PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

DO NOT REMOVE THIS BOOKLET FROM THE TEST CENTRE.

DO NOT WRITE ON, OR OTHERWISE MARK, THIS BOOKLET.

PLEASE USE A 2B PENCIL TO MARK YOUR ANSWERS.

YOU MAY MAKE NOTES ON SCRATCH PAPER PROVIDED BY THE SUPERVISOR.

ALL QUESTIONS IN THIS SECTION ARE MULTIPLE CHOICE FORMAT, WITH FIVE ANSWER OPTIONS: A, B, C, D AND E.

INDICATE YOUR ANSWERS ON THE SEPARATE ANSWER SHEET PROVIDED BY FILLING IN THE APPROPRIATE ANSWER OPTION CORRESPONDING TO THE SECTION, I.E. TO INDICATE OPTION E TO QUESTION 1 IN THIS SECTION, SHADE THE OVAL CORRESPONDING TO OPTION E.

THIS SECTION OF THE TEST LASTS 30 MINUTES. WHEN THE SUPERVISOR CALLS THE END OF THE 30 MINUTES, PLEASE STOP WHAT YOU ARE DOING AND CLOSE THE BOOKLET. THE SUPERVISOR WILL INSTRUCT YOU WHEN TO PROCEED TO THE NEXT SECTION IN THE TEST.
SECTION I
Communication Analysis
Time – 30 minutes

Directions: Each of the following three passages will be accompanied by five relevant questions. After reading a passage, answer the five corresponding questions based ONLY on information given or implied in the text.

Questions 1-5 are based on the following passage:

The rise of the Massive Online Open Course, or MOOC, has generated heated debate over the future direction of higher education. Some skeptics maintain that a MOOC is at best an extension of established models of online learning and at worst nothing but an overhyped fad that can never offer an acceptable substitute for the kind of face-to-face education offered by a traditional university. On the other hand, some of America’s top universities—including Harvard, MIT, and Stanford—are actively promoting MOOCs, and a number of investors are sold on the proposition that MOOCs will permanently transform the landscape of higher education. “I think this could be big the way Google was,” says John Doerr, one of Silicon Valley’s most successful venture capitalists and a major investor in Coursera, a for-profit MOOC provider with close ties to Stanford University.

So just what is a MOOC? Unlike a typical online course in which a university charges tuition, limits enrollment to assure some degree of student-faculty interaction, and gives credit to students who complete the course, a MOOC is tuition-free, open to anyone with an internet connection, and does not offer university credit. The ‘M’ in MOOC is indisputable: an Artificial Intelligence (AI) MOOC offered by Stanford in 2011 attracted more than 160,000 students. Critics, however, point out that these massive enrollments have been accompanied by massive attrition rates—nearly 80% of the enrollees failed to complete the 2011 Stanford AI course.

At this point MOOC providers still seem to be searching for a viable business model. Coursera’s contract with the University of Michigan (which was publicly disclosed due to a Freedom of Information request filed by a journalist) lists no fewer than eight potential “monetization strategies” such as allowing third-party sponsorship of courses, charging students to receive non-credit university-branded certificates, providing in-person assessments for a fee, charging employers to search and contact students who have completed job-related Coursera courses, and charging employers or universities to screen students on their behalf.

1. The passage implies that
   A) for-profit MOOC providers are already converging on a single business strategy.
   B) MOOCs offered by non-profit providers generally have larger enrollments than MOOCs offered by for-profit providers.
   C) MOOCs offered by for-profit providers generally have higher attrition rates than MOOCs offered by non-profit providers.
   D) most students enrolling in MOOCs already have a university degree.
   E) students in a MOOC may not have the opportunity to interact with the course instructors.

2. The skeptics described in the first paragraph would most likely agree
   A) with the assertion that traditional universities have greatly underestimated the extent to which MOOCs will transform higher education.
   B) that the critics of MOOCs have exaggerated the amount of attrition that occurs in these courses.
   C) that the emergence of MOOCs signifies a radical change from earlier approaches to online education.
   D) that the emergence of MOOCs will not lead to drastic changes in ways of teaching and learning at traditional universities.
   E) with the expectations of those venture capitalists who are investing in Coursera.
3. According to the passage, Coursera may attempt to generate revenue through all of the following EXCEPT:
   A) providing personalized assessments to students who want to demonstrate certain competencies.
   B) collecting tuition from students who desire university credit.
   C) acting as a selection agent on behalf of employers or universities.
   D) allowing employers access to a database of students with relevant qualifications.
   E) allowing other companies to advertise on Coursera’s course platform.

4. The passage quotes a prediction made by venture capitalist John Doerr. This prediction depends on which of the following assumptions?
   A) In the future MOOC providers will begin to limit course enrollments.
   B) Stanford University was the first academic institution to offer a MOOC.
   C) Coursera is currently the only for-profit MOOC provider.
   D) Coursera’s contract with the University of Michigan is not typical of its agreements with other universities.
   E) Attrition rates in future MOOCs will not make it impossible for a MOOC provider to earn a profit.

5. The author's attitude toward MOOCs is best described as
   A) theoretical opposition.
   B) cautious appraisal.
   C) resigned acceptance.
   D) dismissive skepticism.
   E) definite optimism.
Questions 6-10 are based on the following passage:

As technological change continues at an unprecedented rate, we frequently find ourselves adrift amidst resultant discontinuous change. There is often no time to plan for change. Rather, as Stephen Hawking states, “change is”. As a result, twenty-first-century management cannot be guided by a set of concrete principles but must instead embrace new ways of being and thinking in order to keep pace with changing conditions and thrive amidst the unknown.

However, as we start to move away from old ways of thinking, some familiar ideas seem difficult to give up. One such concept is the rational view of causality in which the future is understood to be predetermined. Rationalism frames the organization as progressing toward goals preselected by the organization. (The rise and popularity of strategic planning in the twentieth century is a classic expression of rationalist thinking.)

From a transformative point of view, on the other hand, the future is under perpetual construction. In other words, human interaction in the here and now, or the living present, perpetually modifies and shapes the future. Rather than thinking of causality in a traditional, rational way (moving toward a mature state or pre-selected goal), focusing on the living present allows us to conceptualize causality in a transformative way. In this alternative view, our movement toward the future is movement toward an unfinished whole rather than a finished state.

Another outmoded organizational lens is systems thinking. Whether systems are viewed as machines or living systems, systems thinking shows an undesirable objectifying bias because the observer of the system necessarily views herself as external to that system. Although the role of ‘detached observer’ is easy and comfortable for those accustomed to organizational leadership tools developed in the twentieth century, detached views of organizational life fail to address the crux of leadership today, as twenty-first-century organizational life is highly complex and relational.

6. The primary purpose of the passage is to
A) demonstrate that “change is”.
B) defend a particular definition of change.
C) advocate a new way of viewing change.
D) identify a set of concrete principles for managing change.
E) explain a technique for reducing uncertainty in a rapidly changing environment.

7. The author would likely agree with all of the following assertions EXCEPT:
A) It is appropriate to think of the future as something that is continuously being re-shaped by decisions made here and now.
B) The rationalist account of the concept of causality is fundamentally flawed.
C) Successful leadership today depends largely on creating a realistic plan to achieve a set of predetermined goals.
D) People today often experience change as a sudden disruption of familiar ways of thinking and behaving.
E) Managers should view the unknown not as something to be eliminated but as an opportunity to thrive through continual adaptation.

8. According to the passage, a detached observer of a twenty-first-century organization
A) is not aware of the importance of organizational change.
B) is in the best position to offer unbiased advice to leaders of the organization.
C) is not likely to achieve an adequate understanding of organizational leadership.
D) is more likely to view the organization as a machine rather than as a living system.
E) is more likely to view the organization as a living system rather than a machine.
9. The passage mentions strategic planning in order to
A) discuss a new understanding of this concept.
B) give an example of a certain view of causation.
C) show that transformative thinking is impossible without effective long-range planning.
D) correct a deficiency in systems thinking.
E) refute the claim that “there is often no time to plan for change”.

10. Which of the following management practices best exemplifies the new ways of thinking and being mentioned in the passage?
A) Adopting a consistent, objective approach to performance management.
B) Having a clear vision of what the team needs to achieve.
C) Keeping the team focused on progressing toward fixed goals.
D) Encouraging two-way communication with team members even in times of turmoil.
E) Acquiring relevant technical skills to be able to advise team members who encounter problems.
Questions 11-15 are based on the following passage:

The ability to communicate effectively on the phone with English-speaking customers in the USA, UK, or Australia is a much valued commodity in off-shored and outsourced (O & O) call centers in post-colonial Asian countries. Off-shored call centers are “captives”: service centers owned by multinationals that have decided to move their back office functions overseas. Outsourced call centers, on the other hand, are large third party providers and typically serve a range of different industry clients. Attracted by lower labor costs and the belief that the standard of customer care would be equal to, or better than, that offered by on-shore centers, USA multinationals accounted for about 95% of O & O investment in Asian destinations as of 2003. Over the last decade the O & O industry has developed rapidly with a recent prediction that the broader business processing outsourcing (BPO) sector will triple in size from USD 500 billion to USD 1.5 trillion by 2020. Formerly colonized countries such as India and the Philippines are preferred destinations because they continue to use English as a language of government and business, and their elite schools and universities are expected to graduate students with a good command of spoken and written English. But is “good” English good enough in the context of a call center? Spoken English language communication is, after all, a core competency for successful call handling and customer care in call centers. The quality of this core competency, whilst uncontested on-shore where call center customer services representatives (CSRs) are first language speakers, is frequently criticized off-shore where CSRs are non-native speakers. The O & O industry therefore has been keen to develop the ability to source, assess, and cultivate the requisite language skills.

11. The author mentions the “post-colonial” status of certain Asian countries primarily in order to
   A) help clarify the reasons for the widespread use of English in these countries.
   B) prove that the O & O industry can hire large numbers of qualified call center staff who will not require additional language training.
   C) suggest that these countries have lower labor costs than do other Asian countries that were never colonized.
   D) explain the resistance to the establishment of call centers in these countries.
   E) explore the interaction between economic policy and political history in these countries.

12. The author implies that
   A) graduates of certain Asian universities may be unable to act as effective call center CSRs because they lack adequate proficiency in spoken English.
   B) most call centers in Asia are owned by foreign multinational companies.
   C) O & O call centers currently offer better customer service than on-shore call centers do.
   D) irate customers in the USA, UK, and Australia often have unreasonable expectations when dealing with a CSR on the phone.
   E) off-shored call centers have, on average, fewer employees than do outsourced call centers.
13. Which of the following best describes the structure of the passage as a whole?
A) A business trend is mentioned; considerations supporting this trend are noted; an obstacle to further extension of this trend is identified.
B) A business model is criticized; the reasons underlying this model are explained; the inadequacy of these reasons is re-affirmed.
C) A new industry is mentioned; two parts of this industry are distinguished; an argument is given that one of these two parts is likely to flourish while the other is likely to decline.
D) A crucial job skill is highlighted; an example showing the relevance of this skill is introduced; a detailed plan to assist workers to sharpen this skill is outlined.
E) A common stereotype is described; the historical basis for this stereotype is presented; the implications of this stereotype are rejected.

14. According to the passage, the call center industry
A) diverts scarce human capital away from more productive forms of employment.
B) places too much emphasis on oral communication skills at the expense of other core competencies.
C) has been repeatedly criticized for hiring only graduates of elite schools and universities.
D) should consider destinations other than India and the Philippines.
E) sees the need for in-house language training programs.

15. According to the passage, all of the following are true of off-shored call centers EXCEPT:
A) They are part of the BPO sector.
B) They are owned by foreign-based companies.
C) They are known as "captives".
D) They serve more than one client.
E) They are part of the O & O sector.

STOP
IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY. DO NOT TURN TO ANY OTHER SECTION IN THE TEST.
Academic Aptitude

SECTION II

Critical Thinking
SECTION I
Critical Thinking
Exam Instructions

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

DO NOT REMOVE THIS BOOKLET FROM THE TEST CENTRE.

DO NOT WRITE ON, OR OTHERWISE MARK, THIS BOOKLET.

PLEASE USE A 2B PENCIL TO MARK YOUR ANSWERS.

YOU MAY MAKE NOTES ON SCRATCH PAPER PROVIDED BY THE SUPERVISOR.

ALL QUESTIONS IN THIS SECTION ARE MULTIPLE CHOICE FORMAT, WITH FIVE ANSWER OPTIONS: A, B, C, D AND E.

INDICATE YOUR ANSWERS ON THE SEPARATE ANSWER SHEET PROVIDED BY FILLING IN THE APPROPRIATE ANSWER OPTION CORRESPONDING TO THE SECTION, I.E. TO INDICATE OPTION E TO QUESTION 1 IN THIS SECTION, SHADE THE OVAL CORRESPONDING TO OPTION E.

THIS SECTION OF THE TEST LASTS 30 MINUTES. WHEN THE SUPERVISOR CALLS THE END OF THE 30 MINUTES, PLEASE STOP WHAT YOU ARE DOING AND CLOSE THE BOOKLET. THE SUPERVISOR WILL INSTRUCT YOU WHEN TO PROCEED TO THE NEXT SECTION IN THE TEST.
SECTION I
Critical Thinking
Time – 30 minutes

Directions: For each of the following 15 questions, analyze the argument or situation and pick the best possible answer choice.

1. Virtually all eligible voters who took part in a recent survey of political attitudes in Artesiana stated that because political candidates from the major parties are incompetent or corrupt (or both), it is a complete waste of time to vote in Artesianan elections. Yet nearly 80% of eligible voters chose to vote in the most recent Artesianan election.

Which of the following, if true, most helps to explain the seeming paradox?
A) Eligible voters who chose to vote in the most recent election were compelled to vote for at least one candidate they knew to be incompetent or corrupt (or both).
B) Only eligible voters who did not choose to vote in the most recent election were included in the recent survey.
C) All eligible voters who took part in the recent survey gave truthful answers that accurately reflect their views concerning politics.
D) Candidates from some major political parties are competent but corrupt, whereas candidates from other parties are incompetent but honest.
E) Those voters who took part in the recent survey acted in accordance with their beliefs by refusing to waste time voting in the recent elections.

2. Some scholars believe that L'Anse aux Meadows in Newfoundland was a ship repair base for the 11th-century Viking explorers of the land that the Vikings called Vinland. Artifacts discovered at L'Anse aux Meadows include carved pieces of wood similar to wooden ship repair pieces excavated from a 9th-century Viking settlement in Ireland.

Which of the following, if true, would most help to strengthen the claim that L'Anse aux Meadows was used as a ship repair base by 11th-century Viking explorers?
A) Ship repair facilities have existed in Newfoundland since the late 1700s, when the first permanent European settlements were established.
B) The main written sources of information concerning Vinland are two Icelandic sagas that disagree about the type of sailing vessel used to explore Vinland.
C) Any Vikings who explored Vinland must have been based in Greenland, but during the eleventh century the Viking settlements in Greenland had neither the population nor the wealth to send ships to explore Vinland.
D) The carved pieces of wood found at L'Anse aux Meadows are almost identical to carvings made by Native Americans who lived near L'Anse aux Meadows in the eleventh century.
E) A number of clothes-fastening pins of an 11th-century Viking design were among the artifacts unearthed at L'Anse aux Meadows.
3. The *T. urticae* mite is an agricultural pest that feeds on many crop plants, including tomatoes. Some tomato farmers manage this threat by introducing the *G. occidentalis* mite, a predator of *T. urticae*. Other tomato farmers spray their crops with miticide, killing all mites within the area that is sprayed.

If the statements above are true, which of the following must be true?

A) Only if *G. occidentalis* has first been introduced into a tomato field will spraying with miticide eliminate all *T. urticae* from the field.

B) The introduction of *G. occidentalis* and spraying with miticide are the only two known methods for controlling an outbreak of *T. urticae* on a tomato farm.

C) If live *N. californicus* mites are found in a field that has been sprayed with miticide, these mites entered the field sometime after the field was sprayed.

D) *T. urticae* causes more economic damage to tomato farmers than it does to growers of any other major crop plant.

E) Some tomato farmers have tried both introduction of *G. occidentalis* and spraying with miticide as ways of managing the threat posed by *T. urticae*.

4. The small but affluent nation of New Malusidia (NM) faces a serious shortage of manpower in the private sector. As a result, about 30% of the workforce in NM is comprised of foreign workers holding work permits. Some of the foreign workers are skilled; others are unskilled. To alleviate the labor shortage, the government of NM plans to offer permanent residence status to any skilled work permit holder who has resided in the country for longer than two years.

To determine whether the plan is likely to achieve its goal, it would be most useful to know which of the following?

A) Whether the non-working dependents of unskilled work permit holders are permitted to reside in NM during the work permit holder’s term of employment.

B) Whether NM requires that permanent residents who intend to apply for citizenship in NM renounce allegiance to any other country in which they hold citizenship.

C) Whether permanent residents of NM are disqualified from applying for certain jobs in the public sector.

D) Whether the government of NM plans to introduce a new migration scheme allowing skilled foreigners who have never worked in NM to apply for permanent residence.

E) Whether the average duration of gainful employment in NM is greater among foreigners who are permanent residents than it is among foreigners who hold skilled work permits.
5. A parole program offers prisoners a chance to be released from prison early subject to various conditions. A violence risk assessment conducted by a qualified psychologist is an essential step in an effective parole screening process because such an assessment will prevent prisoners who are unsuitable for early release from being considered for parole.

The conclusion above depends upon which of the following assumptions?

A) The parole board is not legally obligated to accept the recommendations of the violence risk assessment report prepared by a qualified psychologist.
B) A parole screening process will surely be effective if it includes a violence risk assessment conducted by a qualified psychologist.
C) A prisoner who is not assessed to pose a high risk of re-offending should be released from prison without conditions.
D) Psychologists conducting violence risk assessments are able to identify those prisoners who are unsuitable for early release.
E) Prisoners applying for parole need not undergo a violence risk assessment if they were imprisoned for a non-violent offence.

6. Twelve months ago the Deedsville City Council launched an anti-littering campaign calling for all residents to do their part to help beautify the city. Since that time the amount of litter collected in Deedsville has fallen by more than 40%. Clearly, the campaign has persuaded many people to refrain from littering.

Which of the following, if true, would most weaken the conclusion above?

A) As a result of budget constraints during the last twelve months, the City Council retrenched a number of cleaners who had been assigned to litter collection duty.
B) The amount of trash collected from public rubbish bins around Deedsville has significantly increased during the last twelve months.
C) In an effort to establish a reputation for good corporate citizenship, a number of private businesses in Deedsville underwrote the cost of the City Council’s anti-littering campaign.
D) Polls indicate that some residents in Deedsville believe that a tree-planting campaign is a more promising way to beautify the city than is an anti-littering campaign.
E) The population of the most litter-prone neighborhoods in Deedsville has risen by about 3% during the last twelve months.
7. People who regularly use sunscreen are more likely to be diagnosed with melanoma skin cancer than are people who do not use sunscreen. Therefore, the use of sunscreen is a cause of melanoma.

The questionable pattern of reasoning above is most similar to which of the following?
A) Some non-smokers suffer from emphysema. Therefore, smoking is not a cause of emphysema.
B) Water-resistant sunscreen is more likely to be used by athletes playing outdoor sports in hot weather conditions than by members of the general public. Consequently, most buyers of water-resistant sunscreen are athletes.
C) Because some individuals are genetically inclined to obesity and obesity can result in type 2 diabetes, any individual who is genetically inclined to obesity will inevitably suffer from type 2 diabetes.
D) Reliance on blood pressure medication increases the risk of a heart attack, because those who take such medication are more likely to suffer a heart attack than are those who do not.
E) Melanoma skin cancer can be caused by Ultraviolet A radiation. Therefore, melanoma skin cancer cannot be caused by Ultraviolet B radiation.

8. Which of the following most logically completes the argument?

Once a major source of loans for overseas development projects, the Republic of Lyttonia endured a period of deflation and sluggish growth after a speculative bubble in the domestic property market burst twenty years ago. Few overseas development loans were initiated during this period of economic stagnation. More recently, the Lyttonian economy has improved significantly, and the country now has a significant supply of funds earmarked for investment. However, it is a mistake to assume that this increase in investment capital will result in a renewed commitment to loans for overseas development projects, because __________.
A) Lyttonia’s overhang of bad debt resulting from the property market collapse has now been cleared.
B) a number of worthwhile overseas development projects were postponed during the last twenty years and are still awaiting funding.
C) the average savings rate in Lyttonia’s private sector is higher now than it was twenty years ago.
D) Lyttonia urgently needs to invest in upgrading its domestic infrastructure, which deteriorated during the long period of economic stagnation.
E) loans for overseas development projects require some level of trust and cooperation between the government of Lyttonia and the government of the nation that receives the aid.
9. Diet food companies claim that their low-calorie foods help consumers to lose weight. Such claims are not simply groundless but turn the truth upside down. It is well-known that most consumers of low-calorie foods have a body mass index (BMI) greater than 25 and so are classified as overweight. Far from offering a weight-loss solution, diet foods are actually a cause of weight gain.

Which of the following, if true, most strengthens the argument above?

A) In some cases, those who are severely overweight can reduce their BMI to a level within the normal range after continuing with a steady diet of low-calorie foods over a period of not less than six months.
B) Some world-class athletes have a BMI greater than 25; these athletes are not overweight but have exceptional muscle mass.
C) Eating diet foods is normally a consequence rather than a cause of weight gain.
D) Diet foods provide better nutritional value and contain fewer calories than the average fast food meal purchased by an individual whose BMI exceeds 25.
E) Overweight people who switch from regular foods to low-calorie foods sometimes eat additional portions of the low-calorie foods, thereby increasing caloric intake.

10. Despite the fact that credit card transactions enhance consumer liquidity, they are properly excluded from a conventional definition of money supply, because credit card use creates a liability that must be repaid.

Which of the following must be assumed in order to draw the conclusion above?

A) Whenever a credit card creates a liability that must be repaid, repayment must be made with some kind of conventional money.
B) Any transaction that creates an obligation to repay a debt should not be included in a conventional definition of money supply.
C) Methods of payment that enhance consumer liquidity benefit consumers and merchants even if such methods are excluded from a conventional definition of money supply.
D) Easy availability of credit cards allows some consumers to incur a higher level of indebtedness than they otherwise would.
E) Because credit card use creates a liability, it creates an offsetting asset that should also be excluded from a conventional definition of money supply.
For questions 11-12, refer to the following facts:

Dr. Abdullah will see exactly six patients on Tuesday morning: Ling, Musa, Nurul, Pau, Quincy, and Rohan. These patients will be seen in an order consistent with the following conditions:

- Musa is seen immediately after Quincy.
- Rohan is seen immediately before Nurul.
- Quincy is the third patient seen.
- Pau is seen immediately after Ling.

11. Given the above conditions, which one of the following could be true?
   A) Musa is the fifth patient seen.
   B) Rohan is the second patient seen.
   C) Rohan is the fourth patient seen.
   D) Nurul is the second patient seen.
   E) Pau is the first patient seen.

12. Given the above conditions, which one of the following CANNOT be true?
   A) Rohan is the first patient seen.
   B) Pau is the second patient seen.
   C) Pau is the sixth patient seen.
   D) Pau is the fifth patient seen.
   E) Nurul is the sixth patient seen.

For questions 13-15, the answer choices are as follows:

(A) The information in statement (1) alone IS enough to answer the question, but the information in statement (2) alone IS NOT enough to answer the question.
(B) The information in statement (2) alone IS enough to answer the question, but the information in statement (1) alone IS NOT enough to answer the question.
(C) NEITHER the information in statement (1) alone NOR the information in statement (2) alone is enough to answer the question, but the information in statements (1) and (2) taken together is enough to answer the question.
(D) The information in statement (1) alone IS enough to answer the question, and the information in statement (2) alone IS also enough to answer the question.
(E) The information in statements (1) and (2) taken together IS NOT enough to answer the question.

13. Is it possible for an artist to be imitative and profoundly creative?
   (1) A few imitative artists are profoundly creative.
   (2) All profoundly creative artists are imitative.

14. Do some cosmetic surgeons in the town of Eyrie Rock charge unreasonable fees?
   (1) Some doctors in the town of Eyrie Rock charge unreasonable fees.
   (2) Some doctors in the town of Eyrie Rock are cosmetic surgeons.

15. Does the busy Bevilacqua Hospital offer Emergency Room services?
   (1) Bevilacqua Hospital is located in the city of San Patricio, where no hospital is allowed to operate unless it offers Emergency Room services.
   (2) Bevilacqua Hospital is located in the state of Indigo, where some hospitals are granted an exemption from a state law requiring hospitals to offer Emergency Room services.
PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

DO NOT REMOVE THIS BOOKLET FROM THE TEST CENTRE.

DO NOT WRITE ON, OR OTHERWISE MARK, THIS BOOKLET.

PLEASE USE A 2B PENCIL TO MARK YOUR ANSWERS.

YOU MAY MAKE NOTES ON SCRATCH PAPER PROVIDED BY THE SUPERVISOR.

YOU ARE PERMITTED THE USE OF A CALCULATOR.

ALL QUESTIONS IN THIS SECTION ARE MULTIPLE CHOICE FORMAT, WITH FIVE ANSWER OPTIONS: A, B, C, D AND E.

INDICATE YOUR ANSWERS ON THE SEPARATE ANSWER SHEET PROVIDED BY FILLING IN THE APPROPRIATE ANSWER OPTION CORRESPONDING TO THE SECTION, I.E. TO INDICATE OPTION E TO QUESTION 1 IN THIS SECTION, SHADE THE OVAL CORRESPONDING TO OPTION E.

THIS SECTION OF THE TEST LASTS 30 MINUTES. WHEN THE SUPERVISOR CALLS THE END OF THE 30 MINUTES, PLEASE STOP WHAT YOU ARE DOING AND CLOSE THE BOOKLET. THE SUPERVISOR WILL INSTRUCT YOU WHEN TO PROCEED TO THE NEXT SECTION IN THE TEST.


Directions: For the following 15 questions, solve each question and indicate the appropriate answer.

For some questions, you will need to refer to accompanying graphs and charts.

For questions 1-4 refer to the table below.

The table below shows the number of deaths (in thousands) due to car accidents and the total number of deaths due to all causes (in thousands) in Country Y over a period of 6 years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total deaths</th>
<th>Deaths due to car accidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>20</td>
<td>0.9</td>
</tr>
<tr>
<td>2001</td>
<td>22</td>
<td>1.12</td>
</tr>
<tr>
<td>2002</td>
<td>24.2</td>
<td>1.55</td>
</tr>
<tr>
<td>2003</td>
<td>26.62</td>
<td>2.02</td>
</tr>
<tr>
<td>2004</td>
<td>29.28</td>
<td>1.91</td>
</tr>
<tr>
<td>2005</td>
<td>32.21</td>
<td>2.42</td>
</tr>
</tbody>
</table>

1. If the given trend in total deaths in Country Y has continued since 1990, approximately how many people died in Country Y in the year 1998?
   A) 19800
   B) 19605
   C) 18180
   D) 16530
   E) 16200

2. Over which two consecutive years did Country Y experience the greatest percentage change in the ratio of number of deaths due to car accidents to total number of deaths?
   A) 2000 – 2001
   B) 2001 – 2002
   C) 2002 – 2003
   D) 2003 – 2004
   E) 2004 – 2005

3. In Country Y, if the percentage of deaths due to natural disasters in 2000 is the same as the percentage of deaths due to car accidents in 2001, approximately how many people died in 2000 due to natural disasters?
   A) 495
   B) 990
   C) 1020
   D) 1230
   E) 1410

4. The number of deaths due to heart disease doubles every year from 2001 to 2004. If the number of deaths due to heart disease in 2000 was 10,000, how many people died in 2004 due to heart disease?
   A) 625
   B) 2,000
   C) 40,000
   D) 160,000
   E) It cannot be determined from the information given
For questions 5-8 refer to the bar graph and the table below.

The Land Transport Authority of Country X conducted a survey on the average number of vehicles passing through junction A at different times in a day in 2012.

Given below is the projected percentage increase in number of vehicles passing through junction A in 2013.

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>Morning</th>
<th>Afternoon</th>
<th>Evening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cars</td>
<td>10%</td>
<td>5%</td>
<td>15%</td>
</tr>
<tr>
<td>Bikes</td>
<td>5%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>Buses</td>
<td>5%</td>
<td>5%</td>
<td>10%</td>
</tr>
</tbody>
</table>

5. In 2012, which vehicle had the highest percentage increase in number of vehicles passing through junction A from afternoon to evening?
   A) Cars
   B) Bikes
   C) Buses
   D) Trucks
   E) It cannot be determined from the information given

6. For which vehicle did morning contribute the highest percentage of vehicles passing through junction A in a day in 2012?
   A) Cars
   B) Bikes
   C) Buses
   D) Trucks
   E) It cannot be determined from the information given

7. Calculate the projected number of cars passing through junction A in a day in 2013.
   A) 567
   B) 715
   C) 728
   D) 2101
   E) 2110

8. Calculate the approximate projected percentage increase in the number of buses passing through junction A in a day in 2013.
   A) 6.4
   B) 6.6
   C) 6.8
   D) 15
   E) 20
For questions 9-12 refer to the bar graph below.

Given below are the times of 5 racers (in seconds) in two 100m races.

9. The winner was decided by taking the average of the times in the two races. Who was the overall winner?
   A) Abhay
   B) Ricky
   C) Ross
   D) Venu
   E) Zaheer

10. Whose times witnessed the highest percentage decrease from race 1 to race 2?
    A) Abhay
    B) Ricky
    C) Ross
    D) Venu
    E) Zaheer

11. In race 1, Ross completed 50m in 5 seconds. If he had increased his actual speed over the remaining 50m by 20 percent, what would have been his time for race 1?
    A) 10.66 seconds
    B) 10.55 seconds
    C) 10.44 seconds
    D) 9.63 seconds
    E) 8.8 seconds

12. If Abhay and Zaheer race for a third time, and their respective times decrease by the same amount as the decrease from race 1 to race 2, who will win the third race and by how many seconds?
    A) Abhay wins by 2 seconds
    B) Abhay wins by 0.02 seconds
    C) Abhay wins by 0.2 seconds
    D) Zaheer wins by 2 seconds
    E) Zaheer wins by 0.02 seconds
For questions 13-15 the answer choices are as follows:

(A) The information in statement (1) alone IS enough to answer the question, but the information in statement (2) alone IS NOT enough to answer the question.

(B) The information in statement (2) alone IS enough to answer the question, but the information in statement (1) alone IS NOT enough to answer the question.

(C) NEITHER the information in statement (1) alone NOR the information in statement (2) alone IS enough to answer the question, but the information in statements (1) and (2) taken together IS enough to answer the question.

(D) The information in statement (1) alone IS enough to answer the question, and the information in statement (2) alone IS also enough to answer the question.

(E) The information in statements (1) and (2) taken together IS NOT enough to answer the question.

13. In a group of cats and their owners, how many cats are there?
   (1) There are 84 legs in total in the group.
   (2) The difference between the number of cats and their owners is 6.

14. What is the average of A, B, and C?
   (1) $3A + B + 2C = 17$
   (2) $0.5A + B + 0.75C = 7$

15. During a sale, store ABC was selling apparel at a discount of $X$ percent. What is the value of $X$?
   (1) Rachel purchased a dress at a discounted price which is $50 less than the original price.
   (2) If all dresses are priced equally, the amount required to buy 27 dresses at discounted price is equal to the amount required to buy 17 dresses at original price.

STOP
IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY. DO NOT TURN TO ANY OTHER SECTION IN THE TEST.
SECTION IV

Data Analysis
SECTION IV
Data Analysis
Exam Instructions

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY.

DO NOT REMOVE THIS BOOKLET FROM THE TEST CENTRE.

DO NOT WRITE ON, OR OTHERWISE MARK, THIS BOOKLET.

PLEASE USE A 2B PENCIL TO MARK YOUR ANSWERS.

YOU MAY MAKE NOTES ON SCRATCH PAPER PROVIDED BY THE SUPERVISOR.

YOU ARE PERMITTED THE USE OF A CALCULATOR.

ALL QUESTIONS IN THIS SECTION ARE MULTIPLE CHOICE FORMAT, WITH FIVE ANSWER OPTIONS: A, B, C, D AND E.

INDICATE YOUR ANSWERS ON THE SEPARATE ANSWER SHEET PROVIDED BY FILLING IN THE APPROPRIATE ANSWER OPTION CORRESPONDING TO THE SECTION, I.E. TO INDICATE OPTION E TO QUESTION 1 IN THIS SECTION, SHADE THE OVAL CORRESPONDING TO OPTION E.

THIS SECTION OF THE TEST LASTS 30 MINUTES. WHEN THE SUPERVISOR CALLS THE END OF THE 30 MINUTES, PLEASE STOP WHAT YOU ARE DOING AND CLOSE THE BOOKLET. THE SUPERVISOR WILL INSTRUCT YOU WHEN TO PROCEED TO THE NEXT SECTION IN THE TEST.
SECTION IV
Data Analysis
Time – 30 minutes

Direction: For the following 15 questions, solve each question and indicate the appropriate answer.

1. While discussing their ages, Anthony tells Keira, 'My age is 6 times what your age was when I was your age'. The sum of their current ages is 57. Find Keira's current age.
A) It cannot be determined from the information given
B) 19
C) 20
D) 21
E) 22

2. To settle mutual debts, two gamblers agree that phones are worth $300 each and that watches are worth $210 each. When one gambler owes money to the other, he settles the debt in phones and/or watches, with “balance” received in the form of phones or watches as well (For example, a $480 debt could be paid with three phones, with two watches received in balance). What is the smallest amount of debt that can be settled in this way?
A) 10
B) 30
C) 50
D) 70
E) 90

3. Tables at a certain store normally cost $50 per unit. During a sale, the store offers one free table with the purchase of every 4 tables. Janice wants to purchase 7 tables and Katelyn wants to purchase 8 tables. During the sale, how much money will Janice save if she purchased the tables with Katelyn instead of purchasing them alone?
A) 20
B) 30
C) 50
D) 60
E) 70

4. Jamie drives for $X$ kilometers at a uniform speed of 50 km/hour, then increases his speed to 75 km/hour and travels for $2X$ kilometers, and finally travels at 40 km/hour for the remainder of the journey. If the total distance travelled is 100 km, find his approximate average speed for the journey.
A) 55 km/hour
B) 50 km/hour
C) 45 km/hour
D) 40 km/hour
E) It cannot be determined from the information given

5. Mike, Mark, and Matt can individually build a house in 12, 16, and 24 days respectively. If Mark starts building the house and receives help from Mike and Matt every second day, in how many days will they finish building the house?
A) 2
B) 4
C) 6
D) 8
E) 10

6. In a certain school, there are 950 students: 500 boys and 450 girls. If 30 percent of the girls and 55 percent of the boys are taller than 1.7 meters and no student is of height 1.7 meters, approximately what percentage of the students in the school are shorter than 1.7 meters?
A) 33%
B) 43%
C) 57%
D) 67%
E) 85%
7. Amber needs to correctly answer 60 percent of the questions to pass a certain test; the test consists of 40 Physics, 30 Chemistry, and 25 Biology questions. If she correctly answered 22 Physics and 15 Chemistry questions, what is the least number of Biology questions that she needs to answer correctly to pass the test?
   A) 15  
   B) 16  
   C) 18  
   D) 20  
   E) 25

8. A certain book consists of 200 pages, numbered from 1 through 200. If Judith opened the book and the product of the two page numbers was 2,550, what was the sum of the two page numbers?
   A) 99  
   B) 100  
   C) 101  
   D) 102  
   E) It cannot be determined from the information given

9. Timothy participated in 5 aptitude tests. The maximum score in each test is 100. He scored 92 in the first test and 94 in the second test. If his overall average in the 5 tests is not more than 90, find the maximum possible average of his scores in the third, fourth, and fifth tests.
   A) 90  
   B) 89  
   C) 88  
   D) 87  
   E) 86

10. Working at a certain uniform rate, 10 workers take 12 hours to build a solid block 5 meters tall, 6 meters wide, and 12 meters long. How much time will 12 workers take to build a solid block 1 meter taller, 2 meters wider, and 3 meters longer if they work at the same rate?
    A) 5 minutes  
    B) 10 minutes  
    C) 20 minutes  
    D) 20 hours  
    E) 60 hours

11. At a certain organization, 10 percent of the male employees are managers and 40 percent of the female employees are not managers. If 30 percent of all the employees are managers, what percentage of the managers is male?
   A) 20  
   B) 33\(\frac{1}{3}\)  
   C) 50  
   D) 60  
   E) It cannot be determined from the information given

12. The cost of a certain international phone call was $0.40 for the first 3 minutes and $0.05 for each additional minute after the first 3 minutes. If the cost of the phone call was $1.00, how long, in minutes, did the phone call last?
    A) 12  
    B) 15  
    C) 18  
    D) 20  
    E) 21

13. An investment of $1,500 was made in a certain bank account and it earned interest that was compounded annually; the annual interest rate was fixed for the entire duration of the investment. If after 12 years the $1,500 increased to $24,000 by earning interest, in how many years after the initial investment was made would the $1,500 have increased to $96,000 by earning interest at the same rate?
   A) 15  
   B) 18  
   C) 20  
   D) 21  
   E) It cannot be determined from the information given
14. The table above shows the number of employees in three clubs at a certain organization. If there are 90 different employees in the three clubs and 10 employees are in all three clubs, how many employees are in exactly two of these three clubs?
A) 10
B) 15
C) 20
D) 25
E) 30

15. Steve is older than Mark by 6 years. If the ratio of their current ages is 7:9, what will be the corresponding new ratio of their ages when Mark is twice as old as he is now?
A) 3:4
B) 7:8
C) 4:3
D) 8:7
E) 6:7

STOP
IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY. DO NOT TURN TO ANY OTHER SECTION IN THE TEST.
### SECTION I
**Communication Analysis**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E</td>
</tr>
<tr>
<td>2</td>
<td>D</td>
</tr>
<tr>
<td>3</td>
<td>B</td>
</tr>
<tr>
<td>4</td>
<td>E</td>
</tr>
<tr>
<td>5</td>
<td>B</td>
</tr>
<tr>
<td>6</td>
<td>C</td>
</tr>
<tr>
<td>7</td>
<td>C</td>
</tr>
<tr>
<td>8</td>
<td>C</td>
</tr>
<tr>
<td>9</td>
<td>B</td>
</tr>
<tr>
<td>10</td>
<td>D</td>
</tr>
<tr>
<td>11</td>
<td>A</td>
</tr>
<tr>
<td>12</td>
<td>A</td>
</tr>
<tr>
<td>13</td>
<td>A</td>
</tr>
<tr>
<td>14</td>
<td>E</td>
</tr>
<tr>
<td>15</td>
<td>D</td>
</tr>
</tbody>
</table>

### SECTION II
**Critical Thinking**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>B</td>
</tr>
<tr>
<td>2</td>
<td>E</td>
</tr>
<tr>
<td>3</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>E</td>
</tr>
<tr>
<td>5</td>
<td>D</td>
</tr>
<tr>
<td>6</td>
<td>A</td>
</tr>
<tr>
<td>7</td>
<td>D</td>
</tr>
<tr>
<td>8</td>
<td>D</td>
</tr>
<tr>
<td>9</td>
<td>E</td>
</tr>
<tr>
<td>10</td>
<td>B</td>
</tr>
<tr>
<td>11</td>
<td>A</td>
</tr>
<tr>
<td>12</td>
<td>D</td>
</tr>
<tr>
<td>13</td>
<td>D</td>
</tr>
<tr>
<td>14</td>
<td>E</td>
</tr>
<tr>
<td>15</td>
<td>A</td>
</tr>
</tbody>
</table>

### SECTION III
**Data Interpretation**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>B</td>
</tr>
<tr>
<td>3</td>
<td>C</td>
</tr>
<tr>
<td>4</td>
<td>E</td>
</tr>
<tr>
<td>5</td>
<td>D</td>
</tr>
<tr>
<td>6</td>
<td>B</td>
</tr>
<tr>
<td>7</td>
<td>E</td>
</tr>
<tr>
<td>8</td>
<td>C</td>
</tr>
<tr>
<td>9</td>
<td>E</td>
</tr>
<tr>
<td>10</td>
<td>A</td>
</tr>
<tr>
<td>11</td>
<td>D</td>
</tr>
<tr>
<td>12</td>
<td>E</td>
</tr>
<tr>
<td>13</td>
<td>C</td>
</tr>
<tr>
<td>14</td>
<td>C</td>
</tr>
<tr>
<td>15</td>
<td>B</td>
</tr>
</tbody>
</table>

### SECTION IV
**Data Analysis**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D</td>
</tr>
<tr>
<td>2</td>
<td>B</td>
</tr>
<tr>
<td>3</td>
<td>A</td>
</tr>
<tr>
<td>4</td>
<td>E</td>
</tr>
<tr>
<td>5</td>
<td>D</td>
</tr>
<tr>
<td>6</td>
<td>C</td>
</tr>
<tr>
<td>7</td>
<td>D</td>
</tr>
<tr>
<td>8</td>
<td>C</td>
</tr>
<tr>
<td>9</td>
<td>C</td>
</tr>
<tr>
<td>10</td>
<td>D</td>
</tr>
<tr>
<td>11</td>
<td>A</td>
</tr>
<tr>
<td>12</td>
<td>B</td>
</tr>
<tr>
<td>13</td>
<td>C</td>
</tr>
<tr>
<td>14</td>
<td>C</td>
</tr>
<tr>
<td>15</td>
<td>B</td>
</tr>
</tbody>
</table>