



CRT SYLLABUS



Group Discussion Topics

1. Digital India: Whom Does it Benefit?
2. Merits and Demerits of Cashless Economy
3. Is the Aadhaar database secured enough?
4. Making Aadhaar Mandatory: Benefits and Drawbacks
5. Impact of Technology on Jobs
6. Whether Digital Education has taken over Traditional Education?
7. Education industry is a business these days.
8. Demonetizations has reduced the Corruption, Black Money and Terrorism?
9. Is the World Ready for Cashless Currency?
10. Future of Crypto Currencies
11. Future of Sports in India
12. Black Money in India
13. Make in India vs Make for India
14. Is GST really a One nation, One tax system?
15. Will Indian economy grow faster with reduced Goods and Services Tax (GST)?
16. Should Triple Talaq be Banned in India or Not?
17. Regional languages in India are fading out in today's world.
18. Gold Monetization Scheme
19. Difficulties in Implementation of Climate Change Summit Resolutions
20. Farmers' Income: Will India be able to double it in next 5 years?
21. Should India have a One Child Policy?
22. Which is more important: Creativity or Efficiency?
23. Role of Engineers in Disaster Management
24. Walmart and Flipkart Deal: Impact on Indian Economy
25. Is India ready for Electric Vehicles?
26. Mars Mission for India Justified?
27. Tobacco must be banned. Yes or No.
28. Issocial media Actually Connecting People?
29. Impact of Social Networking Sites

Creative Topics

30. A Ship Docked in Harbor cannot face the Storms
31. Do Beauty and Brains Go Together?
32. Every Cloud has a Silver Lining
33. Rules are Meant to be Broken
34. Food Comes First, Ethics Later
35. Let Sleeping Dogs Lie
36. There is No Right Way of Doing the Wrong Thing
37. Is Love Precious or Poisonous?
38. Is God Male?
39. Good Things Always Come from Good Thinking
40. In Today's World, everything is Uncertain except Death & Taxes
41. Men are from Mars; Women are from Venus
42. Cleanliness is a Fundamental Responsibility of an Indian Citizen
43. A Person should not be too honest; Straight Trees are cut first

44. Nice Guys Finish Last
45. All Work and No Play Makes Jack a Dull Boy
46. The Wheel is Turning Round and Round
47. If I was the finance minister/Prime Minister
48. Group Task: How can we have Mount Everest in India?
49. When I woke up in the morning I saw?
50. Up the Down Staircase
51. Just as we have smoke free zones, we should have child free zones
52. The Nostradamus Code: World War III

Current Affairs

1. Digital payments are secure and India is ready to go cashless.
2. Chinese goods are a threat to Indian businessmen and economy.
3. Modi's 'Make in India' campaign is better than the old 'Made in India' campaign.
4. Demonetization is a successful and effective move.
5. Govt. can easily control the rising petrol prices.
6. India needs bullet trains!
7. India should implement a uniform civil code.
8. Superintelligence and AI: Is it a boon or bane for India?
9. Should national anthems be played in cinema halls?
10. Is Sarahah promoting cyberbullying?
11. Online games like Blue Whale and Slendarman are dangerous for the youth. Hence WhatsApp should be banned in India.
12. Driverless car ban in India – is it a right move?
13. Is victim shaming (as in the high-profile Chandigarh stalking case) justified?
14. Women's IPL is a welcome move.
15. Minor's abortion: should it be left to the mercy of the court?
16. More and more mobile towers in residential areas. Boon or bane?
17. Caste-based reservation must be replaced with economic status and education of parents.
18. Can privatization save Air India?
19. Is GST a 'one nation', 'one tax' reform?
20. Will the Chinese project OBOR or 'One Belt One Road' benefit India?
21. Are digital payments secure enough for the Indian economy to go cashless?
22. Ban 500, 1000 notes - Corruption Uprooted or just changing clothes!
23. Can we dream of hosting the Olympics?
24. Chinese Goods vs Indian Goods
25. Do we really need Smart Cities?

26. Economic growth is more important than Ecological protection
27. EQ or IQ
28. Extra-curricular activities should be made compulsory in school
29. Facebook needs to clarify policies on content removal!
30. How demonetization is affecting common people more than black money holders?
31. How is Technology impacting the Banking sector?
32. Is compulsory attendance really needed in college?
33. Is it fair to spare political parties from income tax investigation?
34. Is the youth of India confident or confused?
35. Non-execution of GST bill might herald end of present government
36. One India One Election - Pros and Cons
37. PM's vision to make India a Manufacturing Hub - dream or a practical possibility?
38. Polythene bags must be banned!
39. Problems unite us, Religion divides us
40. Should Hindi be the official language of India?
41. Should national anthem be played in cinema halls?
42. Should we change the present system of education in our country?
43. Solution of corruption is a mirage till we catch top public figure
44. Will Reliance Jio be a sustainable business model in a country like India?
45. Youth in Politics

Social Issues

1. The Supreme Court of India recently declared the instant triple talaq as unconstitutional in a landmark judgment. Discuss.
2. Indian adolescents need sexual and reproductive health awareness.
3. Girl infanticide and sex determination is a crime. Yes, or no?
4. In the world, more than one in 5 deaths of children under five happen in India. Immunization in India is poor. Yes or no.
5. Tobacco smoking is already a major health problem in India. Tobacco must be banned. Yes or no.
6. Juvenile crimes are increasing day by day in India. Yes or no.
7. Delhi needs to revise air and vehicular pollution laws. Yes or no.
8. Three out of 4 households in rural India earns less than Rs 5000 per month. We are still economically backward. Yes or no.
9. Overharvesting of groundwater in cities is causing water shortage in villages. Yes or no.
10. Women empowerment is the solution to violence against Indian women. Yes or no.
11. Forty-six percent of women in India get married before the age of 18. Child marriage is still a rampant practice. Discuss.

12. Economic prosperity is taking its toll on Indian marriages with divorce rates shooting up.
Yes or no.
13. India's water pollution situation as a time bomb waiting to explode. Yes or no.
14. Khap panchayat is a modern-day evil that needs to be uprooted. Yes or no.
15. Gender discrimination and child mortality are not specific to any caste or class in India.
Yes or no.
16. Mental illness is more commonplace in urban India, as compared to rural India. Yes or no.
17. Anaemia affects the urban society; the main reason is people here prefer diet fad or junk food. Yes or no.
18. Drug abuse is rampant among Indian teenagers. Yes or no.
19. Indian states are poorer than African nations. Yes or no.
20. Status of sanitization so equally poor in cities and villages of India. Yes or no.
21. One in five births is delivered by C-section in India today. Is it becoming a money-making practice? Discuss.
22. Terrorism in India
23. Religion should not be mixed with politics
24. Should Smoking be Banned Completely?
25. Effects of Television on Youth
26. Love Marriages Vs Arranged Marriages
27. Are beauty contests degrading womanhood?
28. Films are corrupting the Indian Youth
29. Morals & Values among Indians is Degenerating
30. Censorship in Movies & Our Culture
31. Foreign Television Channels are Destroying Our Culture
32. With Media Publishing and Telecasting Trivia, Censorship is the Need of the Hour
33. Women are not fit for Defense Services
34. Women Empowerment - A Cause for Increasing Divorce Rate in India
35. Showing Violence and Crimes should not be allowed in films and on television.
36. Classical Music Heritage and the Growing Pop-Culture
37. Individual Freedom and Civil Society
38. Influence of Online Social Networks on our Youth
39. Is Remixing Good Trend in Music?
40. Bride burning and dowry may look bad, but are an integral part of India.
41. Our Culture is Decaying
42. We are not serious about saving Wildlife/Environment
43. The education system needs serious reforms
44. The Internet is an exercise in hype
45. Marriage is a social trap

Business and Economy

1. Despite the comparisons, India's Aadhaar project is nothing like America's Social Security Number. Share your thoughts.
2. Is the Aadhaar database secured enough?
3. Are the charges on ATM cash withdrawals justified?
4. Is demonetization affecting common people more than black money holders?
5. India ranks 79 in Corruption Perception Index in 2016, according to the Berlin-based corruption watchdog Transparency International (TI). Discuss.
6. The subsidy-led, asset-light cab service model like Ola and Uber, is not good for drivers and customers. Agree or disagree?
7. Indian IT industry contributes immensely to the US economy. True or false?
8. How effective are social security systems and retirement welfare in India?
9. Instead of bullet trains, investment in existing Indian railway infrastructure can spur economic growth in India and also benefit the global economy. Yes, or No?
10. Privatizing the Indian agriculture sector can solve marketing and distribution problems. Yes, or no?
11. NRIs do not invest in India because of bureaucratic hurdles. Yes, or no?
12. Will the great Indian real estate bubble burst soon?
13. Deloitte recently revealed that not even one percent of India's total solar energy potential has been harvested till date. What do you want to say about this?
14. Should the rich and wealthy in India be taxed more?
15. 61,000 Indian millionaires have migrated overseas in last 14 years. Is the uber-rich flocking outside to evade taxes?
16. According to RBI, fresh 100 rupees notes will be launched in April next year. More chaos coming our way?
17. Beurocracy is a hindrance to economic reforms in India. Yes, or no?
18. Is Foreign Direct Investment (FDI) in retail sector good for India?
19. How to Deal with High Oil Prices?
20. Multinational Corporations: Are they Devils in Disguise?
21. Are Indians Less Quality Conscious?
22. Ethics in Business are just a Passing Fad
23. Is the Consumer really the King in India?
24. Commercialization of Health Care: Good or Bad?
25. Is there any Point in having a Business Strategy when the World changes from Month to Month?
26. Is the Patents Bill Good for India?

27. Is the Business of Business only Business?
28. Public Sector being a Guarantor of Job Security is a Myth
29. Capitalism is a very Flawed System but the others are so much worse
30. How can a Business get rid of the Bad Name that it has earned?
31. Government Pumping Money into the Economy is not the Solution for our Economic Problems
32. Is the Budgeting Exercise of any Use?
33. Should Agricultural Subsidies be stopped?
34. Is MNCs Superior to Indian Companies?
35. Advertising is a Waste of Resources
36. Privatization will lead to Less Corruption
37. Should India break Diplomatic Ties with Pakistan?
38. Use of Force by Banks to Recover Loans
39. Skilled Manpower Shortage in India
40. Technology Creates Income Disparities
41. In our economic matters, there is an excessive tendency towards the thinking rather than doing.
42. Every cloud has a silver lining
43. Is disinvestment really that good for India or is a rethink in order?
44. Are co-operatives relevant in today's globalised environment?
45. Foreign aid is a dangerous drug that can stimulate in small doses but become fatally addictive in larger doses.
46. Government should clean its own hands before pointing finger at the private sector for corruption.
47. Reforms have to grow up.
48. Globalization vs. Nationalism
49. Economic freedom not old fashioned theories of development will lead to growth and prosperity
50. Should businessmen run the finance ministry?
51. Should importantly services like transport be left to market forces?
52. Who says MNCs are superior to Indian companies?
53. What we need to reduce scams is better regulatory bodies.
54. Trade can help the poor?
55. Water resources should be nationalized
56. Are Co-operatives Relevant in Today's Global Environment?
57. Indian villages - our strength or our weakness?
58. Space Missions are a Wastage of Resources for a Resource-Starved Nation like India
59. Satyam Scandal would Impact Foreign Investments in India
60. Private Participation in Infrastructure is Highly Desirable
61. Developing Countries need Trade, not Aid
62. Poverty in Third World Countries is due to Prosperity in First World Countries
63. Indian Economy: Old Wine in New Bottle!
64. Is Globalization Really Necessary?
65. What shall we do about our Ever-Increasing Population?
66. Banning of Trade Unions will be Beneficial in Growth of the Economy

67. Why can't India be a World-Class Player in Manufacturing Industry as it is in IT & BPO Sectors?
68. We Need Drinking Water and Not Coke & Pepsi in Rural India
69. Rise of Regional Blocs Threatens Independent Nations like India
70. Should the public sector be privatized?

Abstract Topics for Group Discussion

1. Don't you think too much importance is given to cricket as compared to other sports in India?
2. Polythene bags should be completely banned! Yes or no.
3. Selling alcohol on highways should be banned to curb accidents.
4. Night Owls Versus Early Birds – What do you prefer?
5. Regular physical activity can help prevent obesity, heart disease, hypertension, diabetes, and other lifestyle diseases. Agree or disagree?
6. The pharmaceutical industry mainly influences drug regulation. World governments are also turning a blind eye to bribery and corruption in the pharma sector. Share your thoughts.
7. Global warming could do more than just melt polar ice.
8. Facebook should update policies on content removal.
9. Hard work or smart work?
10. A positive attitude can make a huge difference in your productivity. It can also improve workplace morale. Yes, or no?
11. Peer pressure: does it make or mar your future?
12. Diesel vehicles should be banned in Indian cities.
13. Is gender pay disparity within global organizations justified?
14. The Science of Posture: sitting up straight improves focus at work. Yes, or No?
15. Soft skills matter more than technical skills. Do you agree or disagree?
16. Has employee work-life balance reached a crisis point? Share your thoughts.
17. Bill Gates, Barack Obama, and Julia Roberts have something in common. All 3 of them met their spouses at work. Would you go for a workplace relationship as well? Yes, or No?
18. Workplace politics reduces the productivity of individuals and eventually, the organization is at a loss. Would you agree or disagree?

General Interest

19. English must remain the official language of India. Agree or disagree?
20. Beef ban is illogical. Yes or no?
21. Love marriage vs. arranged marriage. What would you prefer?
22. Joint family vs. nuclear family. What is your choice?
23. WhatsApp, Facebook, Instagram, and Snapchat are killing creativity. Yes, or no?
24. A borderless world is practically impossible. Yes, or no?
25. Corruption is a necessary evil.
26. The dark side of junk food is still unknown. Yes, or no?
27. Illegal immigrants like Rohingyas and Bangladeshi Muslims should be deported. Yes, or no?
28. Is India a Soft Nation?
29. Should Research on Human Cloning be banned?
30. Should Sting Operations be Carried Out?
31. Nuclear War cannot be won and should not be fought
32. Is Swapping Terrorists for Hostages an Encouragement to Plane-Hijackers?
33. Brain-Drain has to be stopped
34. Doctors' Accountability to Improve Health-Care
35. Universal Disarmament is a Must
36. Is India Aping the Western Obsession with Celebrities?
37. India at 60: A Senior Citizen?
38. Unrest in Countries around India
39. Flexi Timings or Fixed Timings - Which is better at Work?
40. Individual Brilliance Certainly makes a Difference
41. Is Paperless Office a Reality or Not?
42. Rules & Regulation Breed Corruption
43. Do NGOs in India Really Work for Others OR Work for their Own Vested Interests?
44. Science Is A Boon Or Bane
45. Should Animals be used for Testing New Drugs & Medical Procedures?
46. Security Cameras & Privacy
47. Advertisements Cheat People, Hence Should Be Banned
48. Borderless World: A Threat?
49. Borderless World: A Myth or Reality?
50. Secularism has become a Tool to Justify the Wrongs done by the Minorities
51. What is the Difference between People who do Things Rightly and People who do Right Things?
52. Corruption is a Necessary Evil for Success in Any Sphere
53. Beauty Pageants are a Must
54. How to Deal with International Terrorism?
55. Are Peace and Non-Violence Outdated Concepts?
56. Indian Army as a Career Option
57. Capital Punishment should be Banned or Allowed?

58. Is Dependence on Computers a Good Thing?

Education

1. Should the practice of Yoga be made compulsory in schools?
2. Increasing the number of Engineering Colleges is a welcome step. Do you agree or disagree?
3. Does dress code really matter at educational institutions?
4. Is compulsory attendance really needed in schools and colleges?
5. How safe are our kids in Indian schools?
6. Govt. should divert more funds towards primary education. Yes, or no?
7. Government school dropouts – how to stop?
8. Should Government intervention in Indian education system be allowed?
9. Should school children be allowed to own and use mobile phones or not?
10. Advantages of Co-education
11. Examinations - has it killed education
12. Do we really Need Education to be Successful?
13. Government Control in Higher Education is Interfering and Not Required
14. Privatization of Higher Education
15. Should the Government Set-up More IITs and IIMs, OR should it be use the Money for Primary & Secondary Education?
16. Foreign Universities in India
17. E-Learning: A Substitute for Classroom Learning?
18. Is Reservation in Higher Education Only Alternative for Social Equality?
19. Private Educational Institutions: Good or Bad
20. Should Management Education be subsidized?
21. How effective are Indian B-schools?

Indian Politics

1. A corrupt but efficient politician is better than a truthful and inefficient one. Yes, or no?
2. Voters must be given a NOTA (None of The Above) choice. Yes, or no?
3. Indian politics is the reason behind the country's backwardness. Yes, or no?
4. Indian election has nothing to do with good governance today. Yes, or no?
5. Political parties should not give tickets to contestants with criminal records. Yes, or no?
6. India needs a bi-party system like the US.
7. Creative Group Discussion Topics
8. Bollywood films and Hollywood influence on Indian music is harming folk culture.

9. Advertisements on TV are all glitter and little truth.
10. We are raising a generation of computer-literate idiots. Yes, or no?
11. Criticism is good.
12. Freshers are better than laterals.
13. Western culture must be adopted by us. Yes, or no?
14. Beauty contests do little to empower women.
15. Euthanasia: To do or not to do?
16. Growth and integrity are poles apart! Yes, or no?
17. A room without books is a body without a soul! Yes, or no?
18. Is silence golden in the present-day world?
19. Work for money, not passion! True or false?
20. Break-ups are start-ups! Discuss.
21. Should voters be given a NOTA (None of The Above) choice?
22. Is our Political System Reason for our Backwardness?
23. Educational qualification for Politicians
24. Necessity of Women Quota Bill for Women Empowerment
25. Voters, not Political Parties, are Responsible for the Criminalization of Politics
26. Should We Pursue our Policy of Dialogue with Pakistan?
27. The Way Forward for India is to Join Hands with Pakistan on Nuclear Matters
28. Need for Good Leaders in India
29. Politics is run by the Barrel of Gun
30. Retirement Age for Politicians
31. Corruption is the Price we pay for Democracy
32. What India needs is a Dictatorship?
33. Value-based Politics is the Need of the Hour
34. Religion should not be mixed with Politics
35. Democracy is Hampering India's Progress
36. Should Tainted Ministers Allowed to Contest Elections?
37. Presidential v/s Parliamentary Form of Government in India
38. Reservations in the Private Sector

Case Studies

39. Say for instance that the Cyberlaw bill has failed. Cyberspace patrolling is just not possible.
40. BCCI should be dissolved by the government.
41. Why are restaurants not ready to accept the Food Security Act?
42. A company fired an employee. As a result, the other employees went on strike. The question is 'Why do you think the company fired the employees?'

43. People today are becoming more and more health conscious, come up with a business model that you would implement to target these health-conscious customers.
44. How are successful athletes such as P.V. Sindhu offered deals worth crores?
45. Talk about the decreasing productivity of the Japanese Workforce and what measures should be taken to improve that.
46. The relevance of reservation for girls at top academic institutions in today's context.

Sports

47. Cricket should be made the national sport of India.
48. Cricketers (male) are overpaid in India.
49. Should India bid for 2024 Olympics?
50. Membership of Parliament is not a trophy. Sachin Tendulkar has misused his fame. Yes, or no?
51. Mahesh Bhupathi and Leander Paes should not wash dirty linen in public.
52. Saina Nehwal made the right move by reuniting with chief national badminton coach Pullela Gopichand. Yes, or no?
53. The indifference and apathy, of Indian officials towards Indian players (in Rio Olympics), is heartbreaking. Discuss.
54. Indian Paralympic sportspersons are often neglected and overlooked when compared to the kind of reception meted out to the Olympic performers.
55. Who is responsible for poor performance of India in sports?
56. 10.Salaries of CEOs, Athletes and Actors should be capped
57. If Winning isn't everything, why do they Keep the Score?
58. Cricket in India has lost its Sheen
59. Is T20 Cricket killing Real Cricketing Skills?
60. Six Billion and One Bronze!
61. Are Cricketers to be blamed for Match Fixing?
62. Modern Day Sport in Industrialized Society is an Industry
63. Cricket as a National Obsession is a Detriment to Other Sports

Environment and Agriculture

1. Should the government give more subsidies to farmers or provide a better mechanism for a loan?
2. Villages are the pride of India. Discuss.
3. Discuss the operatives relevant in today's environment.

4. Ever growing air and water pollution levels – where does the problem lie?
5. Increasing demand for houses is leading to deforestation, which is worsening the quality of air in Indian metros. Discuss.

Socio-Political

1. Indian entertainment – where is this industry headed?
2. Should women join the army in more numbers?
3. Secularism is dangerous for a country like India.
4. Its high time that we re-wrote the Indian constitution.
5. What do you prefer, cheap trash or expensive quality?
6. Rural placements of doctors should not be forced.
7. Indian citizens deserve social security.
8. Movies encourage social evils.
9. The beauty and fashion industries are degrading womanhood.
10. Justice delayed is as good as justice denied.
11. Reservation should be removed from the public sector.
12. Business houses must adopt BPL families in large numbers.
13. Politicians must have a retirement age.
14. India needs a Dictator now. Yes or no?

Socio-Cultural

1. Classical music is dying due to the growing pop-culture in India. Discuss.
2. Is remixing original songs a good practice?
3. There should not be any restriction on Foreign media. Yes or no.
4. Censorship in movies and our culture is useless.
5. Do we need a censor board at all?
6. Movies are corrupting the Indian youth. Yes or no?
7. Indian culture is decaying as we are gradually forgetting our trends, spirituality, and traditions.
8. Western culture is making us forget our cultural heritage.
9. Culture is not law, change is the law of nature.
10. Globalization has affected the Indian youth and overall population in many ways.
11. Western culture is more progressive and upgrowing when compared to Indian culture.

International Affairs

1. United we stand and divided we fall. Discuss with respect to India and its neighboring countries.
2. How should global economies deal with international terrorism?
3. The crisis among the Middle Eastern countries might be resolved in the short run but is very unlikely to be solved for the long term. Discuss.
4. Qatar dispute is the biggest political crisis to hit the Middle East in years. Yes or no.
5. Is the United Kingdom falling apart?
6. Donald Trump will cause US power to collapse. Yes, or no?
7. The gun law in the USA is a huge flaw. Discuss.
8. Among developed nations, the US is the most violent with too many mass shootings taking place in the recent months.
9. US healthcare is the best and the worst.

Management Related

1. Is theoretical knowledge sufficient for managers today?
2. Do women make good managers?
3. How professional are the professional companies today?
4. B-schools fit square nuts into round holes.
5. Is management art or science?
6. Business ethics in today's market and future.
7. Unethical practices lead to success in business.
8. Privatization will lead to Less Corruption
9. Five people go on a strike in an organization, should they be thrown out?
10. Discuss the relevance of family run business in India.
11. Indian Administration should recruit from MBA colleges.
12. India needs more job creators than job seekers.
13. The credibility of B Schools ranking.
14. In most corporates, ethics is a show, corruption is for real.
15. Will stringent laws prevent cases like Satyam?
16. We Need More Entrepreneurs than Managers
17. Rise in MBA Salaries is Not Sustainable in the Long Run
18. Can One Contribute to the Social Sector while Being Employed in the Corporate World?
19. The Rush for MBA is really a Rush for Big Money
20. Will Mumbai's Film Industry ever evolve into a Truly Modern Corporative One?

21. Indians Perform Better as Individuals than in Groups/Teams
22. Positive Attitude and not Knowledge is required for Business Success
23. Are Ethics just Business Pretence?
24. Ethics in Business are just a passing fashion
25. Is an MBA necessary to succeed in life?
26. Family-owned business vs. professionally run businesses
27. Smaller businesses and start-ups have more scope for professional growth.
28. Dot com or doubt com?
29. Managerial skills learnt in the classroom can never match those learnt from experience
30. Management Education in India
31. Is Leaders Born or are they made in Business Schools?
32. Is Management an Art or a Science?
33. The objective of Management is to maximize profits
34. Should GD be Part of Campus Placements?
35. Role of Ethics in Business
36. Is Management Education Required for Business?
37. Whether Hard-Working or Smart-Working is Desirable?
38. Women are better at multi-Tasking
39. Does Morality have an Essence in Corporate Life?
40. Retention of Employees
41. Do Women make Good Managers?
42. Celebrity Brand Endorsement: Effective Advertising?
43. The Salaries that MBAs Get is more than they deserve
44. Engineering Students are wasting their Time in Management Studies; they have Another Way to go
45. MBA in India is highly Over-rated

Controversial

1. Animals should not be used in medical research. Discuss.
2. Gay marriages should be made illegal. Discuss.
3. Happy family life and successful career don't go hand in hand. Yes, or no?
4. Military service should be made obligatory at 18 years of age. Yes or no.
5. The world does not need religion. Yes, or no?
6. Obesity is a disease. Yes, or no?
7. Cloning should be legalized. Yes, or no?
8. Prenuptial agreements make a wedding healthier. Yes, or no?
9. Drinking age should be lowered. Yes, or no?
10. Your race affects your intelligence. Discuss.
11. Single-sex schools are silly. True or false.
12. War is the best option to solve international disputes.
13. Single people are the happiest of all. Yes, or no?

14. Steroids should be accepted in sports. Yes, or no?

Latest Group Discussion Topics

1. Disaster Management in India
2. Is Technology making us less human
3. UAPA (Amendment) Bill, 2019
4. Zero Budget Natural Farming
5. Union Budget – 2019-20
6. Doubling of Farmers' Income by 2022 – How can India achieve this?
7. Coastal security of India
8. How can India become a superpower?
9. Syrian crisis
10. CPEC
11. Data Localization – Benefits & Challenges
12. Referendums strengthen democracy
13. Circular economy is the key to sustainable development
14. How can we utilize technology to tackle financial crimes?
15. India – Russia relations
16. Can illiterates be given driving licenses?
17. Electric vehicles in India
18. Should Cricket be the National game of India?
19. Should political parties be brought under RTI Act?
20. Shanghai Cooperation Organization
21. Changing relation between India and Bangladesh
22. Factors that contributed to the growth of MNCs
23. 'Neighborhood First' policy
24. BIMSTEC
25. Does "NOTA" option in elections really make sense?
26. Major challenges for the Modi government 2.0
27. Are corporate jobs a new form of slavery?
28. Blood is thicker than water – Abstract GD topic
29. Mechanisms adopted to combat terrorism
30. India – Iran Relations
31. Should Andhra Pradesh be given Special Category Status?
32. Consumerism and Middle class
33. How can the standard of people below the poverty line be raised?
34. Facebook vs LinkedIn
35. DE fence Budget 2019-20
36. 75% attendance is too much for engineering students
37. Should Bihar be given Special category status?
38. Is cricket an overrated sport in India?
39. Impact of Crony capitalism on India
40. Higher Education in India
41. Nationalism vs Regionalism

42. India-France Relations
43. BRICS
44. Plastic ban: Economy vs Environment
45. Bad bank – Is it a good idea?
46. Placement scenario in India
47. Is nuclear disarmament mandatory to achieve World Peace?
48. Why Indian PSUs are in losses?
49. Nuclear waste management
50. Should Non-IT students be allowed for IT jobs?
51. Fixed pay vs Variable pay
52. Does India need 'National Commission for Men'?
53. Can Artificial intelligence replace Human intelligence?
54. Retirement Homes – Pros & Cons
55. Criminalization of politics
56. Democracy vs Monarchy
57. The world does not need religion
58. How to lessen losses of Air India?
59. National Register of Citizens – Merits & Demerits
60. Money is honey
61. Which one is more important – Creativity or Knowledge?
62. Who serves the country most – Teacher or Soldier?
63. Is Stock Market similar to gambling?
64. Status of women in India
65. Abrogation of Article 370
66. Gender Equality in the workplace
67. Role of ethics in business
68. Knowledge based economy is important to achieve the economic boom of India
69. Mission Shakti – India's Anti-satellite missile test
70. Should Physical Education be made compulsory in schools?
71. The menace of Eve-teasing
72. India-US relations
73. Jet Airways Crisis
74. India's role in its neighboring countries

Essay Topics

1. Do you prefer to be just a member of a group or the leader of a group?
2. Whether as a role of leader make you learn easy or be a member in a group make you comfort. Why?
3. pollution in the community and what would you do to control it.
4. Practical knowledge is better than bookish knowledge.
5. Present situation of Agriculture in India compares to ancient days.
6. Unity in Diversity - Often Discussed, Rarely Practiced.
7. What is the way the IT people to help an uneducated Public?
8. Impact of western culture on Indians.
9. Internet is boon or bane?

10. Terrorism.
11. The art and Era of Letter Writing.
12. Is Facebook Evil or not?
13. Internet Should be Banned?
14. Jallikattu - The ban should continue.
15. Veg vs non-Veg.
16. Effects of Mobiles on teens.
17. Digital India
18. Education is the most powerful weapon.
19. Indian education and foreign education.
20. Will swacch bharat campaign succeed?
21. What job would you like to do in the future?
22. Should Euthanasia be accepted or be kept banned?
23. Climate Change.
24. How important is it to have a personal-professional balance in life to be happy? What do you do to achieve that?
25. How will you be an asset to Wipro?
26. Agriculture or manufacturing or services are the future development of India.
27. Economic growth without affecting the environment is - mirage or reality
28. old vs new ideology.
29. things I would change about the world.
30. Technology makes human slave - Support and oppose




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CRT SAMPLE QUESTION PAPER





SRI HARI DEGREE COLLEGE

(Permanently Affiliated to Yogi Vemana University, Kadapa)

Recognized by UGC New-Delhi under Section 2(f) & 12(8)

An ISO 9001:2015 Certified Institution

#45/290-10, Balaji Nagar, Kadapa, A.P., INDIA-516003

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Aptitude

- Find average of natural numbers from 1 to 67?
A. 33.5 B. 34 C. 50 D. 67
- What is average of 7 runs, 9 runs, 11 runs, ..., 27 runs, 29 runs and 31 runs?
A. 15 B. 16 C. 16.5 D. 19
- How much will be the average of the squares of natural numbers from 1 to 40?
A. 273.33 B. 553.5 C. 820 D. None of the above
- The distance between two stations A and B is 778 km. A train covers the journey from A to B at 84 km per hour and returns back to A with a uniform speed of 56 km per hour. Find the average speed of train during the whole journey.
A. 60.3 km/hr B. 35.0 km/hr C. 57.5 km/hr D. 67.2 km/hr
- The average of 50 numbers is 30. If two numbers, 35 and 40 are discarded, then the average of the remaining numbers is nearly:
A. 28.32 B. 29.68 C. 28.78 D. 29.27
- The average weight of 3 person P, Q, R is 84 kg. Another person who is S joins the group and now the present average of the group becomes 80 kg. If another person T, whose weight is 3 kg more than that of S, replaces P then the average weight of Q, R, S, and T becomes 78 kg. Find the weight of P.
A. 70 kg B. 72 kg C. 79 kg D. 78 kg
- Three years ago, the average of A, B, and C was 27 years and that of B and C 5 years ago was 20 years. A's present age is
A. 35 years B. 30 years C. 40 years D. 48 years
- The average age of a family of 6 members is 22 years. If the age of the youngest member be 7 years, what was the average age of the family at the birth of the youngest member?
A. 15 B. 12 C. 18 D. 21
- The average of ten numbers is 7. If each number is multiplied by 12, then the average of the remaining numbers will be
A. 7 B. 84 C. 9 D. 87
- Average marks obtained by Raju in 3 papers is 52 and in the fourth paper, he scored 60 marks. Find the new average of marks scored by Raju.
A. 55 B. 54 C. 52 D. 53.5
- The average of 50 members is 38. If the two numbers, 45 and 55 are discarded the average of the remaining numbers will become
A. 36 B. 36.5 C. 37 D. 37.5
- If we choose four numbers, the average of the first three will be 16 and that of last three is 15. If the last number is 18, the first number will be
A. 20 B. 21 C. 23 D. 25
- Rajesh Shopping Bill looks like this:

Item (Qty) Price/ unit

Pencils (35) Rs 4/-

Pens (30) Rs 11/-

Sharpeners (25) Rs 3/-

Find the average price of the goods he has bought.

a. Rs. 5.5 b. Rs. 6.05 c. Rs. 8.25 d. Rs. 9

14. What number has a 5:1 ratio to the number 10?

A. 42 B. 50 C. 55 D. 62

15. If $a:b = 7:5$, $b:c = 9:11$, find $a:b:c$?

A. 63: 14: 55 B. 63: 45: 55 C. 14: 14: 15 D. 7: 14: 15

16. The inverse ratio of 3: 2: 1 is?

A. 1:2:3 B. 2:3:1 C. 3:1:2 D. 2:3:6

17. The ratio of two numbers is 2:3 and the sum of their cubes is 945. The difference of number is?

A. 3 B. 4 C. 5 D. 6

18. A bag contains 50 P, 25 P and 10 P coins in the ratio 5: 9: 4, amounting to Rs. 206. Find the number of coins of each type respectively.

A) 360, 160, 200 B) 160, 360, 200 C) 200, 360, 160 D) 200, 160, 300

19. Two numbers are respectively 20% and 50% more than a third number. The ratio of the two numbers is:

A) 2:5 B) 3:5 C) 4:5 D) 5:4

20. A mixture contains alcohol and water in the ratio 4 : 3. If 5 liters of water is added to the mixture, the ratio becomes 4: 5. Find the quantity of alcohol in the given mixture.

A) 10 B) 12 C) 15 D) 18

21. Salaries of Ravi and Sumit are in the ratio 2:3. If the salary of each is increased by Rs. 4000, the new ratio becomes 40:57. What is Sumit's salary?

A) 38000 B) 46800 C) 36700 D) 50000

22. A sum of money is to be distributed among A, B, C, D in the proportion of 5:2:4:3. If C gets Rs. 1000 more than D, what is B's share?

A.Rs. 500 B.Rs. 1500 C. Rs. 2000 D. None

23. Two numbers are respectively 20% and 50% more than a third number. The ratio of the two numbers is:

A.2:5 B.3:5 C. 4:5 D. 5:4

24. A 70 cm long wire is to be cut into two pieces so that one piece will be $\frac{2}{5}$ th of the other, how many centimeters will the shorter piece be?

A. 10cm B. 20cm C. 25cm D. 30cm

25. If $A:B = \frac{1}{2} : \frac{1}{3}$ $B:C = \frac{1}{2} : \frac{1}{3}$ then $A:B:C$?

A. 2:3:3 B. 1:2:6 C. $\frac{1}{6} : \frac{1}{2} : \frac{1}{3}$ D. 9:6:4

Reasoning:

1. If the letters of the word 'CYCLINDER' are arranged alphabetically, then which letter would be farthest from the first letter of word?
1. N 2. E 3. Y 4. R 5. None of these
2. In a certain code 'CERTAIN' is coded as 'BFQUZJM'. How is 'MUNDANE' coded in that code?
1. LVMEZOD 2. NTCOMBF 3. NTOCNBF 4. LTMCZOF 5. None of these
3. In a certain code 'SEQUENCE' is coded as 'FDOFVRFT'. How is 'CHILDREN' coded in that code?
1. OFESJ MID 2. OFSEM JID 3. OFSEJ MID 4. OFSEJ MID 5. None of these
4. . _ _ xyx _ _ yx _ xy
1. xyyyx 2. Xyyxy 3. Yxxyy 4. yyxyx
5. FU, KP, PK, ?
1. UG 2. UF 3. GS 4. VR
6. xy _ _ yxx _ _ xy _
1. xxxxx 2. Xxyxx 3. Xxyxy 4. Yxxy
7. Rohit travels 18 km North turns left and travels 5 km and then again turns right and covers another 9 km. He then turns to right hand side and travels another 5 km. How far is he from the point of starting his journey?
A. 22.5 km B. 7.5 km C. 6 km D. 15 km E. None of these
8. Ajay and Binod both start from a point towards North. Ajay turns to left after walking 18 km. Binod turns to right after walking the same distance. Ajay waits for some time and then walks another 9 km, whereas Binod walks only 6 km. They both then come back to their respective South and walk 25 km forward. How far is Ajay from Binod?
A. 22.5 km B. 15 km C. 12 km D. 18 km E. None of these
9. There is a ring road connecting cities A, B, C & D. The road is in a circular form but having several approach roads leading to the center. There is a pole exactly in the centre of the ring road which is 15 km from point A on the circular road. Starting from A, You have taken a complete round of the circular road and finish at the same point after touching points B, C and D. You then drive 15 km interior towards the Pole from point A and from there reach somewhere in between B and C on the ring road. Find the distance you have to travel from the pole to reach the point between Band C on the ring road.
A. 45 km B. 22.5 km C. 120 km D. 60 km E. 15 km
10. A man pointing to a photograph says, "The lady in the photograph is my nephew's maternal grandmother." How is the lady in the photograph related to the man's sister who has no other sister?
A. Mother B. Cousin C. Mother-in-law D. Sister-in-law
11. A woman introduces a man as the son of the brother of her mother. How is the man related to the woman?
A. Son B. Nephew C. Grandson D. Uncle
12. Prasanna said, "This girl is the wife of the grandson of my mother." Who is Prasanna to the girl?
A. Husband B. Father C. Father-in-law D. Grandfather
13. If Arun says, "Vimal' mother is the only daughter of my mother", how is Arum related to Ravi?

- A. Father B. Brother C. Grandfather D. None of these
14. Pointing to a man in a photograph. Asha said, "His mother's only daughter is my mother". How is Asha related to that man?
A. Wife B. Sister C. Niece D. Nephew
15. A woman going with a boy is asked by another woman about the relationship between them. The woman replied, "My maternal uncle and the uncle of his maternal uncle is the same." How is the lady related with that boy?
A. Mother and Son B. Aunt and Nephew C. Grandmother and Grandson
D. None of these
16. A man said to a lady, "Your mother's husband's sister is my aunt." How is the lady related to the man?
A. Grand daughter B. Mother C. Daughter D. Sister
17. If X is the brother of the son of Y's son, how is X related to Y?
A. Son B. Cousin C. Grandson D. Brother
18. Introducing a man, a woman said, "His wife is the only daughter of my father." How is that man related to the woman?
A. Husband B. Brother C. Father-in-law D. Maternal uncle
19. Showing the man receiving the prize, Saroj said, "He is the brother of my uncle's daughter." Who is the man to Saroj?
A. Cousin B. Brother-in-law C. Nephew D. Uncle
20. Rita told Mani, "The girl I met yesterday at the beach was the youngest daughter of the brother-in-law of my friend's mother." How is the girl related to Rita's friend?
A. Daughter B. Niece C. Friend D. Cousin

Technical Questions:

- An _____ is a set of entities of the same type that share the same properties, or attributes.
A) Entity set B) Attribute set C) Relation set D) Entity model
- Entity is a _____.
A) Object of relation B) Present working model C) Thing in real world D) Model of relation
- The descriptive property possessed by each entity set is _____.
A) Entity B) Attribute C) Relation D) Model
- The function that an entity plays in a relationship is called that entity's _____.
A) Participation B) Position C) Role D) Instance
- The attribute name could be structured as an attribute consisting of first name, middle initial, and last name. This type of attribute is called _____.
A) Simple attribute B) Composite attribute C) Multivalued attribute D) Derived attribute
- The attribute AGE is calculated from DATE_OF_BIRTH. The attribute AGE is _____.
A) Single valued B) Multi valued C) Composite D) Derived
- Not applicable condition can be represented in relation entry as _____.
A) NA B) 0 C) NULL D) Blank Space
- Which of the following can be a multivalued attribute?
A) Phone number B) Name C) Date_of_birth D) All of the mentioned
- Which of the following is a single valued attribute?

- A) Register number B) Address C) SUBJECT_TAKEN D) Reference
10. A relational database consists of a collection of
A) Tables B) Fields C) Records D) Keys
 11. A _____ in a table represents a relationship among a set of values.
A) Column B) Key C) Row D) Entry
 12. The term _____ is used to refer to a row.
A) Attribute B) Tuple C) Field D) Instance
 13. The term attribute refers to a _____ of a table.
A) Record B) Column C) Tuple D) Key
 14. For each attribute of a relation, there is a set of permitted values, called the _____ of that attribute.
A) Domain B) Relation C) Set D) Schema
 15. Database _____ which is the logical design of the database, and the database _____ which is a snapshot of the data in the database at a given instant in time.
A) Instance, Schema B) Relation, Schema C) Relation, Domain D) Schema, Instance
 16. Course(course_id, sec_id, semester)
Here the course_id, sec_id and semester are _____ and course is a _____
A) Relations, Attribute B) Attributes, Relation C) Tuple, Relation D) Tuple, Attributes
 17. A domain is atomic if elements of the domain are considered to be _____ units.
A) Different B) Indivisible C) Constant D) Divisible
 18. The tuples of the relations can be of _____ order.
A) Any B) Same C) Sorted D) Constant
 19. Which one of the following is a set of one or more attributes taken collectively to uniquely identify a record?
A) Candidate key B) Sub key C) Super key D) Foreign key
 20. Consider attributes ID, CITY and NAME. Which one of this can be considered as a super key?
A) NAME B) IDC) CITY D) CITY, ID
 21. A _____ is a property of the entire relation, rather than of the individual tuples in which each tuple is unique.
A) Rows B) Key C) Attribute D) Fields
 22. Which one of the following attribute can be taken as a primary key?
A) Name B) Street C) Id D) Department
 23. Which one of the following cannot be taken as a primary key?
A) Id B) Register number C) Dept_id D) Street
 24. An attribute in a relation is a foreign key if the _____ key from one relation is used as an attribute in that relation.
A) Candidate B) Primary C) Super D) Sub
 25. Using which language can a user request information from a database?
A) Query B) Relational C) Structural D) Compiler
 26. What will be the output of the following program?

```

class My Class
{
    public static void main (String s[])
    {
        int i = 4;
    }
}

```

```

int j = 21;
int k = ++i * 7 + 2 - j--;
System.out.println("k = " + k);
    }
}

```

k = 16 Program does not compile C.k = 11 D.k = 17

27. class PreandPost Increment

```

{
public static void main(String arg[])
{
int a = 5;
int b = 2;
int c;
int d;
c = ++b; // LINE A
d = a++; // LINE B
c++; // LINE C
System.out.println("a = " + a + " b = " + b + " c = " + c + " d = " + d);
}
}

```

A. a=5 b=4 c=5 d=7 B.a=6 b=4 c=5 d=4 C. a = 6 b = 3 c = 4 d = 5 D. a=7 b=4 c=5 d=6

28. What will be the output of the following program?

class Operators1

```

{
    public static void main(String[] args)
    {
        int a = 34;
        int b = 21;
        int c = a++ + ++b;
        int d = --a + --b + c--;
        int e = a + +b + +c + d--;
        int f = -a + b-- + -c - d++;
        int sum = a + b + c + d + e + f;
        System.out.println("sum = " + sum);
    }
}

```

A.SUM= 263 B.SUM= 265 C.SUM=267 D. COMPILE TIME ERROR

29. What will be the output of the following program?

```

public class DemoonOperators
{
    public static void main (String[] args)
    {
        int input = 7;
        int output = ++input + ++input + ++input;
    }
}

```

```
System.out.println(output);
```

```
}
```

```
}
```

A.-20 B.109 C.27 D. 35 Compilation Error or Runtime Error

30. public class DemoOnOperators

```
{
```

```
public static void main(String[] args)
```

```
{
```

```
int i, j, k, l = 0;
```

```
k = l++;
```

```
j = ++k;
```

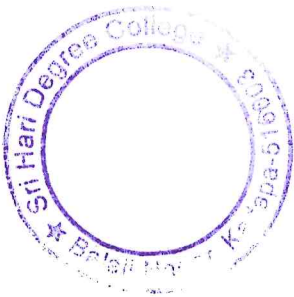
```
i = j++;
```

```
System.out.println(i);
```

```
}
```

```
}
```

A.0 B.1 C.2 D.5 E. Compilation Error or Runtime Error




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**CRT SAMPLE
QUESTION PAPER
ANSWERS**



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Aptitude Answers:

1. Option Average of natural numbers from 1 to 65 = $67 + 1/2 = 34$
2. Option D, Average of even numbers in 1 to n = Last even number + 2/2
Average of odd numbers in 1 to n = Last odd number + 1/2
Average of consecutive numbers = First number + Last number / 2
Here the difference between numbers is constant = 2.
So this can be called a consecutive series.
Average = $31 + 7/2 = 19$
3. Option B, Average of squares of first 'n' natural numbers = $(n+1)(2n+1)/6$
Average of cubes of first 'n' natural numbers = $n(n+1)^2/4$. n = 40
Average of squares of numbers from 1 to 40 = $(40+1)(80+1)/6 = 41 \times 81/6 = 553.5$
4. Option(D) is correct. Average Speed = $(2xy/x+y)$ km/hr
$$= (2 \times 84 \times 56 / 84 + 56)$$
$$= (2 \times 84 \times 56 / 140)$$
$$= 67.2 \text{ km/hr}$$
5. Option(B) is correct
Total sum of 48 numbers = $(50 \times 30) - (35 + 40)$
$$= 1500 - 75$$
$$= 1425$$

Average = $(1425/48)$
$$= 29.68$$
6. C. 79 kg
7. C. 40 years
8. C. 18

9. B. 84

10. B. 54

11. D. 37.5

12. B. 21

13. b. Rs. 6.05

Average = Sum of Observations/Number of Observations

Average = $\frac{\text{Total cost of pencils} + \text{Total cost of pens} + \text{Total cost of sharpeners}}{\text{Total pencils} + \text{Total pens} + \text{Total sharpeners}}$

$\therefore \text{Average price} = \frac{(35 \times 4) + (30 \times 11) + (25 \times 3)}{35 + 30 + 25}$

14. Answer: Option B

$$5:1 = x:10$$

$$x = 50$$

15. Option B

$$a:b = 7:5 \quad b:c = 9:11 \quad a:b:c = 63:45:55$$

16. Answer: Option D $1/3:1/2:1/1 = 2:3:6$

17. Answer: Option A

$$2x \quad 3x$$

$$8x^3 + 27x^3 = 945$$

$$35x^3 = 945$$

$$x^3 = 27 \Rightarrow x = 3$$

18. C) 200, 360, 160

Explanation:

let ratio be x.

Hence no. of coins be $5x, 9x, 4x$ respectively

Now given total amount = Rs. 206

$$\Rightarrow (.50)(5x) + (.25)(9x) + (.10)(4x) = 206$$

we get $x = 40$

\Rightarrow No. of 50p coins = 200

=> No. of 25p coins = 360

=> No. of 10p coins = 160

19. C) 4:5

Let the third number be x .

Then, first number = 120% of $x = 120x/100 = 6x/5$

Second number = 150% of $x = 150x/100 = 3x/2$

Ratio of first two numbers = $6x/5 : 3x/2 = 12x : 15x = 4 : 5$

20. A) 10

Let the quantity of alcohol and water be $4x$ litres and $3x$ litres respectively

$$4x/(3x+5) = 4/5$$

$$20x = 4(3x+5)$$

$$8x = 20$$

$$x = 2.5$$

Quantity of alcohol = (4×2.5) litres = 10 litres.

21. Answer: A) 38000

Let the original salaries of Ravi and Sumit be Rs. $2x$ and Rs. $3x$ respectively.

Then,

$$(2x+4000) / (3x+4000) = 40 / 57$$

$$\Rightarrow 57 \times (2x + 4000) = 40 \times (3x+4000)$$

$$\Rightarrow 6x = 68,000$$

$$\Rightarrow 3x = 34,000$$

Sumit's present salary = $(3x + 4000) = \text{Rs.}(34000 + 4000) = \text{Rs. } 38,000$

22. Option(C) is correct

Let the shares of A, B, C and D be Rs. $5x$, Rs. $2x$, Rs. $4x$ and Rs. $3x$ respectively.

Then, $4x-3x=1000$

$$\Rightarrow x=1000.$$

B's share = $\text{Rs.}2x=\text{Rs.}(2 \times 1000)=\text{Rs. } 2000$

23. option(C) is correct

Let the third number be x .

Then, first number = 120% of $x = 120x/100 = 6x/5$

Second number = 150% of $x = 150x/100 = 3x/2$

Ratio of first two numbers = $6x/5 : 3x/2 = 4 : 5$

24. Option B

$$1: \frac{2}{5} = 5: 2$$

$$\frac{2}{7} * 70 = 20$$

25. Option D

$$A:B = \frac{1}{2}:\frac{1}{3} = 3:2$$

$$B:C = \frac{1}{2}:\frac{1}{3} = 3:2$$

$$A:B:C = 9:6:4$$

Reasoning:

1. option3

2. option1

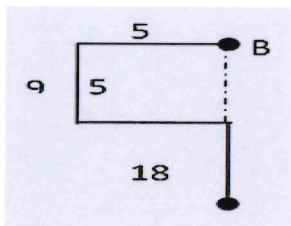
3. option2

4. Option 2 The series is $xy/xy/xy/xy/xy/xy$. Thus, the pattern 'xy' is repeated.

5. Option 2 F is sixth from the beginning of the alphabet & U is sixth from the end.

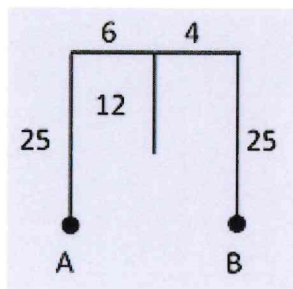
Similarly, K is eleventh from the beginning & P is 11th from the end the same rule is followed in other pairs of the series.

6. Option 2 The series is $xyx/xyx/xyx/xyx$. Thus, the pattern 'xyx' is repeated.



7. option e

8. option b



9. Option E

Explanation: He has to move a distance of 15k

10. A.Sol. Clearly, the lady is the grandmother of man's sister's son.

i.e., the mother of the mother of man's sister's son.

ie., the mother of man's sister.

So, the lady is man's mother.

11. .d

12. A.

Mother's grandson – Son;

Son's wife – Daughter-in-law.

13. D.

Only daughter of Arun's mother –Arun's sister.

So, Vimal's mother is Arun's sister (or)

Arun is the brother of Vimal's mother i.e . Vimal's maternal uncle

14. C.

Asha's mother's mother is man's mother i.e.,

Asha's mother is man's sister (or)

Asha is man's niece.

15. B.

Clearly, the brother of woman's mother is the same as the brother of the father of boy's maternal uncle.

So, the woman and boy's mother are cousins.

Thus, the woman is boy's aunt

16. D.

Sol.

Lady's mother husband – Lady's father;

Lady's father's sister – Lady's aunt.

So, lady's aunt is man's aunt and therefore lady is man's sister.

17. C.

Son of Y's son – Grandson;

Brother of Y's grandson – Y's grandson.

So X is Y's grandson.

18. A.

Only daughter of my father – Myself.

So, the man is woman's husband.

19. A.

Brother of uncle's daughter – Uncle's son – Cousin.

So, the man is Saroj's cousin.

20. D.

Sol.

Daughter of brother-in-law – Niece;

Mother's niece – Cousin.

So, the girl is the cousin of Rita's friend.

Technical Questions:

1. A Explanation: An entity is a "thing" or "object" in the real world that is distinguishable from all other objects.
2. C Explanation: For example, each person in a university is an entity.
3. B Explanation: Possible attributes of the instructor entity set are ID, name, dept name, and salary.
4. C Explanation: A relationship is an association among several entities.
5. B Explanation: Composite attributes can be divided into subparts (that is, other attributes)
6. D Explanation: The value for this type of attribute can be derived from the values of other related attributes or entities.
7. C Explanation: NULL always represents that the value is not present.
8. A Explanation: Name and Date_of_birth cannot hold more than 1 value.
9. A
10. A Fields are the columns of the relation or tables. Records are each row in a relation.
Keys are the constraints in a relation.
11. C Explanation: Column has only one set of values. Keys are constraints and row is one whole set of attribute
12. B Explanation: Tuple is one entry of the relation with several attributes which are fields.
13. B Explanation: Attribute is a specific domain in the relation which has entries of all tuples.

14. A Explanation: The values of the attribute should be present in the domain. Domain is a set of values permitted

15. D Explanation: Instance is an instance of time and schema is a representation.

16. B Explanation: The relation course has a set of attributes coursed, sec_id, semester .

17. B

18. A

19. C Explanation: Super key is the superset of all the keys in a relation.

20. B Explanation: Here the id is the only attribute which can be taken as a key. Other attributes are not uniquely identified.

21. B

22. C Explanation: The attributes name, street and department can repeat for some tuples.

But the id attribute has to be unique. So it forms a primary key.

23. D Explanation: Street is the only attribute which can occur more than once.

24. B Explanation: The primary key has to be referred in the other relation to form a foreign key in that relation

25. A

26. A

27. C Here a and b are declared as integers and they are assigned to 5 and 2 respectively.

In LINE A, we have prefix increment operator i.e. ++ before the operand b i.e. (++b).

So the value of b is first incremented from 2 to 3 and then assigned to c. Hence c becomes

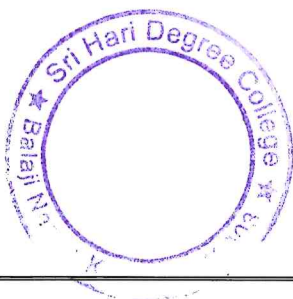
In LINE B, where we have postfix increment operator i.e. ++ after the operand a i.e. (a++), the value of a is first assigned to d, so d becomes 5. Later a is incremented from 5 to 6.


In LINE C, c is incremented, so it goes from 3 to 4. Here there is no difference whether we use postfix (c++) or prefix (++c) increment since we are not assigning it or using it as part of some other expression.

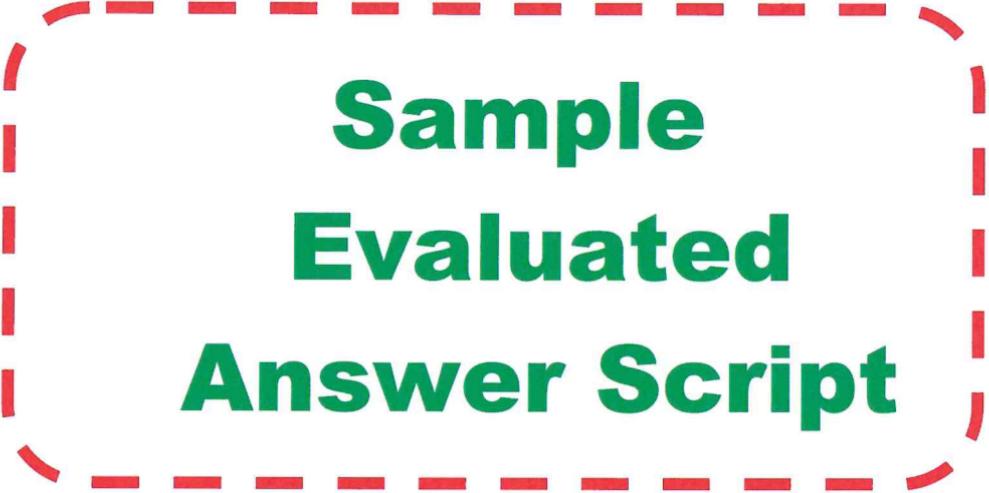
28. A

29. C

30. B




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**Sample
Evaluated
Answer Script**

Aptitude

$25 \times 1 = 25$

1. Find average of natural numbers from 1 to 67? [B]
A. 33.5 B. 34 C. 50 D. 67
2. What is average of 7 runs, 9 runs, 11 runs, ..., 27 runs, 29 runs and 31 runs? [D]
A. 15 B. 16 C. 16.5 D. 19
3. How much will be the average of the squares of natural numbers from 1 to 40? [C]
A. 273.33 B. 553.5 C. 820 D. None of the above
4. The distance between two stations A and B is 778 km. A train covers the journey from A to B at 84 km per hour and returns back to A with a uniform speed of 56 km per hour. Find the average speed of train during the whole journey. [D]
A. 60.3 km/hr B. 35.0 km/hr C. 57.5 km/hr D. 67.2 km/hr
5. The average of 50 numbers is 30. If two numbers, 35 and 40 are discarded, then the average of the remaining numbers is nearly: [B]
A. 28.32 B. 29.68 C. 28.78 D. 29.27
6. The average weight of 3 person P, Q, R is 84 kg. Another person who is S joins the group and now the present average of the group becomes 80 kg. If another person T, whose weight is 3 kg more than that of S, replaces P then the average weight of Q, R, S, and T becomes 78 kg. Find the weight of P. [B]
A. 70 kg B. 72 kg C. 79 kg D. 78 kg
7. Three years ago, the average of A, B, and C was 27 years and that of B and C 5 years ago was 20 years. A's present age is [C]
A. 35 years B. 30 years C. 40 years D. 48 years
8. The average age of a family of 6 members is 22 years. If the age of the youngest member be 7 years, what was the average age of the family at the birth of the youngest member? [C]
A. 15 B. 12 C. 18 D. 21
9. The average of ten numbers is 7. If each number is multiplied by 12, then the average of the remaining numbers will be [B]
A. 7 B. 84 C. 9 D. 87
10. Average marks obtained by Raju in 3 papers is 52 and in the fourth paper, he scored 60 marks. Find the new average of marks scored by Raju. [B]
A. 55 B. 54 C. 52 D. 53.5
11. The average of 50 members is 38. If the two numbers, 45 and 55 are discarded the average of the remaining numbers will become [D]
A. 36 B. 36.5 C. 37 D. 37.5
12. If we choose four numbers, the average of the first three will be 16 and that of last three is 15. If the last number is 18, the first number will be [B]
A. 20 B. 21 C. 23 D. 25

13. Rajesh Shopping Bill looks like this:

Item (Qty) Price/ unit

Pencils (35) Rs 4/-

Pens (30) Rs 11/-

Sharpener (25) Rs 3/-

Find the average price of the goods he has bought.

a. Rs. 5.5 b. Rs. 6.05 c. Rs. 8.25 d. Rs. 9

[B]

14. What number has a 5:1 ratio to the number 10?

A. 42 B. 50 C. 55 D. 62

[B]

15. If a: b = 7: 5, b: c = 9: 11, find a: b: c?

A. 63: 14: 55 B. 63: 45: 55 C. 14: 14: 15 D. 7: 14: 15

[B]

16. The inverse ratio of 3: 2: 1 is?

A. 1:2:3 B. 2:3:1 C. 3:1:2 D. 2:3:6

[D]

17. The ratio of two numbers is 2:3 and the sum of their cubes is 945. The difference of number is?

A. 3 B. 4 C. 5 D. 6

[A]

18. A bag contains 50 P, 25 P and 10 P coins in the ratio 5: 9: 4, amounting to Rs. 206. Find the number of coins of each type respectively.

A) 360, 160, 200 B) 160, 360, 200 C) 200, 360, 160 D) 200, 160, 300

[C]

19. Two numbers are respectively 20% and 50% more than a third number. The ratio of the two numbers is:

A) 2:5 B) 3:5 C) 4:5 D) 5:4

[C]

20. A mixture contains alcohol and water in the ratio 4 : 3. If 5 liters of water is added to the mixture, the ratio becomes 4: 5. Find the quantity of alcohol in the given mixture.

A) 10 B) 12 C) 15 D) 18

[B]

21. Salaries of Ravi and Sumit are in the ratio 2:3. If the salary of each is increased by Rs. 4000, the new ratio becomes 40:57. What is Sumit's salary?

A) 38000 B) 46800 C) 36700 D) 50000

[A]

22. A sum of money is to be distributed among A, B, C, D in the proportion of 5:2:4:3. If C gets Rs. 1000 more than D, what is B's share?

A.Rs. 500 B.Rs. 1500 C. Rs. 2000 D. None

[C]

23. Two numbers are respectively 20% and 50% more than a third number. The ratio of the two numbers is:

A.2:5 B.3:5 C. 4:5 D. 5:4

[C]

24. A 70 cm long wire is to be cut into two pieces so that one piece will be $\frac{2}{5}$ th of the other, how many centimeters will the shorter piece be?

A. 10cm B. 20cm C. 25cm D. 30cm

[B]

25. If A:B = $\frac{1}{2}$: $\frac{1}{3}$ B:C = $\frac{1}{2}$: $\frac{1}{3}$ then A:B:C?

A. 2:3:3 B. 1:2:6 C. $\frac{1}{6}$: $\frac{1}{2}$: $\frac{1}{3}$ D. 9:6:4

[D]

Reasoning:

1. If the letters of the word 'CYCLINDER' are arranged alphabetically, then which letter would be farthest from the first letter of word?

1. N 2. E 3. Y 4. R 5. None of these

20 x 1 = 20

[3]

2. In a certain code 'CERTAIN' is coded as 'BFQUZJM'. How is 'MUNDANE' coded in that code?
 1. LVMEZOD 2. NTCOMBE 3. NTOCNBF 4. LTM CZOF 5. None of these [1]
3. In a certain code 'SEQUENCE' is coded as 'FDOFVRFT'. How is 'CHILDREN' coded in that code?
 1. OFESJ MID 2. OFSEM JID 3. OFSEJ MID 4. OFSEJ MID 5. None of these [2]
4. _ _ _ _ _
 1. xyyx 2. xxyx 3. yxyx 4. yxyx [2]
5. FU, KP, PK, ?
 1. UG 2. UF 3. GS 4. VR [2]
6. xy _ _ _
 1. xxx 2. xxyx 3. xxyx 4. yxy [2]
7. Rohit travels 18 km North turns left and travels 5 km and then again turns right and covers another 9 km. He then turns to right hand side and travels another 5 km. How far is he from the point of starting his journey?
 A. 22.5 km B. 7.5 km C. 6 km D. 15 km E. None of these [E]
8. Ajay and Binod both start from a point towards North. Ajay turns to left after walking 18 km. Binod turns to right after walking the same distance. Ajay waits for some time and then walks another 9 km, whereas Binod walks only 6 km. They both then come back to their respective South and walk 25 km forward. How far is Ajay from Binod?
 A. 22.5 km B. 15 km C. 12 km D. 18 km E. None of these [D]
9. There is a ring road connecting cities A, B, C & D. The road is in a circular form but having several approach roads leading to the center. There is a pole exactly in the centre of the ring road which is 15 km from point A on the circular road. Starting from A, You have taken a complete round of the circular road and finish at the same point after touching points B, C and D. You then drive 15 km interior towards the Pole from point A and from there reach somewhere in between B and C on the ring road. Find the distance you have to travel from the pole to reach the point between Band C on the ring road.
 A. 45 km B. 22.5 km C. 120 km D. 60 km E. 15 km [D]
10. A man pointing to a photograph says, "The lady in the photograph is my nephew's maternal grandmother." How is the lady in the photograph related to the man's sister who has no other sister?
 A. Mother B. Cousin C. Mother-in-law D. Sister-in-law [A]
11. A woman introduces a man as the son of the brother of her mother. How is the man related to the woman?
 A. Son B. Nephew C. Grandson D. Uncle [D]
12. Prasanna said, "This girl is the wife of the grandson of my mother." Who is Prasanna to the girl?
 A. Husband B. Father C. Father-in-law D. Grandfather [A]
13. If Arun says, "Vimal' mother is the only daughter of my mother", how is Arun related to Ravi?
 A. Father B. Brother C. Grandfather D. None of these [D]
14. Pointing to a man in a photograph. Asha said, "His mothers only daughter is my mother". How is Asha related to that man?
 A. Wife B. Sister C. Niece D. Nephew [C]

15. A woman going with a boy is asked by another woman about the relationship between them. The women replied, "My maternal uncle and the uncle of his maternal uncle is the same." How is the lady related with that boy? [B]
 A. Mother and Son B. Aunt and Nephew C. Grandmother and Grandson D. None of these
16. A man said to a lady, "Your mother's husband's sister is my aunt." How is the lady related to the man? [D]
 A. Grand daughter B. Mother C. Daughter D. Sister
17. If X is the brother of the son of Y's son, how is X related to Y? [C]
 A. Son B. Cousin C. Grandson D. Brother
18. Introducing a man, a woman said, "His wife is the only daughter of my father." How is that man related to the woman? [A]
 A. Husband B. Brother C. Father-in-law D. Maternal uncle
19. Showing the man receiving the prize, Saroj said, "He is the brother of my uncle's daughter." Who is the man to Saroj? [A]
 A. Cousin B. Brother-in-law C. Nephew D. Uncle
20. Rita told Mani, "The girl I met yesterday at the beach was the youngest daughter of the brother-in-law of my friend's mother." How is the girl related to Rita's friend? [D]
 A. Daughter B. Niece C. Friend D. Cousin

Technical Questions:

30 x 1 = 30

1. An _____ is a set of entities of the same type that share the same properties, or attributes. [B]
 A) Entity set B) Attribute set C) Relation set D) Entity model
2. Entity is a _____. [C]
 A) Object of relation B) Present working model C) Thing in real world D) Model of relation
3. The descriptive property possessed by each entity set is _____. [C]
 A) Entity B) Attribute C) Relation D) Model
4. The function that an entity plays in a relationship is called that entity's _____. [D]
 A) Participation B) Position C) Role D) Instance
5. The attribute name could be structured as an attribute consisting of first name, middle initial, and last name. This type of attribute is called _____. [C]
 A) Simple attribute B) Composite attribute C) Multivalued attribute D) Derived attribute
6. The attribute AGE is calculated from DATE_OF_BIRTH. The attribute AGE is _____. [D]
 A) Single valued B) Multi valued C) Composite D) Derived
7. Not applicable condition can be represented in relation entry as _____. [D]
 A) NA B) 0 C) NULL D) Blank Space
8. Which of the following can be a multivalued attribute? [A]
 A) Phone number B) Name C) Date_of_birth D) All of the mentioned
9. Which of the following is a single valued attribute? [B]
 A) Register number B) Address C) SUBJECT_TAKEN D) Reference
10. A relational database consists of a collection of _____. [A]
 A) Tables B) Fields C) Records D) Keys
11. A _____ in a table represents a relationship among a set of values.

- A) Column B) Key C) Row D) Entry
12. The term _____ is used to refer to a row. [B]
- A) Attribute B) Tuple C) Field D) Instance
13. The term attribute refers to a _____ of a table. [D]
- A) Record B) Column C) Tuple D) Key
14. For each attribute of a relation, there is a set of permitted values, called the _____ of that attribute. [A]
- A) Domain B) Relation C) Set D) Schema
15. Database _____ which is the logical design of the database, and the database _____ which is a snapshot of the data in the database at a given instant in time. [C]
- A) Instance, Schema B) Relation, Schema C) Relation, Domain D) Schema, Instance
16. Course(course_id, sec_id, semester)
Here the course_id, sec_id and semester are _____ and course is a _____. [C]
- A) Relations, Attribute B) Attributes, Relation C) Tuple, Relation D) Tuple, Attributes
17. A domain is atomic if elements of the domain are considered to be _____ units. [D]
- A) Different B) Indivisible C) Constant D) Divisible
18. The tuples of the relations can be of _____ order. [A]
- A) Any B) Same C) Sorted D) Constant
19. Which one of the following is a set of one or more attributes taken collectively to uniquely identify a record? [B]
- A) Candidate key B) Sub key C) Super key D) Foreign key
20. Consider attributes ID, CITY and NAME. Which one of this can be considered as a super key? [D]
- A) NAME B) ID C) CITY D) CITY, ID
21. A _____ is a property of the entire relation, rather than of the individual tuples in which each tuple is unique. [A]
- A) Rows B) Key C) Attribute D) Fields
22. Which one of the following attribute can be taken as a primary key? [C]
- A) Name B) Street C) Id D) Department
23. Which one of the following cannot be taken as a primary key? [C]
- A) Id B) Register number C) Dept_id D) Street
24. An attribute in a relation is a foreign key if the _____ key from one relation is used as an attribute in that relation. [B]
- A) Candidate B) Primary C) Super D) Sub
25. Using which language can a user request information from a database? [B]
- A) Query B) Relational C) Structural D) Compiler
26. What will be the output of the following program? [A]
- ```

class My Class
{
 public static void main (String s[])
 {
 int i = 4;
 int j = 21;
 int k = ++i * 7 + 2 - j--;
 System.out.println("k = " + k);
 }
}

```

}  
 k = 16      Program does not compile    C.k = 11    D.k = 17  
 27. class Pre and Post Increment

```

 {
 public static void main(String arg[])
 {
 int a = 5;
 int b = 2;
 int c;
 int d;
 c = ++b; // LINE A
 d = a++; // LINE B
 c++; // LINE C
 System.out.println("a = " + a + " b = " + b + " c = " + c + " d = " + d);
 }
 }

```

[D]

A. a=5 b=4 c=5 d=7    B.a=6 b=4 c=5    d=4    C. a = 6 b = 3 c = 4 d = 5    D. a=7 b=4 c=5  
 d=6

28. What will be the output of the following program?

```

 class Operators1
 {
 public static void main(String[] args)
 {
 int a = 34;
 int b = 21;
 int c = a++ + ++b;
 int d = --a + --b + c--;
 int e = a + ++b + ++c + d--;
 int f = -a + b-- + -c - d++;
 int sum = a + b + c + d + e + f;
 System.out.println("sum = " + sum);
 }
 }

```

[A]

A.SUM= 263    B.SUM= 265    C.SUM=267    D. COMPILE TIME ERROR

29. What will be the output of the following program?

```

 public class Demo on Operators
 {
 public static void main (String[] args)
 {
 int input = 7;
 int output = ++input + ++input + ++input;
 System.out.println(output);
 }
 }

```

[B]

A.-20    B.109    C.27    D. 35    Compilation Error or Runtime Error

30. public class DemoOnOperators  
 {  
     public static void main(String[] args)  
     {  
         int i, j, k, l = 0;  
         k = l++;  
         j = ++k;  
         i = j++;  
         System.out.println(i);  
     }  
 }

A.0    B.1    C.2    D.5    E. Compilation Error or Runtime Error

[ B ]



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