

**Ref: AIMCAT1719****INSTRUCTIONS**

1. Read the instructions given at the beginning/end of each section or at the beginning of a group of questions very carefully.
2. This test has a total of 100 questions in three sections: (i) Verbal Ability and Reading Comprehension – 34 Questions (ii) Data Interpretation and Logical Reasoning – 32 Questions and (iii) Quantitative Ability – 34 Questions. The total time available for the test is **180 minutes**. However, you will be allotted exactly 60 minutes for answering the questions in each section and you cannot switch from one section to another while answering the questions in a section.
3. All questions carry three marks each. Each wrong answer to any multiple-choice type question will attract a penalty of one mark. Wrong answers to any non multiple-choice type question will not attract any penalty.

**SECTION – I**  
**Number of Questions = 34**

**DIRECTIONS for questions 1 to 6:** The passage given below is followed by a set of six questions. Choose the best answer to each question.

**R**eleasing the same month as the iPad 2, Mead has taken a big risk with its new 100 Notebook series. Built around a minimal feature set and a low price point, the company is banking that the robust word-processing capabilities and ultraportable design will offer an appealing alternative to the latest tablets and netbooks. Buzz about the Mead 100 has been circulating in the tech blogosphere for months, but with such high expectations, can the notebook deliver?

**Design and Build**

At first blush it is difficult to classify the Mead 100. Its 8.5" X 11" size aligns it with 11" netbooks, but its surprisingly minimal weight (8 oz) positions it closer to the class of tablet devices such as the iPad 2 and the Samsung Galaxy Tab. After spending some time with it, we felt comfortable calling the Mead 100 an ultraportable notebook. The Mead 100 comes equipped with an embossed cardboard cover available in a variety of colors and patterns. Although smooth and shiny, the cover felt cheap to the touch and displayed a notable amount of flex. It remains to be seen how it will fare under heavy use.

An ultraportable device this light does not come without sacrifices, and Mead has opted for the unusual choice of not including a keyboard. Instead, it is operated entirely by a stylus. Some of our testers found the use of the stylus as a control device refreshing and quick, but others struggled with punctuation and poor handwriting. Disappointingly, the stylus is not included with the purchase of the notebook, although the company was quick to point out that many third party styli are available at retail locations where the notebook is sold.

**Graphics and Performance**

At its core, the Mead 100 is equipped with a metal spiral binding and 100 pages of chemically pulped memory, partitioned into standard college rule. Although we found 100 pages suitable for typical use, business and power users should consider upgrading to the Mead 150.

We were impressed by the boot time of the Mead 100, and on our test model startup was literally as fast as opening up the cover, although we did find that subsequent performance lagged as users struggled to find their last page of writing.

The display is a bleached white post-recycled paper, which isn't as bright and welcoming to the eye as higher end acid-free displays, but is acceptable for everyday use. Some users reported performance issues in low-light conditions. The device can be held vertically or horizontally, and receives high marks for producing a noticeable lack of heat or fan noise, even after many hours of use.

Perhaps the most impressive feature of the Mead is its battery life – we used the Mead for eleven hours without a drop in performance or indication of a low battery, although the stylus does become uncomfortable during such long stints.

Graphics capabilities in the Mead 100 are largely dependent on the user's ability to draw, here however some users found the college rule pesky. Music and video capabilities are also a non-starter, although one of our testers was able to program a workaround by drawing a stick figure repeatedly and flipping rapidly through the pages. Still, those looking for music and video editing capabilities will need to go elsewhere.

1. Which of the following is an accurate description of the Mead 100?
  - (A) The Mead 100 is an ultraportable tablet device with a screen size of 11 inches.
  - (B) The Mead 100 is an ultraportable notebook computer without a keyboard and weighs 8 oz.
  - (C) The Mead 100 is a paper notebook with 100 pages.
  - (D) The Mead 100 is a tablet device with a screen size of 8.5 inches.
  
2. The presence of which of the following in Mead 100 could have addressed the concern of the author when he says that "We were impressed... last page of writing" (fifth paragraph of the passage)?
  - (A) A faster graphics card
  - (B) A brighter or higher end display instead of a bleached white post-recycled paper display
  - (C) A keyboard instead of a stylus
  - (D) An attached bookmark
  
3. It can be inferred from the passage that the Mead 150
  - (A) has 150 pages instead of the 100 pages present in Mead 100.
  - (B) is the successor of Mead 100 and is faster than the Mead 100.
  - (C) has a higher weight than Mead 100 as Mead 150 comes equipped with a keyboard.
  - (D) is of a larger size than the Mead 100 with a higher boot time.
  
4. Which of the following can be inferred about the stylus to be used on the Mead 100?
  - (A) The stylus is a digital tool which can be used to operate Mead 100.
  - (B) The stylus is included with the purchase of Mead 100 and additional units can be purchased at major retail stores.
  - (C) The stylus does not enhance the handwriting of the user nor does it correct punctuation mistakes automatically.
  - (D) The stylus can be used for long periods comfortably.
  
5. Which of the following is a similarity between iPad 2 and the Mead 100?
  - (A) The size of iPad 2 is similar to that of the Mead 100.
  - (B) The Mead 100 weighs almost the same as an iPad 2.
  - (C) The display brightness of Mead 100 and iPad 2 are very similar.
  - (D) The Mead 100 costs the same as an iPad 2.
  
6. Which of the following features is forfeited to keep the weight of Mead 100 low?
  - (A) Stylus
  - (B) Battery
  - (C) Video editing capabilities
  - (D) Keyboard

**DIRECTIONS** for questions 7 to 9: The passage given below is followed by a set of three questions. Choose the best answer to each question.

**H**K\$2.7 million is enough to buy a small flat in an urban area, or a decent, two-bedroom unit in a district such as Fanling in the New Territories. But some buyers opt for a parking space. No windows, no view, no walls.

While home prices in the city continue to soften since hitting a peak in September, investors have been shifting their eyes to other asset classes, and that includes parking spaces, according to analysts.

Some buyers do not even own cars, but grab the spaces as investments expecting an increase in prices, thereby boosting the prices of car parking spaces in recent months.

A car parking space at Grand Austin, near the Austin MTR station, was sold for HK\$2.46 million this week, a record for the estate.

"Investing in office space needs a large lump sum. That makes some investors eye other investment targets such as car parking spaces," said Thomas Lam, head of valuation and consultancy at Knight Frank.

Dorothy Chow, a regional director of valuation advisory services at JLL, said there was strong demand because of limited supply.

According to the Transport Department, there are about 683,000 parking spaces in Hong Kong, of which 198,000 are for public use and 485,000 are designated for private use in commercial, residential and industrial premises.

The total number is lower than the 779,329 registered vehicles – excluding franchised buses, public light buses and special purpose vehicles – last year, according to JLL.

Chow said it was risky for buyers to push prices of car parking spaces to such expensive levels.

According to an index produced by the Rating and Valuation Department, the average price of a car parking space rose 204 per cent from 2005 to 2015, while overall residential property prices rose 223 per cent in the same period. The average price of a car parking space rose from about HK\$397,000 in 2005 to HK\$1.2 million.

Demand could drop as Hong Kong was expected to face an economic downturn and a property slowdown, Chow said.

"If the economy turns sour, what will you first to dispose of? It will not be your home, but your car," she said.

An increasing number of investment banks expect Hong Kong's home prices will fall further, with UBS expecting prices to fall 10 per cent to 15 per cent this year and another 5 per cent to 10 per cent in 2017.

7. Which of the following is not a reason for buyers opting to buy car parking space?
- The price of car parking is expected to increase in the future.
  - There is limited supply of and high demand for car parking spaces in Hong Kong.
  - Buying car parking spaces does not require very high investment.
  - The growth in the residential property prices will not be as high as that in car parks.
8. According to Dorothy Chow, which of the following will be true in case of an economic downturn?
- Residential property prices will decrease more rapidly than the price of car parks.
  - The price of car parks will decrease before the residential property prices decrease.
9. It can be inferred from the passage, based on UBS expectations of home prices in Hong Kong and Dorothy Chow's opinion on car parks, that the price of car parking spaces in the coming years will
- decrease.
  - increase.
  - remain constant.
  - first decrease and then increase.

**DIRECTIONS** for questions 10 to 12: The passage given below is followed by a set of three questions. Choose the best answer to each question.

**T**he lab or the factory. You work at one, or the other." In his classic, succinct style, master marketer Seth Godin wrote this piece that sheds light on two types of work cultures – one that values creativity and is always pushing for the next big breakthrough; and the other that prizes reliability and productivity above all else, striving to maintain the status quo.

In many ways, we can relate to these abstract concepts because we see them at play within our offices each day – the drive for productivity as opposed to creativity; a culture that rejects failures or chooses to embrace them; pushing breakthroughs or pushing numbers. How does one actively create and foster an innovative environment within this conflict zone?

Large multinationals have the opportunity to harness talent across the geographies, leveraging the diversity of knowledge that exists across the enterprise to innovate. While driving and enabling innovation is contingent upon markets, economies, resources and a host of other variables, it is hinged heavily on people. Companies that value innovation have one thing in common – they are not averse to taking risks, especially on their people. Talent is recognised for the individual value and strengths each one brings into the system. Different viewpoints are encouraged in an effort to harness the potential of diversity, instead of suppressing it. The best of companies are able to do this through strong rewards and recognition mechanisms, which focus on empowering their people in two important ways – "Speak Up" and "Be Heard".

Companies need to embrace innovative thinking. Great ideas can come from anywhere and we might want to reconsider if our structures and silos might be stifling the potential of our workforce.

But let's take a step back and ask ourselves: how are these ideas born? Is it the people or the process? While we struggle to activate inspired and dynamic thinking in our teams, innovation cannot be forced. So should we completely surrender to the chaos? Is random better? History tells us that new ideas and thoughts emerge out of necessity. Innovation can adjust to the surroundings and preserve its existence.

The Great Depression led to radical economic reforms and coffee houses became the carriers of the thoughts and ideas of the Enlightenment. These are not random instances but some of the greatest examples of collective minds working in tandem to bring a new era of intellectual, cultural, social and economic reform in the world. These people were led by a spirit of inquiry, reflection and collaboration. Imagine the blue-sky thinking we can bring into our workspaces by encouraging a similar ethos.

Some companies today are focusing on the importance of leisure to boost productivity of their employees. Ask yourselves this. While you might often find yourself working overtime, are those hours productive? Efficient? Least of all creative? Creativity bursts through when the mind has time to rest and regenerate. Organisations are doing this by both inculcating out-of-work activities and even mandatory leisure time for employees. The new generation is already tearing down the silos and pushing the envelope when it comes to innovation.

10. According to the passage, what are commonalities among companies that encourage an innovative spirit at the workplace?
- They beat their rivals through similar talent strategies and a set of objective procedures that are handed down across a hierarchical structure.
  - They do not hesitate to take unnecessary risks but encourage blue-sky thinking and reward all individuals equally for the work they do.
  - They instill a spirit of conflict and competition among employees and focus on productivity and reliability above all else.
  - They encourage different viewpoints, a risk-taking culture, and the empowerment of people through a robust reward system.

11. The author makes a mention of coffee houses in para 6 to drive home the point that....
- (A) In a coffee house, innovation can be turned on and off like a tap whereas in workplaces, people tend to passively ride on rather than actively drive the innovation wave.
  - (B) A rejuvenating environment can provide the necessary rest so as to enable people to brainstorm better and find innovative solutions to problems.
  - (C) The Great Depression led to a loss of jobs and people had more time to spend in coffee houses.
  - (D) An organization should become like a coffee house and force people to break out of the routine.
12. The author would agree with all of the following statements EXCEPT?
- (A) The workplace is akin to a living, breathing organism that can either cater to, stifle or unleash the passion and potential of its people.
  - (B) Drivers of innovation in an organization should take into account the talent of its people and not only factors like markets and resources.
  - (C) Leisure time should be creatively spent in aggressively thinking about increasing productivity at the workplace.
  - (D) Need for improvement is the main reason for innovation which can perpetuate its entity in a creative environment.

**DIRECTIONS for questions 13 to 18:** The passage given below is followed by a set of six questions. Choose the best answer to each question.

The first passenger railroad in the United States – the Baltimore and Ohio Railroad – began construction in 1828. Five years later, in 1833, the country saw its first fatal train accident. As train travel proliferated, train wrecks became “a surprisingly frequent form of disaster,” the historian Richard Selcer writes. And “the single worst type of railroad accident ... not to mention the most frequent, was the rear-end collision.”

Passengers involved in these train crashes would sometimes come down with a peculiar constellation of symptoms, including back pain, arm pain, headaches, hearing problems, anxiety, insomnia, lowered sex drive, and memory problems. These symptoms would appear even in the absence of any visible injuries. The condition was known colloquially as “railway spine.”

The physician John Eric Erichsen suggested that it might be caused by the “jarring back and forth” of the spine, although he could not explain what exactly happened to the spinal cord as a result.” So writes Robert Ferrari, a professor of medicine at the University of Alberta, in his book *The Whiplash Encyclopedia*, noting that “railway spine” in fact bears a striking resemblance to whiplash – a condition also linked to rear-end collisions, but of the automotive kind. (The Mayo Clinic says a whiplash injury “most often occurs during a rear-end auto accident, but the injury can also result from a sports accident, physical abuse, or other trauma.”)

The thing is, “whiplash” is not really a medical condition. It’s a term people use to describe neck pain and other symptoms thought to stem from an “acceleration-deceleration mechanism of energy transfer to the neck,” according to the Quebec Task Force on whiplash-associated disorders.

That people can experience neck, head, and back pain after a car accident, or some other kind of neck “energy transfer” is not in doubt. What is unclear is whether such an energy transfer can cause chronic, long-lasting pain, and if so, how.

The typical diagnosis for someone presenting with neck pain after an auto accident is a sprain. But a sprain should heal within a couple weeks. And according to one estimate, about 25 percent of whiplash injury patients end up suffering chronic pain.

And there is still no established physical reason why a whiplash injury would cause chronic pain. Given that, and given the involvement of insurance companies in car accidents, it would be easy to think a lot of these ongoing whiplash cases are scams fabricated to get a payout. (A “useful” illness indeed.)

“The average whiplash claimant submits a request for a few thousand dollars,” the psychiatrist Andrew Malleson writes. “Some claims are genuine, most are greatly exaggerated, and some are totally bogus.” (It’s worth noting that Malleson used to serve as an expert witness for insurance companies.)

At any rate, it’s certainly an expensive condition. By one estimate, rear-impact whiplash injuries in the United States have a price tag of \$2.7 billion a year, including both economic and quality-of-life costs. If physicians followed the Quebec Task Force’s recommendations for treating whiplash – “Mobilize the neck within 72 hours of the accident, exercise, limit inactivity, and avoid dependence on collars and analgesics” – Malleson estimates that “a few million dollars would cover the cost of such treatment for the whole of North America.”

But Ferrari thinks only a “very small percentage [are] malingering. People aren’t smart enough to malinger.” If someone were to exaggerate their symptoms for the sake of an insurance claim and then continue living their normal life, he thinks they’d be caught pretty quickly.

13. Which of the following is not mentioned in the passage as a symptom of railway spine?
- Arm pain
  - Hearing problem
  - Spinal numbness
  - Disorientation
14. What roles do the first and the second paragraphs play in the passage?
- They introduce the reader to a condition called 'railway spine' which is caused by train accidents and is similar to whiplash injury.
  - They emphasize that accident related injuries have become prevalent due to railways and automobiles.
  - They highlight the antiquity of railways in the United States.
  - They introduce the reader to the views of Richard Selcer.
15. According to the Quebec Task Force, which of the following is associated with whiplash?
- Rear-end auto accident
  - Rail accidents
  - Insomnia
  - Energy transfer to the neck
16. According to Robert Ferrari, which of the following is a difference between railway spine and whiplash?
- Energy transfer does not take place in railway spine while it does in whiplash.
  - Railway spine occurs due to rail accidents while whiplash occurs due to automobile accidents.
17. What does Ferrari imply when he states, "People aren't smart enough to malinger" (last para)?
- Most people are not smart enough to exaggerate the cost of treatment when claiming insurance.
  - Most people are not smart enough to apply for insurance claims when they are in an accident.
  - Most people are not smart enough to successfully fabricate accident injuries for the sake of an insurance claim.
  - Most people usually linger around the accident site for the sake of an insurance claim.
18. Which of the following questions is not answered in the passage?
- Do people in automobile accidents suffer from neck pain?
  - Why and how does whiplash injury result in chronic pain?
  - What are the major symptoms of a whiplash injury?
  - What are the Quebec's task force recommendations for treating whiplash injury?

**DIRECTIONS for questions 19 to 24:** The passage given below is followed by a set of six questions. Choose the best answer to each question.

On the occasion of photography's fiftieth anniversary in 1889, American artist J. Wells Champney (1843-1903) wrote an article surveying the familiar list of its social and technological accomplishments in the field of science, anthropology, criminology, and military applications. He ended with what would become a frequent refrain: the lack of parallel progress in art photography. "As an aid to science, as a recorder, as a duplicator, photography has helped advance civilization," Champney remarked. Yet "it has failed to occupy the place it may yet hold as a means for expressing original thought of a fine order." At the turn to the twentieth century, more people came to believe that a modern art must evolve at a pace and with an inventiveness similar to those of science and technology.

Champney appears not to have known the writings of British photographer Peter Henry Emerson (1856-1936), who a few years earlier had taken up eagerly the perceived challenge of science to art and art photography. Emerson acquired his first camera during his medical training at Cambridge University. By 1885, with the assurance of a private income, he chose to practice photography rather than medicine. He insisted that, in the modern world, science was the only authentic basis for art and photography. Just as the French novelist Émile Zola (1840-1902) had adopted the scientific method and outlook of the doctor Claude Bernard (1813-1878), so Emerson seized on the ideas of German scientist Hermann von Helmholtz (1821-1894), whose studies of the human eye's range of focus he took as instructive for photography. In 1880, Zola famously proclaimed that "metaphysical man is dead; with physiological man our position changes." Speaking to the Camera Club of London in March 1886, Emerson likewise declared that "the days of metaphysics are over."

In his most important theoretical work, *Naturalistic Photography* (1889), Emerson expounded his theory of photography. He rejected the idea of art as primarily a vehicle for personal and emotional expression. While maintaining that the artist was a person of special character and ability, he derided works of the imagination as untrue. His own notion of naturalism was based on contemporary science, not art theory, notably on Helmholtz's idea that "perfect artistic painting is only reached when we have succeeded in imitating the action of light upon the eye." At a time when technical improvements enabled photographers to make sharper pictures, Emerson denied that the camera could make art by merely transcribing physical reality. Instead, he argued that the artist should translate exactly how the eye sees, concluding that the photographer should focus on the main subject of a scene, allowing the periphery and the distance to become indistinct. Called differential or selective focus, this approach varied from William Newton's earlier idea of making the entire image slightly out of focus.

Emerson was known as an eccentric art celebrity, whose ideas and work were highly controversial, like those of American painter James McNeill Whistler (1834-1903). When he rejected his own theory in a black-bordered pamphlet titled *The Death of Naturalistic Photography* (1890), the public was skeptical. Yet Emerson maintained that his early theory was based on a belief that tones in a photograph could be manipulated to a greater degree than chemists now proved possible. Having promoted art photography as a cutting-edge application of recent science in his previous work, he cast it off because he saw it as limiting the individuality of the artist.

- 19.** Which of the following statements aptly echoes the sentiments of Emerson regarding the nature of art photography as mentioned in his *Naturalistic Photography*?
- Art photography should not just act as an aid for science but should progress at a pace comparable to science.
  - Art photography evolves through a combination of the artist's imagination and contemporary science.
  - Art photography should involve application of the cutting edge advancements in science and technology.
  - Art photography should involve accurate reproduction of the physical reality with minimal artistic imagination.
- 20.** Which of the following can be inferred about James McNeill Whistler?
- Whistler was an eccentric art celebrity similar to Emerson.
  - The paintings of Whistler caused much controversy during his time.
  - Whistler used advancements in science in creating his painting.
  - Whistler advocated a style of painting but later cast it off.
- 21.** Which of the following are similarities between Émile Zola and Peter Henry Emerson?
- Both Zola and Emerson attempted to align art with advancements in science.
  - Both Zola and Emerson were influenced by the ideas of Hermann von Helmholtz.
  - Both Zola and Emerson rejected their early theories which advocated the importance of science in art.
  - Both Zola and Emerson proclaimed that philosophy was no longer as important as once considered in the area of art.
- Both I and III
  - Both III and IV
  - Only I
  - Both I and IV
- 22.** Which of the following can be understood to be true according to Champney?
- Photography has had little influence on advancements of science because of which it showed slow progress.
  - Photography has helped advance various fields but itself has not shown any progress.
  - The advancements in photography have not yet enabled photography to evolve as a medium for expression of original thought.
  - Photography must take the aid of science and technology for its advancement.
- 23.** Which of the following is not a feature of selective focus as can be inferred from the passage?
- The images captured using selective focus accurately transcribes all aspects of the physical reality.
  - In selective focus, only a part of the photograph will be in focus.
- (C) The images captured using selective focus will be similar to what the human eye normally sees.  
(D) Using selective focus, the photographer attempts to imitate the action of light upon the eye.
- 24.** According to the passage, Emerson rejected his own theory in 1890 primarily because he
- realized that tones in a photograph could not be manipulated as much as he initially thought.
  - believed that selective focus could not be achieved using the technology available at that time.
  - was highly eccentric.
  - felt that cutting edge application of technology in photography limited the individuality of the artist.

**DIRECTIONS** for questions 25 to 28: The five sentences (labelled 1, 2, 3, 4 and 5) given in the following question, when properly sequenced, form a coherent paragraph. Decide on the proper order for the sentences and key in this sequence of five numbers as your answer.

- 25.**
- This result indicated that it was necessary to unify General Relativity with Quantum Theory.
  - This hypothesis would imply that the way the Universe began was completely determined by the laws of science.
  - Another hypothesis is that the Universe has no edge or boundary in imaginary time.
  - With Roger Penrose, Professor Hawking showed that Einstein's General Theory of Relativity implied space and time would begin in the Big Bang and end in black holes.
  - One consequence of such a unification was that black holes should not be completely black, but should emit radiation and eventually disappear.

- 26.**
- To make a long story short, the current philosophy argues that a mental image of a healthy body can be communicated from the brain to the cells of the immune system.
  - Emotional states such as fear and sadness are processed in the limbic system and hypothalamus.
  - These cells act in such a fashion so as to duplicate the mental image that was held in the mind.
  - The limbic system and hypothalamus then send signals to the body's immune system via chemicals called neuropeptides.
  - Many doctors now recognize that our thoughts affect our immune system and our general health.

27. (1) From his humble beginnings as a newspaper boy, he rose to become a national hero as the architect of the country's nuclear programme.  
 (2) Not many people know that he was also a teacher par excellence who inspired children and was one of the trail-blazers of tele-education and tele-medicine in India.  
 (3) Dr. APJ Abdul Kalam, in more ways than one, was a walking mission statement of India.  
 (4) That pretty much gave us a sense of his versatility.  
 (5) In 2002, he was overwhelmingly elected India's 11<sup>th</sup> president.

28. (1) To counter this problem, various strategies for conducting online marketing had been developed in the past – from website linking to banner advertising to email spamming.  
 (2) Market communication strategies change dramatically in the online world.  
 (3) It is almost certain that a continual stream of new market communication strategies will emerge as the Internet medium evolves.  
 (4) However, in many cases it is much harder for your message to be heard above the noise by your target audience.  
 (5) On the Internet, it is easier than ever to actually communicate a message to large numbers of people.

**DIRECTIONS** for questions 29 to 32: Five sentences related to a topic are given below. Four of them can be put together to form a meaningful and coherent short paragraph. Identify the odd one out. Choose its number as your answer and key it in.

29. (1) The man who coined it, the lawyer Raphael Lemkin, defined it as "a coordinated strategy to destroy a group of people."  
 (2) Deaths caused by famine, war, disease, expansionism lack the evidence of "co-ordination" to display the intent to destroy people as part of original policy.  
 (3) The political scientist R. J. Rummel advances a concept "democide" – the murder of any person or people by government including genocide, politicide and mass murder.  
 (4) Legally speaking, genocide is a category that is fairly recent.  
 (5) The key phrase is "co-ordinated" which establishes intent and infrastructure geared to achieving the said crime.

30. (1) In fact, we are unconsciously (secretly) recycling them and provoking situations in which we are repeatedly experiencing them.  
 (2) Unless explored and understood, these emotions produce inner conflict, suffering, and self-defeat.  
 (3) Even when the addictive person is not actually being refused or controlled, he is unconsciously determined to experience events through these unresolved, negative emotions.

- (4) An addictive person can be struggling with feelings of being deprived, refused, controlled, helpless, rejected, betrayed, abandoned, criticized, hated, and so on.  
 (5) An addiction is a self-defeating reaction to, or consequence of, unresolved negative emotions.

31. (1) Unlike in the former, the two most common approaches to narrative in the latter are the three-act-structure and the monomyth.  
 (2) Other screenwriters use Joseph Campbell's narrative pattern of the monomyth – 17 stages that the hero goes through in his journey.  
 (3) The dynamics of storytelling in the short-fiction-film form are substantially different than those in the feature film.  
 (4) Syd Field, a well-known advocate of the three-act-structure in screenwriting argues that screenplays can be divided into three parts: set-up, confrontation and resolution.  
 (5) Richard Raskin, in his pioneering work, *The Art of the Short Fiction Film*, argues that short-fiction films have received little attention from critics.

32. (1) The chief features of the Bretton Woods system were an obligation for each country to adopt a monetary policy that maintained the exchange rate ( $\pm 1$  per cent) by tying its currency to gold and the ability of the IMF to bridge temporary imbalances of payments.  
 (2) The Bretton Woods system of monetary management established the rules for commercial and financial relations among the United States, Canada, Western Europe, Australia and Japan in the mid-20th century.  
 (3) Also, there was a need to address the lack of cooperation among other countries and to prevent competitive devaluation of the currencies as well.  
 (4) The planners at Bretton Woods hoped to avoid a repeat of the Treaty of Versailles after World War I, which had created enough economic and political tension to lead to WWII.  
 (5) The Bretton Woods system was the first example of a fully negotiated monetary order intended to govern monetary relations among independent nation-states.

**DIRECTIONS** for questions 33 and 34: The paragraph given below is followed by a set of statements. Identify from the given statements; (a) the conclusion of the question paragraph, (b) the assumption that is implicit in the conclusion and (c) the inference that can be drawn from the question paragraph. Then select the most appropriate option.

33. Exciting new research conducted at the Creighton University School of Medicine in Nebraska has revealed that supplementing with vitamin D and calcium can reduce your risk of cancer by an astonishing 77 percent. This includes breast cancer, colon cancer, skin cancer and other forms of cancer.

This research provides strong new evidence that vitamin D is the single most effective medicine against cancer, far outpacing the benefits of any cancer drug known to modern science.

**Statements:**

- (i) Cancer that affects different parts of the body needs to be curbed with the help of medicines.
  - (ii) Vitamin D should be made the preferred weapon in the fight against cancer.
  - (iii) There are a few drugs other than vitamin D already being used to fight cancer.
  - (iv) Creighton University School of Medicine in Nebraska has been set up primarily to conduct research on cancer.
- (A) Conclusion – iv, Assumption – ii, Inference – i  
 (B) Conclusion – iii, Assumption – ii, Inference – iv  
 (C) Conclusion – ii, Assumption – i, Inference – iii  
 (D) Conclusion – i, Assumption – iii, Inference – ii
34. Record imports of gold by India show the central bank may be losing the battle to tame inflation, spurring investors to sell government bonds.

Shipments into Asia's third-biggest economy may have increased to 800 metric tons from 557 tons in 2015 and exceeding the previous all-time high of 769 in 2012, according to Ajay Mitra, managing director for India and the Middle East at the World Gold Council. Mumbai-based brokerage Nirmal Bang Commodities Pvt. forecasts purchases from overseas markets may rise to as much as 810 tons this year.

**Statements:**

- (i) Government bonds will become attractive once again in the near future.
  - (ii) The World Gold Council's volume data is reliable.
  - (iii) The Central Bank's inability to fight inflation is apparent from India's rising gold imports.
  - (iv) Investor interest in government bonds will continue to be low-key.
- (A) Conclusion – iv, Assumption – i, Inference – iii  
 (B) Conclusion – i, Assumption – iii, Inference – ii  
 (C) Conclusion – ii, Assumption – iv, Inference – i  
 (D) Conclusion – iii, Assumption – ii, Inference – iv

## SECTION – II

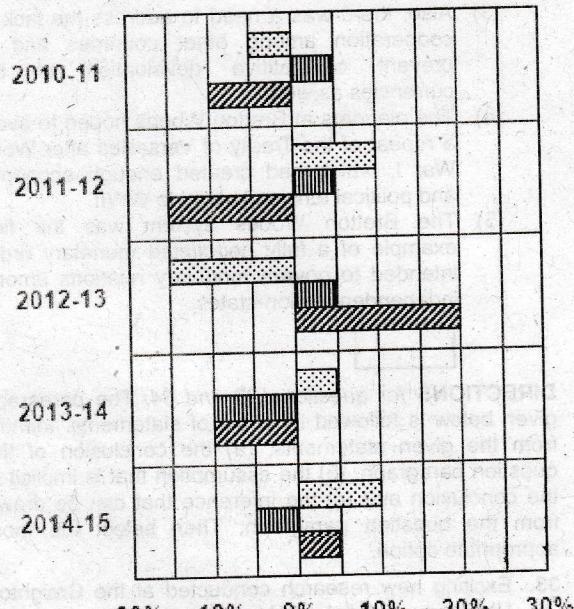
**Number of Questions = 32**

**DIRECTIONS for questions 1 to 4:** Answer these questions on the basis of the information given below.

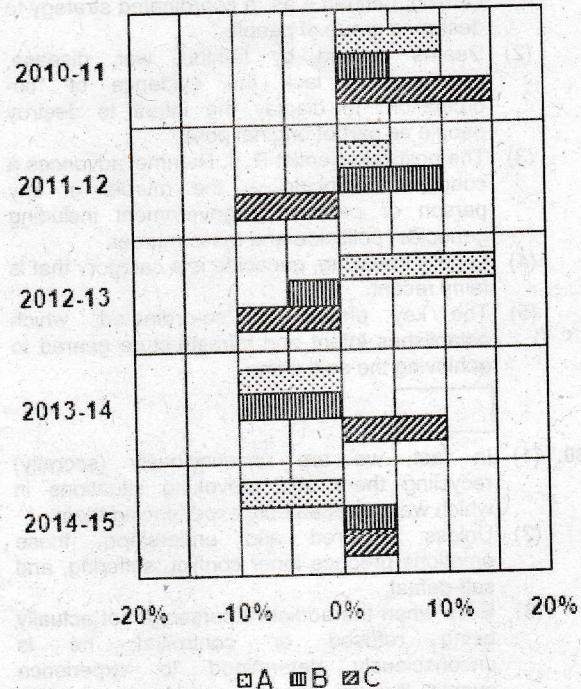
The per capita forest cover of a country for any year is calculated by dividing the forest cover (in sq. km) of the country with the population of the country in that year. The following table presents the forest cover and population of three countries – A, B and C – at the beginning of 2010-11. The bar graphs present the percentage change in the forest cover and the percentage change in the population of these countries during each of five years, from 2010-11 to 2014-15.

Country	Forest Cover (in '000 sq. km)	Population (in mn)
A	1200	40
B	1000	40
C	1600	70

Change in Forest Cover (%)



Change in Population (%)

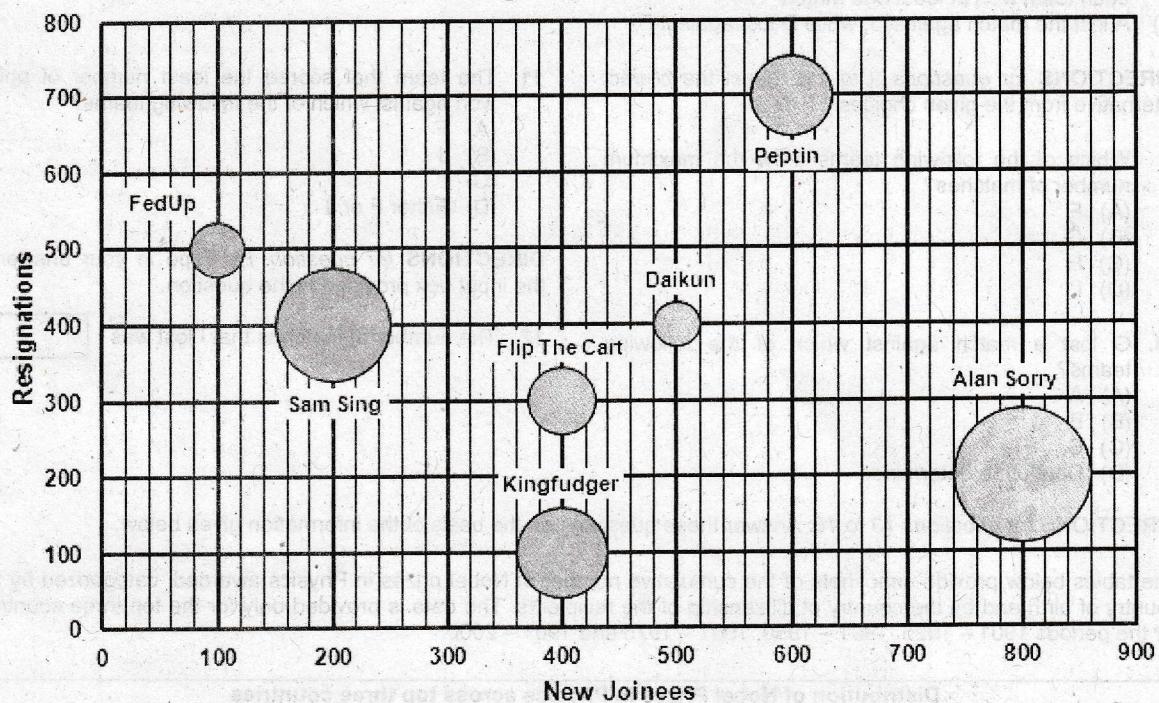


**DIRECTIONS** for questions 1 to 3: Select the correct alternative from the given choices.

1. What is the difference between the population of country C at the end of 2014-15 and that of country B at the end of 2012-13?  
 (A) 35.21 mn      (B) 31.42 mn  
 (C) 27.86 mn      (D) 22.78 mn
2. At the end of which of the five years given was the forest cover per capita of country A the highest?  
 (A) 2014-15      (B) 2013-14  
 (C) 2012-13      (D) 2011-12

**DIRECTIONS** for questions 5 to 8: Answer these questions on the basis of the information given below.

The following bubble chart presents, for seven different companies, the number of employees in each company at the beginning of the year 2015, the number of new joinees (i.e., employees who joined) in each company during the year (given along the X-axis) and the number of resignations (i.e., employees who left) in each company during the year (given along the Y-axis). In the bubble chart, the width (diameter) of the bubble for each company is proportional to the number of employees in the company at the beginning of the year.



Note: The number of employees in Alan Sorry at the beginning of the year is 3000.

**DIRECTIONS** for questions 5 to 8: Select the correct alternative from the given choices.

5. For which company is the ratio of the number of new joinees in 2015 to the number of employees in the company at the beginning of the year the highest?  
 (A) Alan Sorry      (B) Peptin  
 (C) Daikun      (D) Flip The Cart
6. For which company was the difference between the number of employees in the company at the beginning of 2015 and that at the end of 2015 the highest?  
 (A) 2000      (B) 2300  
 (C) 2800      (D) 3500

3. What is the total forest cover (in '000 sq. km) across the three countries combined at the end of 2014-15?  
 (A) 3417.3      (B) 3105.6  
 (C) 3987.6      (D) 3608.9

**DIRECTIONS** for question 4: Type in your answer in the input box provided below the question.

4. At the end of how many of the given five years was the forest cover per capita of country A greater than that of country B?

- (A) FedUp      (B) Kingfudger  
 (C) Alan Sorry      (D) Sam Sing
7. For which company was the percentage increase in the number of employees in 2015 the highest?  
 (A) Alan Sorry      (B) Kingfudger  
 (C) Daikun      (D) Sam Sing
8. What is the difference between the number of employees in the company with the highest number of employees at the end of 2015 and that in the company with the lowest number of employees at the end of 2015?  
 (A) 2000      (B) 2300  
 (C) 2800      (D) 3500

**DIRECTIONS** for questions 9 to 12: Answer these questions on the basis of the information given below.

In a hockey tournament, two groups – Group 1 and Group 2 – of five teams each played against each other such that each team in a group played against all the five teams in the other group exactly once. In any match, the winner was awarded three points, and the loser, no points. In case of a draw, the two teams were awarded one point each. The following table gives partial information about the wins, draws and losses of each team:

Group 1					
Team	Played	Win	Loss	Draw	Points
A	5				10
B	5				5
C	5		2		9
D	5				12
E	5				3

Group 2					
Team	Played	Win	Loss	Draw	Points
F	5				6
G	5				7
H	5				8
I	5				6
J	5				6

Further, it is also known that

- (i) each team won at least one match
- (ii) A lost the match against J, while D lost against F.

**DIRECTIONS** for questions 9 to 11: Select the correct alternative from the given choices.

9. Which of the following teams drew the maximum number of matches?
  - (A) F
  - (B) G
  - (C) H
  - (D) I
10. G lost a match against which of the following teams?
  - (A) A
  - (B) B
  - (C) C
  - (D) Cannot be determined

**DIRECTIONS** for questions 13 to 16: Answer these questions on the basis of the information given below.

The tables below provide snapshots of the cumulative number of Nobel prizes in Physics awarded, categorized by the country of birth and by the country of citizenship of the recipients. The data is provided only for the top three countries for the periods 1901 – 1925, 1901 – 1950, 1901 – 1975 and 1901 – 2000.

Distribution of Nobel Prizes in Physics across top three countries (by country of birth of recipients)								
Rank	1901-1925		1901-1950		1901-1975		1901-2000	
	Country	Nobel Prizes Won	Country	Nobel Prizes Won	Country	Nobel Prizes Won	Country	Nobel Prizes Won
1	Germany	8.50	Germany	10.50	Germany	14.00	U.S.A.	25.33
2	U.K.	3.50	U.K.	10.00	U.S.A.	13.00	Germany	17.67
3	Netherlands	3.00	U.S.A.	4.50	U.K.	12.33	U.K.	12.67

Distribution of Nobel Prizes in Physics across top three countries (by citizenship of recipients)								
Rank	1901-1925		1901-1950		1901-1975		1901-2000	
	Country	Nobel Prizes Won	Country	Nobel Prizes Won	Country	Nobel Prizes Won	Country	Nobel Prizes Won
1	Germany	8.50	U.K.	10.50	U.S.A.	19.50	U.S.A.	33.67
2	U.K.	4.00	Germany	9.50	U.K.	14.00	U.K.	14.33
3	Netherlands	3.00	U.S.A.	7.50	Germany	10.83	Germany	13.83

Further, it is also known that

- (i) in any year, the Nobel Prize in Physics was shared by not more than three persons.  
 (ii) in any year, when there was more than one winner declared for the Nobel Prize in Physics, the prize was shared equally by all the winners. For example, if there were two winners declared for the Nobel Prize in Physics in a certain year, each person is assumed to have won 0.5 of the Nobel Prize in Physics.  
 (iii) the contribution of a particular country (by birth or by citizenship) in any year is the proportion of Nobel Prize winners in Physics in that year from that country.

**DIRECTIONS** for question 13: Type in your answer in the input box provided below the question.

13. If exactly two persons won the Nobel Prize in Physics every year from 1901 to 1925, then in at least how many years during this period did no person born in Germany win a Nobel Prize in Physics?

1

**DIRECTIONS** for questions 14 to 16: Select the correct alternative from the given choices.

14. If from 1951 to 1975, every year in which one or more citizen(s) of U.K. won a Nobel Prize in Physics, it was shared with exactly one citizen of U.S.A, what is the maximum possible number of years during the same period in which a citizen of U.S.A. was the only winner of the Nobel Prize in Physics?



15. From 1976 to 2000, in a total of seven years, no citizen of U.S.A. won the Nobel Prize in Physics. Let  $x$  denote the number of years in the given period in which there were three Nobel Prize winners in Physics, of which at least one and not more than two were citizens of U.S.A. and let  $y$  denote the remaining years in the same period in which citizens of U.S.A. won the Nobel Prize in Physics. If  $x = y$ , then the number of years in which only citizens of

- U.S.A. won the Nobel Prize  
(A) 10  
(B) 8  
(C) 6  
(D) Cannot be determined

16. Which of the following statements is/are definitely true?

- I. In the period 1951-75, the number of Nobel Prize winners in Physics who were born in U.S.A is more than those who were born in Germany.



**DIRECTIONS** for questions 17 to 20: Answer these questions on the basis of the information given below.

On a particular day, six people – A through F – went to the railway station to board six different trains. Each person arrived at the station at a different time and boarded a train which left at a different time. The following information is known about the order in which they arrived at the station and the order in which they left the station, i.e., after boarding their respective trains:

- (i) By the time B arrived at the station, E had left and A was at the station.
  - (ii) C was not the last person to arrive but he arrived after A left.
  - (iii) When D arrived at the station, at least two of the six people were at the station but when D boarded his train, none of the other five were present at the station.
  - (iv) F was the third person to arrive at the station but was the first person to leave the station.
  - (v) The person who arrived first was not the third to leave and the person who was the fourth to leave was not the fourth to arrive.

**DIRECTIONS** for questions 17 to 20: Select the correct alternative from the given choices.

17. Who was the second person to leave the station?  
(A) F      (B) A      (C) E      (D) D

18. Who among the following was the last to arrive?  
(A) F      (B) B      (C) C      (D) D

19. How many of the six people were at the station when C left?  
(A) 3      (B) 2      (C) 1      (D) 0

20. When which of the following persons arrived at the station were the maximum number of persons (among the six) present at the station?  
(A) F      (B) B      (C) C      (D) A

**DIRECTIONS** for questions 21 to 24: Answer these questions on the basis of the information given below.

A head hunting firm analysed the resumes of 50 candidates and found that each candidate mentioned in her resume that she was fluent in at least one language among English, French and Spanish. The firm interviewed the 50 candidates and found that while all the candidates definitely mentioned in their resume all the languages that they were actually fluent in, some of them lied in their resume by **including languages in their resumes that they were not fluent in**. Also, every candidate was actually fluent in at least one language.

The following information is known about the languages that each person mentioned in her resume and the language that each person is actually fluent in:

- (i) The number of people who mentioned that they were fluent in both Spanish and French in their resume is 18 and the number of people who mentioned that they were fluent in only English and Spanish in their resume is 15.
- (ii) None of the candidates mentioned in their resume that they were fluent in only one language.
- (iii) While 4 candidates are actually fluent in all the three languages, the number of candidates who mentioned in their resume that they were fluent in all the three languages was double this number.
- (iv) The number of candidates who are actually fluent in at least two languages is 14 and the number of candidates who are actually fluent in Spanish is 21.
- (v) The number of people who are actually fluent in French but not Spanish is 19 and the number of people who are actually fluent only in French is 14.

**DIRECTIONS** for question 21: Type in your answer in the input box provided below the question.

21. How many candidates are actually fluent only in Spanish?

**DIRECTIONS** for question 22: Type in your answer in the input box provided in the question.

22. The number of candidates who lied in their resume is at least .

**DIRECTIONS** for question 23: Type in your answer in the input box provided below the question.

23. If the number of candidates who are fluent in only Spanish and French is 3, how many candidates are fluent in English and Spanish?

**DIRECTIONS** for question 24: Type in your answer in the input box provided in the question.

24. The number of candidates who did not lie in their resume is at least .

**DIRECTIONS** for questions 25 to 28: Answer these questions on the basis of the information given below.

Tissotbabu, a watchmaker, designed a watch such that the face of the watch had eight equal divisions instead of the twelve divisions present in normal watches. The watch had two hands, one short and one long. Similar to a normal watch, the short hand travels from one division to the next in the same time that it takes for the long hand to complete one full revolution. Further, the short hand completes one full revolution in 12 hours and at 12:00 both the hands point vertically upwards. On the face of the watch, instead of marking numbers at each of the divisions, Tissotbabu marked alphabets from A to H, in no particular order. The following information is known about the face of the watch:

- (i) When the time is exactly 4:30, one of the hands is on the letter D and the other hand is on the letter F.
- (ii) The time taken by the hour hand to move from letter A to letter B is not less than five hours.
- (iii) At 5:15, one of the hands is exactly on H and H is not adjacent to F.
- (iv) C and E are opposite each other and it takes three hours for the hour hand to travel from C to A.

**DIRECTIONS** for questions 25 to 28: Select the correct alternative from the given choices.

25. At which of the following times will the angle between the short and the long hands of Tissotbabu's watch be the same as the angle between the hour hand and minute hand in a normal watch?

- (A) 2:15
- (B) 5:15
- (C) 4:00
- (D) None of the above

26. What will be the approximate time when the last division that the hour hand has passed is marked with the letter C and the minute hand is exactly on the letter A?

- (A) 8 : 49
- (B) 6 : 52
- (C) 7 : 19
- (D) 3 : 45

27. How long will it take for the hour hand to move from B to E?

- (A) 1.5 hours
- (B) 3 hours
- (C) 7.5 hours
- (D) 4.5 hours

28. Which of the following pairs of letters are opposite each other?

- (A) A, B
- (B) A, D
- (C) F, G
- (D) B, E

**DIRECTIONS** for questions 29 to 32: Answer these questions on the basis of the information given below.

Seven cities – A through G – are connected by one-way roads and two-way roads. The following table presents the connecting roads for each of the seven cities:

Origin City	Connecting Roads	
	One-way Road To	Two-way Road To
A	D, F	E
B	F, G	C
C	D, E	B
D	F	E
E	B, G	A, D
F	C	G
G	-	F

**DIRECTIONS** for questions 29 to 32: Select the correct alternative from the given choices.



**SECTION - III**  
Number of Questions = 34

**DIRECTIONS** for question 1: Select the correct alternative from the given choices.

1. Find the remainder when  $x + x^5 + x^9 + x^{13} + x^{17}$  is divided by  $x^2 + x$ .  
(A) 5      (B)  $x$   
(C)  $x^2 - 2x$       (D)  $5x$

**DIRECTIONS** for question 2: Type in your answer in the input box provided below the question.

2. If  $1 + 3 + 5 + \dots + (2n - 1) = 1 + m(m+1)(m+2)(m+3)$ , where  $m$  and  $n$  are natural numbers, find the value of  $n$ , when  $m = 25$ .

**DIRECTIONS** for question 3: Select the correct alternative from the given choices.

3. In a triangle ABC, a perpendicular is dropped from vertex A to side BC, such that it meets BC at D. If  $\frac{AD}{BD} = \frac{DC}{AD}$ , then find the measure of angle A.



**DIRECTIONS** for question 4: Type in your answer in the input box provided below the question.

4. In a college reunion, 25 friends got together, of whom some came with their spouses. As part of a game played during the get-together, all the persons in the gathering shook hands with every other person present. If there were a total of 903 handshakes during the game, how many of the 25 friends did not come with their spouses?

**DIRECTIONS** for question 5: Select the correct alternative from the given choices.

5. If  $2a_n = a_{n-1} + a_{n+1}$ ,  $a_8 = 46$  and  $a_5 = 28$ , then which of the following is true?

(A)  $a_{11} = 62$       (B)  $a_{10} = 58$   
 (C)  $a_7 = 54$       (D)  $a_7 = 42$

**DIRECTIONS** for questions 6 to 8: Type in your answer in the input box provided below the question.

6. In a cart, the diameters of the front and rear wheels are 4 feet and 10 feet respectively. If the sum of the

If the cart makes 100 revolutions per minute and the total number of revolutions made by the two wheels is 98, then find the distance covered (in ft) by the cart.

(Take  $\pi = \frac{22}{7}$ )

1

7. At how many distinct points do any two of the three graphs  $x^2 + y^2 = 25$ ,  $4x + 3y = 25$  and  $x = 0$  meet each other?

1

8. A and B, working together, can do a certain work in 20 days, whereas B and C, working together, can do it in 30 days. A, B and C together started the work but A left after 8 days, while B left after another 10 days and the remaining work was completed by C alone in another 8 days. Had A and B not left, then in how many days would A, B and C together have completed the work?

days

**DIRECTIONS** for questions 9 to 11: Select the correct alternative from the given choices.



10. If  $f(x) = 3x^2$  and  $g(x) = \frac{1}{(f(x))^2}$ , then the value of  $\log_{81}(g(g(3)))$  is

(A)  $5\frac{1}{2}$ . (B) 8.  
 (C) 10. (D)  $15\frac{3}{4}$ .

11. In the quadratic equation  $ax^2 + bx + c = 0$ , if the sum of the roots is equal to the product of the roots, then find the sum of the reciprocals of the roots.

- (A)  $\frac{1}{2}$   
(B) 1  
(C)  $\frac{2}{3}$   
(D) Cannot be determined

**DIRECTIONS** for question 12: Type in your answer in the input box provided below the question.

12. Two persons, A and B; simultaneously started running, from the same point, around a circular track, in the same direction, and met each other for the first time after 15 mins from the start, during which time B had completed exactly five laps.

Instead, if they had moved in opposite directions, after how many minutes from the start would their 11<sup>th</sup> meeting have taken place, given that the speed of A is more than the speed of B?

mins

**DIRECTIONS** for questions 13 and 14: Select the correct alternative from the given choices.

13. There are two concentric circles. From a point on the outer circle, a tangent is drawn to the inner circle. If the length of the tangent is one-third the radius of the outer circle, then find the ratio of the radius of the inner circle to that of the outer circle.

(A)  $1 : \sqrt{2}$       (B)  $2 : 3$

(C)  $2\sqrt{2} : 3$  . . . . . (D)  $8 : 9$

- 14.** If four friends, A, B, C and D, shared a certain sum between themselves such that A's share was one-fourth of the total share of B, C and D; D's share was one-fourth of A's share and B's share was twice C's share, find the ratio of the shares of B and D.

(C) 8 : 3 (D) 5 : 1

**DIRECTIONS** for questions 15 and 16: Type in your answer in the input box provided below the question.

15. If the roots of the quadratic equation  $x^2 - 24x + N = 0$  are prime numbers, how many distinct values can N assume?

三

16. In how many ways can six different fruits be given to three boys such that each boy gets a different number of fruits and each boy gets at least one fruit?

1

**DIRECTIONS** for questions 17 to 19: Select the correct alternative from the given choices.

17. In a private organization, the average increment in the salary of all the employees was 14.3%. If the average increments of all the male and all the female employees were 15.2% and 13.2% respectively, then how many of the 500 employees working in the organization were females?

(A) 200  
(B) 225  
(C) 275  
(D) Cannot be determined

18. How many factors of  $2^x 3^y 5^z$  are divisible by 60?

  - $(x - 1)(y - 1)(z - 1)$
  - $(x - 2)(y - 1)(z - 1)$
  - $xyz - z$
  - $xyz - yz$

19. Find the range of  $x$ , if  $\frac{1}{x-2} > \frac{1}{2x}$ .

