English Language

Direction (1-10): In each of the questions given below a sentence is given which is then divided into five parts out of which one bold part is correct. There are no errors in three out of four remaining parts and therefore only one of the parts other than the bold one is incorrect. You must choose the grammatically incorrect part as your answer. Choose e if you find out there is no error.

1) India producers made a valuable a)/contribution to reducing costs and b)/to expanding access to life-saving treatments c)/for patients, both in emerging d)/markets and in developed countries e)
   a) e
   b) a
   c) d
   d) b
   e) No error

2) We would strive to promote strong, a)/indigenous producers of complex b)/generics and bio similar as this c)/has enormous potential to improve d)/public health in emerging markets e)
   a) d
   b) c
   c) b
   d) a
   e) No error

3) Economic growth is not creating a)/enough opportunities for decent b)/working with sustainable sources of c)/income for India’s burgeoning d)/numbers of youth e)
   a) d
   b) c
   c) b
   d) a
   e) No error

4) The MPC has maintained that the a)/policy is determined only on the b)/inflation-targeting mandate and a rate c)/hike may be needed even to avoid d)/inflationary consequences of depreciation e)
   a) d
   b) a
   c) b
   d) e
   e) No error

5) The Indian economy is missing a)/institutions in the middle that b)/can connect small and informal c)/enterprises more efficiently with the d)/large, formal institutions of the economy e)
   a) e
   b) d
   c) c
   d) a
   e) No error
6) The Indian state has a long a)/and trouble history of b)/failing to fix political and c)/institutional accountability for d)/riots and mass killings e)
   a) b  
   b) c  
   c) d  
   d) a  
   e) No error

7) Growth in e-commerce can boost local a)/manufacturing and catalyse Make b)/in India, more importantly, the food processing c)/sector will get a fillip, however addressing d)/backward linkages and infrastructure e)
   a) c  
   b) a  
   c) d  
   d) e  
   e) No error

8) Progressives and socialists hope to use a)/government to improve the economies of b)/the 21st century should bear these c)/examples in mind, and take great care d)/that their own efforts don’t end up having similar effects e)
   a) e  
   b) a  
   c) d  
   d) c  
   e) No error

10) The bigger casualty of the obsession with GDP a)/growth estimates is the drowning out of b)/other relevant indicators from public debate, c)/this is true of agrarian distress, which d)/has been a burning issue for decades now e)
   a) b  
   b) c  
   c) a  
   d) e  
   e) No error

Directions (11-20): In the following passage there are blanks, each of which has been numbered. These numbers are printed below the passage and against each five words are suggested, one of which fits the blank appropriately. Find out the appropriate word in each case.

The fear of immigration is poisoning Western politics. Donald Trump owes his job to it. Brexit would not be happening without it. Strident nationalists wield power in Italy, Hungary, Poland and Austria, and have gained influence elsewhere. Even Sweden, long a country of refuge, has __(11)__ on migrants. The Sweden Democrats, a thunderingly anti-immigrant party, could win the most votes at an election on September 9th. Though it will not form a government, it has already transformed Swedish politics as mainstream parties seek to halt migrants. The West risks a backlash of the sort that ended the previous great age of mobility, before 1914. That would be a tragedy. Societies that close their doors to migrants will be poorer and less tolerant. Meanwhile, those to whom the doors are closed will see increased suffering, unable to escape the poverty, climate change or violence that prompts them to move. The stakes could not be higher. Yet
The power to admit them rests with voters in states that do not help that states have different policies who resist that change. History makes it hard for them to work. Yet the distinctions are blurry. Poor countries next to war zones receive huge influxes, while rich countries try to undercut local workers; and the fear of newcomers flavour the host culture. And there will be better arguments and policies. That demands more honesty about the trade-offs immigration involves. The walls of nations International law categorises migrants either as refugees, who are entitled to sanctuary, or as economic migrants, who have no right to go anywhere that does not want them. Yet the need for more migrants. So thin the concept that many of their countries refuse to take them back. This mess feeds disaffection in the West, and it is a waste. The act of moving from a poor country to a rich one makes workers dramatically more productive. A world with more migration would be substantially richer. The is that the biggest benefits of moving accrue to the migrants themselves, while the power to admit them rests with voters in rich countries. Fair enough: democratic accountability is largely in national governments. Yet most Western countries, struggling with ageing populations and shrinking workforces, need more migrants. So they have to find ways to make migration policy work for everyone. The first step is to recognise the causes of the backlash against newcomers. Several stand out: the belief that governments have lost control of their borders; the fear that migrants drain already-strained welfare systems; the perception that migrants are undercutting local workers; and the fear of being by alien cultures. Assuaging these concerns requires toughness and imagination. Start by regaining control. Overhaul the outdated international systems for aiding refugees; at the same time, open routes for well-regulated economic migration to the West. This will require countries to secure borders and enforce laws: by preventing the hiring of illegal immigrants and deporting those denied asylum, for example. Where they do not exist, the introduction of ID cards can help. Second, encourage all migrants, including refugees, to work, while limiting the welfare benefits that they can receive. In America, where the safety net is labour rules are flexible and entry-level jobs plentiful, even migrants who dropped out of high school are net contributors to the public finances. Sweden, by contrast has a policy that seems designed to resentment, showering refugees with benefits while making it hard for them to work. Turkey does a better job at integrating refugees, even if it does not recognise them as such. A sensible approach would be to allow migrants to get public education and health care immediately, but limit their access to welfare benefits for several years. This may seem discriminatory, but migrants will still be better off than if they had stayed at home. An extreme illustration can be seen in the oil rich Gulf, where migrants are ruthlessly excluded from the opulent welfare that citizens enjoy. The Gulf is not a model. Migrant workers receive too little protection against coercion and abuse. But because they so obviously pay their way, the native-born are happy to admit them in vast numbers. Elements of that logic are worth considering in the West. Third, ensure that the gains from migration are more shared between migrants and the native-born in the host country. One way is to tie public spending, particularly on visible services such as schools or hospitals, more directly to the number of migrants in a region. Another, more radical idea might be to tax migrants themselves, either by charging for entry or, more plausibly, by applying a surtax on their income for a period after arrival. The proceeds could be spent on public infrastructure, or simply divided among citizens. The more immigrants, the bigger the dividend. The needed and the needy Cultural objections to immigration are harder to Cultural objections to immigration are harder to Newcomers flavour the host culture. And there will inevitably be people who resist that change. History suggests that over time more pluralist countries become more tolerant of immigration. They do so
most easily when the flow of migration is smooth (to prevent the sudden surges that make host societies feel swamped) and when newcomers are integrated into the local culture. Ensuring that they work and learn the local language are two powerful levers for achieving that. How much migration makes sense? The answer will vary from country to country. Belgium is not Canada. Done properly, migration brings economic dynamism. But the shortcomings of today’s policies mean that most Western countries are far more closed than they should be, and they feed the rise of populism. That is both a wasted opportunity and an unnecessary danger.

11) ?
   a) Saved
   b) Scored
   c) Soured
   d) Pour ed
   e) None of these

12) ?
   a) Shirk
   b) Perk
   c) Smirk
   d) Shark
   e) None of these

13) ?
   a) Calm
   b) Peg
   c) Snag
   d) Bag
   e) None of these

14) ?
   a) Crept
   b) Rob
   c) Wobble
   d) Vested
   e) None of these

15) ?
   a) Leap
   b) Swamped
   c) Kept
   d) Cram
   e) None of these

16) ?
   a) Skimpy
   b) Baleful
   c) Bane
   d) Dole
   e) None of these

17) ?
   a) Retribution
   b) Regards
   c) Regard
   d) Stir
   e) None of these

18) ?
   a) Explicitly
   b) Sincere
   c) Pulverise
   d) Extra
   e) None of these

19) ?
   a) Barrage
Directions (21-30): Read the following passage carefully and answer the questions given below.

It would be hard to imagine an immigrant more likely to succeed than Tarek. He has skills (a degree in economics) and experience (at a bank in Damascus). He has get-up-and-go, too. When the war in Syria grew too intense, he fled by car to Beirut, by plane to Turkey, by boat to Greece, by lorry to Denmark and by train to Sweden. Yet after he applied for asylum in 2014, the Swedish government strove to prevent him from contributing to society. “For one and a half years I had to do nothing,” he recalls. He was sent to a refugee centre, where he was not allowed to work or take Swedish classes. Taxpayers gave him ample food and shelter. But he was barred from paying his way, and not working made it difficult to integrate, too. “It was very hard to connect with people,” says Tarek (who prefers not to give his last name). From generous motives, Sweden has adopted policies towards refugees tailor made to provoke a backlash. It has admitted huge numbers—for a while almost anyone arriving from Syria could get asylum. In 2015 the country let in 163,000, or 1.6% of the population. They received welfare benefits but most were not allowed to work. This has buoyed an anti-immigrant party, the Sweden Democrats, who might win the most votes in an election on September 9th. The rich world is gripped by a debate about what to do with newcomers from poor countries. In theory there are two completely separate categories: refugees from war or persecution, who have a right to safe haven, and economic migrants, who do not. In practice, however, many countries fail to honour their obligations to refugees, and plenty of economic migrants pose as refugees because they see no other legal way to enter a rich country. For many voters, the two issues blur into one: what they care about is the number of foreigners arriving. According to Gallup, 700m people—14% of the world’s adults—would like to move permanently to another country, usually a rich one. In sub-Saharan Africa the figure is 31%. The rich world clearly could not absorb so many newcomers at once. And this is one reason why the politicians who complain loudest about the huddled masses are either winning elections (as in Hungary, Italy, Austria and America), or forcing other parties to rethink their open-door policies (Denmark, Sweden, Germany, Britain). “We can’t take care of everybody,” says Anders Olin, who is handing out leaflets for the Sweden Democrats outside Malmo station. “It’s a burden on the welfare state. [Refugees] become citizens after a couple of years. Then the whole family comes.” In the past ten years, adds Mr Olin, “we’ve had many problems with violence and shootings.” He admits, however, that Malmo is still nice, whatever Donald Trump says, and that he does not personally feel threatened.

Niels Paarup-Petersen, the leader of the liberal Centre Party in Malmo, says that Sweden mishandled the refugee crisis of 2015. Asylum claims were processed too slowly, he says. The state should not have lavished so much money on each newcomer. “We were treating refugees under the age of 18 the same way we would treat a vulnerable, homeless Swedish kid, spending 2,000 kronor ($220) a night on giving them all kinds of nurturing. It wasn’t sustainable.” Rather than paying migrants to do nothing, Mr Paarup-Petersen thinks they should have been offered job training and language classes. “We have lots of vacancies for plumbers and welders,” he points out. Like the rest of Europe, Sweden has...
tightened its borders since 2015. Asylum applications have fallen by five-sixths. For those who like their societies homogenous, almost any amount of migration is too much. However, the economic benefits of allowing steady flow are potentially gigantic. An unskilled Mexican who moves to America raises his wages by 150%; a Nigerian, by 1,000%. Michael Clemens of the Centre for Global Development, author of the forthcoming book “The Walls of Nations”, estimates that if everyone who wanted to move were allowed to do so, the world would be twice as rich. Could some of these gains be realised without too much disruption? Are there policies that would allow more long-term migration with the consent of native-born voters? As politicians scrabble for short-term fixes—a fence here, a holding pen there—few are asking these questions. This article will focus on three rich places—Sweden, the United Arab Emirates (UAE) and America—and try to draw lessons from their different policies and experiences. In the United States, 13% of the population is foreign-born. In Sweden it is 18.5%. In both places this is roughly three times as high as in 1970, but in America’s case it is a reversion to a historical norm, whereas in Sweden it is a huge change for a previously monochrome society. In the UAE, nearly 90% of residents are foreigners—another huge change within less than two generations. Sweden attracts surprisingly few highly skilled migrants from other rich countries, thanks to its cold weather and high taxes. Half of its foreign-born population comes from outside Europe. Iraqis and Syrians are the largest groups after Finns. Many locals fear that culturally distant newcomers will not adopt Sweden’s liberal values and will strain its generous welfare state. Emiratis have no such fears. Foreigners cannot drain their welfare state because the state which, flush with petrodollars, pays fat wages for light work. Asked if he has ever seen an Emirati laying bricks in the scorching sun, a construction boss replies: “You know the answer. Raffy Fermin moved from the Philippines to the UAE and others found that a strong predictor of people’s attitudes to migrants was whether they felt in control of their own lives, and whether they felt their country was in control of its borders. Thus, to win voters’ consent, any programme to let in more migrants must keep track of them. The other three policies are all about integration. Migrants should be encouraged to work. They should be helped to fit in. And they should be seen to pay their way. Migrants in the UAE obviously pay their way. They fill 99% of private-sector jobs, from designing skyscrapers to scraping dirty saucepans. Emirati citizens prefer to work for the state which, flush with petrodollars, pays fat wages for light work. Asked if he has ever seen an Emirati laying bricks in the scorching sun, a construction boss replies: “You know the answer. Raffy Fermin moved from the Philippines to the UAE to fix cars. Locals love flashy vehicles, but would not be seen dead under one. So Porsche, a German firm, sponsors a school in Manila that teaches young Filipinos how to service its machines. When they qualify, Porsche offers them jobs in the Gulf. Mr. Fermin arrived in Abu Dhabi in 2013, when he...
was 21. He works on cool cars in a cool workshop. He earns twice what he would at home, tax-free, sending 70% of it home to support his widowed mother and invest in property. He plans one day to go home and set up a car-repair business. “I’m happy I came,” he beams. Some migrants have it much worse. In Saudi Arabia and Kuwait, they are often tied to one employer, whose permission they need to switch jobs. This gives horrible bosses immense power. Some fail to pay wages on time, or at all. Some confiscate workers’ passports, trapping them. Domestic workers are particularly at risk, since they work out of sight. Many Westerners decry the way Gulf states treat migrants. Some think it immoral to offer them no chance of citizenship. But there is a trade-off. Because migrants have fewer rights, Gulf citizens are willing to admit more of them, relative to population, than Western countries. Most of the migrants benefit and want to stay. Whereas the Gulf states have admitted vast numbers suddenly but temporarily, America has done it gradually but permanently. Babies born on American soil are automatically citizens. So immigrant families, even if they arrive illegally, can become American in one generation. America’s flexible labour market makes it easy for migrants to find entry-level jobs, and its meagre welfare state means they have to. The unemployment rate for immigrants is 4% compared with 16% in Sweden, where benefits are fatter and unions have negotiated industry-wide pay scales that price unskilled migrants out of jobs. The National Academies of Sciences found that even immigrants who drop out of high school are net contributors to the public purse if they arrive in America before the age of 25. Migration has also made America the innovation hub of the world. Immigrants are twice as likely as natives to start a company; more than 40% of the Fortune 500 were founded either by an immigrant or the child of one. Newcomers bring skills, connections and new ways of thinking. Gordana Vunjak-Novakovic, for example, moved to America in 1993, as her native Yugoslavia was falling apart. An engineer with an interest in biology, she found a job at the Massachusetts Institute of Technology. She got a green card in three weeks. “That would be unheard of today,” she laments. Now at Columbia University in New York, she has helped to launch four companies, including Epibone, which uses stem cells to grow new bones. It helps, she says, that New York mixes so many people from elsewhere, with such a wide range of perspectives and experiences. Two-thirds of the people she works with are immigrants or their offspring. She worries that the flow of foreign talent might be under threat. Just back from a trip to China, she notes that many students wanted to know if they were still welcome in America. The number of visas issued to foreign students fell by 40% between 2015 and 2017, to fewer than 400,000.

21) What is author’s tone in the passage?
   a) Critical
   b) Analytical
   c) Cohesive
   d) Both A and B
   e) None of these

22) What do you think is the reason behind rise of new political parties?
   a) A large influx of refugees
   b) Disorderly management
   c) Crime rate
   d) Both A and B
   e) None of these

23) Choose antonym for - Meagre
   a) Thin
   b) Scanty
   c) Ample
   d) Poor
   e) None of these

24) Choose synonym for - Perception
    a) Thin
25) Choose an appropriate title for the passage.

a) New Parties on the horizon  
b) Comparing the countries  
c) Pros and Cons: The Immigrants  
d) America: Best and worst  
e) None of these

26) Choose synonym for - Sully

a) Sanctify  
b) Tarnish  
c) Clean  
d) Sanctuary  
e) None of these

27) Choose antonym for - Provoke

a) Spouse  
b) Arouse  
c) Incite  
d) Placate  
e) None of these

28) Which of the following is not a method to tackle the problem mentioned in the passage?

a) Speed up the process of asylum granting  
b) Bring in the immigrants in an orderly manner  
c) Segregating Women, children and the elderly.  
d) Both A and C  
e) None of these

29) Choose synonym for - Gripped

a) Base  
b) Blasé  
c) Enchanted  
d) Weary  
e) None of these

30) Choose antonym for- Disruption

a) Disorder  
b) Common  
c) Commotion  
d) Array  
e) None of these

Quantitative Aptitude

Directions (31 –35): Study the following information and answer the questions followed:

Bar graph below shows average productivity of two houses of our parliament (Lok Sabha and Rajya Sabha) over five years.

Average productivity = (Actual hours spent/Scheduled working hours) * 100
31) If scheduled working hours for Lok Sabha is 6 hours in a day, then find the total actual working hours spent in one week in Lok Sabha in 2016.
   a) 42 hours  
   b) 48.6 hours  
   c) 50.4 hours  
   d) 54 hours  
   e) None of these

32) If scheduled working hours for Lok Sabha is 6.6 hours in a day, then find the total actual working hours spent for Rajya Sabha in 2014.
   a) 4.2 hours  
   b) 8.6 hours  
   c) 5.4 hours  
   d) 5.6 hours  
   e) None of these

33) Find the ratio of actual working hours spent in Lok Sabha to that of in Rajya Sabha in the year 2015 if ratio of scheduled working hours for Lok Sabha to that for Rajya Sabha is 3 : 4 in 2015.
   a) 4 : 3  
   b) 27 : 16  
   c) 8 : 9  
   d) 9 : 8  
   e) None of these

34) Find the average of actual working hours spent per day in Rajya Sabha in the years 2016, 2017 and 2018 together if scheduled working hours per day for Rajya Sabha in these 3 years is 9 hours.
   a) 6.3 hours  
   b) 5.7 hours  
   c) 5.4 hours  
   d) 7.2 hours  
   e) None of these

35) Find that actual working hours spent in Rajya Sabha is what percent of actual working hours spent in Lok Sabha in 2018 if scheduled working hours for Lok Sabha and Rajya Sabha is same.
   a) 112.5%  
   b) 92.5%  
   c) 102.5%  
   d) 108.5%  
   e) None of these

Directions (36 – 40): Based on the given passage, answer the questions that follow.

A invested Rs. 50000 in a company in the beginning of the year. After few months, B invested Rs. 40000 in the same company. At the end of the year, A received Rs. 12000 as his share of profit for the year. In the next year, A and B again invested the same amount as they did in the previous year for the whole year. After 3 months, C invested Rs. 60000 and
received Rs. 4500 as his share of profit at the end of second year.

36) In the third year, if A, B and C invested the same amount as before in the second of the year, what is C’s share in a profit of Rs. 60000?
   a) Rs. 12000
   b) Rs. 18000
   c) Rs. 24000
   d) Rs. 32000
   e) Rs. 36000

37) What is the share of A in the profit in the second year?
   a) Rs. 3000
   b) Rs. 3500
   c) Rs. 4000
   d) Rs. 5000
   e) Rs. 5500

38) If B invested in the company after 4 months, what is the ratio of the share in profit of A and B after first year?
   a) 5: 4
   b) 5: 8
   c) 8: 5
   d) 15: 4
   e) 15: 8

39) If B received Rs. 5600 as his share of profit at the end of first year, after how many months did he invested in the company?
   a) 3
   b) 4
   c) 5
   d) 6
   e) 7

40) At the end of the first year, what amount did B received as his share of profit?
   a) Rs. 6000
   b) Rs. 9600
   c) Rs. 10000
   d) Rs. 12000
   e) Could not be determined

Directions (41 – 42): What approximate value should come in the place of question mark ‘?’ in the following question? (You are not expected to calculate the exact value)

41) \( \sqrt[3]{1487 - (12.5)^2} + 45.512 + \sqrt{110.2 \div 2.99} = ? \)
   a) 59
   b) 60
   c) 256
   d) 257
   e) None of these

42) \( \sqrt{2551 + \sqrt{2000 - (16.5)^2}} + \sqrt{110.2 \div 3} = ? \)
   a) 64
   b) 34
   c) 66
   d) 95
   e) None of these

Directions (43 – 45): What should come in place of the question mark (?) in the following equation?

43) \( 47^{7.5} \div 47^{(3/2)} \times 47^{(3)} = (\sqrt[4]{47})^? \)
   a) 4
   b) 2.5
   c) 6
   d) 3.5
   e) None of these

44) \( (42 \times 229) \div (9261)^{1/3} = ? \)
   a) 458
   b) 564
   c) 12
   d) 1004
   e) None of these

45) \( \frac{9}{20} - [\frac{1}{5} + (\frac{1}{4} + (\frac{5}{6} - (\frac{1}{3} + \frac{1}{2}))) ] \) is equal to
   a) 0
   b) 1
   c) 9/20
   d) 9/10
   e) 9/5

Directions (46 – 48): What will come in place of question mark (?) in the following series?

46) 480, 505, 605, 830, 1230, ?
   a) 1855
   b) 1875
   c) 1890
   d) 1865
   e) None of these

47) 1256, 1270, 1280, 1291, 1304, ?
   a) 1311
   b) 1310
   c) 1312
48) 625, 650, 700, 775, 875,?
a) 1000  
b) 1025  
c) 975  
d) 1050  
e) None of these

Directions (49 – 50): Find the Wrong term in the following series?
49) 7413, 7422, 7440, 7477, 7503, 7548
a) 7422  
b) 7440  
c) 7477  
d) 7503  
e) None of these

50) 3, 4, 8, 17, 33, 49, 94
a) 17  
b) 8  
c) 4  
d) 33  
e) 49

Directions (51 – 55): In each of these questions, two equations (I) and (II) are given. You have to solve both the equations and give answer.
51) I. 20x^2 + 47x + 21 = 0
II. 32y^2 – 28y + 3 = 0
a) x > y  
b) x ≤ y  
c) x ≥ y  
d) x < y  
e) x = y or relationship between x and y can't be established

52) I. x^2 – x(\sqrt{2} + 3) + \sqrt{2} = 0
II. \sqrt{3}y^2 + 2y – \sqrt{3} = 0
a) If x > y  
b) If x ≤ y  
c) If x ≥ y  
d) If x < y  
e) If x = y or relationship between x and y can't be established

53) I. x^2– x(\sqrt{2} + 3) + 3\sqrt{2} = 0
II. y^2– 5y + 6 = 0
a) if x > y  
b) if x ≤ y  
c) if x ≥ y  
d) if x < y  
e) if x = y or relationship between x and y can't be established

54) I. 60x^2 – 326x – 22 = 0
II. y^2 – 11y + 28 = 0
a) if x > y  
b) if x ≤ y  
c) if x ≥ y  
d) if x < y  
e) if x = y or relationship between x and y can't be established

55) I. 36x^2 – 196x – 11 = 0
II. 14y^2 – 132y + 238 = 0
a) if x > y  
b) if x ≤ y  
c) if x ≥ y  
d) if x < y  
e) if x = y or relationship between x and y can't be established

56) In a boy’s hostel, the rooms are numbered from 101 to 125 on the first floor, 231 to 265 on the second floor and 306 to 345 on the third floor. In the month of May 2016, the room occupancy was 60% on the first floor, 80% on the second floor and 50% on the third floor. If it is also known that the monthly room charges are Rs. 250, Rs. 200 and Rs. 150 on each of the floors, then find the average income per room for the month of May 2016.

a) Rs. 123.50  
b) Rs. 196.03  
c) Rs. 127.32  
d) Rs. 141.10  
e) None of these

57) The average weight of three men Akshun, Kamal and Devansh is 55 kg. If another man Dev
joins the group the average becomes 58 kg. The weight of another man Dev who joins the group later is
a) 84 kg
b) 80 kg
c) 67 kg
d) Cannot be determined
e) None of these

58) Two equal glasses are respectively 1/3 and 1/5 full of grease. They are then filled up with water and the contents mixed in a tumbler. The ratio of grease and water in the tumbler is:
a) 7 : 5
b) 4 : 11
c) 17 : 7
d) 11 : 23
e) 7 : 3

59) A petroleum refinery takes 100 litres of petrol as input and after refining for 1 hour gives certain amount of output petrol X litres. This can be sold in the market at a profit of Rs. 25 per litre. If this petrol is further refined for ½ hour it gives Y litres of petrol. This can be sold at a profit of Rs. 45 per litre. Output and input ratio at both the stages is 90%. The maximum amount that can be earned from 1000 litres of petrol input is
a) Rs. 36,400
b) Rs. 37,500
c) Rs. 35,450
d) Rs. 40,500
e) None of these

60) A man borrowed a certain sum of money at 10% simple interest for 3 years. After 3 years, he cleared his debt by paying Rs.15600. If he had borrowed the sum of money on a compound interest of 10% per annum compounded half-yearly, after 3 years, he would have to pay:
a) Rs. 481.10 more
b) Rs. 414.80 less
c) Rs. 457.10 more
d) Rs. 471.50 less
e) None of these

Directions (61 – 65): In each of the following questions, a question is followed by two or three statements. Read all the statements and find that which statements are required to answer the question and answer accordingly.

61) What is the volume of the cylindrical tank?
Statement I: Diameter of the base is equal to the height of the tank.
Statement II: Height of the tank is 20 m.
Statement III: Area of the base is 320 sq. m.
a) Only I and III.
b) Only I
c) Only III
d) Any of the two
e) None of these

62) How many students are there in all in the institute of Computer, Electrical and Mechanical?
Statement I: 20% of the students study Mechanical.
Statement II: The number of students studying Computer and Electrical are in the ratio of 5:3.
Statement III: The number of students studying Electrical is more than that of studying Mechanical by 100.
a) Only II and III
b) III and either I or II only
c) Any two of the three
d) All I, II and III
e) Question cannot be answered even with the information in all the three statements

63) A man invested a sum of Rs 50,000. He invested some part at 6 % p.a. and remaining at 6.5% p.a. How much money did he invest at 6 % p.a.?
Statement I: The total interest amount paid after 1 year was Rs 3150
Statement II: The interest on one sum was twice that on the other.
a) If the data in statement I alone is sufficient to answer the question.
b) If the data in statement II alone is sufficient to answer the question.
c) If the data either in statement I alone or statement II alone are sufficient to answer the question.
d) If the data given in both I and II together are not sufficient to answer the question.
e) If the data in both the statements I and II together are necessary to answer the question.

64) What is the ratio of ages of A to B?
Statement I: A’s age will be twice B’ age after 5 years.
Statement II: A’s present age is 5 more than twice B’s present age.

a) If the data in statement I alone is sufficient to answer the question.
b) If the data in statement II alone is sufficient to answer the question.
c) If the data either in statement I alone or statement II alone are sufficient to answer the question.
d) If the data given in both I and II together are not sufficient to answer the question.
e) If the data in both the statements I and II together are necessary to answer the question.

65) Find in how many days A alone can do the work?
Statement I: If A and B do a work together for 10 days and B left the work and A do the remaining work in 20 days.
Statement II: If A and B can do the work in 15 days

a) Only I
b) Only II
c) Either I or II
d) Neither I nor II
e) Both I and II

Reasoning Ability

Directions (66-68): In these questions, relationship between different elements is show in the statements. The statements are followed by conclusions. Study the conclusions based on the given statements and select the appropriate answer

66) Statement: C ≥ D, A < B, E = D, B < C

Conclusions:
I. C > E
II. A ≥ E

67) Statement:
C ≤ D, A ≥ B, D ≥ E, B > C

Conclusions:
I. A ≥ D
II. B > E

68) Statement:
S < T, Q = R, R ≥ S, P > Q

Conclusions:
I. P > S
II. T > Q

Direction (69-71): Study the information below and answer the following questions.

In a certain code language, ‘community to preparing doctors’ is written as ‘yn fr re fu’,
‘preparing student in village’ is written as ‘zm ba mo fr’
‘student to france on’ is written as ‘yn dv zm gi’
‘france mans to preparing’ is written as ‘yn gi fr yu’
(All the codes are two-letter codes only.)

69) What is the code for ‘village’ in the given code language?
a) mo
b) yu
c) zm
d) Other than those given as options
e) Either ‘ba’ or ‘mo’

70) In the given code language, what does the code ‘fu’ stand for?
a) france
b) Either ‘doctors’ or ‘community’
c) village
d) preparing
e) Either ‘village’ or ‘in’
71) What may be the code for ‘preparing our’ in the given code language?
   a) dv iq
   b) iq gi
   c) iq fr
   d) gi ik
   e) fr dv

72) Which person is from Mumbai?
   a) P
   b) S
   c) Q
   d) N
   e) J

73) The person sitting opposite to R is from which place?
   a) Mumbai
   b) Kolkata
   c) Chennai
   d) Bangalore
   e) Hyderabad

74) K is from which place?
   a) Mumbai
   b) Nagpur

75) Who sits second to the left of the person from Hyderabad?
   a) N
   b) P
   c) J
   d) S
   e) L

76) Four of the five are alike in a certain way. So they form a group. Which one of the following in the below options doesn't belong to that group?
   a) K - Bangalore
   b) J - Chennai
   c) S - Mumbai
   d) R - Delhi
   e) Q – Kolkata

77) A, B, C, D, E, F, G and H are eight boxes of different shapes square, rectangular, cubical, circular, pentagonal, rhombus, triangular and hexagonal, not necessarily in the same order. They are stacked one above the other.

- Circular box is kept between triangular box and hexagonal box, all three being kept at consecutive positions. Hexagonal box is below triangular box.
- Box A is kept between box D and box H, and they all three are kept at consecutive positions.
- Rhombus shaped box is exactly between pentagonal and cubical box. Cubical box is below pentagonal box.
- Circular box is second from the top.
- Box E is above rectangular box and below box F.
- Box F is third from the bottom. Box C is above A with a gap 2 boxes in between them.
• Pentagonal box is fifth from the top.
• Only two boxes are kept above box D.
• Box B is neither at the top nor at the bottom

77) Which among the following box is at sixth position from the bottom?
   a) Cubical  
   b) Rhombus  
   c) Pentagonal  
   d) Hexagonal  
   e) Triangular

78) Which among the following statement is true?
   a) Box A is below box G  
   b) Box F is Cubical  
   c) Box B is not circular  
   d) Box C is triangular  
   e) Box G is above box H

79) Which among the following box is Rhombus in shape?
   a) Box H  
   b) Box F  
   c) Box E  
   d) Box G  
   e) Box C

80) How many boxes are between Circular and Rhombus shaped box?
   a) Two  
   b) Three  
   c) Four  
   d) Five  
   e) Six

81) Find the odd one out?
   a) C  
   b) D  
   c) H  
   d) E  
   e) F

82) How many alphabets are there in the English alphabetical series between the letter which is twelfth from left end and the letter which is fifth from the right end?
   a) One  
   b) Two  
   c) Three  
   d) Four  
   e) None

83) If all the vowels are dropped from the given arrangement, how many Z's are there which are not immediately followed by K?
   a) None  
   b) One  
   c) Two  
   d) Three  
   e) Four

84) How many O's are there in the given arrangement each of which is immediately preceded by a vowel but not followed by a vowel?
   a) None  
   b) One  
   c) Two  
   d) Three  
   e) Four

Directions (85-89): Study the following arrangement carefully and answer the questions given below:
Eight persons - P, Q, R, S, T, U, V and W are born in consecutive years (in one year, only one person is born), not necessarily in the same order, the youngest one been born in 1988. Each belongs to different profession. S is born in an odd numbered year after at least one person and is an engineer. Doctor is the eldest one. Three persons are born in the years between the years of birth of Engineer and Nurse, who is born in the year immediately preceding the year in which U is born. One of the persons is a Merchant. As many persons are elder than W is same as the persons younger than P. W is born before P. Officer is born just after the year in which Engineer is born. R is a Manager and P is Clerk. Business man who is not T and is born five years after Q.

85) Who is the merchant?
86) Who is the manager?
86) Who is an officer?
a) W  
b) V  
c) T  
d) U  
e) Q

87) How many people are born before V.
a) 6  
b) 5  
c) 4  
d) 2  
e) 1

88) In which year is S born?
a) 1984  
b) 1983  
c) 1988  
d) 1985  
e) 1986

89) If all persons were born on 1st January of each consecutive year respectively, then what is the age of P by 2nd January 2018?
a) 44 years  
b) 35 years  
c) 30 years  
d) 31 years  
e) 33 years

90) Find the missing term that will replace the question mark.
OS-3, TX-6, YC-9, DH-12, ?
a) IN-15  
b) IJ-15  
c) HL-15  
d) IM-15  
e) JN-15

91) Who is third to the left of A?
a) B  
b) K  
c) C  
d) E  
e) G

92) How many persons between G and C in anti clock wise from G?
a) 3  
b) 4  
c) 5  
d) 1  
e) None

93) Who is opposite to B?
a) A  
b) C  
c) G  
d) K  
e) F

either bus or car for travelling to their office. No two persons whose names appear consecutively in alphabetical order were seated immediately next to each other. A and C can be seated immediately next to each other, but F cannot be seated immediately next to G and so on.

- A was seated 3rd to the left of E who was at a gap of 1 from B
- K was seated opposite to M
- C was 2nd to the left of a person who travelled by bus
- B’s neighbours travelled by bus
- F was not an neighbour of K
- Person seated opposite to G travelled by car
- No 3 persons seated consecutively used the same mode of transportation
- C’s neighbors’ used the same mode of transportation
- A does not sit opposite to F.
94) Find the odd one out?

a) C
b) M
c) G
d) A
e) E

95) Who is second to the left of G?

a) K
b) A
c) M
d) G
e) F

Directions (96-97): Study the following information carefully and answer the given questions.

Amongst five friends, A, B, C, D, E, each got different marks in the examination. A scored more than B but less than C. C scored 65 marks. D scored less marks than only E. The one who scored the minimum marks scored 60 marks and the one who scored the highest, scored 80 marks.

96) Who scored the second highest marks?

a) B
b) E
c) D
d) C
e) A

97) Who is the most likely to have scored 62 marks?

a) B
b) A
c) D
d) E
e) Either E or B

Directions (98-100): Read the following information carefully and answer the questions, which follow:

'P ÷ Q' means 'P is father of Q'.
'P + Q' means 'P is sister of Q'.
'P x Q' means 'P is brother of Q'.
'P - Q' means 'P is mother of Q'.

98) In the expression 'A x B ÷ C - D', how is C related to A?

a) Uncle

99) Which of the following means 'A is grandmother of D'?

a) A+B+C+D
b) A-B+C-D
c) A+B+CxD
d) A+Bx-C-D
e) None of these

100) In the expression 'A + B - C x D' how is C related to A?

a) Aunt
b) Niece
c) Father
d) Nephew
e) None of these

Answers:

Directions (1-10): 
1) Answer: B)
In part A in place of ‘India’ it should be ‘Indian’

2) Answer: D)
In part A in place of ‘would’ it should be ‘should’

3) Answer: B)
In part C in place of ‘working’ it should be ‘work’

4) Answer: C)
In part B in place of ‘on’ it should be ‘by’

5) Answer: A)
In part E in place of ‘large’ it should be ‘larger’

6) Answer: A)
In part B in place of ‘trouble’ it should be ‘troubling’

7) Answer: C)
In part D in place of ‘however’ it should be ‘thus’

8) Answer: B)
In part A in place of ‘hope’ it should be ‘hoping’

**9) Answer: B)**

In part A in place of ‘increased’ it should be ‘increasing’

**10) Answer: C)**

In part A in place of ‘bigger’ it should be ‘biggest’

**Directions (11-20):**

11) Answer: C)

Soured – foul

**12) Answer: C)**

Smirk - smile

**13) Answer: C)**

Snag - catch

**14) Answer: D)**

Vested – invested

**15) Answer: B)**

Swamped – flooded

**16) Answer: A)**

Skimpy – short

**17) Answer: D)**

Stir – move

**18) Answer: A)**

Explicitly - definitely

**19) Answer: B)**

Assuage – soothe

**20) Answer: A)**

Colossal – huge

**Directions (21-30):**

21) Answer: B)

The author has analysed the issue of immigrants and given some viable conclusions.

**22) Answer: D)**

Both options A and B have been mentioned as the prime reason behind rise of new opposition political parties.

**23) Answer: C)**

Meaning of ‘Meagre’ is ‘lacking in quantity or quality’. Option C could be the antonym of Meagre.

**24) Answer: D)**

Perception – ‘become aware of something through the senses’

**25) Answer: C)**

Option C is closest to the theme idea of the passage.

**26) Answer: B)**

Meaning is ‘Sully’ is ‘damage the purity or integrity of’. So Option B could be the synonym of the given word.

**27) Answer: D)**

Meaning of ‘Provoke’ is ‘stimulate or give rise to’. So Option D could be the antonym.

**28) Answer: C)**

Option C is clearly not the mentioned as the reason to tackle the problem mentioned in the passage.

**29) Answer: C)**

Meaning of ‘Gripped’ is ‘firmly holding the attention or interest of’. So the synonym could be Option C.

**30) Answer: D)**

Meaning of ‘Disruption’ is ‘disturbance or disordering’. Hence the antonym could be Option D.

**Directions (31-35):**

31) Answer: C)

Scheduled working hours for Lok Sabha in a day = 6 hour
Scheduled working hours for Lok Sabha in one week = 6 * 7 = 42 hours
Total actual working hours spent in one week in Lok Sabha in 2016 = 42 * (120/100) = 50.4 hours

32) Answer: C)
Scheduled working hours per day for Lok Sabha and Rajya Sabha = 6.6 * (100/110) = 6 hours
Actual working hours spent in a day in Rajya Sabha in 2014 = 90% of 6
= 5.4 hours

33) Answer: D)
Let scheduled working hours for Lok Sabha to that for Rajya Sabha is 3x and 4x respectively.
Actual working hours spent in Lok Sabha in 2015 = 120% of 3x = 3.6x
Actual working hours spent in Rajya Sabha in 2015 = 80% of 4x = 3.2x
Ratio = 3.6x : 3.2x = 9 : 8

34) Answer: B)
Actual working hours spent per day in Rajya Sabha in 2016 = 75% of 9 = 6.75 hours
Actual working hours spent per day in Rajya Sabha in 2017 = 70% of 9 = 6.3 hours
Actual working hours spent per day in Rajya Sabha in 2018 = 45% of 9 = 4.05 hours
Average = (6.75 + 6.3 + 4.05)/3 = 5.7 hours

35) Answer: A)
Since scheduled working hours for Lok Sabha and Rajya Sabha is same.
Required percent = (45/40) * 100 = 112.5%

Directions (36-40):
36) Answer: C)
In third year,
A’s investment = Rs. 50000 for 12 months
B’s investment = Rs. 40000 for (12 – x) months
C’s investment = Rs. 60000 for 12 months
Hence,
⇒ A’s share : B’s share : C’s share = 50000 : 40000 : 60000
⇒ A’s share : B’s share : C’s share = 5 : 4 : 6
∴ C’s share = (6/15) * 60000 = Rs. 24000

37) Answer: D)
In second year,
A’s investment = Rs. 50000 for 12 months
C’s investment = Rs. 60000 for (12 – 3) = 9 months
C’s share = Rs. 4500
Hence,
⇒ (50000 × 12) : (60000 × 9) = A’s share : 4500
⇒ 10 : 9 = A’s share : 4500
⇒ A’s share = (10/9) × 4500
∴ A’ share = Rs. 5000

38) Answer: E)
A’s investment = Rs. 50000 for 12 months
B’s investment = Rs. 40000 for (12 – 4) = 8 months
∴ Ratio of their share in profit = (50000 × 12) : (40000 × 8) = 15 : 8

39) Answer: C)
Let B invested in the company after ‘x’ months
A’s investment = Rs. 50000 for 12 months
B’s investment = Rs. 40000 for (12 – x) months
A’s share = Rs. 12000
B’s share = Rs. 5600
Hence,
⇒ (50000 × 12) : [40000 × (12 – x) ] = 12000 : 5600
⇒ (5 × 12) : [4 × (12 – x) ] = 120 : 56
⇒ 60 : (48 – 4x) = 120 : 56
⇒ (60 × 56)/120 = 48 – 4x
⇒ 4x = 20
⇒ x = 5
∴ B invested in the company after 5 months

40) Answer: E)
As the time duration for which B invested his money is not known, his share of profit couldn’t be determined.

Directions (41-42):
41) Answer: B)
\(\sqrt[3]{(1487 - (12.5)^2} + 45.512 + \sqrt{110.2 ÷ 2.99} = ?
⇒ \sqrt[3]{(1487 - 156.25)} + 45.512 + 10.5 ÷ 2.99 = ?
⇒ \sqrt[3]{1331} + 45.5 + 3.5 = ?
⇒ 11 + 49 = 60

42) Answer: C)
\(\sqrt{2551} + \frac{\sqrt{2000}}{\sqrt{16}} + \sqrt{110.2 ÷ 3} = ?
⇒ 50.5 + \frac{10}{4} + 10.5 ÷ 3
\[ \Rightarrow 50.5 + \sqrt[3]{1728} + 3.5 \]
\[ \Rightarrow 54 + 12 = 66 \]

Directions (43-45):
43) Answer: C)
\[ \Rightarrow 47^{7.5-1.5} \times 47^{-3} = 47^{\cancel{7.5}-\cancel{1.5}-3} \]
\[ \Rightarrow 47^{-3} = 47^{-3/2} \]
\[ \Rightarrow 3 = \frac{\cancel{7}}{2} \]
\[ \Rightarrow 6 = ? \]

\[ \therefore \text{6 should come in place of ?}. \]

44) Answer: A)
Given that, \((42 \times 229) ÷ (9261)^{1/3} = ?\)
Now, \((9261)^{1/3} = (21 \times 21 \times 21)^{1/3} = 21\)
\[ \therefore ? = (42 \times 229)/9261^{1/3} = 42 \times 229/21 = 458 \]

45) Answer: A)
\[ 9/20 - [1/5 + \{1/4 + (5/6 - (1/3 + 1/2))\}] \]
\[ = 9/20 - [1/5 + \{1/4 + (5/6 - 5/6)\}] \]
\[ = 9/20 - [1/5 + \{1/4 + 0\}] \]
\[ = 9/20 - [1/5 + 1/4] \]
\[ = 9/20 - 9/20 \]
\[ = 0 \]

Directions (46-48):
46) Answer: A)
\[ 480 + 5^2 = 505 \]
\[ 505 + 10^2 = 605 \]
\[ 605 + 15^2 = 830 \]
\[ 830 + 20^2 = 1230 \]
\[ 1230 + 25^2 = 1855 \]

47) Answer: C)
\[ 1256 \]
\[ 1256 + (1 + 2 + 5 + 6) = 1270 \]
\[ 1270 + (1 + 2 + 7 + 0) = 1280 \]
\[ 1280 + (1 + 2 + 8 + 0) = 1291 \]
\[ 1291 + (1 + 2 + 9 + 1) = 1304 \]
\[ 1304 + (1 + 3 + 0 + 4) = 1312 \]

48) Answer: A)
\[ 625 \]
\[ 625 + 25 = 650 \]
\[ 650 + 25 \times 2 = 700 \]
\[ 700 + 25 \times 3 = 775 \]
\[ 775 + 25 \times 4 = 875 \]
\[ 875 + 25 \times 5 = 1000 \]

Directions (49-50):
49) Answer: C)
\[ 7413, \]
\[ 7413 + 9 \times 1 = 7422, \]
\[ 7422 + 9 \times 2 = 7440 \]
\[ 7440 + 9 \times 3 = 7467 \neq 7477 \]
\[ 7467 + 9 \times 4 = 7503 \]
\[ 7503 + 9 \times 5 = 7548 \]

50) Answer: E)
\[ 3 + 1^2 = 4 \]
\[ 4 + 2^2 = 8 \]
\[ 8 + 3^2 = 17 \]
\[ 17 + 4^2 = 33 \]
\[ 33 + 5^2 = 58 \]

So here 49 should be replaced by 58,
58 + 6^2 = 94

Directions (51-55):
51) Answer: D)
I. \[ 20x^2 + 47x + 21 = 0 \]
\[ \Rightarrow (5x + 3)(4x + 7) = 0 \]
\[ \Rightarrow x = -3/5, -7/4 \]

II. \[ 32y^2 - 28y + 3 = 0 \]
\[ \Rightarrow (8y - 1)(4y - 3) = 0 \]
\[ \Rightarrow y = 1/8, 3/4 \]

Hence, \(X < Y\)

52) Answer: A)
I. \[ x^2 - x(\sqrt{3} + \sqrt{2}) + \sqrt{6} = 0 \]
\[ \Rightarrow (x - \sqrt{2})(x - \sqrt{3}) = 0 \]
\[ \Rightarrow x = \sqrt{2}, \sqrt{3} \]

II. \[ \sqrt{3}y^2 + 2y - \sqrt{3} = 0 \]
\[ \Rightarrow (y + \sqrt{3})(\sqrt{3}y - 1) = 0 \]
\[ \Rightarrow y = -\sqrt{3}, 1/\sqrt{3} \]

Hence, \(x > y\)

53) Answer: E)
\[ x^2 - x(\sqrt{2} + 3) + 3\sqrt{2} = 0 \]
\[ \Rightarrow (x - 3)(x - \sqrt{2}) = 0 \]
\[ \Rightarrow x = 3, \sqrt{2} \]
\[ y^2 - 5y + 6 = 0 \]
\[ \Rightarrow (y - 3)(y - 2) = 0 \]
\[ \Rightarrow y = 2, 3 \]

Hence, relationship between \(x\) and \(y\) cannot be determined.
54) Answer: E)

\[60x^2 - 326x - 22 = 0\]
\[\Rightarrow (4x - 22)(15x + 1) = 0\]
\[\Rightarrow x = 22/4, -1/15\]
\[y^2 - 11y + 28 = 0\]
\[\Rightarrow (y - 4)(y - 7) = 0\]
\[\Rightarrow y = 4, 7\]

Hence, relationship between x and y cannot be determined.

55) Answer: E)

\[36x^2 - 196x - 11 = 0\]
\[\Rightarrow (2x - 11)(18x + 1) = 0\]
\[\Rightarrow x = 11/2, -1/18\]
\[14y^2 - 132y + 238 = 0\]
\[\Rightarrow (y - 7)(7y - 17) = 0\]
\[\Rightarrow y = 7, 17/7\]

Hence, relationship between x and y cannot be determined.

56) Answer: A)

Number of rooms on first floor = 25
Rooms occupied on first floor = 60% of 25 = 25 \times 0.6 = 15
Income generated from first floor rooms = 15 \times 250 = Rs. 3750
Number of rooms on second floor = 35
Income generated from second floor rooms = 35 \times 0.8 \times 200 = Rs. 5600
Number of rooms on third floor = 40
Income generated from third floor rooms = 40 \times 0.5 \times 150 = Rs. 3000
Total income generated = 3750 + 5600 + 3000 = Rs. 12,350
Total number of rooms = 25 + 35 + 40 = 100
Average Income per room = 12,350/100 = Rs. 123.5

57) Answer: C)

Let the weights of Akshun, Kamal, Devansh and Dev be A, B, C, D respectively.
Average weight of Akshun, Kamal, Devansh = 55
\[\Rightarrow (A + B + C)/3\]
\[\Rightarrow 165 kg = A + B + C \quad ----(1)\]
Similarly,
Average weight of Akshun, Kamal, Devansh, Dev = 58
\[\Rightarrow (A + B + C + D)/4\]
\[\Rightarrow 232 kg = A + B + C + D \quad ----(2)\]

Subtracting equation 2 from 1, we get,
\[D = 67 kg\]
The weight of another man Dev who joins the group later is 67 kg.

58) Answer: B)

According to the given information,
Let the capacity of the glass be 15x
\[\Rightarrow \text{Amount of grease in first glass} = 15x \times (1/3) = 5x\]
\[\Rightarrow \text{Amount of grease in second glass} = 15x \times (1/5) = 3x\]

Now,
\[\therefore \text{Water is mixed in the glass up to the brim.}\]
\[\therefore \text{Amount of water in first glass} = 15x - 5x = 10x\]
And, Amount of water in second glass = 15x - 3x = 12x
Now,
Contents in both the glasses are mixed in tumbler
\[\Rightarrow \text{Total amount of grease in tumbler} = 5x + 3x = 8x\]
\[\Rightarrow \text{Total amount of water in tumbler} = 10x + 12x = 22x\]
\[\therefore \text{Ratio of grease} : \text{water in tumbler} = 8x : 22x = 4 : 11\]

59) Answer: E)

Let the two stages of refinery be Stage - 1 and Stage - 2.

Stage - 1:
Amount of input petrol before stage - 1 = 100 Litres
Amount of output petrol after stage - 1 = X Litres
Output and input ratio = 90%
\[\Rightarrow X/100 = 0.9\]
\[\Rightarrow X = 100 \times 0.9 = 90 \text{ Lit}\]

Stage - 2:
Amount of input petrol before stage - 2 = 90 Litres
Amount of output petrol after stage - 2 = Y Litres
Output and input ratio = 90%
\[\Rightarrow Y/90 = 0.9\]
\[\Rightarrow X = 90 \times 0.9 = 81 \text{ Litres}\]

Amount of output petrol for an input of 100 litres after both the stages = 81 litres
\[\Rightarrow \text{Amount of output petrol for an input of 1000 litres after both the stages} = 810 \text{ litres}\]
Maximum amount that can be earned for 1000 litres = 45 \times 810 = Rs. 36,450
60) Answer: A)
Let the sum of money borrowed be Rs. ‘P’
As we know,
Simple interest = (Principal × rate × time)/100

∴ Amount paid after 3 years at 10% simple interest =
⇒ 15600 = P + (P × 10 × 3)/100
⇒ 15600 = P + 0.3P
⇒ 15600 = 1.3 P
⇒ P = 15600/1.3
⇒ P = Rs. 12000

Now,
When the interest is compounded yearly,
Amount = Principal × (1 + rate/100)^t
When the interest is compounded half yearly,
Amount = Principal × (1 + (rate/2)/100)^(2t)
∴ Amount paid after 3 years at 10% compound interest compounded half-yearly,
⇒ 12000 × (1 + 5/100)^6
⇒ 12000 × (1.05)^6
⇒ 12000 × 1.34009564
⇒ Rs. 16081.1477
∴ He would have to pay = 16081.1 – 15600 = Rs. 481.1 more

61) Answer: D)
From I and II :
Height = 20 m  radius = 10 m
Then ,Volume of the cylindrical tank = (22/7) *10 *
*10 *20 sq. m
From II and III :
Volume = Area of the base * Height = 320 *20 sq. m
From I and III:
Area of the base = (22/7) * radius^2 = 320
We can calculate radius then, from I diameter is equal
to the height so 2*radius = height
Now we can calculate volume of the cylindrical tank.
Hence, Any of the two is enough to get the volume.
62) Answer: D)
Using I and II, percentage of students in three institute can be found out. Using this data and III, we
will get final answer.

63) Answer: C)
Let first part is Rs x, then remaining is Rs (50000-x)
From statement I,
[(x*6*1)/100] + [((50000-x)*6.5*1)/100] = 3150
So x can be calculated.
From statement II,
[(x*6*1)/100] = 2 × [((50000-x)*6.5*1)/100]
So x can be calculated.
64) Answer: D)
From both statements we get same equation. So 1 equation in 2 variables cannot be solved.
65) Answer: E)
From I, 30/A + 10/B=1
From II, 1/A + 1/B=1/15. We can get A and B using both

Directions (66-68):
66) Answer: D)
On combining all the statements we get,
A < B < C ≥ D = E
Neither of the conclusions follows.
67) Answer: D)
On combining all the statements we get,
A≥ B > C ≤ D ≥ E
Neither of the conclusions follows.
68) Answer: A)
On combining all the statements we get,
P > Q= R≥ S < T Only conclusion I follows.

Directions (69-71):
69) Answer: E)
70) Answer: B)
71) Answer: C)

Direction (72-76):
From the given specific information,
Q sits second to the left of the person, who is opposite to the person from Bangalore. The person
from Bangalore is an immediate neighbour of L.
L is an immediate neighbour of the person from Hyderabad. Now case 1 becomes invalid. J is not from Hyderabad, but sits opposite to the person from Delhi, who does not sit at any ends. Now case 2 becomes invalid.

R is from Nagpur and is an immediate neighbour of the person from Kolkata. M sits opposite to the person who is an immediate neighbour of R. P sits opposite to the person from Pune. L is not from Mumbai.

From case 3.

Thus the final arrangement is

72) Answer: A)
73) Answer: C)
74) Answer: D)
75) Answer: C)
76) Answer: E)

Directions (77-81):
Circular box is second from the top
F box is 3rd from the bottom

Box E is above rectangular box and below box F
Pentagonal box is 5th from the top
Rhombus shaped box is exactly between pentagonal and cubical box. Cubical box is below pentagonal box. Circular box is second from the top. Circular box is kept between triangular box and hexagonal box, all three being kept at consecutive positions. Hexagonal box is below triangular box.

<table>
<thead>
<tr>
<th>8</th>
<th>Triangular</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Circular</td>
</tr>
<tr>
<td>6</td>
<td>Hexagonal</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Pentagonal</td>
</tr>
<tr>
<td>3</td>
<td>Rhombus</td>
</tr>
<tr>
<td>2</td>
<td>Cubical</td>
</tr>
<tr>
<td>1</td>
<td>Rectangular</td>
</tr>
</tbody>
</table>

Only two boxes are kept above box D. Box A is kept between box D and box H and they all three are kept at consecutive positions. Box C is above A with a gap 2 boxes in between them.

<table>
<thead>
<tr>
<th>8</th>
<th>Triangular</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Circular</td>
</tr>
<tr>
<td>6</td>
<td>Hexagonal</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Pentagonal</td>
</tr>
<tr>
<td>3</td>
<td>Rhombus</td>
</tr>
<tr>
<td>2</td>
<td>Cubical</td>
</tr>
<tr>
<td>1</td>
<td>Rectangular</td>
</tr>
</tbody>
</table>

Box B is neither at the top nor at the bottom. Therefore, the final arrangement is

Directions (82-84):

82) Answer: A)

Z A O K M A H O H O Z K M A Z K M A O M O Z H M O Z K H

There are only one alphabet are there in the English alphabetical series between the letter which is twelfth from left end and the letter which is fifth from the right end.

Z A O K M A H O H O Z K M A Z K M A O M O Z H M O Z K H

So, K L M

83) Answer: B)

Z A O K M A H O H O Z K M A Z K M A O M O Z H M O Z K H

If all the vowels are dropped from the given arrangement, then

Z K M H Z K M M Z H M Z K H

There is only one such Z which is not immediately followed by K.

Z K M H Z K M Z K M Z H M Z K H

84) Answer: C)

Z A O K M A H O H O Z K M A Z K M A O M O Z H M O Z K H
There are two O's in the given arrangement each of which is immediately preceded by a vowel but not followed by a vowel.

Z A O K M A H O H O Z K M A Z K M A O M O Z H M O Z K H

**Direction (85-89):**

Youngest one is born in 1988 and all are born in consecutive years.

So, they must be born from 1981 to 1988

Eldest is doctor so born in 1981

S is born after at least one person and in an odd numbered year,

so following cases are possible.

S is an engineer.

**Case I:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Person</th>
<th>Profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td></td>
<td>Doctor</td>
</tr>
<tr>
<td>1982</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td>S</td>
<td>Engineer</td>
</tr>
<tr>
<td>1984</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1985</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1988</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Case II:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Person</th>
<th>Profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td></td>
<td>Doctor</td>
</tr>
<tr>
<td>1982</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td>S</td>
<td>Engineer</td>
</tr>
<tr>
<td>1984</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1985</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>Nurse</td>
<td></td>
</tr>
<tr>
<td>1988</td>
<td>U</td>
<td></td>
</tr>
</tbody>
</table>

**Case III:**

Three persons are born between engineer and nurse, so case II becomes invalid.

Nurse is born in the year immediately preceding the year in which U is born.

So.

**Case I:**
Now, W is elder than same no. of persons from which P is younger than.
W is born before P.
Officer is born just after the year in which engineer is born.
So, following cases are obtained

**Case 1(a):**

<table>
<thead>
<tr>
<th>Year</th>
<th>Person</th>
<th>Profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td></td>
<td>Doctor</td>
</tr>
<tr>
<td>1982</td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td>S</td>
<td>Engineer</td>
</tr>
<tr>
<td>1984</td>
<td></td>
<td>Officer</td>
</tr>
<tr>
<td>1985</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>P</td>
<td>Nurse</td>
</tr>
<tr>
<td>1988</td>
<td>U</td>
<td></td>
</tr>
</tbody>
</table>

**Case 1(b):**

<table>
<thead>
<tr>
<th>Year</th>
<th>Person</th>
<th>Profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td></td>
<td>Doctor</td>
</tr>
<tr>
<td>1982</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td></td>
<td>Nurse</td>
</tr>
<tr>
<td>1984</td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>1985</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>S</td>
<td>Engineer</td>
</tr>
<tr>
<td>1988</td>
<td>P</td>
<td>Officer</td>
</tr>
</tbody>
</table>

**Case II (a):**

<table>
<thead>
<tr>
<th>Year</th>
<th>Person</th>
<th>Profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>W</td>
<td>Doctor</td>
</tr>
<tr>
<td>1982</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td></td>
<td>Nurse</td>
</tr>
<tr>
<td>1984</td>
<td></td>
<td>U</td>
</tr>
<tr>
<td>1985</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>S</td>
<td>Engineer</td>
</tr>
<tr>
<td>1988</td>
<td>P</td>
<td>Officer</td>
</tr>
</tbody>
</table>

**Case II (b):**

<table>
<thead>
<tr>
<th>Year</th>
<th>Person</th>
<th>Profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td></td>
<td>Doctor</td>
</tr>
<tr>
<td>1982</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td>W</td>
<td>Nurse</td>
</tr>
<tr>
<td>1984</td>
<td>U</td>
<td></td>
</tr>
<tr>
<td>1985</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1986</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>S</td>
<td>Engineer</td>
</tr>
<tr>
<td>1988</td>
<td></td>
<td>Officer</td>
</tr>
</tbody>
</table>

R is a manager
And, P is clerk so, case I(a) and II(a) is invalid
Businessman is born 5 years after Q.
In 1(b) if, Q is born in 1981; then businessman is born in 1986, can be a case II (b) is invalid as we cannot place Q and businessman according to the given conditions.

Also, R is manager who must be born in 1982 One person is Merchant; thus, U must be the Merchant

So, we get,

<table>
<thead>
<tr>
<th>Year</th>
<th>Person</th>
<th>Profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>Q</td>
<td>Doctor</td>
</tr>
<tr>
<td>1982</td>
<td>R</td>
<td>Manager</td>
</tr>
<tr>
<td>1983</td>
<td>S</td>
<td>Engineer</td>
</tr>
<tr>
<td>1984</td>
<td>W</td>
<td>Officer</td>
</tr>
<tr>
<td>1985</td>
<td>P</td>
<td>Clerk</td>
</tr>
<tr>
<td>1986</td>
<td>V/T</td>
<td>Businessman</td>
</tr>
<tr>
<td>1987</td>
<td>T/V</td>
<td>Nurse</td>
</tr>
<tr>
<td>1988</td>
<td>U</td>
<td>Merchant</td>
</tr>
</tbody>
</table>

T is not a business man so, T must be nurse and V must be businessman

Final arrangement is,

<table>
<thead>
<tr>
<th>Year</th>
<th>Person</th>
<th>Profession</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>Q</td>
<td>Doctor</td>
</tr>
<tr>
<td>1982</td>
<td>R</td>
<td>Manager</td>
</tr>
<tr>
<td>1983</td>
<td>S</td>
<td>Engineer</td>
</tr>
<tr>
<td>1984</td>
<td>W</td>
<td>Officer</td>
</tr>
<tr>
<td>1985</td>
<td>P</td>
<td>Clerk</td>
</tr>
<tr>
<td>1986</td>
<td>V</td>
<td>Businessman</td>
</tr>
<tr>
<td>1987</td>
<td>T</td>
<td>Nurse</td>
</tr>
<tr>
<td>1988</td>
<td>U</td>
<td>Merchant</td>
</tr>
</tbody>
</table>

85) Answer: D)
86) Answer: A)
87) Answer: B)
88) Answer: B)
89) Answer: E)
90) Answer: D)

So, 1st and last letter are at the gap of 3 letters. The difference between consecutive numbers is of 3.

Directions (91-95):
A was seated 3rd to the left of E. Who was a gap of 1 from B K was seated opposite to M

C was 2nd to the left of a person who travelled by bus. B’s neighbours travelled by bus

F was not neighbouring K and F cannot be Seated beside E. A does not sit opposite to F.
C’s neighbours used the same mode of transportation. Person seated opposite to G travelled by car, so case 2 is eliminated.

91) Answer: A)
92) Answer: B)
93) Answer: B)
94) Answer: D)
95) Answer: A)

Directions (96-97):
E(80) > D > C(65) > A > B (60)
96) Answer: C)
97) Answer: B)

Directions (98 -100):
98) Answer: C)
99) Answer: B)
100) Answer: D)

A(+) → B(+)
C(-)
D

A(-)
B(-) → C(+)
D
C(+) → D
YEARLY PLATINUM PACKAGE

1000+ Mock tests (Covers All Important Bank, Insurance, SSC & Railway Exams)