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TEST SERIES

GS - 2

CSAT - 1

2023

FULL LENGTH TEST SERIES - 1
GS - 2
FULL MARKS : 200 * TIME : 2 HOURS

Read the following five passages and answer the items that follow. Your answer to these items should be based on the passages only :

Passage - 1

Theoretically, there are fundamental differences between the legal and regulatory framework of a command-and-control economy and a market economy. In the former, economic activity is restricted to those activities that are permitted by the state. In a market economy, the economy thrives because the state interferes only when there is 'market failure', i.e., monopoly power, asymmetric information or externalities. As a consequences, laws permit all activities, unless the state specifically restricts them in the context of market failure. The restrictions need to be part of a known and predictable regulatory regime unlike now where a lot of restrictions - well intentioned as they are not part of a stable frame work.

(1) Which amongst the following is the most natural corollary of what is stated in the passage? :

- a. The state should reduce the statutory compliances to be made by firms in a market economy.
- b. The state should divide different sectors of economy into large, medium and small and permit firms to operate accordingly.
- c. The state should trim its own area economic activity.
- d. The state should restrict the negative list of sectors in which firms cannot operate to bare minimum.

Passage - 2

India has suffered from persisted high inflation. Increase in administered prices, demand and supply imbalances, imported inflation aggravated by rupee depreciation, and speculation have combined to keep high inflation going if there is an element common to all of them, it is that many of them are the outcomes of economic reforms. Indian's vulnerability to the effect of changes in international prices has increased with trade liberalisation. The effort to reduce increase in the prices of commodities that are administered.

(2) What is the most logical rational and crucial message that is implied in the above passage? :

- a. Under the present circumstances, India should completely avoid all trade liberalisation policies and all subsidies.
- b. Due to its peculiar socio-economic situation, India is not yet ready for trade liberalisation process.
- c. There is no solution in sight for the problems of continuing poverty and inflation in India in the near future.
- d. Economic reforms can often create high inflation economy.

Passage - 3

Today, wheather you are a resident of Delhi or Delhi; Durban or Darwin, wheather you are from Noidu or New York, it is simply not realistic to think only in terms of your own country. Global forces press in from every conceivable direction. People, goods and ideas cross borders and cover vast distances with ever greater frequency, speed and ease. We are increasingly connected through travel, trade, the internet, through what we watch, what we eat and even the games we play.

(3) How does today's world resist Parochial (limited and narrow) thinking? :

- a. A substantial rise in literacy levels of global economy.
- b. Global forces have promoted interconnectivity and exchange of information and goods.
- c. Fading of National borders is bringing countries closer and increasing trade and travel.
- d. Through what we watch, what we eat and the game we play.

Passage - 4

Bolsa Familia is one of the world's largest cash transfer programmes, administering benefit to 13.8 million households. It covers 26% of the population across all the municipalities in 2012 with a budget of \$10.75 billion - 0.53% of GDP - in 2013. It is fully financed from general government revenues through the social security budget. The programme's main goals are to reduce poverty, promote food security, break down the intergenerational cycle of poverty through human capital accumulation and increase access to public services, especially health, education and social assistance. Women are the programme recipients and are responsible for complying with the conditions : Regular visit to health clinics, attendance of pregnant or breast feeding women in scheduled prenatal and postnatal visits, attendance at educational activities on health and nutrition, full vaccination of children under age 7 and routine health checkups and growth monitoring.

(4) Which of the following best summarises the passage above? :

- a. Bolsa Familia is the best cash transfer programme in the world.
- b. Bolsa Familia is a successful cash transfer programme that teaches many households by working in the areas of health, food security, education, poverty.
- c. Bolsa familia is good for the welfare of the people especially women.
- d. Bolsa familia is a cash transfer programme that touches many households by working in the area of health, food security, education, poverty.

Passage - 5

Ecological research over the last quarter of the century has established the deleterious effects of habitat fragmentation due to mining, highway and such other intrusions on forests. When a large block of forests gets fragmented into smaller bits, the edges of all these bits come into contact with human activities resulting in the degradation of the entire forests. Continuity of forested landscapes and corridors gets disrupted affecting several extinction-prone species of wildlife. Habitat fragmentation is therefore considered as the most serious threat to biodiversity conservation. Adhoc grants of forest lands to mining companies coupled with rampant illegal mining is aggravating this threat.

(5) What is the central focus of this passage? :

- a. Illegal mining in forests
- b. Extinction of wildlife
- c. Conservation of nature
- d. Disruption of habitat.

(6) What is the purpose of maintaining the continuity of forested landscapes and corridors?:

- i. Preservation of biodiversity
- ii. Management of mineral resources
- iii. Grant of forest lands of human activities.

Select the correct answer using the codes given below -

- (a) i only
- (b) i & ii
- (c) ii & iii
- (d) i, ii & iii.

(7) A batsman has a certain average of runs for 9 innings. In the 10th innings, he makes a score of 100 runs thereby increasing his average by 8 runs. His new average is :

- (a) 32
- (b) 36
- (c) 28
- (d) 40.

(8) In an election, one of the candidates got 30% of the total votes polled, but he lost by 210 votes. What is the total number of votes polled? :

- (a) 630
- (b) 525
- (c) 460
- (d) 700.

(9) The difference between the simple interest received from two banks on Rs. 1000 for three years is Rs.6. What is the difference between their rates? :

- (a) 0.17
- (b) 0.33
- (c) 0.25
- (d) 0.20.

(10) Find the missing number in place of the question mark (?) :

6	2	4	8
17	15	8	10
18	9	7	?

- (a) 5 (b) 16 (c) 7 (d) 8.
- (11) 0, 6, 24, 60, 120, 210, (?) :
- (a) 331 (b) 334 (c) 339 (d) 336.
- (12) In 1930, a person's age was 8 times that of his son. In 1938, the father's age become 10 times that of his son's age in 1930. The ages of the son and father in 1940 were respectively :
- (a) 16yr, 58yr (b) 15yr, 50yr (c) 14yr, 42yr (d) 13yr, 34yr.
- (13) A man spends 30% of his income on food, 12% on house rent, 28% on miscellaneous of saving at the end of a month is Rs. 810, then man's total income is:
- (a) Rs. 2100 (b) Rs. 2400 (c) Rs. 2600 (d) Rs. 2700.
- (14) If $ABCXDEED = ABCABC$, where A, B, C, D and E are different digits, what are the values of D and E? :
- (a) D = 2, E = 0 (b) D = 0, E = 1 (c) D = 1, E = 0 (d) D = 1, E = 2.
- (15) The value of x satisfying the equation :
- $$\frac{1}{x-3} - \frac{1}{x+5} = \frac{1}{6}$$
- are
- (a) 7, -9 (b) -7, -9 (c) -7, 9 (d) 7, 9.
- (16) A and B can complete work together in 5 days. If A works at twice his speed and B at half of his speed, this work can be finished in 4 days. How many days would it take for A alone to complete the job? :
- (a) 10 (b) 12 (c) 15 (d) 18.

Direction for the following 8 (eight) items :

Read the following five passages and answer the item(s) that follow each passage. Your answers to these items should be based on the passages only :

Passage – 1

Prohibition's history stretches back into the 19th century when religious groups and social organizations such as the American Temperance Society, fought against the "scourge of alcohol" and drunkenness. In the 1850s Maine and other states experimented with laws banning alcohol, but local opposition brought about their eventual reversal. Women's groups played a significant role. Activists argued that drink fuelled violence in the home as drunk husbands would beat their wives and children. Temperance advocates argued that alcohol abuse caused poverty. In the 1870s the Woman's Christian Temperance Union (WCTU) launched a major campaign to prohibit alcohol in support of the crusade mounted by the Prohibition Party, founded in 1869. Teetotallers, a 19th-century term for people who abstained from all alcohol, even made it to the White House. President Rutherford B. Hayes and his wife Lucy did not drink alcohol nor would they serve it.

17. Which one of the following is the most logical rational and crucial inference that can be derived from the passage? :

- Abstention from alcohol, as demonstrated by Rutherford B. Hayes, increases the chances of being elected to the White House.
- Ban on Alcohol consumption benefits women more than their male counterparts.
- Effective alcohol ban leads to more young women entering the workforce and enjoying the independence urban life afforded them.
- Socio-religious norms and values can lend support to campaigns against alcohol consumption.

- 18. On the basis of the above passage, the following assumptions have been made :**
1. Laws are capable of bringing about a change in human behaviours that do not conform to religious values.
 2. Campaigns by women are more likely to accomplish their desired objectives, than that by men.

Which of the assumption(s) is/are valid? :

- a. 1 only b. 2 only c. Both 1 and 2 d. Neither 1 nor 2.

Passage – 2

As Steven Pinker has argued in his controversial book *The Better Angels of our Nature : Why Violence has Declined*, we may be enjoying, at least statistically, the safest times our species has known since we evolved 300,000 years ago. Violent deaths, ranging from individual homicide to massed chemical weapons attacks, have been in decline for generations, Pinker writes, thanks to everything from the invention of agriculture to the humanist philosophy that inspires minority rights movements. Such optimism is challenged by sceptics, who note that colossal state-to state bloodlettings like World War II have been replaced by smaller, longer, more complex and bloody enough proxy wars. And anyone who thinks appeals to violence are a passé vice of the ancestors need only watch the bloodlust on display at modern political rallies.

19. Which one of the following is the most logical rational and crucial message conveyed by the above passage? :

- a. Humanist philosophy pitches the minority against the majority for their rights.
- b. Wars preceding World War II witnessed more violent deaths and war crimes than the contemporary proxy wars.
- c. Increasing incidents of terrorism are a prime example of bloody proxy wars.
- d. Violence, whose decline is debatable, has over time morphed itself from a crude to a subtler form.

20. What is the most logical and rational corollary to the above passage? :

- a. World War II like state-to-state bloodlettings will not happen again in the future.
- b. The current international monitoring mechanism is stringent enough to prevent massed chemical attacks.
- c. Violence handling mechanism should take into account the changing manifestations of violence.
- d. Political rallies should be banded because of their role in fanning violence across the globe.

21. The passage mentions “smaller, longer, more complex and bloody enough proxy wars”. Which one of the following contemporary forms of violence best fits the above definition? :

- a. Somali pirates’ hijacking of ships b. Rise of ISIS in Syria
- c. Journalist Jamal Khashoggi’s murder at Saudi consulate in Istanbul, Turkey
- d. Scuffle between Saudi Arabia and Iran.

Passage – 3

In the popular imagination, sand is synonymous with limitlessness. In reality it is a scarce commodity, for which builders are now scrabbling. Not just any old grains will do. The United Arab Emirates is carpeted in dunes, but imports sand nonetheless because the kind buffeted by desert winds is too fine to be made into cement. Sand shaped by water is coarser and so binds better. Extraction from coastlines and rivers is therefore surging. But according to the United Nations Environment Programme (UNEP), Asians are scooping up sand faster than it can naturally replenish itself. In Indonesia some two dozen small islands have vanished since 2005. Vietnam expects to run out of sand this year.

22. On the basis of the above passage, the following assumption(s) have been made :

1. Non-Asian countries have found a viable substitute for sand which is a scarce commodity.
2. Popular imagination can often be at divergence with the ground reality.

3. By importing sand, the United Arab Emirates is preserving its own reserve for future use.
Which of the above assumption(s) is/are valid? :
a. 1 and 3 only b. 3 only c. 2 only d. 1, 2 and 3.

Passage – 4

Why did Hitler's plan to eradicate the Jews through slave labour camps in Poland begin with 999 young women? The fascist government wanted to eliminate fertile bearers of the next generation of Jews, but also according to Slovak historian Pavol Mest'an, it was easier to get families to relinquish daughters than sons. In addition, it was thought that the girls would entice their families to follow them to the relocation camps, Mest'an says, where Jews were being "resettled" or "rehomed"- Nazi euphemisms for killed.

- 23. On the basis of the above passage, the following assumption(s) have been made :**
1. Slovak historians had a patriarchal mind-set that often eclipsed their worldview.
2. The fascist government wanted the Jews to 'resettle' outside Poland.

Which of the above assumption(s) is/are valid?

- a. 1 only b. 2 only c. Both 1 and 2 d. Neither 1 nor 2.

Passage – 5

Before the earthquake, things were looking up in Haiti. The economy was improving, foreign investors were considering investment opportunities and Haitians themselves were feeling hopeful about their future. But political dysfunction worsened after the disaster and the two back to back presidential and legislative elections that would follow. That dysfunction eventually impacted the pace of the recovery. Public outcry over corruption resulted in a radial display of discontent that three times in 2019, led to a complete shutdown of the country.

- 24. Which of the following is the most logical, scientific and rational inference that can be made from the above passage? :**

- a. Earthquakes are followed by political instability in the affected country.
b. Political stability is an important prerequisite for overall development of a country.
c. Corruption, as evident from Haiti's experience, leads to complete shutdown of a country.
d. Foreign investors shy away from seismically active regions on earth.

- 25. If every alternate letter of the English alphabet (starting with B) is replaced with its opposite letter and the remaining letters are replaced with the letter consecutive to them, then how will we write "DISCOUNT"?**

- a. WJTPDVMG b. WITDVPMG c. WJTDPVMG d. WJSDPVNG.

- 26. A family consists of three sons and their parents. Average age of the family is 20 years. Average of the ages of second eldest son and parents is 24 years. Difference between parents age together and second eldest son is 48 years. Ratio of ages of second eldest son and eldest son is 2:3. What is the age of the youngest son? :**

- a. 10 years b. 20 years c. 12 years d. 15 years.

- 27. Ashok was travelling to Mumbai from Delhi. When he left Delhi on Friday noon, his watch was slow by 2 minutes. He took rest at Bhopal and got to know that his watch showed correct time at that time. He reached Mumbai at 2 p.m. on the following Friday and saw that his watch is 4 minutes 48 seconds fast. If the watch gains uniformly, then when did he reach Bhopal?**

- a. 2 p.m. on Sunday b. 2 p.m. on Saturday
c. 12 p.m. on Monday d. 12 p.m. on Sunday.

- 28. Consider two statements 1 and 2 followed by a question :**

S1 : Speed of A is twice that of B. A is eight times faster than D.

S2 : B takes half as much time as taken by C.

How much time B will take to complete his journey, if D completes the same journey in one hour more than C? :

- a. S1 alone is sufficient to answer the question
b. S2 alone is sufficient to answer the question

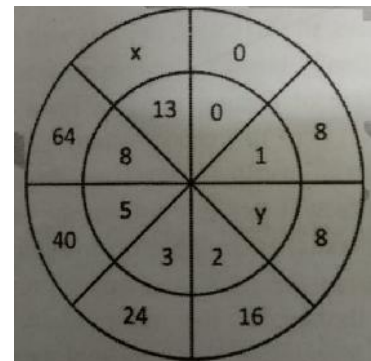
- c. S1 and S2 taken together are not sufficient to answer the question
d. Both S1 and S2 are necessary to answer the question.
29. In the given sequence how many perfect square numbers are there which are immediately preceded by a vowel and immediately followed by a consonant? :
23, A, 49, Z, 16, E, 81, W, 121, O, 9, D, 25, U, 784, Y
a. One b. Two c. Three d. More than three.
30. What is X in the sequence given below :
287, 167, 119, 47, 23, 7, X ?
a. 4 b. 8 c. 2 d. 3.
31. Consider two statements S1 and S2 followed by a question :
S1 : N is a natural number and $N > 3$
S2 : If N is divided by 6, remainder is either 1 or 5.
Which one of the following is necessarily true? :
a. N is a prime number b. N is divisible by 5, 7, 11 and 13
c. N is a perfect square d. None of the above.
32. Ram went to circus and he had Rs.350 in different denominations : Rs.1, Rs.5, Rs.10, Rs.20 and Rs.50. He bought the entry ticket by using two notes of Rs.10 and one note of Rs.5. Then he bought a toy by using three notes of Rs.20 and three notes of Rs.5. After that he bought an ice-cream by using one note of Rs.50, four notes of Rs. 5 and ten notes of Rs.1. After that he booked an auto for home and paid him all the rupees he had. In how many ways can he pay the fare of auto if he had thirty-six notes initially? :
a. 2 b. 3 c. 5 d. More than 5.
33. A calculating device has a certain feature, for addition one has to press '@' one time, for multiplication one has to press '@' twice, for subtraction one has to press '#' thrice and for division one has to press '*' twice.
If the device follows BODMAS rule then find the value of $70^{**5} @ @2 @12 ####20?$:
a. 0 b. 20 c. 10 d. 12.
34. Consider the figure :
What will be the sum of x and y in the given figure? :
a. 105 b. 101
c. 89 d. 1.
35. Consider the following series :
EXISTENTIAL, ISENTIAL, XISTENTIA, ?, ISENTI
Find the term missing in the series :
a. XISTENT b. ISTETI
c. XISTENTI d. ISENTIA.
36. A die is rolled twice. What is the probability of getting a sum equal to 8? :
a. $\frac{5}{36}$ b. $\frac{1}{9}$ c. $\frac{7}{36}$ d. $\frac{2}{9}$.

Direction for the following 9 (nine) items :

Read the following four passages and answer the items that follow each passage. Your answers to these items should be based on the passage only.

Passage – 1

Lower trade costs, greater facility in communications and information availability have allowed more specialization by firms and the potential to source goods and services globally. Fragmentation and internationalisation of production chains are not new but have grown substantially in recent decades. Such fragmentation allows firms to specialise in specific activities



and has thereby allowed some firms to enter global markets since they can produce one part of a final good, or provide a specific service, rather than needing to integrate an entire complex production process. Unbundling of tasks and business functions may have increased the opportunities for developing countries in particular to participate in global value chains as firms in developed countries outsource to more cost-competitive regions. In this way, production takes place in geographical areas and in firms, in closer alignment with their comparative advantage.

- 37. On the basis of the above passage the following assumption(s) have been made :**
1. Only developing countries can benefit by leveraging improvements in communications and information availability for their trade advantage.
 2. Earlier, the entire production process had to be carried out at a specific geographical location.
 3. Globalisation leads to better inter-connectedness among different geographies of the world.

Which of the above assumption(s) is/are valid? :

- a. 1 and 2 only b. 3 only c. 2 and 3 only d. 1 and 3 only.
- 38. The passage seems to argue :**
- a. Against the increased connectivity brought about by globalization.
 - b. In favour of globalisation driven benefits accruing to developing countries.
 - c. In favour of the domination of developed countries in global trading regime.
 - d. Against the increasing competition for market access among exporting countries.

Passage – 2

The Great Recession and the subsequent period of subdued GDP growth in most advanced economies have highlighted the need for macroeconomic forecasters to account for sudden and deep recessions, periods of higher macroeconomic volatility and fluctuations in ‘trend GDP growth’. Here we put forward and extension of the standard Markov-Switching Dynamic Factor Model (MS -DFM) by incorporating two new features : switches in volatility and time – variation in ‘trend GDP growth’. First we show that volatility switches largely improve the detection of business cycle turning points in the low-volatility environment prevailing since the mid -1980s. It is an important result for the detection of future recessions since according to our model the US economy is now back to a low volatility environment after an interruption during the Great Recession. Second our model also captures a continuous decline in the US ‘trend GDP growth’ that started a few years before the Great Recession and continued thereafter. These two extensions of the standard MS-DFM framework are supported by information criteria, marginal likelihood comparisons and improved real –time GDP forecasting performance.

- 39. On the basis of the above passage, the following assumption(s) have been made :**
1. It is possible to forecast future recessions by using robust economic models.
 2. Massive infrastructure investment helps spur GDP growth in post-recession scenarios.
 3. Dynamic nature of economic models can help them capture and explain the changing reality.

Which of the above assumption(s) is/are valid? :

- a. 2 only b. 1 and 3 only c. 2 and 3 only d. 1, 2 and 3.
- 40. Which of the following can be a possible meaning of ‘trend GDP growth’, as mentioned in the passage? :**
- a. Sustainable GDP growth rate as recommended by MS-DFM model.
 - b. India’s low growth rate before the economic reforms of 1991.
 - c. GDP growth rate of Asian countries in the aftermath of the 2008 global economic crisis.
 - d. None of the above.

Passage – 3

Countries wishing to support their mining services sectors should ensure that firms in these sectors do not face overly burdensome regulation. Small and medium sized enterprises,

in particular, are less well equipped to navigate difficult business environments. Since a substantial share of mining services firms are SMEs regulatory barriers to entry, complex regulatory procedures and overly protective regulation for incumbent firms will strongly impact the potential for minerals rich countries to develop a mining services sector and thereby leverage their mineral resources for job creation throughout the value chain. Countries interested in leveraging their mineral resources for economy-wide growth should not shy away from foreign inputs. Foreign inputs of goods and services are associated with higher levels of domestic value addition in mining. A 10% increase in the value added of foreign inputs is associated with a 2.8% increase in the domestic value added of mining exports on average all else equal. Similar results are found for imported mining services inputs.

- 41. On the basis of the above passage the following assumption(s) has/have been made:**
1. Firms may resort to unethical practices to maintain dominance in their business sector.
 2. Some countries are apprehensive of seeking foreign inputs in mining sector as a tool to bring about comprehensive economic growth.
 3. Regulations have a bearing on the ease of doing business in a country.

Which of the above assumption(s) is/are valid? :

- a. 2 only b. 3 only c. 1 and 3 only d. 2 and 3 only.
- 42. What is the most logical and rational corollary to the above passage? :**
- a. The share of small and medium enterprises (SMEs) in the mining sector should be reduced as they are less prepared to navigate strict business regulations.
 - b. Mineral rich countries should consider easing regulatory environment and be more open to foreign inputs to fully leverage the potential of a thriving mining sector.
 - c. Domestic value addition in mining should be replaced by its foreign counterpart which is more cost-effective.
 - d. Incumbent mining firms should be encouraged to takeover SMEs as this would benefit the sector through economies of scale.

Passage – 4

Product bundling is a very common strategy implemented in many industries. The objective is to combine products so that the consumer derives more value than if the products were bought individually. A typical example is a meal or menu in a restaurant. The price is cheaper for the consumer when compared with a separate order for a starter, a main dish and dessert. It is also more convenient and saves time. By providing additional features or complementary functions, the benefits of the bundle often go beyond price. Product bundling can also be used to introduce to the consumer new products that she may have not initially thought about buying. E-commerce websites, for example, often suggest products that are bought together with the one picked by the customer to encourage further sales. The rationale is the same for services bundled with goods. But since services are about 'changing the conditions of the consuming units', services bundled with goods are generally more related to the additional or complementary features that can be added to the good and provide extra benefits to the consumer. Through services, the idea is also to establish a long-lasting relationship with the customer rather than a one-off sale of multiple products. Accompanying the customer through the product life cycle can create loyalty. It also provides information to the manufacturer that can be used to improve products. Last but not least, services are generally a more stable source of revenues and more resilient to fluctuations during the economic cycle.

- 43. Which of the following is a possible implication of the above passage? :**
- a. E-commerce giants in India are incurring losses because they follow product bundling to increase sales volumes.
 - b. Product bundling has worked well only in countries having a booming service sector.
 - c. Government also being a service provider can consider exploring the feasibility of product bundling in administration.
 - d. Either (a) or (b)

44. On the basis of the above passage the following assumption(s) has/have been made:
1. Innovation can be an important driver of the growth of business enterprises.
 2. Product bundling given rise to consumerism by virtually forcing consumers to use products they do not actually need.
 3. In a materialistic society, social status is determined by the physical possessions of an individual – that's why firms are bundling goods with services.
- Which of the above assumption(s) is/are valid? :**
- a. 2 and 3 only b. 1 only c. 1 and 3 only d. 1, 2 and 3.
45. According to the passage, which of the following is/are the advantage(s) of bundling services with goods? :
1. Additional expenditure on the part of the business enterprise.
 2. Building a relationship of trust between a firm and its consumers.
 3. Reliable feedback mechanism for product improvement.
- Select the correct answer using the codes given below :**
- a. 3 only b. 1 and 2 only c. 2 and 3 only d. 1, 2 and 3.
46. A six digit number 4A7B3C is such that it leaves remainder 0 when divided by 7, 11 and 13. What will be the sum of numbers at A, B and C? :
- a. 11 b. 13 c. 14 d. 12.
47. When the digits of a two-digit number are reversed, the number increases by 27. Sum of the least and the highest such two-digit numbers is –
- a. 85 b. 93 c. 110 d. 83.
48. If $3 * 4 \$ 5 = 54$, $2 * 3 \$ 5 = 48$, then $5 * 6 \$ 7 = ?$
- a. 130 b. 65 c. 90 d. 195.
49. A Coaching opens for 5 days in a week starting from Monday to Friday. Four different subjects Mathematics, Physics, Chemistry and Biology are taught and only one subject is taught per day.
1. Mathematics is taught on Monday and Friday.
 2. Different subjects are taught on Tuesday and Thursday.
 3. Different subjects are taught on Wednesday and Friday.
- To ensure that any two different subjects are taught on consecutive days :**
- a. Statement 1 alone is sufficient b. Statement 3 alone is sufficient
- c. Statement 2 alone is sufficient
- d. Statement 2 is not sufficient, but statement 2 along with statement 3 is sufficient.
50. Consider the following Statements and Conclusions :
- Statements :**
1. Some Astronomers are Astrologers
 2. Some astrologers are Scientists.
 3. No Scientist is a Physicist
 4. No Physicist is an Astronomer.
- Conclusions :**
- I. No Physicist is an Astrologer
 - II. No Scientist is an Astronomer
 - III. Some Astrologers are Astronomers.
- Which of the above conclusion(s) can be drawn from the given statements? :**
- a. I, II and III b. Only I and II c. Only III d. Only II and III.
51. Golu and Bholu appear in an interview for 2 vacancies. The probability of selection of Golu and that of Bholu are $\frac{1}{3}$ and $\frac{1}{7}$ respectively. What is the probability that only one of them will be selected? :
- a. $\frac{1}{21}$ b. $\frac{8}{21}$ c. $\frac{4}{21}$ d. $\frac{2}{7}$.
52. (P X Q) means P is sister of Q, (P + Q) means P is daughter of Q, (P - Q) means P is the father of Q, (P ÷ Q) means that P is the mother of Q.
- $A \div B \times C + D - F$

Which of the conclusion(s) can be drawn from the following statement(s)?

1. A is mother of F
2. D is father of B
3. F is the son of A
4. B and C are sisters of F.

Select the correct answer using the codes given below :

- a. 1, 2 and 3 b. 2, 3 and 4 c. 1, 3 and 4 d. 1, 2 and 4.

- 53. A mobile company manufactures three types of mobiles – Q1, Q2, and Q3. 40% and 30% mobiles are manufactured of Q1 and Q2 types respectively. The quality inspector segregates the defective mobiles and lists them as – 3% of Q1 and 1% of Q2, while 95% of Q3 are not defective. What is the percentage of defective mobiles manufactured by the company? :**

- a. 30% b. 3% c. 15% d. 5%.

- 54. A solid cube is painted red, blue and white such that opposite faces are of same colour. The cube is then cut into 343 identical cubes. How many cubes have one of their faces painted?**

- a. 25 b. 150 c. 294 d. 90.

- 55. In India 60% people went to Europe trip, 50% went to Russia trip and 10% did not travel abroad. Which of the following conclusion(s) can be drawn from the above data? :**

1. 20% people went to Europe as well as Russia.
2. 30% people went to only Russia.

Select the correct answer using the codes given below :

- a. 1 only b. 2 only c. Both 1 and 2 d. Neither 1 nor 2.

Directions for the following 5 (five) items :

Read the following three passages and answer the items that follow each passage.

Your answers to these items should be based on the passage only.

Passage – 1

The latest jobs report shows that the unemployment rate in America stayed at 3.5% in December, confirming that things are looking pretty good for workers right now. Less well known is that there are plans afoot to improve workers prospects once they have laid down their tools. Shortly before Christmas, America enacted its first big reform to the retirement system in over a decade. The Setting Every Community Up for Retirement Enhancement Act of 2019, better known as the secure Act, is a good start. But much more is needed.

Americans could certainly do with additional retirement security. The median balance held in retirement accounts is \$60,000 per family, enough for only a pitiful income in old age. Yet by one estimate 40% of working-age Americans have no retirement-account savings at all, meaning that they will probably have to rely on Social Security (public pensions) in their dotage. That safety-net is thin. America's rate of old-age poverty is one of the highest in the rich world.

- 56. Which one of the following is the most logical, rational and crucial inference that can be derived from the passage? :**

- a. Festive seasons offer an opportune time to launch big bang reforms.
- b. Public pension is the sole constituent of social security arrangement in America.
- c. Public pension help prevent any change in living standard of an American worker after retirement.
- d. Developing a habit of saving from an early age can help reduce old age poverty; more Americans should adopt this habit.

- 57. What is the most logical and rational corollary to the above passage? :**

- a. India's National Old Age Pension Scheme (NOAPS) should be replicated by countries facing high old-age poverty rates.
- b. There is not much scope to improve workers prospects once they have laid down their tools.

- c. Statutory backing to social security measures is necessary but not sufficient to improve the lot of retirees.
- d. Country with high rates of old-age poverty should come up with a comprehensive mechanism to address the issue.

Passage – 2

When Jawaharlal Nehru became the prime minister of India in 1947, one of his first acts was to evict the country's commander-in-chief, General Sir Rob Lockhart, from Flagstaff House, among the grandest mansions in Delhi. In a pointed gesture of civilian supremacy, Mr. Nehru then moved in himself. A few years later he abolished the post of commander-in-chief entirely. The three coequal chiefs of the army, navy and air-force have battled it out ever since, often quite heatedly. That changed on January 1st when Bipin Rawat, the army chief, was handed a new uniform, a plush house and a newly minted job : Chief of Defence Staff (CDS). The creation of such a post had been mooted for decades, especially after the army and air force squabbled during a war against Pakistan in 1999. But there was resistance from civilians, who feared that a CDS might accrue too much authority and from the air force, which saw it as a power grab by the already dominant army.

58. On the basis of the above passage, the following assumption(s) have been made :

- 1. Army is inherently dominating in nature as compared to navy and air force.
- 2. India would have witnessed a military coup had Jawaharlal Nehru not abolished the post of commander-in-chief.
- 3. Navy is more subservient to political leadership than civilians and the air force.

Which of the above assumption(s) is/are valid? :

- a. 1 and 3 only b. 1 and 2 only c. 1, 2 and 3 d. None of the above.

59. The above passage seems to imply that :

- 1. Creation of the post of CDS can lead to better coordination among army, navy and air force in India's future wars.
- 2. Bipin Rawat, the first CDS, would be allotted the same Flagstaff House from which General Sir Rob Lockhart was evicted.
- 3. The creation of the post of CDS signifies the beginning of the end of civilian supremacy in India.
- 4. Appointment of Bipin Rawat, an ex-army chief, to the post of CDS will further increase the domination of army over the other two services of armed forces.

Select the correct answer using the codes given below :

- a. 1, 2 and 3 only b. 2 and 4 only c. 1 only d. 1, 3 and 4 only.

Passage - 3

Like the popular fitness apps, which help users track their exercise activities, food intake and more, an app called 'Evocco' aims to give consumers information about their shopping habits to help cut their carbon footprint by estimating the climate impact of their choices. By taking a photograph of food receipts, shoppers can check their score which combines the climate impact of the food they've bought with their nutritional value, helping customers get the most nutritious food for the lowest climate impact.

60. The above passage implies that :

- 1. Fitness apps are no longer required as Evocco provides more coherent information to consumers.
- 2. The focus on subtle environmental impacts of consumer behaviour diverts attention from the actual culprits of climate change.

Which of the statements given above is/are correct? :

- a. 2 only b. 1 only c. Both 1 and 2 d. Neither 1 nor 2.

61. In a class of 35 students, 17 students failed in Hindi, 18 students failed in English, 8 students passed in both the subjects. The number of students who passed in exactly one subject is :

- a. 10 b. 19 c. 5 d. 4.

62. A person walked 10 km towards west from point A, then moved 8 km towards north and reached the bus stand then he walked 6 towards east and reached a school. From school, he walked 12 km towards his right and then moved 9 km towards east and reached his home. How far and in which direction is the school from his house?:
- 13 km, south-west
 - 12 km, north-east
 - 15 km, north-west
 - 15 km, south-west.
63. There are three scales A, B and C of different lengths joined together :
- If scale C is removed, then total length is decreased by 10%.
 - If scale B is removed, then total length is decreased by 40%.
 - Total length of all the three scales is 400 cm.
- Which of the above statements is/are needed to find the length of scale A? :**
- Statement 1 alone is not sufficient, but statement 1 along with statement 2 is sufficient to answer the question
 - Statement 2 alone is not sufficient but statement 2 along with statement 3 is sufficient to answer the question.
 - Any one of the statements 1 or 2 along with statement 3 is sufficient to answer the question.
 - All the three statements are needed to answer the question.
64. There are three contestants Rohan, Mohan and Sohan in an election. Rohan secured 30% of the total votes, Mohan secured 60% of the remaining votes and Sohan secured 84000 votes. What was the winning margin (i.e. difference between the winner and runner-up) in number of votes? :
- 46000
 - 26000
 - 40000
 - 36000.
65. A shopkeeper sells an item at a certain price. If he sells that item at 33.33% of the original selling price, then he suffers a loss of 33.33%. Find the profit percent, if he sells that item at 60% of the original selling price? :
- 35%
 - 20%
 - 25%
 - 37.5%.
66. The transportation cost charged by a goods train company is proportional to the square root of the distance and proportional to the cube root of the weight of the goods. If the distance is increased by 4 times, then what percentage of the original weight of the parcel can be transported at the same cost? :
- 25%
 - 20%
 - 12.5%
 - 37.5%.
67. Rajat invited his two friends to his birthday party. He cut his cake into three pieces. The weight of first piece is the sum of the first 4 prime numbers. The weight of second piece is the average of first three odd numbers plus half of third piece. The third piece is as heavy as the other two pieces together. Find the weight of the whole cake? :
- 40 units
 - 20 units
 - 80 units
 - 30 units.
68. Ajeet and Sujeet go for shopping in a mall. They use escalator to move between various floors. The escalator moves at a constant speed. Ajeet takes 30 steps to reach the top of the escalator, while Sujeet takes 20 steps to reach the top. If the escalator was turned off, how many steps would they have to take to walk up? :
- 40 steps
 - 50 steps
 - 60 steps
 - 80 steps.
69. There are two participants for a 4 km race of a circular track having a circumference of 1 km. Five minutes after the race started, the runner-up and the winner met for the first time. They started from the same point, in the same direction and their speeds are uniform. If the speed of runner-up is half of the speed of the winner, then what is the time taken by winner to finish the race? :
- 20 min
 - 15 min
 - 10 min
 - 5 min.

70. Ambuj started a business by investing a certain amount. After few months, Rakesh joined him by investing 33.33% more amount than Ambuj. After 12 months the share of Ambuj is Rs. 4608 out of a total profit of Rs. 8704. What is the ratio of time periods of Ambuj and Rakesh? :
- a. 2 : 3 b. 3 : 2 c. 1 : 2 d. 3 : 4.
71. A cube of maximum size is inscribed in a sphere and a sphere of maximum radius is inscribed in that cube. What is ratio of radius of small sphere to that of the bigger sphere? :
- a. $\sqrt{3} : 1$ b. $\sqrt{3} : 2$ c. 1 : 2 d. $1 : \sqrt{3}$.
72. A pipe X fills at a rate such that it can fill a tank in 24 hours, but because of a glitch it could fill at this rate for 16 hours only. After that it starts filling at a rate such that it can fill the whole tank in 18 hours. If the pipe is to fill at a stretch, how many less hours will it take to fill the tank than earlier? :
- a. 3 b. 2 c. 6 d. 4.
73. Jethalal purchases a purse at a certain price. On selling that purse for Rs. 875, the numerical value of profit percent enjoyed by Jethalal is equal to the price spent by him at the time of purchase? :
- a. Rs. 250 b. Rs. 350 c. Rs. 450 d. Rs. 300.

Directions for the following 3 (three) items :

Read the following information and answer the three items that follow :

World top nutrition research agency suggested diet requirements for two age groups. An NGO uses this data and prepares the diets given below :

Composition for age group 6 to 14 (per 100 gm)					
Diet (per kg price)	Carbohyd rates (in %)	Protein (in %)	Fat (in %)	Vitamin (in %)	Mineral (in %)
A (Rs.100)	40	30	10	10	10
B (Rs.40)	75	15	0	10	0
C (Rs.80)	30	25	15	15	15
D (Rs.50)	20	20	30	20	10

Composition for age group 15 to 22 (per 100 gm)					
Diet (per kg price)	Carbohy drates (in %)	Protein (in %)	Fat (in %)	Vitamin (in %)	Mineral (in %)
W (Rs.70)	30	30	10	15	15
X (Rs.50)	50	25	5	10	10
Y (Rs.90)	30	40	10	20	0
Z (Rs.60)	20	35	20	15	10

74. A child is 10 years old and he has protein deficiency. How many different ways can the agency prepare the diet for him by mixing at least two diets in equal quantities such that at least 25% protein, at least 10% mineral and at least 10% vitamin are there in the final mixture? :
- a. One b. Two c. Three d. No such way.
75. An eight-years-old child is poor and malnourished. What will be the cheapest suitable diet combination (mixing of at least two diets is necessary) for him if he requires at least 10% vitamin, at least 20% protein and at most 10% fat? :
- a. A + B b. B + C c. A + B + C d. A + C + D.
76. For a child of 16 years, what will be the perfect diet combination (mixing of at least two diets is necessary) if he needs at least 30% protein, at least 10% vitamin and at least 15% minerals? :
- a. W + X + Y + Z b. W + X + Y c. W + X + Z d. No such combination is possible.

Directions for the following 8 (eight) items :

Read the following five passages and answer the items that follow each passage.

Your answers to these items should be based on the passage only :

Passage – 1

There are a number of policies that countries can implement to benefit more from the value addition of foreign goods and services inputs. One aspect relates to their relative openness to trade. This analysis points to the positive impact of services inputs into the mining sector and the positive effect of imported inputs in particular. Notwithstanding, minerals-rich countries differ in their openness to trade in goods and services. Regarding restrictiveness to trade in services, Australia, Canada and Chile, all large and sophisticated mining countries, are quite open to trade in the main services inputs for mining: engineering services, construction, digital services and transport. South Africa is fairly open to foreign services providers. Other mining countries such as Brazil are less open. The United States shows a more mixed picture as it is open to foreign services providers in some sectors such as digital, and more closed in others such as maritime transport and construction.

77. **What is the main idea that we can infer from the passage? :**
- a. Degree of openness to trade is directly proportional to a country's overall prosperity.
- b. Countries in the Southern Hemisphere are more open to trade than their Northern counterparts.
- c. There is no fixed blueprint to decide the nature and extent of trade openness a country should go for it varies from case to case.
- d. India's decision to open up its coal mining sector will reduce its import dependence.
78. **According to the passage, which of the following reflect(s) the author's stand on positive impact(s) of trade openness? :**
1. As in the case of Australia, Canada and Chile, openness to trade benefits only the mining sector of a country.
2. South Africa is among the most developed African countries because it openly seeks foreign inputs into its mining sector.
3. Members of the World Trade Organisation (WTO) tend to benefit more from trade openness than non-member countries.

Select the correct answer using the codes given below :

- a. 1 and 3 only b. 3 only c. 2 and 3 only d. None of these.

Passage – 2

The photocopier industry is often used as an example when discussing the 'servitization' because it was one of the first to rely on business models involving services. In the late 1950s, the

Haloid Company (later known as Xerox) introduced the first plain paper was cheaper and easier than photographic film, the machine was expensive and had many mechanical parts requiring maintenance to function properly. Most companies in the sector had a 'razor and razor blade' business model with a low margin on the photocopier itself (to ensure a low price) and higher mark-ups on the supplies (ink and paper). Since the novelty in Xerox's product was the possibility to use plain paper, it was difficult to follow the same model. In addition the Xerox photocopier was about six items more expensive than products sold by competitors. This is why the company started to lease photocopiers for a fixed price per month covering the maintenance services. The success of the 'servitization' strategy was so important that an antitrust suit was brought against Xerox in 1975 due to its dominant market position and the company had to allow competitors such as Kodak and IBM to provide services for its products.

- 79. On the basis of the above passage, the following assumption(s) have been made :**
1. Market regulations aim at promoting healthy competition among business entities.
 2. Innovative pricing model is an important driver of the sales of a company.
 3. Reduction in photocopying costs leads an increase in copyright infringement literary works.

Which of the above assumption(s) is/are valid? :

- a. 3 only b. 1 and 2 only c. 1, 2 and 3 d. 2 only.
- 80. Which of the following is true about 'razor and razor blade' business model as mentioned in the passage? :**
- a. It is applicable to firms working in stationery segment, e.g. photocopying industry.
 - b. Change in raw materials costs of an industry can affect the applicability of this model to that industry.
 - c. This model works well in countries having minimum government, maximum governance.
 - d. Xerox ended up inviting antitrust suit because its new product did not follow 'razor and razor blade' business model.
