and girls for Non-medical?**

- (A) 3 : 17
- (B) 17 : 8
- (C) 8 : 17
- (D) 17 : 3

**Answer.** 8 : 17

**Solution.** To find the ratio of boys to girls for the Non-medical stream, we need to calculate the number of boys and girls who opted for Non-medical.

1. The percentage of students who opted Non-medical is 25% of the total students, which is  $0.25 * 3,000 = 750$  students.
2. The percentage of girls in Non-medical is 30% of the total number of girls, which is  $0.30 * 1,700$  (total number of girls) = 510 girls.

3. To find the number of boys who opted for Non-medical, subtract the number of girls from the total number of students who chose Non-medical: Number of boys in Non-medical =  $750 - 510 = 240$  boys.

Now, calculate the ratio of boys to girls for Non-medical:

Number of boys : Number of girls =  $240 : 510$

To simplify the ratio, divide both numbers by their greatest common divisor, which is 30:

$240 \div 30 : 510 \div 30 = 8 : 17$

So, the ratio of boys to girls for Non-medical is  $8 : 17$ . The correct answer is (C)  $8 : 17$ .

**XXX. In an organization, the total number of employees working in various departments viz. IT, marketing, Purchase, Hr, Accounts and Production are 4,500. the information regarding department wise percentage of employees was collected and also record about gender the ratio of employees was prepared. 18 percent of the total number of employees work in its department and the ratio of males to females in its department is  $2 : 1$ . in marketing, ratio of males to females is  $2 : 3$  and number of employees engaged in marketing is 20% of the total employment. 12% of the total numbers of workers are running the HR department and the ratio of males to females in this department is  $5 : 1$ . The fraction of male to females in the production department is  $3 : 2$  and the total number of persons employed in this department is 15% of the total workforce. the number of persons occupied in the purchase and accounts department is 24% and 11% respectively of the total number of workers. gender ratio (ratio of males to females) in Purchase department is  $1 : 1$  and in Accounts is  $1 : 2$ .**



**Question 146. How many females are employed in the Purchase department?**

- (A) 450
- (b) 540
- (C) 495
- (d) 595

**Answer.** 540

**Solution.** To find out how many females are employed in the Purchase department, we need to first determine the total number of employees in the organization and then calculate the number of employees in the Purchase department and the ratio of males to females in that department.

Let's calculate it step by step:

1. Total number of employees in the organization is 4,500.
2. The number of employees engaged in the Purchase department is 24% of the total workforce: Number of employees in Purchase department =  $0.24 * 4,500 = 1,080$  employees.
3. The gender ratio in the Purchase department is 1:1. This means an equal number of males and females in this department.

So, to find the number of females in the Purchase department, we divide the total number of employees in the Purchase department (1,080) by 2 (since the gender ratio is 1:1):

Number of females in Purchase department =  $1,080 / 2 = 540$  females.

Therefore, (B) 540 females are employed in the Purchase department.

**Question 147. How many employees are working in it and Accounts departments together?**

- (A) 1,702
- (B) 1,646
- (C) 1,766

**(D) 1,305**

**Answer.** 1,305

**Solution.** To find out how many employees are working in the IT and Accounts departments together, we need to calculate the number of employees in each department and then add them up.

1. In the IT department, 18% of the total number of employees work, which is  $0.18 * 4,500 = 810$  employees.
2. In the Accounts department, 11% of the total number of employees work, which is  $0.11 * 4,500 = 495$  employees.

Now, add the number of employees in the IT and Accounts departments together:

$$810 \text{ (IT)} + 495 \text{ (Accounts)} = 1,305 \text{ employees.}$$

So, (D) 1,305 employees are working in the IT and Accounts departments together.

**Question 148. What is the ratio of the total number of males to the total number of females working in all the departments put together?**

- (A) 63 : 41  
(b) 19 : 27  
(C) 41 : 34  
(d) 34 : 41

**Answer.** 41 : 34

**Solution.** To find the ratio of the total number of males to the total number of females working in all the departments, we need to calculate the number of males and females in each department, and then sum them up for all the departments.

Let's calculate it step by step:

1. In the IT department, 18% of the total number of employees work. The ratio of males to females in this department is 2:1.
  - Number of employees in IT =  $0.18 * 4,500 = 810$  employees
  - Ratio of males to females in IT = 2:1
  - Number of males in IT =  $(2 / 3) * 810 = 540$  males
  - Number of females in IT =  $(1 / 3) * 810 = 270$  females
2. In the Marketing department, the ratio of males to females is 2:3, and the number of employees engaged in marketing is 20% of the total employment.
  - Number of employees in Marketing =  $0.20 * 4,500 = 900$  employees
  - Ratio of males to females in Marketing = 2:3
  - Number of males in Marketing =  $(2 / 5) * 900 = 360$  males
  - Number of females in Marketing =  $(3 / 5) * 900 = 540$  females
3. In the HR department, the ratio of males to females is 5:1, and 12% of the total workers are in HR.
  - Number of employees in HR =  $0.12 * 4,500 = 540$  employees
  - Ratio of males to females in HR = 5:1
  - Number of males in HR =  $(5 / 6) * 540 = 450$  males
  - Number of females in HR =  $(1 / 6) * 540 = 90$  females
4. In the Production department, the ratio of males to females is 3:2, and 15% of the total workforce is in Production.
  - Number of employees in Production =  $0.15 * 4,500 = 675$  employees
  - Ratio of males to females in Production = 3:2
  - Number of males in Production =  $(3 / 5) * 675 = 405$  males
  - Number of females in Production =  $(2 / 5) * 675 = 270$  females
5. In the Purchase department, the gender ratio is 1:1, and the number of persons occupied in Purchase is 24% of the total number of workers.
  - Number of employees in Purchase =  $0.24 * 4,500 = 1,080$  employees
  - Ratio of males to females in Purchase = 1:1
  - Number of males in Purchase =  $1,080 / 2 = 540$  males
  - Number of females in Purchase =  $1,080 / 2 = 540$  females

6. In the Accounts department, the gender ratio is 1:2, and the number of persons occupied in Accounts is 11% of the total number of workers.

- Number of employees in Accounts =  $0.11 * 4,500 = 495$  employees
- Ratio of males to females in Accounts = 1:2
- Number of males in Accounts =  $(1 / 3) * 495 = 165$  males
- Number of females in Accounts =  $(2 / 3) * 495 = 330$  females

Now, add up the number of males and females in all the departments:

- Total number of males = 540 (IT) + 360 (Marketing) + 450 (HR) + 405 (Production) + 540 (Purchase) + 165 (Accounts) = 2,460 males
- Total number of females = 270 (IT) + 540 (Marketing) + 90 (HR) + 270 (Production) + 540 (Purchase) + 330 (Accounts) = 2,040 females

Now, calculate the ratio of total males to total females:

Total males : Total females = 2,460 : 2,040

To simplify the ratio, divide both numbers by their greatest common divisor, which is 60:

Total males : Total females = 41 : 34

So, the ratio of the total number of males to the total number of females working in all the departments put together is 41 : 34. The correct answer is (C) 41 : 34.

**Question 149. Number of females in the marketing department forms what percentage of the total number of employees in the organization?**

- (A) 8%
- (B) 7%
- (C) 12%
- (D) 10%

**Answer.** 12%

**Solution.** To find the number of females in the marketing department as a percentage of the total number of employees in the organization, we need to calculate the number of females in the marketing department and then express it as a percentage of the total number of employees.

1. The number of employees in the marketing department is 20% of the total employment: Number of employees in Marketing =  $0.20 * 4,500 = 900$  employees.
2. The ratio of males to females in the marketing department is 2:3. So, the number of females in the marketing department can be calculated as: Number of females in Marketing =  $(3 / 5) * 900 = 540$  females.

Now, to find the percentage of females in the marketing department relative to the total number of employees, you can use the following calculation:

Percentage of females in Marketing = (Number of females in Marketing / Total number of employees) \* 100  
Percentage of females in Marketing =  $(540 / 4,500) * 100 = 12\%$ .

So, the number of females in the marketing department forms 12% of the total number of employees in the organization. The correct answer is (C) 12%.

**Question 150.** What is the ratio of the number of males in the marketing department to the number of males in the HR department?

- (A) 4 : 5
- (b) 5 : 4
- (C) 7 : 3
- (d) 6 : 7

**Answer.** 4 : 5

**Solution.** To find the ratio of the number of males in the marketing department to the number of males in the HR department, we need to calculate the number of males in each department.

From the information provided:

1. In the marketing department, the ratio of males to females is 2:3, and the total number of employees in marketing is 20% of the total employment. So, the number of males in the marketing department is  $(2 / 5) * (20\% \text{ of } 4,500)$ .
2. In the HR department, the ratio of males to females is 5:1, and 12% of the total workers are in HR. So, the number of males in the HR department is  $(5 / 6) * (12\% \text{ of } 4,500)$ .

Now, let's calculate these values:

Number of males in Marketing =  $(2 / 5) * (0.20 * 4,500) = (2 / 5) * 900 = 360$  males

Number of males in HR =  $(5 / 6) * (0.12 * 4,500) = (5 / 6) * 540 = 450$  males

Now, you can find the ratio of the number of males in the marketing department to the number of males in the HR department:

Ratio of males in Marketing : Ratio of males in HR = 360 : 450

To simplify the ratio, divide both numbers by their greatest common divisor, which is 90:

$$(360 / 90) : (450 / 90) = 4 : 5$$

So, the ratio of the number of males in the marketing department to the number of males in the HR department is 4 : 5. The correct answer is (A) 4 : 5.