

MAT 2005

Language Comprehension

Instructions [1 - 4]

Study the following passage carefully to answer the questions that follow each passage:

PASSAGE I:

Chinese Goods sight now make up less than 3% of India's imports and if the figures are sight they are growing at no more than 25% a year. So, why is everyone making such a hue and cry over the Chinese threat? Aren't Indian Industrialists merely trying to get more tariff protection by stoking Xenophobia? Probably some are. But that should not divert attention from the main point : China has finally shown up on India's economy radar screen and it needs to be watched.

The figures may not yet reflect, but anecdotal evidence points to the fact that China is weighting heavily on the minds of the manufacturing industry. Even if you discount all the praying and petitioning for protection there is enough indication that increasing number of business men are today looking of setting up operations in China. IN other words they are putting their money where their mouth is: If you are in manufacturing, Industry. Even if discount all the praying and petitioning for protection, there is enough indication that increasing number of businessmen are today looking at selling up operation in China. In other words they are putting their money where their mouth is: if you are manufacturing it makes for more sense to operate out of China than out of India.

According to news paper reports. Ajanta the world largest clock maker is shifting its manufacturing base tools, stock and travel from morb in Gujarat's Saurashtra region to Shenshen in china. Many other Indian companies, from Bajaj electricals to Blow plast are looking at options that range from setting up their own operations in China to starting joint ventures to out sourcing. What we have seen so far could be just the tip of a bigger trend: there are lot more Indian companies central around three fourth of China's exports Only one fourth of its exports consists of goods made by Chinese owned companies and that store is shrinking, according to the wall street journal.

In other words, China's amazing export performance is due to its ability to gell itself as the perfect base for global manufacturing. This puts the issue in a larger context. This is the largest term issue that should engage the attention of policy makers, more than the flood of imported goods from China.

It is almost as if focusing on export means lettering down the country, just as rupee depreciation, in some quarters is take a man rational emasculation? Focussing on exports will mean a lot of things policy makers only need to talk to Indian firms who are chocking out China to got a laundry list of needs. There is of course, another way of looking at all this China competitive advantages lie in its manufacturing towers, India's advantages lie in services powered by its highly skilled English speaking man power. It is only natural therefore, that even as India is on the way to becoming the global back office for the world, China is becoming the global manufacturing base. We believe that this line of thinking is misleading. The only thing that prevents India from becoming a global manufacturing base is the lack of a government that functions the way it should. Meanwhile, here's a piece of advice for Indian businessmen. Please do what ever it takes to keep your business alive whether it means investing in Shenzhen or outsourcing from Timbuktoo - but do think global. While the government gets act together, the country's search for new business models that skirt around existing bottlenecks has to continue. Suehdeep Agarwal's Bhartiya International, India's top leather garments exporter with a turnover of Rs. 200 crore, has been notching up 30% growth year after year by outsourcing its requirements from factories all around the world - including China. Maybe that's one way to go.

1. The major theme of the passage can be considered as

- A** India's business relations with China.
- B** a comparison of India's and China's exports.
- C** the existing anxiety regarding India's manufacturing performances.
- D** India's hopes for manufacturing opportunities in China.

Answer: A

2. Which one of the following can be accepted as the title for the passage?

- A** China's Amazingly successful Export performances
- B** competition between India and China for investments
- C** A piece of Advice for Indian Businessmen
- D** The Chinese Threat to Indian Industrialists

Answer: D

3. Which of the following is not correct according to the author?

- A** Indian industrialists concentrate more on exports and less on domestic markets.
- B** Many Indian companies are not trying to set up their operations in China.
- C** Chinese-owned companies made one-fourth of the goods exported.
- D** Indian companies do not want to take the risk of setting up in China and exporting to other countries.

Answer: D

4. The author seems to believe that fast growth of industries depends on which one of the following factors?

- A** Liberalisation
- B** Effective demand of the manufactured goods in the country and in foreign markets
- C** The domestic market
- D** The record-breaking exports

Answer: D

Instructions [5 - 8]

Study the following passage carefully to answer the questions that follow each passage:

PASSAGE II :

There is a long list of horror stories connected with the consumption of sugar-hyperactivity in children; criminal behaviour in adults; diabetes, and elevated cholesterol. There is little good scientific evidence that sugar causes these conditions, but under certain circumstances it is thought to aggravate them. While the relationship between diet and health is far from an exact science, the relationship between diet and behaviour is even less clear. "There is a reasonable amount of evidence that what we eat does regulate one's brain chemistry", said Bambi Young, associate visiting professor in the Department of Epidemiology at the UCLA, "and it is more pronounced in certain individuals and under certain circumstances. The effect of food on behavior are subtle, but they do exist. There are some people, particularly young children who are super responders." Sugar, perhaps because it provides nothing but calories and pleasure, is high on the list of culprits. Sugar is a carbohydrate like pasta and grain. It is a simple carbohydrate; pasta and grain are complex ones. But they are worlds apart. All carbohydrates are made up of one or more simple sugars. Other names under which sugar appears are glucose (blood sugar), fructose (milk sugar), and maltose (malt sugar). Sugar is used for energy. Brain cells need it to function. Some of the glucose we take in, whether in the form of simple or complex carbohydrates is stored to be used as needed. The excess is converted to fat. Sugar, that includes all forms of honey, corn syrup, high-fructose corn syrup, maple syrup and molasses - is the number one additive in foods. It turns up in the least expected places, like mayonnaise and ketchup. Researchers generally agree that an inborn desire for sweetness begins at birth. One school of thought theories that sugar is addictive and provides a high similar to, though much lesser than, drugs. "No one knows whether one becomes addicted to the pleasure or whether sugar has an effect in the brain level," said a professor of psychiatry. "But behaviorally there are children who become very very dependent on sugar". However, for some people who are anxious and tense, sugar has a positive effect because it promotes a feeling of well-being and of alertness. Though there is a general agreement about this in the scientific community, others disagree. According to them, there can be the opposite effect. "It depends on the persons and on the situations," said Mr. Connors of Duck University. "There are huge individual differences. Though sugar does not cause hyperactivity, uncontrollable behaviour in children, it exacerbates it." One typical scenario is the child who eats candy, cookies and cakes at a birthday party. "People are always telling me about their children who came home from a birth-day party hanging from a chandelier," said Bonnie Kaplan, an associate professor pediatrics and psychology. "Parents blame it on sugar, but birthday parties are very exciting things for children and in addition there are other things besides sugar in the food." Mr. Connors agreed that "stimulus is important," but he added, "It is hard to pin down until you realise it depends on the content of the rest of the meal."

5. Children's way of life renders them open to

- A** heavy use of sugar.
- B** hyperactivity after eating sweets.
- C** eating lots of candies, cookies and cakes.
- D** careful selection of food items served at a birthday party.

Answer: A

6. There is good medical evidence that will worsen their condition if they don't regulate Sugar consumption.

- A adult criminals
- B diabetic patients
- C young sweet-eating children
- D those who have cholesterol

Answer: C

7. We can have more confidence in the statement made by

- A Psychiatrists.
- B Epidemiologists.
- C University professors.
- D Researchers in the field.

Answer: D

8. According to the facts enumerated in the passage, the common man.

- A Can use sugar without any apprehension in as much quantities, as he prefers.
- B can give his healthy child as many chocolates and sweet meats and need not have any fear about the intake of sugar and other carbohydrates.
- C should be wise enough to use his discretion regulated his and his family's intake of sugar, paste and grain.
- D should be wise enough to use his discretion to regulate his and his family's intake of pasta and grain.

Answer: C

Instructions [9 - 11]

Study the following passage carefully to answer the questions that follow each passage:

PASSAGE III:

An expert group has sounded a timely warning on what environmentally destructive tourism will mean to national parks and wildlife sanctuaries and the objectives they are suppose to serve. Given the unique and rare wildlife the country has been endowed with, the rationale for using the resources for attracting tourists

from abroad is unassailable. This necessarily postulates that the flora and the fauna should be protected and conserved. As a matter of fact much of the government's interest in wildlife preservation has to do with the tremendous prospect of tourist traffic on that account. Yet the risk of the revenue-earning motivation overrunning the conservation imperatives is very real, the lure of the coveted foreign exchange that goes with this business only serving to enhancing it several folds. Even with the tourist inflow far below the potential, the pressure of visitors is said to have been already felt on the tiger reserves. With the Government of India's declared intent to boost tourism quite justified for its own reasons, the need for eliminating the risk assumes a greater sense of urgency. The study team has noted that most of the 41 national parks and 165 wildlife sanctuaries surveyed are open to tourists. The less frequented among them may not require special attention immediately in this respect as much as the ones that are major tourists attraction do. These include the Sanjay Gandhi National park in Maharashtra, Nandankanan in Orissa, and Bannerghatta in Karnataka. Over a year ago, the Indian Board for wildlife expressed concern over the looming danger, and decided that the core areas of national parks and sanctuaries should be kept to tally free from biotic disturbances, and the visitors be permitted to view the wildlife only from areas as marked out for the purpose. And now, the expert group has come up with the suggestion that a case by case evaluation be done of the capacity as well as the limitations of all the national parks and wildlife sanctuaries and based on such assessment an area-specific plan for tourist promotion within the safety norms be charted. That this is the most scientific way of going about the job, and that there is no time to lose can be really conceded.

9. Biotic disturbances in the context means

- A** attack from other living things, animals, etc.
- B** the disturbances caused by the natives on seeing the strange foreigners.
- C** the political disturbances causing the close down of the parks.
- D** disturbances caused by the wild animals on seeing the tourists.

Answer: D

10. By using the expression "environmentally destructive tourism," the author means

- A** the preservation of the wild beasts.
- B** destruction of the wildlife and sanctuaries.
- C** destroying the attractive sources of wild animals and birds.
- D** the maintenance of the flora and fauna of the country.

Answer: D

11. To implement the most scientific ways of tourism we should

- A** get industries and talented persons trained in the field.
- B** form a commission and plan out how to implement the suggestions.

- C** send a group of scientists abroad to learn more about tourism.
- D** spend as much finance as possible to better five suggestions made.

Answer: B

Instructions [12 - 15]

Study the following passage carefully to answer the questions that follow each passage:

PASSAGE IV :

We tend to be harsh on our bureaucracy, but nowhere do citizens enjoy dealing with their government. They do it because they have to. But that does not mean that the experience has to be dismal. Now there is a new wind blowing through government departments around the world, which could take some of this pain away. In the next five years it may well transform not only the way public services are delivered but also the fundamental relationship between governments and citizens. Not surprisingly, it is the internet that is behind it. After e-commerce and e-business, the next revolution may be e-governance. Examples abound. The municipality of phoenix, Arizona, allows its citizens to renew their car registrations, pay traffic fines, replace lost identity cards etc. online without having to stand in endless queues in a grubby municipal office. The municipality is happy because it saves \$ 5 a transaction - it costs only # 1.60 to process an online transaction versus \$ 6.60 to do it across the counter. In Chile, people routinely submit their income tax returns over the Internet, which has reduced the time taken and the number of errors and litigation with the tax department. Both tax-payers and the revenue department are happier. The furthest ahead, not surprisingly, is the small, rich and entrepreneurial civil service of Singapore, which allows citizens to do more functions online than any other. As in many private companies, the purchasing and buying of Singapore's government department is now on the Web, and cost benefits come through more competitive bidding, easy access to global suppliers and time saved by online processing of orders. They can post their catalogues on their site, bid for contracts, submit invoices and check their payment status over the Net. The most useful idea for Indian municipalities is Government works, a private sector-run site that collects local taxes, fines and utility bills for 3,600 municipalities across the United States. It is a citizen's site, which also provides information on government jobs, tenders, etc. The most ambitious is the British government, which has targeted to convert 100 per cent of its transactions with its citizens to the internet by 2005. Cynics in India will say, 'Oh, e-government will never work in India. We are so poor and we don't have computers. But they are wrong! There are many experiments afoot in India as well. Citizens in Andhra Pradesh can download government forms and submit applications on the net without having to bribe clerks. In many districts, land records are online and this has created transparency. Similarly, in Dhar district of Madhya Pradesh, villagers have begun to file applications for land transfers and follow their progress on the Net. In seventy villages in Kolhapur and Sangli districts in Maharashtra, Internet booths have come up where farmers can daily check the market rates of agricultural commodities in Martathi, along with data on agricultural schemes, information on crop technology, when to spray and plant their crops and bus and railway timetables. They also find vocational guidance on jobs, applications for ration cards, kerosene/gas burners and land record extracts with details of land ownership. Sam Pitroda's World Tel, Reliance Industries and the Tamil Nadu government are jointly laying 3,000 km of optic fibre cables to create a Tamil Network which will offer ration cards, schools, college and hospital admission forms, land records, and pension records. If successful, World Tel will expand the network to Gujarat, Karnataka and West Bengal. In Kerala, all the villages are getting linked online to the district headquarters, allowing citizens to compare the development priorities of their village with other villages in the State. Many are still sceptical of the real impact because of few Indians have computers. The answer lies in interactive cable TV and in Internet kiosks. Although India has only five million computers and thirty-eight million telephones, it has thirty-four million homes with cable TV and these are growing at eight percent a year. By 2005 most

cable homes will have access to the Internet from many of the 700,000 local STD/PCR booths. Internet usage may be low today, but it is bound to grow rapidly in the future, and e-governance in India may not be a dream.

12. **How can India overcome low penetration of computers for e-governance?**

- A** By manufacturing more computers
- B** Through cable TV and Internet kiosks
- C** By opening more STD/PCR booths
- D** By making the Internet free

Answer: B

13. **Which of the following has not been one of the effects of submitting income tax returns over internet in Chile?**

- A** Reduction of legal cases
- B** Reduction in errors
- C** Increase in transparency
- D** Increase in number of returns

Answer: D

14. **In which direction is the new and blowing?**

- A** More and more interaction of citizens with government through internet.
- B** Outsourcing the work of infrastructure creation for internet.
- C** Increasing the penetration of computers in rural areas.
- D** Integrating e-commerce, e-business and e-governance.

Answer: A

15. **According to the author, e-governance in India**

- A** is a dream and may not succeed.
- B** will not succeed unless more computers are owned by citizens.
- C** has had successful attempts and plans.

D will not work because the model is suited for developed countries.

Answer: C

Instructions [16 - 20]

Critically examine the statements given in italics against each question.

16. *The world is a great book; one who does not travel reads only one page.*
Which statement best elucidates the above?

- A** There are many truths connected with life. Traveling outside will teach us some of them.
- B** If we consider the world as a book we have to read all the pages to understand the contents. One page deals with travel.
- C** Compare the world to a big book that has all the aspects of learning about life. Travelling is one of the aspects that completes our learning.
- D** We can learn many things from our parents, teachers and books. But travelling is a unique means of education that helps us to learn about the world and life.

Answer: D

17. *Rich, not gaudy, apparel proclaimeth the man.*
Which of the following sentences explains the above statement?

- A** Well-dressed men are always impressive and welcome.
- B** We should wear clothes according to the occasion and place because our clothes show what we are.
- C** The kind of clothes we wear always speak about our personality and attitude to life.
- D** We should always dress elegantly to please others and win friends.

Answer: A

18. *Uneasy lies the head that wears the crown.*
What does this mean?

- A** The crown worn by the king does not mean that he is a happy man.
- B** The king wears a crown of gold and gems but his responsibilities make him restless and unhappy.
- C** People who are rich and powerful are generally restless and worried.
- D** Those who are in high positions and wealthy are mostly restless because of their responsibilities, like kings.

Answer: C

19. *The circumstances of birth are irrelevant. What you do with the gift of life, determines what you are.*
Which statement best explains this?

- A** One may be born rich or poor. But how he lives speaks of high real self.
- B** Misfortunes come even if we are born rich. But success in life depends on our own efforts to live a good life.
- C** Birth alone does not contribute to success in life. Life is precious and is a free gift of God and we should make it worth living.
- D** Great qualities are given by God as gifts. We should make good use of them to achieve success in life.

Answer: A

20. *Your mind is like a parachute; it works best when it is open.*
What does the statement imply?

- A** Parachutes are meant for saving lives and you have to open them to do that.
- B** Open mindedness is what is essential. We should share with others our joys, sorrows, fears and hopes to make life meaningful.
- C** We should never close our minds to others. When we share we become happier and contented.
- D** Our minds are like parachutes closed. We must open them to share happiness.

Answer: B

Instructions [21 - 25]

Each sentence against these questions has four underlined parts numbered (1), (2) and (4). Choose the part of the sentence which contains an error.

21. **The energy, intelligence and/(1) compassion of the volunteers/(2) who aided in the search/(3) effort was remarkable/(4).**

- A** 1
- B** 2
- C** 3

D 4

Answer: D

22. Most students/(1) of the college union/(2) rejects the chairman's/(3) demand that they return to classes/(4).

A 1

B 2

C 3

D 4

Answer: C

23. Terrible as it sound/(1), most of us will support a death penalty/(2) system which is perfect in which/(3) only the guilty is executed/(4).

A 1

B 2

C 3

D 4

Answer: A

24. To make drink and drive/(1) to criminal offence/(2), is an approach directed/(3) only to intoxicated drivers/(4).

A 1

B 2

C 3

D 4

Answer: C

25. To make drink and drive/(1) to criminal offence/(2), is an approach directed/(3) only to intoxicated drivers/(4).

A 1

B 2

C 3

D 4

Answer: C

Instructions [26 - 29]

Pick out the most effective pair of words to make the sentence meaningful.

26. **The problem of housing shortagewith the population explosion has also beenby this policy.**

A Projected, discussed

B Threatened, manifested

C Dispensed, acknowledged

D Compounded, addressed

Answer: D

27. **Part of the conclusion in our societies..... from our pursuit of efficiency and economic growth, in the that these are the necessary ingredients of progress.**

A stems, conviction

B emerges, consideration

C drives, evaluation

D extends, planning

Answer: D

28. **The quality of..... between individuals and the organisation for which they work can be..... to the benefit of both parties.**

A life, conceptualised

B service, evaluated

C interaction, improved

D sophistication, developed

Answer: C

29. Handicrafts constitute an important..... of the decentralised sector of India's economy and employment to cover six million artisans.

- A** factor, aims
- B** segment, provides
- C** extension, plants
- D** period, projects

Answer: B

Instructions [30 - 31]

In each of these questions, there are three sentences marked A, B and C. Find the two or three sentences which convey the same meaning.

30. **A. The manager would like you to help him locate the fault.**
B. If you help him locate the fault, the manager would like you.
C. The Manager desires that you should provide him the necessary assistance to locate the fault.

- A** A and B
- B** B and C
- C** A and C
- D** All the three

Answer: C

31. **A. The judge remarked that not all the accused were really guilty.**
B. The judge remarked that some of the accused were guilty while others were not.
C. The judge remarked that all those who are accused include some who are not really guilty.

- A** A and B
- B** B and C
- C** A and C
- D** All the three

Answer: A

Instructions [32 - 35]

Each question has a sentence that has been scrambled and the scrambled parts have been marked A, B, C,

Dand E. Find the correct order of the parts to reconstruct the sentence.

32. **A. in different regions of that federation.**
B. that was Yugoslavia.
C. the fundamental cause has been the very large difference in the quality of life.
D. although the dismemberment of the federation.
E. is seen more as the result of an ethnic conflict.

- A** D,B,E,C,A
B C,E,B,D,A
C B,C,E,D,A
D A, B,D, E, C

Answer: A

33. **A. but there is some merit in it**
B. as distinct from consumption
C. the bifurcation of plan and non-plan funds
D. in so far as it focuses attention on development expenses
E. in the budget is artificial

- A** D,C,A,B,E
B C,D,B,E,A
C C, E, A,B, D
D D,E,A,C,B

Answer: C

34. **A. like the industrialised countries**
B. as if they are to be suffered as relics of a backward past
C. we have specially drawn attention to the non-motorized
D. because they are completely overlooked in transport planning
E. till replaced by faster petroleum fuelled transport

- A** D,E,A,C,B
B C,D,E,B,A
C C,B,A,D,E
D C,D,B,E,A

Answer: B

35. **A:** he was highly sensitive and resentful
B: towards the country or to those
C: when there was even implied discourtesy
D: while he was extremely gentle and tolerant
E: he held in honour

A A, C, D, B, E

B D, A, C, B, E

C E, A, D, C, B

D D, C, B, E, A

Answer: D

Instructions [36 - 40]

For the given word at the top of each table, match the dictionary definition on the left (A, B, C, D) with their corresponding usage on the right (E, F, G, H). Out of the four possibilities given below the table, select the one that has all the definitions and their usage correctly matched.

36. Ground

	Meaning		Usage
A.	A basis for belief action or argument	E.	He was at loss to explaining what grounds he had decided to take up the case
B.	Foundation	F.	He received a thorough grounding in the theoretical aspect before he was allowed to move on
C.	To provide a reason or justification for	G.	He realised he was on a shaky ground when the principal questioned him
D.	To instruct in Fundamental principal	H.	The book has provided the philosophical ground for most of the Nazi policies

A A:F
 B:G
 C:H
 D:E

B A:H
 B:G
 C:E
 D:F

C A:G
 B:H
 C:E
 D:F

- D**
- A:E
 - B:F
 - C:G
 - D:H

Answer: B

37. Mix

	Meaning		Usage
A.	To combine into one mass	E.	She was unable to mix with the crowd as she wastoo self conscious
B.	Associate	F.	The mix looked rather unappetizing to the customer
C.	Confuse	G.	He was mixing the herbs in accordance with the directions given in the book
D.	A product of mixing	H.	He wasrather mixed up about whether he should go to college or not

- A**
- A:F
 - B:H
 - C:E
 - D:G

- B**
- A:G
 - B:E
 - C:H
 - D:H

- C**
- A:F
 - B:E
 - C:H
 - D:G

- D**
- A:F
 - B:E
 - C:G
 - D:H

Answer: C

38. Steep

	Meaning		Usage
A.	Having a very sharp slope	E.	He found the price too steep and decided against buying it
B.	To soak in liquid	F.	She had steeped the clothes in a solution to get rid of the smell
C.	Too great or too high	G.	He was steeped in learning but was surprisingly inarticulate
D.	Saturate	H.	The trekkers were used to steep mountains but this one unnerved them

A
A:E
B:F
C:G
D:H

B
A:G
B:F
C:E
D:H

C
A:H
B:F
C:E
D:G

D
A:H
B:E
C:F
D:G

Answer: C

39. Last

	Meaning		Usage
A.	To continue in existence of operation	E.	The sole was being cut on the last so that it would fit in well
B.	To be enough for needs of	F.	The car lasted much longer than any one had expected
C.	A foot shaped from on which a shoe is required	G.	Last but not the least, thanks was due to the jury which had done such a good job
D.	At the end: in conclusion	H.	The provisions would have lasted them less than a fortnight

A
A:F
B:H
C:E
D:G

B A:E
B:G
C:H
D:H

C A:F
B:E
C:H
D:G

D A:G
B:H
C:E
D:F

Answer: A

40. Drum

	Meaning		Usage
A.	A percussion instrument	E.	The musician wastesting the drum before the show began
B.	to beat a drum	F.	He had drummedit into her that the event was the chanceof a lifetime for her
C.	To sound rhythmically	G.	The musicians were asked to drum to a faster beat
D.	To drive or force by steady effort	H.	The girl was drumming her fingers on the table nervously.

A A:G
B:H
C:E
D:F

B A:E
B:F
C:H
D:G

C A:E
B:G
C:F
D:H

D A:E
B:G
C:H
D:F

Answer: D

Mathematical Skills

41. The number of ways in which four letters of the word MATHEMATICS can be arranged is

- A 136
- B 2454
- C 1680
- D 192

Answer: B

Explanation:

Letters of the word :

M A T H E I C S

M A T

Case 1 : 4 are different (all four words chosen are different, no repetition)

$$= {}^8C_4 \times 4! = 70 \times 24 = 1680$$

Case 2 : 2 alike + 2 different (out of the chosen four letters, two are same, rest two are chosen of the remaining seven)

$$= {}^3C_1 \times {}^7C_2 \times \frac{4!}{2!}$$

$$= 3 \times 21 \times 12 = 756$$

Case 3 : 2 alike + 2 alike (four letters are chosen from M,A,T)

$$= {}^3C_2 \times \frac{4!}{2!2!} = 18$$

$$\therefore \text{Total number of ways} = 1680 + 756 + 18 = 2454$$

=> Ans - (B)

42. A hemispherical bowl is filled to the brim with a beverage. The contents of the bowl are transferred into a cylindrical vessel whose radius is 50% more than its height. If the diameter is same for both the bowl and the cylinder, the volume of the beverage in the cylindrical vessel is

- A $66\left(\frac{2}{3}\right)\%$
- B $78\left(\frac{1}{2}\right)\%$
- C 100%
- D more than 100%

Answer: C

Explanation:

Let height of cylindrical vessel = $h = 2$ cm \Rightarrow Radius of cylinder = 3 cm and radius of hemisphere bowl = 3 cm

$$\Rightarrow \text{Volume of hemispherical bowl} = \frac{2}{3}\pi r^3$$

$$= \frac{2}{3}\pi(3)^3 = 18\pi \text{ cm}^3$$

$$\text{Now, volume of cylindrical vessel} = \pi r^2 h$$

$$= \pi \times (3)^2 \times 2 = 18\pi \text{ cm}^3$$

\therefore Volume of both are same, thus volume of beverage in cylindrical vessel is 100% of hemispherical bowl.

\Rightarrow Ans - (C)

43. The price of copper rose by 25 per cent and then fell by 20 per cent. The price after these changes was

- A 20 per cent greater than the original price
- B 5 per cent greater than the original price
- C the same as the original price
- D 5 per cent less than the original

Answer: C

Explanation:

$$\text{Effective percentage change} = (+25) + (-20) + \left(\frac{25 \times -20}{100}\right)$$

$$= 5 - 5 = 0$$

\therefore The effective % change is zero, the final price will be same as original price.

\Rightarrow Ans - (C)

44. A right circular cone and a right circular cylinder have equal base and equal height. If the radius of the base and the height are in the ratio 5 : 12, then the ratio of the total surface area of the cylinder to that of the cone is

- A 3 : 1
- B 13 : 9
- C 17 : 9
- D 34 : 9

Answer: C

Explanation:

Let radius of both be $r = 5$ and height be $h = 12$ units

$$\Rightarrow \text{Slant height of cone} = l = \sqrt{(5)^2 + (12)^2} = \sqrt{25 + 144}$$

$$\Rightarrow l = \sqrt{169} = 13 \text{ units}$$

$$\Rightarrow \text{Total surface area of cylinder} : \text{Total surface area of cone} = 2\pi r(r + h) : \pi r(r + l)$$

$$= 2r + 2h : r + l$$

$$= \frac{10+24}{5+13} = \frac{34}{18}$$

$$= 17 : 9$$

\Rightarrow Ans - (C)

45. Tom reads at an average rate of 30 pages per hour, while Jan reads at an average rate of 40 pages per hour. If Tom start reading a novel at 4 : 30 and Jan begins reading an identical copy of the same book at 5 : 20, at what time will they be reading the same page

A 9 : 30

B 9 : 00

C 8 : 40

D 7 : 50

Answer: D

Explanation:

Tom's speed = 30 pages/hr and Jan's speed = 40 pages/hr

Now, in 4:30 to 5:20 = 50 minutes, Tom has already read 25 pages.

Let t minutes after 5:20, they will be reading the same page. Now, Tom is 25 pages ahead of Jan, and they are reading the same novel, thus effective speed = $40 - 30 = 10$ pages/hr

$$\Rightarrow \text{Time taken to catch up Tom} = \frac{25}{10} = 2.5 \text{ hours}$$

\therefore At 5:20 + 2:30 = **7:50**, they will be reading the same page.

\Rightarrow Ans - (D)

46. A contract is to be completed in 46 days and 117 men were set to work, each working 8 hours a day. After 33 days $\frac{4}{7}$ of the work is completed. How many additional men may be employed so that the work may be completed in time, each man now working 9 hours a day?

A 80

B 81

C 82

D 83

Answer: B

Explanation:

Using, $\frac{M_1 D_1 H_1}{W_1} = \frac{M_2 D_2 H_2}{W_2}$

Initially, 117 men completed $\frac{4}{7}$ work in 33 days working 8 hours per day. Let x men complete the remaining $\frac{3}{7}$ work in 13 days working 9 hours per day.

$$\Rightarrow \frac{117 \times 33 \times 8}{4} = \frac{x \times 13 \times 9}{3}$$

$$\Rightarrow x = 33 \times 2 \times 3 = 198$$

$$\therefore \text{Additional men required} = 198 - 117 = 81$$

\Rightarrow Ans - (B)

47. The area of a field in the shape of a trapezium measures 1440 m^2 . The perpendicular distance between its parallel sides is 24 m. If the ratio of the parallel sides is 5 : 3, the length of the longer parallel side is

A 45 m

B 60 m

C 75 m

D 12 m

Answer: C

Explanation:

Let lengths of longer parallel side and shorter side be $5x$ and $3x$ m respectively.

$$\Rightarrow \text{Area of trapezium} = \frac{1}{2} \times (\text{height}) \times (\text{sum of parallel sides})$$

$$\Rightarrow \frac{1}{2} \times 24 \times (5x + 3x) = 1440$$

$$\Rightarrow 12 \times 8x = 1440$$

$$\Rightarrow x = \frac{1440}{96} = 15$$

$$\therefore \text{Length of longer parallel side} = 5 \times 15 = 75 \text{ m}$$

\Rightarrow Ans - (C)

48. Ten different letters are given. Words with five letters are formed from these given letters. The number of words which have at least one letter repeated is

A 69760

B 30240

C 99748

D 43929

Answer: A

Explanation:

Number of words in which all the 5 letters are repeated = $10^5 = 100000$

Number of words in which no letter is repeated = $P_5^{10} = 30240$

=> Number of words which have at least one letter repeated = $100000 - 30240 = 69760$

=> Ans - (A)

49. **A man rows to a place 48 km distant and back in 14 hours. He finds that he can row 4 km with the stream in the same time as 3 km against the stream. the rate of the stream is**

A 1 km/hr

B 1.5 km/hr

C 1.8 km/hr

D 3.5 km/hr

Answer: A

Explanation:

Let speed of man = x km/hr and speed of stream = y km/hr

=> Downstream speed = $(x + y)$ km/hr and upstream speed = $(x - y)$ km/hr

According to ques, => $\frac{4}{x+y} = \frac{3}{x-y}$

$$\Rightarrow 4x - 4y = 3x + 3y$$

$$\Rightarrow x = 7y \text{-----(i)}$$

$$\text{Also, } \frac{48}{x+y} + \frac{48}{x-y} = 14$$

$$\Rightarrow \frac{48}{8y} + \frac{48}{6y} = 14$$

$$\Rightarrow 6 + 8 = 14y$$

$$\Rightarrow y = 1$$

∴ Speed of stream = **1 km/hr**

=> Ans - (A)

50. **A shopkeeper purchased 150 identical pieces of calculators at the rate of Rs. 250 each. He spent an amount of Rs. 2500 on transport and packaging. He fixed the labelled price of each calculator at Rs. 320. However, he decided to give a discount of 5% on the labelled price. What is the percentage profit earned by him?**

A 14%

B 15%

C 16%

D 20%

Answer: A

Explanation:

$$\text{Total cost price} = (150 \times 250) + 2500 = \text{Rs. } 40,000$$

$$\text{Total marked price} = 150 \times 320 = \text{Rs. } 48,000$$

$$\text{Total Selling price after 5\% discount} = \frac{95}{100} \times 48,000 = \text{Rs. } 45,600$$

$$\therefore \text{Profit \%} = \frac{(45600 - 40000)}{40000} \times 100$$

$$= \frac{5600}{40000} \times 100 = 14\%$$

=> Ans - (A)

51. If $\log 2 = 0.30103$, find the number of digits in 2^{56} .

A 13

B 15

C 17

D 19

Answer: C

Explanation:

$$\text{Given : } \log 2 = 0.30103$$

$$\text{Let } x = 2^{56}$$

$$\Rightarrow \log(x) = \log(2^{56})$$

$$\Rightarrow \log(x) = 56 \log(2)$$

$$\Rightarrow \log(x) = 56 \times 0.30103 = 16.85$$

If characteristic is 16, then number of digits in 2^{56} is 17

=> Ans - (C)

52. A cricket club has 15 members, of whom only 5 can bowl. If the names of the 15 members are put into a box and 11 drawn at random, then the chance of obtaining an eleven containing at least 3 bowlers is

A $\frac{7}{13}$

B $\frac{6}{13}$

C $\frac{11}{15}$

D $\frac{12}{13}$

Answer: D

Explanation:

Total number of ways of selecting 11 players out of 15 = C_{11}^{15}

$$= \frac{15 \times 14 \times 13 \times 12}{1 \times 2 \times 3 \times 4} = 1365$$

There are 5 bowlers and 10 other players.

Now, favorable ways = (3 bowlers and 8 others) or (4 bowlers and 7 others) or (5 bowlers and 6 others)

$$\Rightarrow \text{Total favorable ways} = (C_3^5 \times C_8^{10}) + (C_4^5 \times C_7^{10}) + (C_5^5 \times C_6^{10})$$

$$= (10 \times 45) + (5 \times 120) + (1 \times 210)$$

$$= 450 + 600 + 210 = 1260$$

$$\therefore \text{Required probability} = \frac{1260}{1365} = \frac{12}{13}$$

\Rightarrow Ans - (D)

53. From the top of a light-house 60 m high with its base at the sea-level, the angle of depression of a boat is 15° . The distance of the boat from the foot of the light-house is

A $(\sqrt{3}-1)(60 \text{ m})$

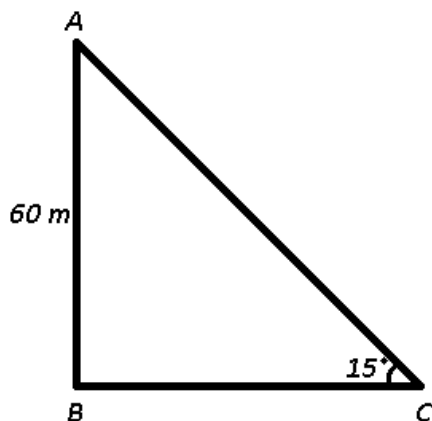
B $(\sqrt{3}+1)(60 \text{ m})$

C $(\sqrt{3}-1)(30 \text{ m})$

D $(\sqrt{3}+1)(30 \text{ m})$

Answer: B

Explanation:



Given : $AB = 60 \text{ m}$ and $\angle ACB = 15^\circ$

To find : $BC = ?$

Solution : Using, $\tan(A - B) = \frac{\tan(A) - \tan(B)}{1 + \tan(A)\tan(B)}$

$$\Rightarrow \tan(15^\circ) = \tan(60^\circ - 45^\circ)$$

$$= \frac{\tan(60^\circ) - \tan(45^\circ)}{1 + \tan(60^\circ)\tan(45^\circ)}$$

$$= \frac{\sqrt{3} - 1}{1 + \sqrt{3}} \text{-----(i)}$$

In right $\triangle ABC$,

$$\Rightarrow \tan(15^\circ) = \frac{AB}{BC}$$

$$\Rightarrow \frac{\sqrt{3} - 1}{\sqrt{3} + 1} = \frac{60}{BC}$$

$$\Rightarrow BC = 60 \left(\frac{\sqrt{3} + 1}{\sqrt{3} - 1} \right) \text{ m}$$

54. How many multiples of 3 are there among the integers 15 to 105 inclusive?

A 30

B 31

C 32

D 33

Answer: B

Explanation:

Multiples of 3 are : 15, 18, 21, ..., 102, 105

The above series is an A.P. with first term = $a = 15$ and common difference = $d = 3$ and last term = $l = 105$

Let number of terms be n

$$\Rightarrow \text{Number of terms} = l = a + (n - 1)d$$

$$\Rightarrow 15 + (n - 1)3 = 105$$

$$\Rightarrow (n - 1)3 = 105 - 15 = 90$$

$$\Rightarrow n - 1 = \frac{90}{3} = 30$$

$$\Rightarrow n = 31$$

\Rightarrow Ans - (B)

55. The traffic lights at three different road crossings change after every 48 sec., 72 sec. and 108 sec., respectively. If they all change simultaneously at 8 : 20 : 00 hours, then at what time will they again change simultaneously ?

- A** 8 : 20 : 08 hrs
- B** 8 : 24 : 10 hrs
- C** 8 : 27 : 12 hrs
- D** 8 : 30 : 15 hrs

Answer: C

Explanation:

L.C.M. (48,72,108) = 432

Thus, they will all change simultaneously after 432 seconds = 7 min 12 seconds

=> Time they will change again = 8:20:00 + 00:07:12 = 8:27:12 hours

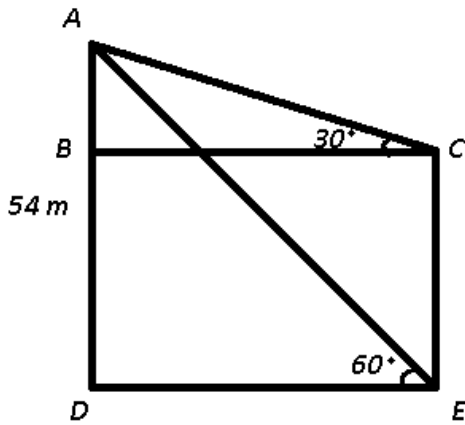
=> Ans - (C)

56. **There are two temples, one on each bank of a river, just opposite to each other. One temple is 54 m high. From the top of this temple, the angles of depression of the top and the foot of the other temple are 30° and 60° respectively. Find the width of the river and the difference of heights of the temples.**

- A** 30.16 m width, 16 m height
- B** 31.14 m width, 18 m height
- C** 32.18 m width, 14 m height
- D** 28.20 m width, 22 m height

Answer: B

Explanation:



It is given that Temple AD = 54 m and

Solution : In right $\triangle ADE$,

$$\Rightarrow \tan(60^\circ) = \frac{AD}{DE}$$

$$\Rightarrow \sqrt{3} = \frac{54}{DE}$$

$$\Rightarrow DE = \frac{54}{\sqrt{3}}$$

$$\Rightarrow DE = 18\sqrt{3} \approx 31.18 \text{ m width}$$

Similarly, in right $\triangle ABC$,

$$\Rightarrow \tan(30^\circ) = \frac{AB}{BC}$$

$$\Rightarrow \frac{1}{\sqrt{3}} = \frac{AB}{18\sqrt{3}}$$

$$\Rightarrow AB = 18$$

\therefore Height of temple = CE = $54 - 18 = 36$ m height

Difference of heights = $54 - 36 = 18$

57. A hollow sphere of internal and external diameters 4 cm and 8 cm respectively is melted into a cone of base diameter 8 cm. The height of the cone is

A 12

B 14

C 15

D 18

Answer: B

Explanation:

Internal and External radius of sphere are 2 cm and 4 cm respectively, and radius of cone = 4 cm.

Let height of cone = h cm

Volume of hollow sphere = Volume of cone

$$\Rightarrow \frac{4}{3}\pi \times [(r_1)^3 - (r_2)^3] = \frac{1}{3}\pi R^2 h$$

$$\Rightarrow 4 \times (4^3 - 2^3) = (4)^2 \times h$$

$$\Rightarrow h = \frac{4 \times 56}{16}$$

$$\Rightarrow h = 14 \text{ cm}$$

\Rightarrow Ans - (B)

58. A train 108 m long moving at a speed of 50 km/hr crosses a train 112 m long coming from the opposite direction in 6 seconds. The speed of the second train is

A 48 km/hr

B 54 km/hr

C 66 km/hr

D 82 km/hr

Answer: D

Explanation:

Sum of lengths of both trains = $108 + 112 = 220 \text{ m}$

Speed of first train = 50 km/hr and let speed of second train = x km/hr

$$\Rightarrow \text{Relative speeds of both trains (in m/s)} = (50 + x) \times \frac{5}{18}$$

$$\text{Using, Speed} = \frac{5}{18}(50 + x) = \frac{220}{6}$$

$$\Rightarrow 50 + x = \frac{220}{6} \times \frac{18}{5}$$

$$\Rightarrow 50 + x = 132$$

$$\Rightarrow x = 132 - 50 = 82$$

\therefore Speed of second train = **82 km/hr**

\Rightarrow Ans - (D)

59. George takes 8 hours to copy a 50 page manuscript while Sonya can copy the same manuscript in 6 hours. How many hours would it take them to copy a 100 page manuscript, if they work together?

A $6\frac{6}{7}$

B 9

C $9\frac{5}{7}$

D 14

Answer: A

Explanation:

George takes 8 hours to copy a 50 page manuscript, \Rightarrow Efficiency of George = $\frac{50}{8} = \frac{25}{4}$ pages/hr

Similarly, Sonya's efficiency = $\frac{50}{6} = \frac{25}{3}$ pages/hr

\Rightarrow Work done by them working together in 1 hr = $\frac{25}{3} + \frac{25}{4} = \frac{175}{12}$

\therefore Time taken when they work together to finish a 100 page manuscript = $\frac{100}{\frac{175}{12}}$

$= 100 \times \frac{12}{175} = \frac{48}{7} = 6\frac{6}{7}$ hours

\Rightarrow Ans - (A)

60. **Rajan got married 8 years ago. His present age is $\frac{6}{5}$ times his age at the time of his marriage. Rajan's sister was 10 years younger to him at the time of his marriage. The age of Rajan's sister is**

- A** 32 years
- B** 36 years
- C** 38 years
- D** 40 years

Answer: C

Explanation:

Let Rajan's age when he was married be $5x$ years, \Rightarrow Rajan's present age = $6x$ years

According to ques, $\Rightarrow 5x + 8 = 6x$

$\Rightarrow x = 8$

\Rightarrow Rajan's sister's age at the time of his marriage = $5x - 10$

$= 5(8) - 10 = 30$ years

\therefore Rajan's sister's present age (8 years after marriage) = $30 + 8 = 38$ years

\Rightarrow Ans - (C)

61. **Shekhar started a business investing Rs. 25,000 in 1999. In 2000, he invested an additional amount of Rs. 10,000 and Rajeev joined him with an amount of Rs. 35,000. In 2001, Shekhar invested another additional amount of Rs. 10,000 and then Jatin joined them with an amount of Rs. 35,000. What will be Rajeev's share in the profit of Rs. 1,50,000 earned at the end of 3 years from the start of the business in 1999?**

- A** Rs.45000
- B** Rs.50000
- C** Rs.70000
- D** Rs.75000

Answer: B

Explanation:

Shekhar invested Rs. 25,000 for 1st year, Rs. 35,000 for 2nd year and Rs. 45,000 for 3rd year. Rajeev invested Rs. 35,000 for 2 years and Jatin invested Rs. 35,000 for 1 year

$$\Rightarrow \text{Ratio of profits earned by Shekhar, Rajeev and Jatin respectively} = (25000 \times 1 + 35000 \times 1 + 45000 \times 1) : (35000 \times 2) : (35000 \times 1)$$

$$= (25 + 35 + 45) : (70) : (35)$$

$$= 105 : 70 : 35 = 3 : 2 : 1$$

$$\therefore \text{Rajeev's share in total profit of Rs. 1,50,000} = \frac{2}{(3+2+1)} \times 1,50,000$$

$$= 2 \times 25000 = \text{Rs. } 50,000$$

\Rightarrow Ans - (B)

62. A person lent out a certain sum on simple interest and the same sum on compound interest at a certain rate of interest per annum. He noticed that the ratio between the difference of compound interest and simple interest of 3 years and that of 2 years is 25 : 8. The rate of interest per annum is

A 10%

B 11%

C 12%

D $12\frac{1}{2}\%$

Answer: D

Explanation:

Let principal sum be Rs. P and rate of interest = $r\%$

$$\text{Difference between S.I. and C.I. for 2 years} = \frac{Pr^2}{100^2} \text{ and for 3 years} = \frac{Pr^2}{100^2} \left(3 + \frac{r}{100}\right)$$

$$\Rightarrow \text{Ratio} = \left[\frac{Pr^2}{100^2} \left(3 + \frac{r}{100}\right) \right] : \left[\frac{Pr^2}{100^2} \right] = 25 : 8$$

$$= \frac{3 + \frac{r}{100}}{1} = \frac{25}{8}$$

$$\Rightarrow \frac{r}{100} = \frac{25}{8} - 3$$

$$\Rightarrow \frac{r}{100} = \frac{25-24}{8} = \frac{1}{8}$$

$$\Rightarrow r = \frac{100}{8} = 12\frac{1}{2}\%$$

\Rightarrow Ans - (D)

63. An empty fuel tank of a car was filled with A type petrol. When the tank was half-empty, it was filled with B type petrol. Again when the tank was half-empty, it was filled with A type petrol. When the tank was half-empty again, it was filled with B type petrol. What is the percentage of A type petrol at present in the tank ?

- A** 33.5%
- B** 37.5%
- C** 40%
- D** 50%

Answer: B

Explanation:

Let the capacity of the tank be 100 litres

Initially: A type petrol = 100 litres

After first operation:

$$\text{A type petrol} = \frac{100}{2} = 50 \text{ litres}$$

B type petrol = 50 litres

After second operation:

$$\text{A type petrol} = 50 + \frac{50}{2} = 75 \text{ litres}$$

$$\text{B type petrol} = \frac{50}{2} = 25 \text{ litres}$$

After third operation:

$$\text{A type petrol} = \frac{75}{2} = 37.5 \text{ litres}$$

$$\text{B type petrol} = 50 + \frac{25}{2} = 62.5 \text{ litres}$$

∴ Required percentage = **37.5%**

=> Ans - (B)

64. **A and are two alloys of gold and copper prepared by mixing metals in the ratio 7 : 2 and 7 : 11 respectively. If equal quantities of the alloys are melted to form a third alloy C, the ratio of gold and copper in C will be**

- A** 5 : 7
- B** 5 : 9
- C** 7 : 5
- D** 9 : 5

Answer: C

Explanation:

Let quantity of each be L.C.M.(9,18) = 18 units

=> Gold in alloy A = 14 units and copper in alloy A = 4 units

Similarly, gold in alloy B = 7 units and copper in alloy B = 11 units

$$\therefore \text{Ratio of gold and copper in alloy C} = \frac{(14+7)}{(4+11)}$$

$$= \frac{21}{15} = 7 : 5$$

=> Ans - (C)

65. The average age of students of a class is 15.8 years. The average age of boys in the class is 16.4 years and that of the girls is 15.4 years. The ratio of the number of boys to the number of girls in the class is

A 1 : 2

B 2 : 3

C 3 : 4

D 3 : 5

Answer: B

Explanation:

Let number of boys be x and number of girls be y

According to ques,

$$\Rightarrow 16.4x + 15.4y = 15.8(x + y)$$

$$\Rightarrow 16.4x + 15.4y = 15.8x + 15.8y$$

$$\Rightarrow 0.6x = 0.4y$$

$$\Rightarrow \frac{x}{y} = \frac{0.4}{0.6} = 2 : 3$$

=> Ans - (B)

66. Bombay Express left Delhi for Bombay at 14.30 hrs, travelling at a speed of 60 kmph and Rajdhani Express left Delhi for Bombay on the same day at 16.30 hrs. travelling at speed of 80 kmph. How far away from Delhi will the two trains meet?

A 120 km

B 360 km

C 480 km

D 500 km

Answer: C

Explanation:

Distance travelled by Bombay Express in 2 hours = $60 \times 2 = 120$ km

Thus, at 16.30 hrs, the two trains are at a distance of 120 km from each other.

Travelling in same direction, relative speed = $80 - 60 = 20$ km/hr

$$\Rightarrow \text{Time taken by the trains to meet} = \frac{120}{20} = 6 \text{ hours}$$

∴ Distance from Delhi when the trains meet = $80 \times 6 = 480$ km

[Note :- If we multiply the speed of Bombay Express, i.e. 60 km/hr, we need to keep in mind that it has already travelled 120 km (for 2 hours) in the beginning.]

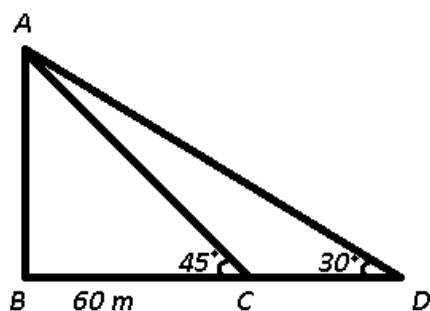
=> Ans - (C)

67. A man is watching from the top of a tower a boat speeding away from the tower. The boat makes an angle of depression of 45° with the man's eye when at a distance of 60 meters from the tower. After 5 seconds, the angle of depression become 30° . What is the approximate speed of the boat, assuming that it is running in still water?

- A** 32 kmph
B 36 kmph
C 38 kmph
D 40 kmph

Answer: A

Explanation:



Let AB be the tower and BC = 60 m. It takes 5 seconds for the boat to go from C to point D.

In right $\triangle ABC$,

$$\Rightarrow \tan(45^\circ) = \frac{AB}{BC}$$

$$\Rightarrow 1 = \frac{AB}{60}$$

$$\Rightarrow AB = 60 \text{ m} \text{ -----(i)}$$

Similarly, in right $\triangle ABD$,

$$\Rightarrow \tan(30^\circ) = \frac{AB}{BD}$$

$$\Rightarrow \frac{1}{\sqrt{3}} = \frac{60}{BD}$$

$$\Rightarrow BD = 60\sqrt{3} \text{ m} \text{ -----(ii)}$$

$$\text{Thus, } CD = 60\sqrt{3} - 60 = 60(\sqrt{3} - 1) \text{ m}$$

$$\text{Using speed} = \text{distance/time, } \Rightarrow \text{Speed of boat} = \frac{60(\sqrt{3}-1)}{5}$$

$$= 12(\sqrt{3} - 1) = 12 \times 0.732 = 8.784 \text{ m/s}$$

$$\therefore \text{Speed of boat (in km/hr)} = 8.784 \times 3.6 \approx 32 \text{ km/hr}$$

=> Ans - (A)

68. Simplify : $\left[\log_{xy}^{1}(xyz) + \log_{yz}^{1}(xyz) + \log_{zx}^{1}(xyz) \right]$

A 4

B 5

C 3

D 2

Answer: D

Explanation:

Expression : $\left[\log_{xy}^{1}(xyz) + \log_{yz}^{1}(xyz) + \log_{zx}^{1}(xyz) \right]$

Using, $\log_m(n) = \frac{1}{\log_n(m)}$ and $\log(mn) = \log(m) + \log(n)$

$$= \log_{xyz}(xy) + \log_{xyz}(yz) + \log_{xyz}(zx)$$

$$= \log_{xyz}(xy \times yz \times zx)$$

$$= \log_{xyz}(xyz)^2$$

$$= 2 \log_{xyz}(xyz) \quad [\log_m(m) = 1]$$

$$= 2 \times 1 = 2$$

=> Ans - (D)

69. A circle and a rectangle have the same perimeter. The sides of the rectangle are 18 cm and 26 cm.
What is the area of the circle?

A 88 cm^2

B 154 cm^2

C 1250 cm^2

D 616 cm^2

Answer: D

Explanation:

Sides of rectangle are $l = 26 \text{ cm}$ and $b = 18 \text{ cm}$

$$\Rightarrow \text{Perimeter of rectangle} = 2 \times (26 + 18) = 2 \times 44 = 88 \text{ cm}$$

Let radius of circle be $r \text{ cm}$

$$\Rightarrow \text{Circumference of circle} = 2\pi r = 88$$

$$= 2 \times \frac{22}{7} \times r = 88$$

$$\Rightarrow r = 88 \times \frac{7}{44} = 14 \text{ cm}$$

$$\therefore \text{Area of circle} = \pi r^2$$

$$= \frac{22}{7} \times 14 \times 14 = 616 \text{ cm}^2$$

\Rightarrow Ans - (D)

70. The banker's discount on a certain sum due 2 years hence is $\frac{11}{10}$ of the true discount. The rate percentis

A 11%

B 10%

C 5%

D 5.5%

Answer: C

Explanation:

Let true discount T.D. be Re 1

$$\Rightarrow \text{B.D.} = \text{Rs. } \frac{11}{10} = 1.10$$

$$\therefore \text{Sum} = \frac{(1.10 \times 1)}{(1.10 - 1)} = \text{Rs. } 11$$

\Rightarrow S.I. on Rs. 11 for 2 years is Rs. 1.10

Let rate of interest be $r\%$

$$\Rightarrow \frac{11 \times r \times 2}{100} = 1.1$$

$$\Rightarrow r = \frac{110}{22} = 5\%$$

\Rightarrow Ans - (C)

71. A cistern has two taps which fill it in 12 minutes and 15 minutes respectively. There is also a waste pipe in the cistern. When all the three are opened, the empty cistern is full in 20 minutes. How long will the waste pipe take to empty the full cistern?

A 5 minutes

B 10 minutes

C 15 minutes

D 20 minutes

Answer: B

Explanation:

Let time taken by waste pipe to empty the cistern be t minutes

$$\Rightarrow \frac{1}{12} + \frac{1}{15} - \frac{1}{t} = \frac{1}{20}$$

$$\Rightarrow \frac{1}{t} = \frac{1}{12} + \frac{1}{15} - \frac{1}{20}$$

$$\Rightarrow \frac{1}{t} = \frac{5+4-3}{60}$$

$$\Rightarrow \frac{1}{t} = \frac{6}{60} = \frac{1}{10}$$

∴ The waste pipe takes **10 min** to empty the cistern.

⇒ Ans - (B)

72. **A spherical ball of lead, 3 cm in diameter is melted and recast into three spherical balls. The diameter of two of these are 1.5 cm and 2 cm respectively. The diameter of the third ball is**

A 2.5 cm

B 2.66 cm

C 3 cm

D 3.5 cm

Answer: A

Explanation:

Let radius of third ball be r cm

Volume of a sphere = $\frac{4}{3}\pi R^3$

$$\Rightarrow \left[\frac{4}{3} \times \pi \times \left(\frac{3}{2}\right)^3 \right] + \left[\frac{4}{3} \times \pi \times (1)^3 \right] + \left[\frac{4}{3} \times \pi \times r^3 \right] = \frac{4}{3} \times \pi \times \left(\frac{3}{2}\right)^3$$

$$\Rightarrow \frac{27}{64} + 1 + r^3 = \frac{27}{8}$$

$$\Rightarrow r^3 = \frac{27}{8} - \frac{27}{64} - 1$$

$$\Rightarrow r^3 = \frac{216-27-64}{64}$$

$$\Rightarrow r = \sqrt[3]{\frac{125}{64}} = \frac{5}{4}$$

∴ Diameter of third ball = $2 \times \frac{5}{4} = 2.5$ cm

⇒ Ans - (A)

73. **A man buys a watch for Rs. 1950 in cash and sells it for Rs. 2200 at a credit of 1 year. If the rate of interest is 10% per annum, the man.**

A gains Rs. 55

B gains Rs. 50

C Loses Rs. 30

D gains Rs. 30

Answer: A

Explanation:

Principal sum = Rs. 1950 and rate of interest = 10%

$$\Rightarrow \text{Amount after 1 year} = 1950 + \frac{10}{100} \times 1950$$

$$= 1950 + 195 = \text{Rs. } 2145$$

But, the man sold it for Rs. 2200, \Rightarrow Profit earned = $2200 - 2145 = \text{Rs. } 55$

\Rightarrow Ans - (A)

74. A pole 50 m high stands on a building 250 m high. To an observer at a height of 300 m, the building and the pole subtend equal angles. The distance of the observer from the top of the pole will be

A 25 m

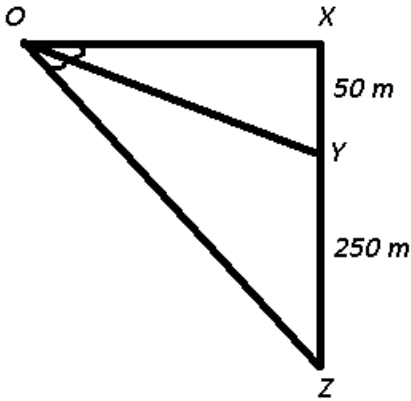
B 50 m

C $25\sqrt{3}$ m

D $25\sqrt{6}$ m

Answer: D

Explanation:



Given : Let O be the observer and XY is the pole = 50 m and YZ is the building = 250 m. $\angle XOY = \angle YOZ = \theta$

To find : $XO = x = ?$

Solution : In right $\triangle XOY$,

$$\Rightarrow \tan(\angle XOY) = \frac{YX}{XO}$$

$$\Rightarrow \tan\theta = \frac{50}{x} \text{ -----(i)}$$

In right $\triangle XOZ$,

$$\Rightarrow \tan(\angle XOZ) = \frac{ZX}{XO}$$

$$\Rightarrow \tan(2\theta) = \frac{300}{x}$$

$$\Rightarrow \frac{2 \tan \theta}{1 - \tan^2 \theta} = \frac{300}{x}$$

Substituting value from equation (i), we get :

$$\Rightarrow \frac{2 \times 50/x}{1 - (50/x)^2} = \frac{300}{x}$$

$$\Rightarrow 1 - \left(\frac{50}{x}\right)^2 = \frac{1}{3}$$

$$\Rightarrow \left(\frac{50}{x}\right)^2 = 1 - \frac{1}{3} = \frac{2}{3}$$

$$\Rightarrow \frac{50}{x} = \sqrt{\frac{2}{3}}$$

$$\Rightarrow x = \frac{50\sqrt{3}}{\sqrt{2}}$$

$$\Rightarrow x = 25\sqrt{6} \text{ m}$$

\Rightarrow Ans - (D)

75. A man and his wife appear in an interview of two vacancies in the same post. The probability of the husband's selections $\frac{1}{7}$ and the probability of the wife's selections $\frac{1}{5}$. What is the probability that only one of them is selected?

A $\frac{4}{5}$

B $\frac{2}{7}$

C $\frac{8}{15}$

D $\frac{4}{7}$

Answer: B

Explanation:

Let A = Event that husband is selected and B = Event that wife is selected.

$$\Rightarrow P(A) = \frac{1}{7} \text{ and } P(\bar{A}) = 1 - \frac{1}{7} = \frac{6}{7}$$

$$\text{Similarly, } P(B) = \frac{1}{5} \text{ and } P(\bar{B}) = 1 - \frac{1}{5} = \frac{4}{5}$$

$$\therefore \text{Probability that only one is selected} = P(A) \times P(\bar{B}) + P(\bar{A}) \times P(B)$$

$$= \left(\frac{1}{7} \times \frac{4}{5}\right) + \left(\frac{6}{7} \times \frac{1}{5}\right)$$

$$= \frac{4}{35} + \frac{6}{35}$$

$$= \frac{10}{35} = \frac{2}{7}$$

76. A container contains 40 liters of milk. From this container 4 liters of milk was taken out and replaced by water. This process was repeated further two times. How much milk is now contained by the container?

- A** 26.34 liters
- B** 27.36 liters
- C** 28 liters
- D** 29.16 liters

Answer: D

Explanation:

If a container contains x units of a liquid from which y units are taken out and replaced by water. After n operations, quantity of pure liquid

$$= x \left(1 - \frac{y}{x}\right)^n$$

$$\therefore \text{Milk in the container now} = 40 \left(1 - \frac{4}{40}\right)^3$$

$$= 40 \left(\frac{9}{10}\right)^3$$

$$= 40 \times \frac{729}{1000}$$

$$= \frac{729}{25} = 29.16 \text{ liters}$$

=> Ans - (D)

77. **A garrison of 3300 men had provisions for 32 days, when given at the rate of 850 gms per head. At the end of 7 days a reinforcement arrives and it was found that the provisions will last 17 days more, when given at the rate of 825 gms per head. What is the strength of the reinforcement?**

- A** 1500
- B** 1700
- C** 1800
- D** 1600

Answer: B

Explanation:

Using, $M_1 D_1 H_1 = M_2 D_2 H_2$

3300 men having 850 gm per head have provisions for = $32 - 7 = 25$ days

Let total men after reinforcement be x

$$\Rightarrow 3300 \times 25 \times 850 = x \times 17 \times 825$$

$$\Rightarrow x = \frac{3300}{825} \times \frac{850}{17} \times 25$$

$$\Rightarrow x = 4 \times 50 \times 25 = 5000$$

$$\therefore \text{Strength of reinforcement} = 5000 - 3300 = 1700$$

=> Ans - (B)

78. A man sells Rs. 5000, 12% stock at 156 and invests the proceeds partly in 8% stock at 90 and the balance in 9% stock at 108. He thereby increase his income by Rs. 70. How much of the proceeds were invested in each stock?

- A Rs. 3600 in 8% stock and Rs. 4200 in 9% stock
- B Rs. 3400 in 8% stock and Rs. 4000 in 9% stock
- C Rs. 7200 in 8% stock and Rs. 7800 in 9% stock
- D Rs. 4800 in 8% stock and Rs. 5400 in 9% stock

Answer: A

Explanation:

Selling price of Rs. 5000 stock = $5000 \times \frac{156}{100} = \text{Rs. } 7800$

Income from stock = $\frac{12}{100} \times 5000 = \text{Rs. } 600$

Now, let investment in 8% stock be Rs. x and 9% stock be Rs. $(7800 - x)$

According to ques,

$$\Rightarrow \frac{8}{90} \times x + \frac{9}{108} \times (7800 - x) = 600 + 70$$

$$\Rightarrow \frac{8x}{90} + 650 - \frac{x}{12} = 670$$

$$\Rightarrow \frac{16x - 15x}{180} = 20$$

$$\Rightarrow x = 3600$$

\therefore Amount invested in 8% stock = Rs. 3600 and in 9% stock = Rs. 4200

\Rightarrow Ans - (A)

79. If an 'anglet' is defined as 1 per cent of 1 degree, then how many anglets are there in a circle?

- A 0.36
- B 3.6
- C 360
- D 36000

Answer: D

Explanation:

1 anglet = 1% of 1°

$\Rightarrow 100 \text{ anglets} = 1^\circ$

$\therefore 360^\circ = 360 \times 100 = 36000 \text{ anglets}$

\Rightarrow Ans - (D)

80. In how many different ways can the letters of the word MATHEMATICS be arranged so that the vowels always come together?

- A 100080
- B 4989600
- C 120960
- D None of these

Answer: C

Explanation:

In the word 'MATHEMATICS', we treat the vowels AEAI as one letter. Thus, we have MTHMTCS (AEAI)

Now, we have to arrange 8 letters, out of which M occurs twice, T occurs twice and the rest are different.

=> Number of ways of arranging these letters = $\frac{8!}{(2!)(2!)} = 10080$

Now, AEAI has 4 letters in which A occurs 2 times and the rest are different.

=> Number of ways of arranging these letters = $\frac{4!}{2!} = 12$

∴ Required number of words = $10080 \times 12 = 120960$

=> Ans - (C)

Data Analysis & Sufficiency

Instructions [81 - 86]

Each of these questions has a problem and two statements numbered I and II given certain information. Decide if the information given in the statements is sufficient for answering the problem. Mark the answer as

81. Why haven't Indian scientists made much head way in any field after independence?

I. Indian scientists are not provided with up-to-date laboratory facilities.

II. Indian scientists regard that knowledge of western science advances in enough for a nation to advances.

- A if the data in statement I alone are sufficient to answer the question;
- B if the data either in I or II alone are sufficient to answer the question;
- C if the data even in both the statement together are not sufficient to answer the question;
- D if the data in both the statements I and II are needed to answer the question.

Answer: A

82. **There were 54 members of a cooperative society. How many members attended the recent Annual General Meeting (AGM)?**

I. Normally two-third members attend the meeting.

II. One-sixth of the members were out of the town on AGM's day.

- A** if the data in statement I alone are sufficient to answer the question;
- B** if the data either in I or II alone are sufficient to answer the question;
- C** if the data even in both the statement together are not sufficient to answer the question;
- D** if the data in both the statements I and II are needed to answer the question.

Answer: C

Explanation:

The first statement indicates the usual approximate figure, and not the actual number of people who attended the meeting, hence it is insufficient.

Similarly, the second statement states that 9 members were out of town, but of the remaining, we still do not know how many attended the meeting. Even after combining both statements, we cannot find the number of people who attended the meeting, hence both statements together are not sufficient.

=> Ans - (C)

83. **Is cigarette smoking injurious to health ?**

I. Non-smokers have a longer life-span.

II. the incidence of heart attacks is more in smokers.

- A** if the data in statement I alone are sufficient to answer the question;
- B** if the data either in I or II alone are sufficient to answer the question;
- C** if the data even in both the statement together are not sufficient to answer the question;
- D** if the data in both the statements I and II are needed to answer the question.

Answer: C

84. **Does television viewing affect the performance of students?**

I. The number of failures in Class XII is more this year.

II. Television watching is harmful to the eyes.

- A** if the data in statement I alone are sufficient to answer the question;
- B** if the data either in I or II alone are sufficient to answer the question;
- C** if the data even in both the statement together are not sufficient to answer the question;
- D** if the data in both the statements I and II are needed to answer the question.

Answer: C

Explanation:

The first statement implies that more students failed in class XII this year, but it did not mention the reason behind as watching TV, the second statement only states that watching TV is harmful to the eyes, and nothing about its effects on students.

Hence, even both statement together are not sufficient to answer the question.

=> Ans - (C)

85. **When will the price of the air coolers be the lowest?**

I. From July till January and companies offer 15 per cent.

II. During November, the prices will be 20 per cent less than off season prices and 30 per cent less than February to June prices.

- A** if the data in statement I alone are sufficient to answer the question;
- B** if the data either in I or II alone are sufficient to answer the question;
- C** if the data even in both the statement together are not sufficient to answer the question;
- D** if the data in both the statements I and II are needed to answer the question.

Answer: D

86. **Can a democratic system operate without effective opposition?**

I. The opposition ts indispensable.

II. A good statesman always learns more from his opponents than from his fervent supporters.

- A** if the data in statement I alone are sufficient to answer the question;
- B** if the data either in I or II alone are sufficient to answer the question;
- C** if the data even in both the statement together are not sufficient to answer the question;
- D** if the data in both the statements I and II are needed to answer the question.

Answer: B

Instructions [87 - 91]

Study the following table to answer these Questions?

Expenditure of a company(in lakh rupees) per annum over the given years

Items of expenditure

Year	Salary	Fuel and transport	Bonus	Interest on loans	Taxes
1998	288	98	3.00	23.4	83
1999	342	112	2.52	32.5	108
2000	324	101	3.84	41.6	74
2001	336	133	3.68	36.4	88
2002	420	142	3.96	49.4	98

87. The ratio between the total expenditure on Taxes for all the years and the total expenditure on Fuel and Transport for all the years respectively is approximately

- A 4 : 7
- B 10 : 13
- C 15 : 18
- D 5 : 8

Answer: B

Explanation:

Total expenditure on Taxes for all the years (in lakhs) = $83+108+74+88+98 = 451$

Total expenditure on Fuel and Transport for all the years (in lakhs) = $98+112+101+133+142 = 586$

=> Required ratio = $\frac{451}{586} \approx 10 : 13$

=> Ans - (B)

88. The total expenditure of the company over these items during the year 2000 is

- A Rs. 544.44 lakhs
- B Rs. 501.11 lakhs
- C Rs. 446.46 lakhs
- D Rs. 478.87 lakhs

Answer: A

Explanation:

The total expenditure of the company over these items during the year 2000

= $324 + 101 + 3.84 + 41.6 + 74 = 544.44$ lakhs

=> Ans - (A)

89. What is the average amount of interest per year which the company had to pay during this period?

- A Rs. 32.43 lakhs
- B Rs. 33.72 lakhs
- C Rs. 34.18 lakhs
- D Rs. 36.66 lakhs

Answer: D

Explanation:

Total interest paid during this period = $23.4+32.5+41.6+36.4+49.4 = 183.3$ lakhs

=> Required average = $\frac{183.3}{5} = 36.66$ lakhs

=> Ans - (D)

90. **Total expenditure on all these items in 1998 was approximately what per cent of the total expenditure in 2002?**

A 62%

B 66%

C 69%

D 71%

Answer: C

Explanation:

Total expenditure on all these items in 1998 = $288+98+3+23.4+83 = 495.4$

Total expenditure on all these items in 2002 = $420+142+3.96+49.4+98 = 713.36$

=> Required % = $\frac{495.4}{713.36} \times 100 \approx 69\%$

=> Ans - (C)

91. **The total amount of bonus paid by the company during the given period is approximately what per cent of the total amount of salary paid during this period?**

A 0.1%

B 0.5%

C 1%

D 1.25%

Answer: C

Explanation:

Total bonus paid (in lakhs) = $3+2.52+3.84+3.68+3.96 = 170$

Total salary paid (in lakhs) = $288+342+324+336+420 = 1710$

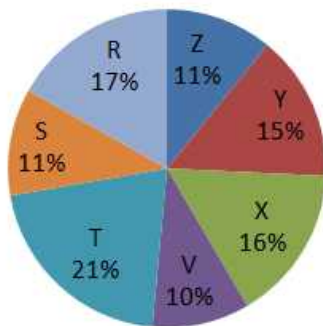
=> Required % = $\frac{170}{1710} \times 100 \approx 1\%$

=> Ans - (C)

Instructions [92 - 96]

Study the following pie-chart and the table to answer these questions :

Proportion of Population of seven villages in 1997



Village	% population below poverty line
X	38
Y	52
Z	42
R	51
S	49
T	46
V	58

92. Find the population of villages S if the population of village X below poverty line in 1997 is 12160.

- A 18500
- B 20500
- C 22000
- D 26000

Answer: C

93. The ratio of population of village T below poverty line to that of village Z below poverty line in 1997 is

- A 11 : 23
- B 13 : 11
- C 23 : 11
- D 11 : 13

Answer: C

94. If the population of village R in 1997 is 32000, then what will be the population of village Y below poverty line in that year?

- A 14100
- B 15600

C 16500

D 17000

Answer: B

95. If in 1998, the population of villages Y and V increase by 10% each and the percentage of population below poverty line remains unchanged for all the villages, then find the population of village V below poverty line in 1998, given that the population of village Y in 1997 was 30000.

A 11250

B 12760

C 13140

D 13780

Answer: B

96. If in 1999, the population of village R increase by 10% while that of village Z reduces by 5% compared to that in 1997 and the percentage of population below poverty line remains unchanged for all the village, then find the approximate ratio of population of village R below poverty line to the ratio of population of village Z below poverty line for the year 1999.

A 2 : 1

B 3 : 1

C 4 : 3

D 5 : 4

Answer: A

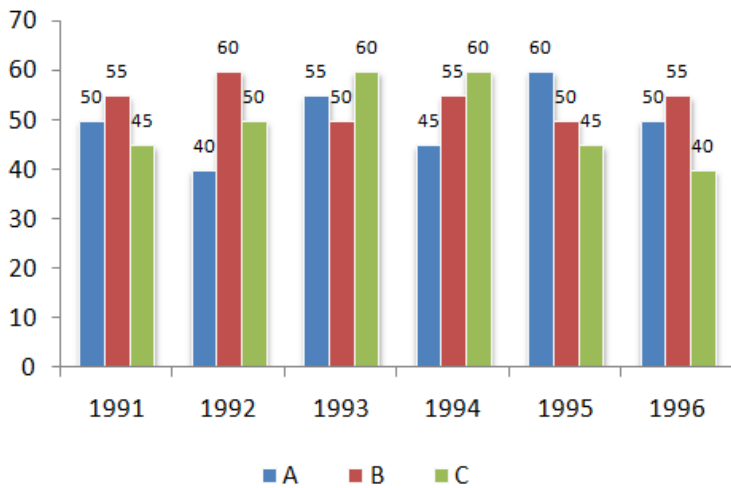
Explanation:

R=16%

Instructions [97 - 101]

Study the following graph carefully to answer the question

Production Of Paper (in lakh tonnes) By 3 Different Companies A, B and C Over The Years



97. What is the difference between the production of company C in 1991 and the production of company A in 1996?

- A 50000 tonnes
- B 50000000 tonnes
- C 5000000 tonnes
- D 500000 tonnes

Answer: D

Explanation:

Production of company C in 1991 = 45,00,000 tonnes

Production of company A in 1996 = 50,00,000 tonnes

=> Difference = 50,00,000-45,00,000 = 5,00,000 tonnes

=> Ans - (D)

98. What is the percentage increase in production of company A from 1992 to 1993?

- A 37.5
- B 38.25
- C 35
- D 36

Answer: A

Explanation:

Percentage increase in production of company A from 1992 to 1993

$$= \frac{(55-40)}{40} \times 100$$

$$= \frac{75}{2} = 37.5\%$$

=> Ans - (A)

99. For which of the following years was the percentage of rise/fall in production from the previous year the maximum for company B?

A 1992

B 1993

C 1996

D 1995

Answer: B

Explanation:

Percentage of rise/fall in production from the previous year for company B in year :

$$1992 = \frac{60-55}{55} \times 100 = 9.09\%$$

$$1993 = \frac{50-60}{60} \times 100 = -16.67\% \quad \text{[MAX]}$$

$$1996 = \frac{55-50}{50} \times 100 = 10\%$$

$$1995 = \frac{50-55}{55} \times 100 = -9.09\%$$

=> Ans - (B)

00. The total production of company C in 1993 and 1994 is what percentage of the total production of company A in 1991 and 1992?

A 95

B 90

C 110

D None of these

Answer: D

Explanation:

Total production of company C in 1993 and 1994 = 60+60 = 120

Total production of company A in 1991 and 1992 = 50+40 = 90

$$\Rightarrow \text{Required \%} = \frac{120}{90} \times 100 = 133.33\%$$

=> Ans - (D)

01. What is the difference between the average production per year of the company with highest average production and that of the company with lowest average production in lakh tonnes?

A 3.17

B 4.33

C 4.17

D 3.33

Answer: C

Explanation:

Production Of Paper (in lakh tonnes) by company A = 50+40+55+45+60+50 = 300

Production Of Paper (in lakh tonnes) by company B = 55+60+50+55+50+55 = 325

Production Of Paper (in lakh tonnes) by company C = 45+50+60+60+45+40 = 300

=> Required average difference = $\frac{(325-300)}{6} = 4.17$

=> Ans - (C)

Instructions [102 - 106]

These questions are based on the table below:

Candidates appeared and passed

Year	Rural		Semi-urban		State Capitals		Metropolises	
	App.	Pas.	App.	Pas.	App.	Pas.	App.	Pas.
1990	1652	208	7894	2513	5054	1468	9538	3214
1991	1839	317	8562	2933	7164	3248	10158	4018
1992	2153	932	8139	2468	8258	3159	9695	3038
1993	5032	1798	9432	3528	8529	3628	11247	5158
1994	4915	1668	9784	4015	9015	4311	12518	6328
1995	5628	2392	9969	4263	10725	4526	13624	6419

02. **For the candidates from which of the following location was there three continuous increase both in appeared and passed?**

A Semi urban

B State capital

C State capital and rural

D None of these

Answer: D

Explanation:

Number of candidates who have appeared was continuously increasing in only state capitals, but the number of students passed were both increasing and decreasing in all communities.

=> Ans - (D)

03. **In which of the following years was the percentage passed to appeared candidates from semi-urban area the least?**

- A** 1991
- B** 1993
- C** 1990
- D** 1992

Answer: D

Explanation:

Ratio of passed to appeared candidates from semi-urban area in

$$1991 = \frac{2933}{8562} \approx \frac{1}{3}$$

$$1993 = \frac{3528}{9432} \approx \left(>\right) \frac{1}{3}$$

$$1990 = \frac{2513}{7894} \approx \left(>\right) \frac{1}{3}$$

$$1992 = \frac{2468}{8139} \approx \left(<\right) \frac{1}{3} \quad \text{[MIN]}$$

=> Ans - (D)

04. What approximate value was the percentage drop in the number of semi-urban candidates appeared from 1991 to 1992?

- A** 5
- B** 10
- C** 15
- D** 8

Answer: A

Explanation:

$$\text{Percentage drop in the number of semi-urban candidates appeared from 1991 to 1992} = \frac{(8562-8139)}{8562} \times 100$$

$$= \frac{4230}{8562} \approx \frac{400}{80} = 5\%$$

=> Ans - (A)

05. In 1993 percentage of candidates passed to appeared was approximately 35 from which location?

- A** Rural
- B** Rural and Metropolises
- C** Semi-urban and Metropolises
- D** None of these

Answer: A

Explanation:

35% is slightly more than one third

In State capitals and metropolises, passed candidates are less than one-third of appeared candidates.

$$\text{In Rural} = \frac{1798}{5032} \times 100 = 35.73\%$$

$$\text{In Semi urban} = \frac{3528}{9432} \times 100 = 37.4\%$$

∴ In rural area, approx 35% candidates passed in 1993.

=> Ans - (A)

06. The total number of candidates passed from Rural in 1993 and Semi-urban in 1990 was exactly equal to the total number of candidates passed from State capital in which of the following years

A 1990

B 1993

C 1994

D 1992

Answer: C

Explanation:

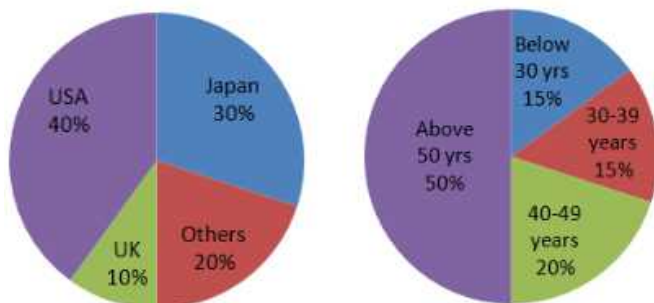
The total number of candidates passed from Rural in 1993 and Semi-urban in 1990 = 1798 + 2513 = 4311

Now, 4311 candidates passed from state capital in **1994**

=> Ans - (C)

Instructions [107 - 110]

The following pie charts exhibit the distribution of the overseas tourist traffic from India. The two charts show the tourist distribution by country and the age profile of the tourist respectively. Examine the charts carefully to answer those questions.



07. The ratio of the number of Indian tourists that went to USA to the number of Indian tourists who were below 30 years of age is

A 2 : 1

B 8 : 3

C 3 : 8

D Cannot be determined

Answer: B

Explanation:

% of Indian people that went to USA = 40%

% of Indian people below 30 years of age = 15%

=> Required ratio = $\frac{40}{15} = 8 : 3$

=> Ans - (B)

08. **Amongst other countries, Switzerland accounted for 25% of the Indian tourist traffic. It is known from official Swiss records that a total of 25 lakh Indian tourists had gone to Switzerland during the year. What is the number of 30-39 years old Indian tourists who went abroad in that year?**

A 18.75 lakhs

B 25 lakh

C 50 lakh

D 75 lakh

Answer: D

Explanation:

25% \equiv 25 lakhs

100% \equiv 100 lakhs

=> Total overseas tourist from India = $\frac{100}{20} \times 100 = 500$ lakhs

\therefore Required number of overseas tourist of 30-39 years old = $\frac{15}{100} \times 500 = 75$ lakhs

=> Ans - (D)

09. **Based on the information in the above question, what was the volume of traffic of Indian tourists in the US?**

A 150 lakhs

B 125 lakh

C 200

D None of these

Answer: C

10. On the basis of information in the above two questions, what can be inferred about the number of 50 + year old who visited UK during the year

- A** At least 25 lakh
- B** Exactly 25 lakh
- C** At least 10 lakh
- D** Cannot be determined

Answer: D

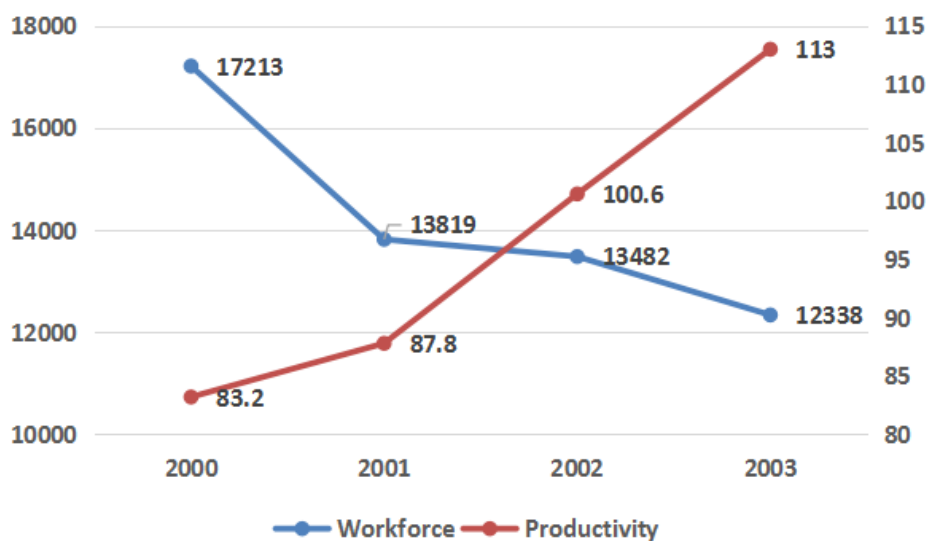
Explanation:

Since, we do not know the total number of people in the age group pie chart and the people visited, we cannot determine the number of 50+ year old.

=> Ans - (D)

Instructions [111 - 113]

Study the line graph below to answer these question.



11. By how much percentage has production changed (approximately) in 2003 as compared to its value for 2000?

- A** -3%
- B** +5%
- C** 0%
- D** +7%

Answer: A

Explanation:

Production in 2000 = $17213 \times 83.2 = Rs. 14,32,121.6$

Production in 2003 = $12338 \times 113 = Rs. 13,94,194$

% Change in production = $\frac{1394194 - 1432121.6}{1432121.6} \times 100 = -2.6\% \approx -3\%$

=> Ans - (A)

12. The percentage change in which of the mentioned areas is the highest over the period 2000-2003

- A Work force
- B Productivity
- C Production
- D Both (1) and (2)

Answer: B

Explanation:

% Change in productivity = $\frac{(113 - 83.2)}{83.2} \times 100 = 35.8\%$ [MAX]

% Change in workforce = $\frac{(17213 - 12338)}{17213} \times 100 = 28.3\%$

Production in 2000 = $17213 \times 83.2 = Rs. 14,32,121.6$

Production in 2003 = $12338 \times 113 = Rs. 13,94,194$

% Change in production = $\frac{1432121.6 - 1394194}{1432121.6} \times 100 = 2.6\%$

=> Ans - (B)

13. Which two variables have moved in the same direction in the mentioned period?

- A Workforce and productivity
- B Workforce and production
- C Production and productivity
- D None of these

Answer: B

Explanation:

Workforce is directly proportional to productivity, it is clear that workforce and production have moved in the same direction. Both showed percentage drop over 2000-2003

=> Ans - (B)

Instructions [114 - 120]

Each of these questions has a problem and two statements, number I and II. Decide if the information given in the statement is sufficient for answering the problem. Mark the answer as

$$14. \text{ If } -\binom{3}{4}x + 3y - \binom{1}{2} = \binom{3}{2}y - \binom{1}{4}x$$

What is the value of x ?

I. $y^2 = 4$

II. $y = 2$

- A** If statement I by itself is sufficient to answer the question, but statement II by itself is not.
- B** If statement II by itself is sufficient to answer the question, but statement I by itself is not.
- C** If statements I and II taken together are sufficient to answer the question, even though neither statement by itself is sufficient.
- D** If either statement by itself is sufficient to answer the question.

Answer: B

Explanation:

$$\text{Expression : } -\binom{3}{4}x + 3y - \binom{1}{2} = \binom{3}{2}y - \binom{1}{4}x \text{ -----(i)}$$

$$\text{I : } y^2 = 4$$

$$\Rightarrow y = \pm 2$$

Case 1 : $y = 2$ substituting in equation (i)

$$\Rightarrow -\binom{3}{4}x + 3(2) - \binom{1}{2} = \binom{3}{2} \times (2) - \binom{1}{4}x$$

$$\Rightarrow \frac{-2x}{4} = 3 - 6 + \frac{1}{2}$$

$$\Rightarrow \frac{-x}{2} = \frac{-5}{2}$$

$$\Rightarrow x = 5$$

Case 2 : $y = -2$ substituting in equation (i)

$$\Rightarrow -\binom{3}{4}x + 3(-2) - \binom{1}{2} = \binom{3}{2} \times (-2) - \binom{1}{4}x$$

$$\Rightarrow \frac{-2x}{4} = -3 + 6 + \frac{1}{2}$$

$$\Rightarrow \frac{-x}{2} = \frac{7}{2}$$

$$\Rightarrow x = -7$$

∴ Both cases have different values for x , thus, we cannot find value of x using statement I alone.

II : $y = 2$ substituting in equation (i)

$$\Rightarrow -\binom{3}{4}x + 3(2) - \binom{1}{2} = \binom{3}{2} \times (2) - \binom{1}{4}x$$

$$\Rightarrow \frac{-2x}{4} = 3 - 6 + \frac{1}{2}$$

$$\Rightarrow \frac{-x}{2} = \frac{-5}{2}$$

$$\Rightarrow x = 5$$

∴ Statement II alone is sufficient.

⇒ Ans - (B)

15. A list contains 11 consecutive integers. What is the greatest integer on the list?

I. If x is the smallest integer on the list, then $(x + 72)^{\frac{1}{3}} = 4$.

II. If x is the smallest integer on the list, then $\frac{1}{64} = x^{-2}$.

- A** If statement I by itself is sufficient to answer the question, but statement II by itself is not.
- B** If statement II by itself is sufficient to answer the question, but statement I by itself is not.
- C** If statements I and II taken together are sufficient to answer the question, even though neither statement by itself is sufficient.
- D** If either statement by itself is sufficient to answer the question.

Answer: A

Explanation:

Statement I : If x is the smallest integer on the list, then $(x + 72)^{\frac{1}{3}} = 4$

$$\Rightarrow (x + 72) = 4^3 = 64$$

$$\Rightarrow x = 64 - 72 = -8$$

Now, 11 consecutive integers starting from -8 : -8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2

Thus, greatest integer is 2 and statement I alone is sufficient.

Statement II : If x is the smallest integer on the list, then $\frac{1}{64} = x^{-2}$

$$\Rightarrow (x)^2 = 64$$

$$\Rightarrow x = \pm 8$$

Since, there are two values of x , we cannot find the greatest integer. statement II alone is insufficient.

\Rightarrow Ans - (A)

16. If a rectangle has length a and width b , what is its area

I. $2a = \frac{15}{b}$

II. $a = 2b - 2$

- A** If statement I by itself is sufficient to answer the question, but statement II by itself is not.
- B** If statement II by itself is sufficient to answer the question, but statement I by itself is not.
- C** If statements I and II taken together are sufficient to answer the question, even though neither statement by itself is sufficient.
- D** If either statement by itself is sufficient to answer the question.

Answer: A

Explanation:

Length of rectangle = a and Width = b , \Rightarrow Area = ab

Statement I : $2a = \frac{15}{b}$

$\Rightarrow ab = \frac{15}{2} = 7.5$

Area of rectangle is 7.5, hence statement I alone is sufficient.

Statement II : $a = 2b - 2$

Since, there are no specific values of a and b , we cannot find the area, hence statement II alone is not sufficient.

\Rightarrow Ans - (A)

17. What is the ratio of men to women rolled in a certain class?

I. The number of women enrolled in the class is 3 less than half the number of men enrolled.

II. The number of women enrolled in the class is $\frac{2}{5}$ of the number of men enrolled.

- A** If statement I by itself is sufficient to answer the question, but statement II by itself is not.
- B** If statement II by itself is sufficient to answer the question, but statement I by itself is not.
- C** If statements I and II taken together are sufficient to answer the question, even though neither statement by itself is sufficient.
- D** If either statement by itself is sufficient to answer the question.

Answer: B

Explanation:

Let number of men and women enrolled be m and w respectively.

Statement I : $w + 3 = \frac{m}{2}$

$\Rightarrow m = 2w + 6$

Since, we cannot find $m : w$, thus, statement I alone is insufficient.

Statement II : $w = \frac{2}{5} \times m$

$\Rightarrow \frac{m}{w} = \frac{5}{2}$

Thus, statement II alone is sufficient to find the required ratio.

\Rightarrow Ans - (B)

18. What is the value of b ?

I. $2a - b = 3$

II. $a = b - (1 - a)$

- A** If statement I by itself is sufficient to answer the question, but statement II by itself is not.
- B** If statement II by itself is sufficient to answer the question, but statement I by itself is not.

- C** If statements I and II taken together are sufficient to answer the question, even though neither statement by itself is sufficient.
- D** If either statement by itself is sufficient to answer the question.

Answer: B

Explanation:

Statement I : $2a - b = 3$

There are no specific values of a and b , hence I alone is not sufficient.

Statement II : $a = b - (1 - a)$

$$\Rightarrow a = b - 1 + a$$

$$\Rightarrow b = 1$$

\therefore Statement II alone is sufficient to find the value of b .

\Rightarrow Ans - (B)

19. If $a \neq b$, what is the value of $a + b$

I. $a^2 - (b^2 \div a) = b = 6$

II. $(a + b)^2 = 36$

- A** If statement I by itself is sufficient to answer the question, but statement II by itself is not.
- B** If statement II by itself is sufficient to answer the question, but statement I by itself is not.
- C** If statements I and II taken together are sufficient to answer the question, even though neither statement by itself is sufficient.
- D** If either statement by itself is sufficient to answer the question.

Answer: B

20. If $2^{2m+1}, 2^{n+2}$, what is the value of $m + n$?

I. $2^{3n-1} = 256$

II. $2^{m+2n} = 256$

- A** If statement I by itself is sufficient to answer the question, but statement II by itself is not.
- B** If statement II by itself is sufficient to answer the question, but statement I by itself is not.
- C** If statements I and II taken together are sufficient to answer the question, even though neither statement by itself is sufficient.
- D** If either statement by itself is sufficient to answer the question.

Answer: A

Intelligence & Critical Reasoning

Instructions [121 - 125]

In each of the following questions, a statement is given followed by two conclusions. Mark the answer as

21. **Statement : Morning walks are good for health.**

Conclusion :

I. All healthy people go for morning walks

II. Evening walks are harmful

A If only conclusion I follows

B If only conclusion II follows

C If either I or II follows

D If neither I nor II follows

Answer: D

Explanation:

Morning walks are good for health doesn't mean that All healthy people go for morning walks and neither can we conclude that evening walks are harmful.

Hence neither I nor II follows

22. **Statement : The best way to escape from a problem is to solve it.**

Conclusion :

I. Your life will be dull if your don't face a problem

II. To escape from problems, you should always have some solutions, with you

A If only conclusion I follows

B If only conclusion II follows

C If either I or II follows

D If neither I nor II follows

Answer: B

23. **Statement : Vegetable prices are soaring in the market.**

Conclusion :

I. Vegetables are becoming a rare commodity.

II. People cannot eat vegetables.

A If only conclusion I follows

B If only conclusion II follows

C If either I or II follows

D If neither I nor II follows

Answer: D

24. **Statement :** Until our country achieves economic equality, political freedom and democracy would be meaningless.

Conclusion :

I. Political freedom and democracy go hand in hand.

II. Economic equality leads to real political freedom and democracy.

A If only conclusion I follows

B If only conclusion II follows

C If either I or II follows

D If neither I nor II follows

Answer: B

25. **Statement :** Parents are prepared to pay any price for an elite education to their children.

Conclusion :

I. All parents these days are very well off.

II. Parents have an obsessive passion for a perfect development of their children through good schooling.

A If only conclusion I follows

B If only conclusion II follows

C If either I or II follows

D If neither I nor II follows

Answer: B

Instructions [126 - 130]

A statement is followed by two arguments I and II Decide which of the arguments is a strong argument and which is a weak arguments. Mark answer as:

26. **Statement :** Should telecasting feature films be stopped?

Arguments :

I. Yes, Young children are misguided by the feature films.

II. No, This is the only way to educate the masses.

A If only argument I is strong

B If only argument II is strong

- C** If either I or II is strong
- D** If neither I nor II is strong

Answer: D

27. **Statement : Should school education be made free in India.**

Arguments :

I. Yes. This is the only way to improve the level of literacy.

II. No. It would add to the already heavy burden on the exchequer.

- A** If only argument I is strong
- B** If only argument II is strong
- C** If either I or II is strong
- D** If neither I nor II is strong

Answer: B

28. **Statement : Should India stop missile development?**

Arguments :

I. Yes. The USA desires so.

II. No. The nation must always remain up-to-date in its defence preparedness.

- A** If only argument I is strong
- B** If only argument II is strong
- C** If either I or II is strong
- D** If neither I nor II is strong

Answer: B

29. **Statement : Should we scrap the Public Distribution system in India?**

Arguments :

I. Yes. Young children are misguided by the feature films.

II. No. The poor do not get any benefit because of corruption.

- A** If only argument I is strong
- B** If only argument II is strong
- C** If either I or II is strong
- D** If neither I nor II is strong

Answer: D

30. **Statement : Can pollution be controlled?**

Arguments :

I. Yes. If everyone realises the hazard it may create and cooperates to get rid of it, pollution may be controlled.

II. No The crowded highways, factories and industries and an ever growing population eager to acquire more and more land for constructing houses are beyond control.

A If only argument I is strong

B If only argument II is strong

C If either I or II is strong

D If neither I nor II is strong

Answer: C

Instructions [131 - 135]

A statement is followed by three courses of action numbered I, II, and III. You have to assume everything in the statement to be true. Decide which course(s) of action logically follow(s) for pursuing from the given options marked (a), (b), (c) and (d)

31. **Statement : In one of the worst accidents in railway level crossing fifty people died when a bus carrying them collided on to a running train.**

Conclusions of action::

I. The train driver should immediately be suspended.

II. The driver of the bus should be tried in court for negligence on his part.

III. The railway authority should be asked to man all its level crossings.

A None follows

B Only I and II follow

C Only III follow

D Only II and III follow

Answer: D

32. **Statement : There was a spurt in criminal activities in the city during the recent festival season.**

Courses of action::

I. The police should immediately investigate into the causes of this increase.

II. In future the police should take adequate precaution to avoid recurrence of such situation during the festival season.

III. The known criminals should be arrested before any such season.

A None follows

- B** Only I and II follow
- C** Only III follow
- D** Only II and III follow

Answer: B

33. **Statement :** A mass mortality of shrimps in ponds on the entire Andhra coast has recently been reported due to the presence of a virus.

Courses of action::

- I.** The water of the pond affected should immediately be treated for identifying the nature of the virus.
- II.** The catching of shrimps from the ponds should temporarily be stopped.
- III.** The fishermen should be asked to watch for the onset of such phenomenon in nature.

- A** None follows
- B** Only I and II follow
- C** Only III follow
- D** Only II and III follow

Answer: D

34. **Statement :** The world will have to feed more than 10 billion people in the next century of whom half will be in Asia and will eat rice as their staple.

Courses of action::

- I.** More funds should immediately be allocated for rice research to help ensure adequate supplies.
- II.** The people in Asia should be encouraged to change their food habit.
- III.** The rice should be grown in countries outside Asia to meet the demand.

- A** None follows
- B** Only I and II follow
- C** Only III follow
- D** Only II and III follow

Answer: D

35. **Statement :** If the faculty members also join the strike, there is going to be a serious problem.

Courses of action ::

- I.** The faculty members should be persuaded not to go on strike.
- II.** Those faculty members who join the strike should be suspended.
- III.** The management should not worry about such small things.

- A** None follows
- B** Only I and II follow
- C** Only III follow
- D** Only II and III follow

Answer: B

Instructions [136 - 139]

Study the information given below to answer these questions

There are four friends A, B, C, D. One of them is a cricketer and studies Chemistry and Biology. A and play football. Both football players study Maths D is a boxer. One football player also studies physics. The boxer studies Matsha and Accounts. All the friends study two subjects each and play one game each:

36. **Who is the cricketer?**

- A** A
- B** B
- C** C
- D** D

Answer: C

37. **Who studies Accounts and plays football?**

- A** A alone
- B** B alone
- C** D
- D** A or B

Answer: D

38. **Who studies Physics?**

- A** A or B
- B** A alone
- C** B alone
- D** D

Answer: A

39. **How many games are played and subjects studied by the four friends?**

- A** 1 game and 4 subjects
- B** 2 games and 3 subjects
- C** 3 games and 4 subjects
- D** 3 games and 5 subjects

Answer: D

Instructions [140 - 144]

A statement is followed by three assumptions marked, I, II, III. Check whether these assumptions are implicit in the statement or not. Possible combination of assumptions are given against option (a), (b), (c) and (d). Choose the appropriate

40. **Statement : "Buy pure and natural honey and company X" and advertisement in a newspaper.**

Assumptions :

- I. Artificial honey can be prepared.**
- II. People do not mind paying more for pure and natural honey.**
- III. No other company supplies pure honey.**

- A** Only I is implicit
- B** Only I and II are implicit
- C** Only I and III are implicit
- D** All are implicit

Answer: A

41. **Statement : "Fly with us and experience the pleasure of flying" - an advertisement by an airlines.**

Assumption :

- I. More passengers may be attracted to travel by the airline after reading the advertisement.**
- II. People generally may prefer an enjoyable flight.**
- III. Other airlines may not be offering the same facilities.**

- A** Only I is implicit
- B** Only I and II are implicit
- C** Only I and III are implicit
- D** All are implicit

Answer: D

42. **Statement :** "We do not want you to see our product on newspaper, visit our shop to get a full view".
An advertisement.

Assumptions :

- I. People generally decide to purchase any product after seeing the name in the advertisement.**
- II. Uncommon appeal may attract the customers.**
- III. People may come to see the product.**

- A** Only I is implicit
- B** Only I and II are implicit
- C** Only I and III are implicit
- D** All are implicit

Answer: D

43. **Statement :** "Use Riya cold cream for fair complexion". **An advertisement.**

Assumptions :

- I. People like to use cream for fair complexion.**
- II. People are easily fooled.**
- III. People respond to advertisements.**

- A** Only I is implicit
- B** Only I and II are implicit

- Only I and III are implicit
- C**
- All are implicit
- D**

Answer: D

44. **Statement : 'Smoking is injurious to health' - a warning printed on the cigarette packets.**

Assumptions :

I. People read printed matter on a cigarette packet.

II. People take careful note of a warning.

III. Non-smoking promotes health.

- Only I is implicit
- A**
- Only I and II are implicit
- B**
- Only I and III are implicit
- C**
- All are implicit
- D**

Answer: B

Instructions [145 - 147]

Study the given information carefully and answer the questions that follow:

- (i) There are seven books one each on Psychology, Hindi, English, Sociology, Economics, Education and Accountancy, lying on a table one above the other.
- (ii) Sociology is on the top of all the books.
- (iii) Accountancy is immediately below Education which is immediately below sociology.
- (iv) Economics is immediately above Psychology but not in the middle.
- (v) Hindi is immediately below psychology.

45. **Economics is between which of the following books?**

- Accountancy and Education
- A**
- Psychology and Hindi
- B**
- English and Psychology
- C**
- Psychology and Sociology
- D**

Answer: C

46. Which three books are between Accountancy and Hindi?

- A English, Economics and Psychology
- B Economics, Psychology and Education
- C Economics, Psychology and Hindi
- D Cannot be determined

Answer: A

47. If Sociology and English, Accountancy and Hindi and Education and Psychology interchange their positions, which book will be between Psychology and Sociology?

- A Accountancy
- B Psychology
- C Hindi
- D Economics

Answer: C

48. If NARGRUED is the code for GRANDEUR, which word is coded as SERPEVRE?

- A PERSEVER
- B PRESEVER
- C PERSERVE
- D PRESERVE

Answer: D

49. A bus starts from city X. The number of women in the bus is half of the number of men. In city Y, 10 men leave the bus and five women enter. Now, the number of men and women is equal. In the beginning, how many passengers entered the bus?

- A 15
- B 30
- C 36
- D 45

Answer: D

Explanation:

Let the number of women at the start be w . hence, the number of men in the bus = $2w$

Now, at Y, 5 women board and 10 men leave. This equals the number of men and women.

Hence, $w+5 = 2w - 10 \implies w = 15$

hence, total passengers at the start of the day = $w + 2w = 45$

50. **A square field ABCD of side 90 m is so located that its diagonal AC is from north to south and the corner B is to the west of D. Rohan and Rahul start walking along the sides from B and C respectively in the clockwise and anti-clockwise directions with speeds of 8 km/hr and 10 km/hr. Where shall they cross each other the second time?**

- A** On AD at a distance of 30 m from A
- B** Only BC at a distance of 10 m from B
- C** On AD at a distance of 30 m from D
- D** On BC at a distance of 10 m from C

Answer: B

51. **In a class, there are 18 boys who are over 160 cm tall. If these constitute three-fourths of the boys and the total number of boys is two-thirds of the total number of students in the class, what is the number of girls in the class?**

- A** 6
- B** 12
- C** 18
- D** 24

Answer: B

Explanation:

Let the number of boys in the class = b

Given three-fourths of the boys in the class = 18

$$\Rightarrow \frac{3}{4}b = 18$$

$$\Rightarrow b = 24$$

Number of boys in the class = 24

Let the total number of students in the class = t

Given number of boys is two-thirds of the total number of students in the class

$$\Rightarrow \frac{2}{3}t = 24$$

$$\Rightarrow t = 36$$

Total number of students in class = 36

\therefore Number of girls in the class = $36 - 24 = 12$

Hence, the correct answer is Option B

52. Five children were administered psychological tests to know their intellectual levels. In the report, psychologists pointed out that the child A is less intelligent than the child B, the child C is less intelligent than the child D, the child is less intelligent than the child C and child A is more intelligent than the child E. Which child is the most intelligent?

- A** A
- B** B
- C** D
- D** E

Answer: C

53. In certain code '247' means 'spread red carpet', '256' means 'dust one carpet' and '264' means 'one red carpet'. Which digit in that code means 'dust'?

- A** 2
- B** 3
- C** 5
- D** 6

Answer: C

Explanation:

"dust" is seen only in the second sentence. So a number in its three digit code which doesn't occur in other codes should stand for "dust"

The digit which does that is 5. hence, the answer.

54. In a certain code language, 'nee muk pic' means 'grave and concern'; 'ill dic so' means 'every body else', and 'tur muk so' means body and soul.' Which of the following would mean 'every concern'?

- A** dic pic
- B** ill nee
- C** pic nee
- D** Cannot be determined

Answer: D

Explanation:

From 1 and 3, we can say and = "muk"

From 2 and 3, we can say body = "so"

Hence, soul = "tur"

Other words cannot be determined conclusively. Hence, option D

55. In a certain code language, 'col tip mot' means 'singing is appreciable'; 'mot baj min' means 'dancing is good' and 'tip nop baj' means 'singing and dancing'. Which of the following means 'good' in that code language?

- A mot
- B min
- C baj
- D Can't be determined

Answer: B

Explanation:

In the code language,

'col tip mot' means 'singing is appreciable'(1)

'mot baj min' means 'dancing is good'(2)

'tip nop baj' means 'singing and dancing'(3)

From statement 2 and 3, baj means dancing. From 1 and 2, mot means is.

From 2, the remaining code min means good in the code language.

Hence, the correct answer is Option B

56. In a shop, the items were arranged in a shelf consisting of six rows. Biscuits are arranged above the tins of chocolates but below the rows of packets of chips, cakes are at the bottom and the bottles of peppermints are below the chocolates. The top most row had the display of jam bottles. Where exactly are the bottles of peppermints? Mention the place from the top.

- A 2nd
- B 3rd
- C 4th
- D 5th

Answer: D

Explanation:

The order which can be clearly plotted at the start is:

1. Jam
- 2.
- 3.

- 4.
- 5.
6. Cakes

For the rest we can decipher that the order from top to bottom has to obey: Chips - Biscuits - Chocolates - Peppermints

And we can see that there are exactly 4 slots to fill.

Hence, the 4 items are filled the same way and pepper mints occupy 5th place from top.

57. **Ashish leaves his house at 20 minutes to seven in the morning, reaches Kunal's house in 25 minutes, they finish their breakfast in another 15 minutes and leave for their office which takes another 35 minutes. At what time do they leave Kunal's house to reach their office?**

- A** 7.40 a.m.
- B** 7.20 a.m.
- C** 7.45 a.m.
- D** 8.15 a.m.

Answer: B

Explanation:

Ashish leaves his house at 6:40 AM

Reaches Kunal's house in 25 mins i.e. at 7:05 AM

They finish their breakfast by 7:20 AM

And at the same time, they leave for office.

58. **In a row of girls, Rita and Monika occupy the ninth place from the right end and tenth place from the left end, respectively. If they interchange their places, Rita and Monika occupy seventeenth place from the right and eighteenth place from the left, respectively. How many girls are there in the row?**

- A** 25
- B** 26
- C** 27
- D** Data inadequate

Answer: D

59. **One morning after sunrise, Reeta and Kavita were talking to each other face to face at Tilak Square. If Kavita's shadow was exactly to the right of Reeta, which direction was kavita facing**

- A** North
- B** South

- C** East
- D** Data inadequate

Answer: B

60. At a farm, there are hens, cows and bullocks, and keepers to look after them. There are 69 heads less than legs; the number of cows is double of that of bullocks; the number of cows and hens is the same and there is one keeper per ten birds and cattle. The total number of hens plus cows and bullocks and their keepers does not exceed 50. How many cows are there?

- A** 10
- B** 12
- C** 14
- D** 16

Answer: B

Explanation:

Let the number of hens = h , cows = c , bullocks = b , keepers = k .

Also given, $h = c$ and $c = 2b \implies h = c = 2b$

Also given is $k = (h+c+b)/10$, substituting from above relations, we have $k = b/2$

Now, adding up the total living beings: $h + c + b + k \leq 50$ which implies $5.5b \leq 50$

Adding up for the number of the legs: $2h + 4c + 4b + 2k \leq 119$ which implies $b \leq 7$

If we take $b = 7$, then $k = 3.5$ which is not possible

If we take $b = 6$, $k = 3$ and $h = c = 12$ each

Hence, number of cows = 12

Indian & Global Development

61. P-Harikrishna is associated with

- A** Badminton
- B** Golf
- C** Volleyball
- D** None of these

Answer: D

62. Which country of the following is not a permanent member of the UN Security council?

- A** China
- B** France
- C** USA
- D** Japan

Answer: D

63. The ad line 'Flying for Everyone' is associated with which airlines?

- A** Jet Airways
- B** Air Deccan
- C** Spice Jet
- D** Kingfisher Airlines

Answer: C

64. Which was not a candidate city for the 2012 Olympics?

- A** Sydney
- B** London
- C** Madrid
- D** Paris

Answer: A

65. The e-Choupal programme, which uses Internet stations in the villages, is an initiative of

- A** Reliance group
- B** Infosys
- C** Lalbhai Group
- D** ITC Ltd

Answer: D

66. One of the world's biggest gas reserve was recently found in

- A** Bombay High
- B** Krishna Godavari basin
- C** Rajasthan
- D** None of the above

Answer: B

67. **G-15 is a group of**

- A** Non-aligned countries
- B** Developed countries
- C** Developing countries
- D** None of these

Answer: C

68. **Swift is a car launched by**

- A** Honda
- B** Toyota
- C** Maruti Suzuki
- D** Tata Motors

Answer: C

69. **At the current average rate of growth, our GDPs all set to double every years.**

- A** 12
- B** 16
- C** 11
- D** 10

Answer: B

70. **Which country is known as the "Land of the Rising Sun"?**

- A** Japan

- B** Australia
- C** Norway
- D** North Korea

Answer: A

71. **Which are the new promoters of Dabhol Power Company (DPC)?**

- A** GE and Bechtel
- B** GE and ABB
- C** Gechtel and Tatas
- D** Bechtel and Reliance Energy

Answer: A

72. **'Avenger' is a bike model launched by**

- A** Bajaj
- B** Yamaha
- C** Honda
- D** None of these

Answer: A

73. **The State which produces maximum quantity of gold in India is**

- A** Karnataka
- B** Punjab
- C** Chattisgarh
- D** Himachal Pradesh

Answer: A

74. **The currency of China is**

- A** Yen

B Yuan

C Rigit

D Won

Answer: B

75. **Rourkela Steel Plant was set up in collaboration with**

A Germany

B Britain

C Russia

D France

Answer: A

76. **Which company is the world's second largest automaker?**

A Suzuki

B Ford

C Toyota

D Honda

Answer: C

77. **The meetings of Rajya Sabha are presided over by the**

A President

B Vice President

C Prime Minister

D Speaker of Lok Sabha

Answer: B

78. **Which tennis star has won maximum number of Grand Slam single titles so far**

A Roger Federer

B Pete Sampras

- C** Bjorn Borg
- D** Fred Perry

Answer: B

79. Commonwealth games in the year 2010 are scheduled to be held in

- A** Sydney
- B** London
- C** Toronto
- D** Delhi

Answer: D

80. American automobile industry executives have voted as the topmost outsourcing destination.

- A** India
- B** China
- C** Korea
- D** None of these

Answer: A

81. The ad line 'Connecting India' is linked with

- A** BSNL
- B** Airtel
- C** MTNL
- D** Hutch

Answer: A

82. C-class is a vehicle launched by

- A** Maruti Suzuki
- B** Ford
- C** Mercedes-Benz

D GM

Answer: C

83. **The Nanavati Commission was appointed to lookin to the**

A 1984 Riots

B Ayodhya case

C MumbaiRiots

D None of the above

Answer: A

84. **Whichairlines is planning to becomethefirst Indian carrier to be a part of a global airline alliance like the Star Alliance. One World or the Sky team etc.**

A Indian Airlines

B Air India

C Air Sahara

D None of these

Answer: C

85. **Gautam Singhanian is associated with**

A Jindal Group

B Microsoft

C Raymond

D Wipro

Answer: C

86. **Which cruise ship of Star Cruises wil soon be available to take a cruise from Mumbai to Lakshadweep or Goa?**

A Superstar Aries

B Superstarleo

C Superstar Virgo

D Superstar Libra

Answer: D

87. **The highest score in an innings in test cricket has so far been made by**

A Matthew Hayden

B Don Bradman

C Brian Lara

D None of the above

Answer: C

88. **Presently, who is the Leader of the Opposition in the Rajya Sabha?**

A Atal Bihari Vajpayee

B L.K. Advani

C Jaswant Singh

D None of these

Answer: C

89. **Kuchipudi dance originated in**

A Orissa

B Karnataka

C Kerala

D Andhra Pradesh

Answer: D

90. **The Planning Commission has set out a road map to double per capita income by the year**

A 2020

B 2025

C 2018

D 2012

Answer: D

91. **UN Day is observed on**

A 24 October

B 24 January

C 24 september

D 24
December

Answer: A

92. **Wockhardt Ltd., is a company dealing with**

A Textiles

B Steel

C Pharmaceuticals and Biotechnology

D Automobiles and Electronics

Answer: C

93. **Capital of Arunachal Pradesh is**

A Imphal

B Shillong

C Dispur

D None of these

Answer: D

94. **Wetside Stores is an enterprise of**

A Aditya Birla Group

B Tatas

C Raymond

D None of these

Answer: B

95. **Fortis Hospitals chain is an enterprise of**

- A** Cipla
- B** Aventis
- C** Ranbaxy
- D** Glaxo

Answer: C

96. **Mary Pierce, who in partnership with Mahesh Bhupathi, won the 2005 Wimbledon Mixed Doubles Championship, belongs to**

- A** France
- B** Sweden
- C** USA
- D** Australia

Answer: A

97. **Lufthansais an airlines from**

- A** France
- B** Russia
- C** POland
- D** Germany

Answer: D

98. **NABARDstandsfor**

- A** National Bank for Arboriculture and Rural Development
- B** National Board for Advanced Research and Development
- C** National Body for Aeronautical Research and Development

D National Bank for Agriculture and Rural Development

Answer: D

99. Which of the following has become the hottest job sector industry in India now.

A Information Technology

B IT-Enabled Services (ITES)

C Retail trade

D Telecom

Answer: B

100. Merdeka Cup is associated with

A Hockey

B Football

C Basketball

D Badminton

Answer: B