

**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 two sections with 60 questions – 30 questions in each section. The TOTAL TIME available for the paper is **140 minutes**. The time available for each section is 70 minutes and you cannot return to the first section once you have started the second section.
3. You are expected to show your competence in both the sections.
4. All questions carry three marks each. Each wrong answer will attract a penalty of one mark.

**SECTION – I**  
**Number of Questions = 30**

**DIRECTIONS for questions 1 to 3:** Answer the questions on the basis of the information given below.

In a swiss chess tournament, 16 players participate. Prior to the tournament the players are assigned a seeding from 1 through 16, in decreasing order of their skill such that the topmost player is assigned seed 1. A numerically lower seed is considered to be seeded higher than a numerically higher seed. In any game, the winner gets 1 point and the loser gets 0 points. In case of a draw, both the contestants are assigned half a point each. In each round all the contestants with identical scores are placed in a group and arranged in the decreasing order of their seedings. Each group is then divided into two halves such that the highest seed in the 1<sup>st</sup> half of the group plays the highest seed in the 2<sup>nd</sup> half of the group. For example in the 1<sup>st</sup> round, each player starts with zero points and hence seed 1 plays seed 9, seed 2 plays seed 10 and so on. The tournament continues in this manner till there is only one undefeated player, who is then declared the winner of the tournament. When a lower seeded player beats a higher seeded player, he is said to have caused an upset.

1. Which of the following best describes the number of rounds 'n' needed to identify the winner of the tournament?
 

(A) $n \geq 4$	(B) $n \leq 8$
(C) $n \leq 4$	(D) $n = 4$
2. If the 5<sup>th</sup> and the 8<sup>th</sup> seeds are upset in round 1 and no other upset happens in round 1, who does the fourth seed play against in round 2?
 

(A) 8	(B) 13
(C) 15	(D) 16
3. If seeds 1, 3, 5 and 7 are upset in round 1 & seeds 2, 4, 6 and 8 are upset in round 2, who is the lowest seeded player who can win the tournament, given that at most one upset is allowed in the rest of the tournament?
 

(A) 9	(B) 11
(C) 13	(D) 15

**DIRECTIONS for question 4:** The question below is followed by two statements, I and II. Answer the question using the following instructions:

- Mark A if the question can be answered by any one of the two statements alone but not by the other statement alone.
  - Mark B if the question can be answered by either of the two statements alone.
  - Mark C if the question can be answered only if both the statements are taken together.
  - Mark D if the question cannot be answered even if both the statements are taken together.
4. The speeds of train A and train B are 72 kmph and 18 kmph respectively. What is the length of the train A?
    - I. Train A crosses train B in 50 seconds
    - II. Train A crosses a car which is moving at 18 kmph in 35 seconds.

**DIRECTIONS for questions 5 to 8:** Answer the questions independently of each other.

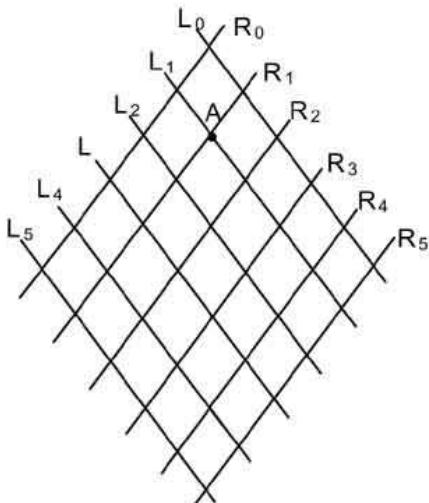
5. A certain number of children are standing in a row, all of them facing North. There are twice as many girls in the row as there are boys. From the west end of the row, Ajay is 8<sup>th</sup> among the boys and 17<sup>th</sup> among all the children. From the east end of the row he is 20<sup>th</sup> among all the children. How many boys are there to the right of Ajay?
 

(A) 5	(B) 4
(C) 16	(D) Cannot be determined
6. Let p, q, r be the respective numbers that show up when three fair dice, D<sub>1</sub>, D<sub>2</sub> and D<sub>3</sub>, are rolled. If  $y = |(p-1)(q-4)(r-5)|$ , the probability that  $y \leq 1$  is
 

(A) $\frac{109}{216}$	(B) $\frac{5}{12}$
(C) $\frac{95}{216}$	(D) $\frac{93}{216}$

7. A number has four factors and the sum of its factors excluding 1 and itself is 56. How many such numbers exist?  
 (A) 1      (B) 2      (C) 3      (D) 4

8.



In the grid shown L<sub>0</sub>, L<sub>1</sub>, L<sub>2</sub>, L<sub>3</sub>, ..., L<sub>n</sub> are parallel lines starting from left and R<sub>0</sub>, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, ..., R<sub>n</sub> are parallel lines starting from the right. The node (L<sub>i</sub>, R<sub>j</sub>) represents the point of intersection of the lines L<sub>i</sub> and R<sub>j</sub>. For example, (L<sub>1</sub>, R<sub>1</sub>) represents A in the above figure.

Find the number of ways of reaching the point (L<sub>8</sub>, R<sub>5</sub>) from the top most point (L<sub>0</sub>, R<sub>0</sub>) travelling the shortest distance?

- (A) 1287    (B) 13    (C) 1216    (D) 1960

**DIRECTIONS for questions 9 to 11:** Answer the questions on the basis of the information given below.

A music troupe with 12 artistes – A through L – comprises three types of artistes, dancers, singers, and musicians, who perform over a period of three days. It is known that A, B, C and D are dancers; E, F, G and H are singers; I, J, K and L are musicians. Further it is known that

- Each performance involves one or more artistes.
  - there is at least one performance on each day and each artiste performs on only one day.
  - B and C perform together.
  - the number of artistes performing on each day, starting from day 1, increases in an arithmetic progression.
  - A, B, E and J do not perform on day 3.
  - F and G, K and L, and I and H are couples and perform together with their respective partners only.
9. Who among the following must perform on day 3 if no dancer performs on day 2?  
 (A) F    (B) D    (C) G    (D) I

**DIRECTIONS for questions 16 to 19:** Answer the questions on the basis of the information given below.

A railway reservation counter in Andheri (west) has five counters numbered from 1 through 5. The table below gives the total number of transactions in the five counters, in various time-slots, from S<sub>1</sub> through S<sub>6</sub>, in a certain week.

Slot → Day ↓	8 a.m – 10 a.m (S <sub>1</sub> )	10 a.m – 12 noon (S <sub>2</sub> )	12 noon – 2 p.m (S <sub>3</sub> )	2 p.m – 4 p.m (S <sub>4</sub> )	4 p.m – 6 p.m (S <sub>5</sub> )	6 p.m – 8 p.m (S <sub>6</sub> )
Monday	64	72	76	80	84	96
Tuesday	60	68	51	63	72	84
Wednesday	82	79	73	71	78	84
Thursday	74	75	71	76	82	92
Friday	92	85	86	77	73	85
Saturday	86	81	74	79	75	87
Sunday	72	74	77	75	80	93

10. If atleast one artiste from each of dancers, singers and musicians performs on each day, then who among the following should perform on day 2?  
 (A) F    (B) D    (C) G    (D) B
11. Which of the following statements is true?
- I. At least one and at most three artistes of the same type perform on each day.
  - II. D is the only dancer who performs on day 3.
- (A) Only I is true  
 (B) Only II is true  
 (C) Both I and II are true  
 (D) Neither I nor II is true

**DIRECTIONS for question 12:** The question below is followed by two statements, I and II giving certain data. Answer the question using the following instructions:

- Mark A if the question can be answered by any one of the two statements alone but not by the other statement alone.  
 Mark B if the question can be answered by either of the two statements alone.  
 Mark C if the question can be answered only if both the statements are taken together.  
 Mark D if the question cannot be answered even if both the statements are taken together.

12. The cost prices of three articles P, Q, and R are in the ratio 3 : 7 : 5 and their selling prices are in the ratio 1 : 4 : 2 respectively.

What is the cost price of article R?

- I. The difference between the cost price and selling price of all the three articles is the same and is equal to Rs.100.
- II. Profit is made on only one of the three articles.

**DIRECTIONS for questions 13 to 15:** Answer the questions independently of each other.

13. The magnitude of profit is one third that of the discount offered. If the discount offered is 37.5%, find the profit percent.

- (A) 20%    (B) 25%    (C) 40%    (D) 12.5%

14. Find the remainder when  $2^{164}$  is divided by 164.

- (A) 2    (B) 4    (C) 16    (D) 64

15. The probability of a missile hitting its target is 1/2 and it takes 3 missiles to destroy a bridge. What is the minimum number of missiles to be fired so that the probability of the bridge being destroyed exceeds 0.99?

- (A) 7    (B) 8    (C) 14    (D) 15

It is known that on Monday, Wednesday, Saturday, and Sunday, the staff manning the odd-numbered counters take their lunch break from 1 p.m to 1.30 p.m., while the remaining staff take theirs between 1.45 p.m. and 2.15 p.m. and on the rest of the days, the staff swap their lunch slots. Normal transaction hours are from 8 a.m. to 8 p.m., excluding lunch breaks. The idle time for a slot is defined as the sum of the idle periods (i.e., the duration for which no transactions take place during normal transaction hours) at all the counters open during that slot.

Any time-lag between two successive transactions, other than that due to scheduled lunch breaks, may be ignored. Assume that all the counters are open during all normal transaction hours, unless mentioned otherwise.

16. If on Monday, at each of the counters, the average time for a single transaction in slot  $S_1$  is 6 minutes, and the ratio of the number of transactions at counters 1, 2, 3 and 4 is 3 : 2 : 5 : 1 respectively, find the minimum number of transactions done at counter 5?
- (A) 12      (B) 9      (C) 20      (D) 15

17. On Friday, two staff members scheduled to man counters 4 and 5 were on leave and hence only counters 1, 2, and 3 were open to the public. The time taken for each transaction in counters, 1, 2, and 3 is 3, 2, and 1 minutes respectively, and transactions at each of the counters begin at 8 a.m. If at any instant there is more than one counter free and available for a transaction then the transaction is carried out at the counter which takes the minimum time for the transaction. In which counter does the 74<sup>th</sup> transaction for the day take place? Assume that all the people who come to transact stand in a single queue and that at no time is the queue empty.
- (A) 2  
(B) 1  
(C) 3  
(D) Cannot be determined

18. If the time taken per transaction in the slot  $S_3$  on Tuesday and slot  $S_4$  on Wednesday is the same and equal to 't', find the value of 't' for which the idle time is the same for the two slots mentioned. Assume that in any particular slot, the time taken per transaction is the same for all the transactions in the slot, irrespective of the counter at which a transaction takes place.
- (A) 4 minutes 45 seconds  
(B) 4 minutes 30 seconds  
(C) 3 minutes 30 seconds  
(D) 3 minutes 45 seconds

19. On Saturday, if the average number of transactions that took place during the first hour of a slot is 38, and not more than 50% of the transactions in any slot took place during the first hour of the slot, then the maximum number of transactions that took place during the second hour of any slot on Saturday is
- (A) 53      (B) 54      (C) 55      (D) 37

**DIRECTIONS for questions 20 and 21:** Answer the questions on the basis of the information given below.

Paul, a school principal, has to select students from among Anil, Bhagat, Chandu, Deepak, Emran, Farah

**DIRECTIONS for questions 23 to 25:** Answer the questions on the basis of the information given below.

The following table gives the details regarding the number of policies issued and the commissions earned by two policy agents, Anil and Pranav, in four regions, A, B, C, and D, in 2006. The two agents issue policies in only the four regions mentioned above.

and Girish to represent the school in an upcoming inter-school competition. The following additional information is given regarding the selection of the students.

- (i) If Chandu is there in the team then Emran should not be there but Farah should be there in the team.
  - (ii) Only if Anil is not there in the team, Bhagat is there in the team.
  - (iii) If Emran is there in the team then Anil is also there in the team.
  - (iv) If Bhagat is there in the team then Deepak must also be there in the team.
  - (v) Only if Girish is there in the team, Bhagath is there in the team.
20. If the number of students selected into the team is 'n', then what is the number of values that 'n' can assume?
- (A) 2      (B) 4      (C) 6      (D) 5
21. If a team of maximum size is selected for the inter-school competition, then who among the following cannot be present in the team?
- (A) Emran  
(B) Anil  
(C) Bhagat  
(D) more than one of the above

**DIRECTIONS for question 22:** The question below is followed by two statements, I and II giving certain data. Answer the question using the following instructions:

- Mark A if the question cannot be answered using both the given statements.
- Mark B if the question can be answered using both the statements together but not either statement alone.
- Mark C if the question can be answered using either statement alone.
- Mark D if the question can be answered using any one of the statements alone but not the other.

22. In a B-school, 30% of the students in a batch were male. If 10% of the females students have work experience, what percent of males have work experience?

- I. 20% of all the students in the batch have work experience.
- II. The number of males having work experience is 25% more than the number of females having work experience.

Region		Commission <sup>1</sup> earned in 2006	Number <sup>2</sup> of policies issued in 2006	Increase <sup>3</sup> in commission over previous year	Increase <sup>3</sup> in number of policies over previous year
A	Anil	30%	25%	10%	20%
	Pranav	15%	20%	20%	0
B	Anil	35%	25%	20%	15%
	Pranav	20%	25%	15%	25%
C	Anil	15%	20%	15%	0
	Pranav	30%	25%	10%	5%
D	Anil	20%	30%	10%	20%
	Pranav	35%	30%	10%	10%

1. As a percentage of the total commission earned by the agent in all the four regions put together in that year.  
 2. As a percentage of the total number of policies issued by the agent in all the four regions put together in that year.  
 3. Percentage increase in 2006 when compared to the corresponding value in 2005.

23. The lowest commission per policy in 2005 was earned by  
 (A) Pranav in region C.  
 (B) Anil in region C.  
 (C) Pranav in region A.  
 (D) Anil in region B.

24. If in 2006, Anil had issued 20% fewer policies, on the whole, when compared to Pranav, but earned the same total commission, the highest ratio of commission earned to the number of policies issued, in 2006, was obtained by  
 (A) Anil in region B.  
 (B) Anil in region A.  
 (C) Pranav in region C.  
 (D) Pranav in region D.

25. Which of the following is true regarding the quantities defined by the two statements below?  
 I. The number of regions in which there is an increase in the commission earned per policy issued by Anil from 2005 to 2006.  
 II. The number of regions in which there is a decrease in the commission earned per policy issued by Pranav from 2005 to 2006.  
 (A) I > II  
 (B) I < II  
 (C) I = II  
 (D) Cannot be determined

ownership of the books. The following are the answers given by A, B, and C.  
 A: Physics book belongs to me. Maths book does not belong to B. Chemistry book does not belong to C.  
 B: Physics book does not belong to me. Chemistry book belongs to C. Maths book does not belong to A.  
 C: Physics book does not belong to A. Maths book does not belong to me. Chemistry book does not belong to B.

I know that exactly one of them always speaks the truth, exactly one of them always lies and the third one alternates between truth and lie, in any order.

27. Which of the following is true?  
 (A) Chemistry book belongs to C.  
 (B) Maths book belongs to A.  
 (C) Physics book belongs to A.  
 (D) Maths book belongs B.

28. Which of the following can be concluded?  
 I. A always tells the truth.  
 II. C always lies.  
 III. B is the owner of the Chemistry book.  
 (A) Only I.  
 (B) Only I and III.  
 (C) Only II and III.  
 (D) All three statements.

**DIRECTIONS** for question 26: Select the correct alternative from the given choices.



**DIRECTIONS** for questions 27 and 28: Answer the questions on the basis of the information given below.

Three students – A, B and C – have exactly three books, one each on Physics, Chemistry and Maths, with them. Each of these three books belongs to exactly one of the three students. As I wanted to know the names of the respective owners of the books, I asked them about the

ownership of the books. The following are the answers given by A, B, and C.

- A: Physics book belongs to me. Maths book does not belong to B. Chemistry book does not belong to C.
  - B: Physics book does not belong to me. Chemistry book belongs to C. Maths book does not belong to A.
  - C: Physics book does not belong to A. Maths book does not belong to me. Chemistry book does not belong to B.

I know that exactly one of them always speaks the truth, exactly one of them always lies and the third one alternates between truth and lie, in any order.

27. Which of the following is true?

  - (A) Chemistry book belongs to C.
  - (B) Maths book belongs to A.
  - (C) Physics book belongs to A.
  - (D) Maths book belongs B.

28. Which of the following can be concluded?

  - I. A always tells the truth.
  - II. C always lies.
  - III. B is the owner of the Chemistry book.
  - (A) Only I.
  - (B) Only I and III.
  - (C) Only II and III.
  - (D) All three statements.

**DIRECTIONS** for questions 29 and 30: Answer the questions on the basis of the information given below.

A and B started simultaneously from the same point and drove in opposite directions on a circular track of length 1260 m. Initially A's speed was 24 m/s and B's speed was 39 m/s. Each time they met, they interchanged their speeds as well as the direction in which they traveled. Further, it is known that they met for the 23<sup>rd</sup> time at 8:00 p.m.

**SECTION – II**  
**Number of Questions = 30**

**DIRECTIONS** for questions 1 to 3: Provided below are 6 statements that form the content of a single paragraph. While one statement of the paragraph is in the right sequential position, the other 5 are not. Answer the 3 questions that follow this set of statements, following the specific directions given for each.

- a. For adventure enthusiasts, there are few physical endeavours that can match the sheer exhilaration of white-water rafting – the sport where a small group of individuals, usually ----- **under (a) / fewer than (b)** thirty five, in inflatable rafts, are catapulted down the course of a torrent.
  - b. All these turn out, however, to be ----- **surmountable (a) / achievable (b)** challenges that the sportsmen (and women) are able to face with confidence, thanks to the protective gear that help minimise bodily harm in the event of mishaps.
  - c. They do it for the sheer joy of the experience of incredible motion, and the thrill of coming ----- **off (a) / through (b)** in one piece!
  - d. What ----- **encourages (a) / prompts (b)** them to put themselves at risk?
  - e. The paddles and oars ----- **wielded (a) / employed (b)** seem in the event grossly inadequate for the sustained intensity of the physical effort required to stay afloat and on course.
  - f. There are risks ----- **untold (a) / aplenty (b)**: the raft could capsize, persons could get thrown overboard, muscles in the limbs, shoulders, neck and back could get wrenched by the suddenness of movement and motion.



**DIRECTIONS** for questions 4 to 6: Read the following passage and answer the questions that follow it.

The 1600s were not, on the face of it, an obvious candidate for the description of the "age of genius". It was a world in which everyone was God-fearing and when everything from floods to comets was seen as the inscrutable (and unchallengeable) will of a jealous, stern deity.

Yet it was from this unpromising soil that the modern, scientific world-view bloomed. Edward Dolnick's project is to chronicle the thinkers and the discoveries that made it possible. The result is at once a biography of men such as Gottfried Liebniz, Isaac Newton and Johannes Kepler, a layman's description of the significance of their work and an evocative piece of cultural history. It is the story of humanity's (or at any rate Europe's) liberation from a pious fatalism that saw every fire and plague as divine punishment for some mortal transgression or other.

The crowning achievement of the age – Newton's *Philosophie Naturalis Principia Mathematica* – is among the most influential books ever written; those with the mathematical fortitude to make sense of its deliberately obscure diagrams are struck dumb with admiration. The equations derived by the eccentric genius are still used to design cars, build bridges and send spacecraft into the cosmos.

But the legacy of the age is more than just a set of useful theories. The intuition of men like Newton and Kepler that, beneath the apparent chaos of everyday life, the universe is a regular, ordered machine that can be described with a few simple equations proved – amazingly – to be correct. It is this idea of universality that is the true legacy of the scientific revolution. That the same simple rules describe the fall of an apple, the flight of a cannonball and the movements of the heavens is hugely heartening, for it suggests that despite its fearsome complexity, the universe is something that can be comprehended by mortal minds. That, in turn, opens the way to the modern notion of progress. After all, what is comprehensible can be tinkered with and, in time, improved.

The standard account tells us that the new science broke the stranglehold that the church and a few of its favoured pagan thinkers (chiefly Aristotle) had exerted for centuries on Western thought. That is broadly true, but as Mr. Dolnick demonstrates, the reality was a good deal more complicated. The proto-scientists did not spring into being as paid-up believers in modern materialism and rationality. Newton divided his time between pursuits that today we would recognise as science and older, much more arcane disciplines such as alchemy and an obsessive search for numerological codes in the Bible. As John Maynard Keynes, a British economist, observed after buying a trove of Newton's papers, these men were not the first of the scientists, but the last of the sorcerers.

Indeed, for many of the fledgling scientists, their conviction that the universe was an orderly place sprang from their religious belief. Newton intended his great system of the world as a tribute to a dazzlingly deft geometer-god. When others took it to suggest that, once the universal clockwork was wound up there would be no further need for divine intervention to keep the planets in their orbits, he was dismayed. Like many revolutionaries, he perhaps did not comprehend the full extent of what he had helped to unleash.

4. Going by the context of the passage, which of the following assumptions about thinkers may lead to erroneous conclusions?
    - (A) They preferred an unorthodox and a rational approach to life.
    - (B) The thinkers did not remove God from the picture while discerning the science of the universe.
    - (C) They had little idea of the far-reaching consequences of their discoveries.
    - (D) The thinkers attempted to bridge the divide between archaic and modern views.
  5. The passage uses an observation by John Maynard Keynes to imply that:
    - (A) Science is related to alchemy and bibliomancy.
    - (B) Sorcery and science are poles apart.
    - (C) Newton's theories were unrefined as he was still of the diabolical arts.
    - (D) The first scientists were not the iconoclasts they were viewed as.
  6. Newton's disappointment with the secular interpretation of the scientific world-view stems from
    - (A) his suspicions that his learning were distorted to suit the spirit of the age.
    - (B) his fears of a divine retribution for humanity's transgression.
    - (C) his conviction in a scientific order of the universe.
    - (D) his belief in a divine ascription in his new science.
- DIRECTIONS** for questions 7 to 9: In the each question, four different ways of presenting an idea are given. Choose the one that conforms most closely to standard English usage.
7. (A) The geological record suggests that climate ought not to concern us too much when we are gazing into the energy future not because it's unimportant but it's beyond our power to control.  
(B) The geological record suggests that climate ought to not concern us too much when we are gazing into the energy future, because it's not unimportant and because it's beyond our power to control.  
(C) The geological record suggests that climate ought to not concern us too much when we are gazing into the energy future, because it's not unimportant but beyond our power to control.  
(D) The geological record suggests that climate ought not to concern us too much when we're gazing into the energy future, not because it's unimportant but because it's beyond our power to control.
  8. (A) Modern games based on 'Star Wars' look better even than the original films since today's games consoles far outperform any special effects technology available back in the 1980s.  
(B) Modern games based on 'Star Wars' look even better than the original films since today's games consoles far outperform any special-effects technology available back in 1980s.  
(C) Modern games based on 'Star Wars' even look better than the original films, since today's games consoles far outperform any special-effects technology available in the 1980s.  
(D) Modern games based on 'Star Wars' look better than even the original films, since today's games consoles far outperform any special effects technology available in the 1980s.
  9. (A) The omnipresence of cameras and other surveillance technology might end up making individuals more conformists as they suppress their individuality in avoiding drawing to much attention to themselves.  
(B) The omnipresence of cameras and other surveillance technology might end up making individuals more conformist as they suppress individuality in avoiding to draw too much attention to themselves.  
(C) The omnipresence of cameras and other surveillance technologies might end up making individuals more conformist as they suppress their individuality to avoid drawing too much attention to themselves.  
(D) The omnipresence of camera and other surveillance technology might end in making individuals more conformist as they suppress their individuality in avoiding the drawing of too much attention to themselves.

**DIRECTIONS** for questions 10 to 12: Each of these critical reasoning questions is based on a short argument, a set of statements, or a plan of action. For each question, select the best answer of the choices given.

10. Dreaming can help improve your memory and make you a better problem solver. Researchers found that Rapid Eye Movement (REM) sleep – the stage of slumber when our most intensely remembered dreams occur – is crucial to the brain's ability to lay down and consolidate memories. This means that adults who get less than the recommended seven to eight hours of sleep a night may be damaging their mind's ability to form strong memories.

Which of the following, if true, would, together with the information above, provide the best basis for the claim that one should dream to improve one's memory?

- (A) REM sleep is reached only after the brain has passed through deep sleep stages.
- (B) REM sleep is important for putting together all the information we process on a daily basis.
- (C) The proverbial 40 winks do nothing more than relieve a tired brain.
- (D) People who enjoy a dream-filled sleep are better at making links between facts when they wake.

- 11.** Parenting expert: Families are communicating increasingly in a silent world of emails and texts. It's not just that speech is disappearing in the house, effective communication is itself an endangered species.

Which of the following, if true, is most damaging to the position of the parenting expert?

- (A) The way we communicate is changing and increased dependence on technology doesn't detract from life skills.
- (B) Children can communicate in an online language and express themselves.
- (C) Keyboards and phone pads prompt most of the communication within the house.
- (D) The more gadgets that appear, the less we have to do with one another.

- 12.** X: Sport has clearly become a global business. Olympians ceased to be amateurs long ago. Win a medal, and financial rewards will follow. Corporate sponsors want to back winners. For companies, the games are a golden marketing opportunity.

Y: But there is no prize money on offer at the Olympics. Athletes compete only for the glory of gold, silver and bronze. Most of them are thrilled just to be there.

Y's argument is flawed because it fails to consider that

- (A) Sport and economics go together.
- (B) Money can be made outside the sports arena.
- (C) People are willing to pay to watch others play.
- (D) Successful sportspersons have huge earning powers.

**DIRECTIONS** for questions 13 to 15: Read the following passage and answer the questions that follow it.

"The God Species", by a British environmental journalist, Mark Lynas, is about recognising the true extent of the power humans derive from their tools and their sheer numbers. It embraces the idea that the extent of this power, outstripping the dominion of any previous species, means that the earth is now in a new period of its history, the "Anthropocene", and from that standpoint adumbrates the limits wise deities might impose on the further use of such world-altering abilities.

The book is an absorbing read, but not a comfortable one. Readers who were previously unaware of the scope of humanity's effects on the world – on its climate, its biogeochemical cycles, the chemistry of its oceans, the colour of its sky, the flow of its rivers, the number of its species and more – may find themselves shocked by its relentless exposition. Meanwhile many readers who are already alarmed by the state of the environment will find themselves shocked by what Mr Lynas wants to do about it.

This is because of the somewhat inconsistent relationship that a lot of environmentalists have with science. When it comes to the hazards posed to the climate by greenhouse gases they see science as an ally scarcely to be questioned. But when it comes to the hazards posed by radiation from nuclear-power plants or by genes engineered into crops, greens often give equally compelling science a lot less credence – as, until recently, did Mr Lynas.

A few years ago, though, seized by the magnitude of the threat of global warming, he started to look at nuclear power afresh, and decided it wasn't so bad: without it there would be a couple of billion tonnes more carbon dioxide in the atmosphere. His openness of mind spread: online comments responding to an article he wrote made him realise, to his shame, that though he had read many scientific papers on global warming he had never read any on genetically modified crops. Now he sees biotechnology-based intensive farming as crucial to keeping farms from overrunning forests. And how, he asks, can opponents to the damage done by industrially produced nitrogen-based fertilisers object to the genetic engineering that might let crops produce their own fertilisers as blamelessly as clover does?

Mr Lynas's apostasy extends beyond technology. He rejects the belief, widespread among environmentalists, that the protection of nature requires a wholesale recasting of society and the economy. Continued capitalist growth is a good thing, he says – it just needs an understanding of the environmental system's limits and technology that allows them not to be breached. This is not an unheard-of view among environmentalists, and at times Mr Lynas's protestations of heresy can seem a trifle self-serving. But his views are certainly not yet common currency, and for the most part that makes his positions both more interesting and more compelling.

- 13.** The word 'apostasy' as used in the passage, means
- (A) unorthodox or revolutionary opinions.
  - (B) reservations or cautions.
  - (C) an opinion or doctrine contrary to the church dogma.
  - (D) a renunciation or abandonment of former loyalties.

- 14.** What according to the author, is the 'inconsistent relationship' that environmentalists have with science?
- (A) They sometimes support scientific inventions, at other times they are suspicious.
  - (B) When it comes to nuclear energy, they believe science crosses all limits.
  - (C) While they believe in the power of science in some areas, in others they doubt it.
  - (D) They believe that science, which is beneficial to man, can also be his nemesis.

- 15.** Why would some be shocked by what Mr.Lynas wants to do?

Because .....

- (A) he wants to promote a review of established convictions.
- (B) he wants to use science to find solutions to the problems created by science.
- (C) he wants to support beliefs that are not inconsistent with those of the environmentalists.
- (D) he wants environmentalists to change their stance by 180°.

**DIRECTIONS** for questions 16 to 18: Provided below are 6 statements that form the content of a single paragraph. While one statement of the paragraph is in the right sequential position, the other 5 are not. Answer the 3 questions that follow this set of statements, following the specific directions given for each.

- a. When it works, the result is an emotionally stable, stress-free wild animal that not only stays put, but is healthy, lives a very long time, eats without fuss, behaves and ----- **responds (a) / socializes (b)** in natural ways and – the best sign – reproduces.
  - b. Getting animals used to the presence of humans is at the heart of the art and science of zookeeping. The key aim is to diminish an animal's flight distance, and the minimum distance at which an animal wants to ----- **hold (a) / keep (b)** a perceived enemy.
  - c. Our tools for diminishing flight distance are the knowledge we have of an animal, providing food and shelter, and the protection we----- **afford (a) / dispense (b)**.
  - d. Giraffes will allow you to come to within thirty yards of them if you are in a motor car, but will run if you are 150 yards away on foot. Fiddler crabs ----- **scramble (a) / scurry (b)** when you're ten yards away; howler monkeys stir in their branches when you're at twenty yards; African buffaloes react at seventy-five yards.
  - e. Different animals have different flight distances and they ----- **gauge (a) / assess (b)** them in different ways. Cats look, deer listen, bear smell.
  - f. A flamingo in the wild won't mind you if you stay more than three hundred yards away. If you cross that limit it becomes tense. Get even closer and

you'll ----- trigger (a) / induce (b) a flight reaction from which the bird will not cease until the three-hundred-yard limit is set again, or until its heart and lungs fail.



**DIRECTIONS** for questions 19 to 21: Read the following passage and answer the questions that follow it.

"I just think it's a meaningless concept." That was the verdict of Paul O'Neill, George Bush's plain-spoken first treasury secretary, on the current-account deficit. The current-account is a tricky concept that reflects several different balances at the same time. From one angle, it is just the accounting counterpoint to capital inflows. Viewed from a different perspective, however, it is the sum of the trade deficit (showing how much more Americans import than they export) plus interest payments to foreigners on previous borrowing. In other words, it reflects how much Americans are borrowing to finance today's spending and to service yesterday's debt. If they are borrowing too much, the deficit becomes unsustainable.

Just as an individual cannot pile on credit-card debt forever, so a country cannot increase the burden of its foreign debt indefinitely. Eventually, interest on the accumulated debt would use all the economy's resources, leaving nothing for domestic spending. In practice, however, the current-account deficit would have to adjust much earlier. Just when depends on a variety of indicators: the size of the accumulated debt; the rate at which new debt is piling up (the current-account deficit); the speed of economic growth; and the interest rate paid on the borrowed funds.

America's rate of borrowing is high and rising. At just under 5% of its GDP, the current-account deficit is the highest in the country's history. Even in the final decades of the 19<sup>th</sup> century, after the Civil War, America's deficit was generally below 3% of GDP (though Canada and Argentina ran deficits as high as 10% of GDP in that period). In the Reagan era, the current-account deficit peaked at 3.4% of GDP.

Some of the rise may be a statistical quirk. According to official numbers, the world as a whole runs a current-account deficit with itself, and one that has risen sharply since 1997. Since the world does not, as yet, trade with Mars, the numbers must be wrong, so some of America's current-account deficit may be more apparent than real. But not all of the rise, or even most of it, can be explained this way.

In fact, America's current-account deficit is becoming worryingly large. Several studies suggest that economies hit trouble when their current-account deficits reach 4-5% of GDP.

Does it matter that America's current-account deficit is already an outlier by conventional benchmarks? Optimists claim not, pointing out that America has seen a big rise in productivity growth. That not only explains the higher borrowing (to

fund the investment boom), but also makes it easier to finance the debt. There is something in that. America's productivity growth did rise sharply in the late 1990s, pushing the economy's trend rate of growth from about 2.5% to 3-3.5%. But the current-account deficit has increased far more rapidly. Worse, it is still rising, even though the investment boom is over.

19. The author, in this passage,
- (A) reassures economists who are concerned about the implications of America's external borrowing.
  - (B) rings a note of warning on America's current-account deficit and what it means for the world economy.
  - (C) examines America's current-account deficit to indicate how bad its borrowing binge really is.
  - (D) sets right people's misunderstanding regarding the precarious condition of the US economy.
20. Which of the following are in line with the author's views?
- (a) The current-account in no way reflects the financial standing of America.
  - (b) A higher borrowing may not be a cause for concern if it is invested productively.
  - (c) There is no need for the US government to be concerned about its financial status since it is the largest economy in the world.
21. What is the author's view on the 'more apparent than real' current-account deficit?
- (A) The numbers are wrong since even the world as a whole supposedly runs a current account deficit.
  - (B) While the current-account may not reflect the true picture, it is still a matter of concern.
  - (C) Since we do not trade with Mars, the world cannot have a current-account deficit.
  - (D) America can run a large deficit since its currency happens to be the global reserve currency.

**DIRECTIONS** for questions 22 to 24: Read the following passage and answer the questions that follow it.

In the 2002 football World Cup, France, the reigning world champions, suffered a humiliating defeat to unfancied Senegal. All 11 members of the victorious Senegalese team had played for European clubs. They were not alone. By 2000, the first and second divisions of Europe's leagues had poached enough African players to field 70 teams. So, have greedy European clubs deprived Senegal of its best footballers, or has the prospect of a lucrative career in Europe encouraged more Senegalese to take up the beautiful game?

This question is posed by a new book, "Give Us Your Best and Brightest", by Devesh Kapur and John McHale. The authors are development economists first, football fans second (if at all). But they see the emigration of African players as a highly visible example of the "brain drain". Less visible, but more worrying, is the departure of the poor world's doctors, nurses and teachers to more lucrative job markets in the rich world. Ghana, for example, has only 6.2 doctors per 100,000 people. Perhaps three-quarters of its doctors leave within ten years of qualifying.

The answer to the Senegal conundrum is of course "both": the best players leave, and the dream of emulating them motivates many others to take their place. The real question is whether the second effect outweighs the first, leaving the game in Senegal stronger or weaker than it otherwise would be. A few economists, including Andrew Mountford, of Royal Holloway (part of the University of London), and Oded Stark, of the University of Bonn, think the net effect of the brain drain is similarly ambiguous. The prospect of securing a visa to America or Australia should tempt more people in poor countries to invest in education. Mr Stark calls this a "brain gain". If the temptation is strong enough, and the chances of landing a visa low enough, the poor country could even come out ahead: it might gain more qualified (if disappointed) doctors and engineers than it loses.

As with all debates about the brain drain, theory has run ahead of evidence. The numbers on international flows of people are much patchier than those on cross-border flows of goods or capital. In a recent paper, Mr Stark and his co-authors investigate internal migration instead. The rural villages of Mexico lose many of their brightest sons and daughters to jobs in cities or border towns. Those Mexicans who leave their home villages tend to be better educated than those who stay. But despite this, the example the leavers set (and the job leads they provide) raises the average level of schooling of those left behind. Because they can aspire to a world beyond the village, even if they never reach it, young Mexicans have an added reason to stay in school beyond a ninth year, the authors show.

Even if the brain drain does leave a country with a better-educated populace, is this necessarily a good thing? Education is not free, and some of those who gambled on a diploma as a ticket overseas will regret their decision. But Mr Stark assumes that people in poor countries tend to demand too little education. A person's productivity depends on the skills of those around him, as well as his own. Because of these spillovers, an individual's education is worth more to the economy as a whole than it is to himself, and he will underinvest in it as a result. Mr Stark sees limited emigration as one way to fix this market failure.

India's software engineers are perhaps an example of this principle at work. Indian students had little reason to learn computer coding before there was a software industry to employ them. But such an industry could not take root without

computer engineers to man it. The dream of a job in Silicon Valley, however, was enough to lure many of India's bright young things into coding, and that was enough to hatch an indigenous software industry where none existed before.

India's valley-dwellers represent just one contingent in a much larger diaspora. According to the most exhaustive study of the brain drain, released last month by the World Bank, there were 1.04m Indian-born people, educated past secondary school, living in the 30 relatively rich countries of the OECD in 2000. (An unknown number of them acquired their education outside their country of birth, the report notes.) This largely successful diaspora is more than just something to envy and emulate. Its members can be a source of know-how and money, and provide valuable entrées into foreign markets and supply chains. But Messrs Kapur and McHale think India's relatively happy experience with its educated migrants is more likely to be the exception than the rule. Its million-strong brain drain represents just 4.3% of its vast graduate population, according to the Bank. By contrast, almost 47% of Ghana's highly educated native sons live in the OECD; for Guyana, the figure is 89%. This is not a stimulative leeching of talent; it is a haemorrhage.

Emigration, as Mr Stark suggests, might be a spur to greater accomplishment, and the poor world's talent, like Senegal's footballers, deserves a chance to compete on a global stage. But it is not easy to run a managed "emigration" policy. The drain of educated minds from poor countries is mostly determined by host countries' rules, not home countries' interests. There will be tremendous pressure to loosen those rules in the future, not least because, as the baby-boom generation retires, it will seek to "backfill the taxpaying workforce behind it", as Messrs Kapur and McHale put it. The rich world no longer welcomes the tired and the huddled; it looks set to compete ever more fiercely for the bright and the qualified.

22. The focus of the passage is on the question

  - (A) Does a brain drain pull up the standards of competence in a country?
  - (B) Can international migration be called a brain drain?
  - (C) Might poor countries gain when their best and brightest leave?
  - (D) Have foreign clubs deprived African countries of their best talent?

23. In the given passage, 'this market failure' refers to

  - (A) skewed priorities in education.
  - (B) lack of education in poor countries.
  - (C) inadequate recognition of the desirability of one's education.
  - (D) inadequacy of market oriented skills.

24. The passage states that India's experience with its émigré's is an exception because:

  - (a) its brain drain represents an insignificant proportion of its educated populace.
  - (b) its qualified but rejected visa-seekers can be absorbed in local industries.
  - (c) its diaspora can be tapped for technology and foreign exchange.
  - (A) Only c
  - (B) a and b
  - (C) a and c
  - (D) a, b and c

**DIRECTIONS** for questions 25 to 27: In each of the following questions, the word at the top of the table is used in four different ways, lettered A to D. Choose the option in which the usage of the word is INCORRECT or INAPPROPRIATE.

**25. ANSWER**

- (A) The errant employee must answer for his behaviour.  
(B) This is a difficult question for which there seems to be no answer.  
(C) The equipment that he showed me does not answer my needs.  
(D) I am writing to answer to the headmaster's queries.

## 26. GAME

- (A) A wise man once remarked 'politics is a dirty game'.
  - (B) He is aware of the risk involved, yet he is a game, for it.

- (C) She was too naive to see through his evil game.  
(D) Chess which is a game of skill is said to sharpen one's intellect.

27. FAIR

- (A) Mr.Patel has always been fair in all his dealings with his associates.
  - (B) All the three siblings have fair hair.
  - (C) Besides German, Sunil has a fair knowledge of French too.
  - (D) The juniors were considered to be a fair game by most of the seniors.

**DIRECTIONS** for questions 28 to 30: Each question has a set of four sequentially ordered statements. Each statement can be classified as one of the following.

**Facts**, which deal with pieces of information that one has heard, seen or read, and which are open to discovery or verification (the answer option indicates such a statement with an 'F').

**Inferences**, which are conclusions drawn about the unknown, on the basis of the known (the answer option indicates such a statement with an 'I').

**Judgements**, which are opinions that imply approval or disapproval of persons, objects, situations and occurrences in the past, the present or the future (the answer option indicates such a statement with a 'J').

Select the answer option that best describes the set of four statements.

28. (1) Fifty years ago, African Americans gained little traction in protesting their virtual exclusion both from the planning process for the Civil War centennial and from the core narrative that centennial officials were pushing.

(2) Suffice it to say, the sesquicentennial observance promises to be different: not only are blacks themselves far better positioned politically and economically to influence the tone and content of the various activities, but in an era of heightened racial sensitivity, a great many whites are less inclined to allow for ambiguity in Confederate symbols, human and otherwise.

(3) Over the last generation, we have seen heated conflicts about the Confederate battle flag in

Georgia and several other states. Statues and paintings could be just as divisive. Blacks and whites squabbled in 1995 over placing a statue of Richmond's own Arthur Ashe, a tennis legend and widely celebrated humanitarian, near the likenesses of Lee, Davis, Stonewall Jackson, and other Confederate stalwarts adorning the city's Monument Avenue.



29. (1) The self-immolator's death, no matter how spectacular, will remain utterly meaningless unless it is captured by a receptive gaze — that is, unless it occurs within a community eaten up by guilty thoughts and feelings.

(2) The guilt can be due to several factors: habitual toleration of injustices, collective cowardice and ethical numbness, passivity in front of political oppression, a general sense of defeat in front of a force (totalitarian government, foreign military occupation, and so on) perceived as invincible, if illegitimate.

(3) In other words, self-immolators are effective in societies that feel responsible in part for their servitude, where feelings of complicity, mutual resentment, and distrust have not only poisoned

people's private lives, but also undermined whatever social life is left.

## (Key and Solutions for AIMCAT1207)

### Key

#### SECTION – I

1. A	6. C	11. D	16. C	21. *	26. C
2. *	7. D	12. A	17. B	22. C	27. C
3. B	8. A	13. B	18. D	23. *	28. D
4. D	9. B	14. C	19. C	24. A	29. B
5. B	10. D	15. C	20. D	25. A	30. D

\* Refer Solution

#### SECTION – II

1. C	6. D	11. A	16. C	21. B	26. B
2. C	7. D	12. B	17. D	22. C	27. D
3. B	8. B	13. D	18. B	23. C	28. B
4. A	9. C	14. C	19. C	24. D	29. D
5. D	10. C	15. A	20. A	25. D	30. C

### Solutions

#### SECTION – I

##### Solutions for questions 1 to 3:

- The number of rounds needed to identify the winner is minimum when the number of draws is minimum, ie, zero. In such a case, the number of round needed to identify the winner is 4, since  $2^4 = 16$ .  
 At the end of round 1, 8 players have a score of 1 - 0  
 At the end of round 2, 4 players have a score of 2 - 0  
 At the end of round 3, 2 players have a score of 3 - 0  
 At the end of round 4, 1 player has a score of 4 - 0  
 ∴ At least four rounds are needed to identify the winner.  
 Choice (A)

- Since no information is known about the number of draws, the opponent of seed 4 cannot be uniquely determined.  
**Note:** Since 'cannot be determined' is not present in the choices, this question has been ignored for evaluation of results.
- At the end of round 1 the following is the group of players with one point each and the schedule of matches in round 2.

$\left. \begin{matrix} 2 \\ 4 \\ 6 \\ 8 \\ 9 \\ 11 \\ 13 \\ 15 \end{matrix} \right\}$	1 <sup>st</sup> half	2 - 9	
		4 - 11	
		6 - 13	
		8 - 15	

Since seeds 2, 4, 6, 8, are upset, the group of players with 2 points each at the end of round 2 and the schedule of matches in round 3 is as below

$\left. \begin{matrix} 9 \\ 11 \\ 13 \\ 15 \end{matrix} \right\}$	1 <sup>st</sup> half	9 - 13	
		11 - 15	

To enable the lowest seeded player to win the tournament, we assume that seed 9 is upset.

⇒ The next lowest seed is 11, who can win the tournament

Note the answer will not alter even if draws are considered. For instance, say seeds 2, 4, 6, 8 draw their respective matches in round 1.

∴ At the end of round 1, seeds 9, 11, 13, 15 are the only winners and hence grouped together. In the 2<sup>nd</sup> round, 9 plays against 13 and 11 against 15 with 9 and 11 ending up as winners since upsets happen in matches involving only seeds 2, 4, 6, 8. Since in the remaining rounds, at most only one upset is allowed, 9 is upset by 11.

∴ Seed 11 can be the lowest seed who wins.

Choice (B)

##### Solution for question 4:

- Let the lengths of train A and train B be x metres and y metres respectively.

From statement I,

Case I: The two trains are moving in the same direction.

$$x + y = (72 - 18) \times \frac{5}{18} \times 50 = 750 \text{ m.}$$

Case II: The two trains are moving in opposite directions.

$$x + y = (72 + 18) \times \frac{5}{18} \times 50$$

$$\Rightarrow (x + y) = 1250 \text{ m.}$$

We do not know the value of y, so we can't find x.

So statement I alone is not sufficient.

From statement II,

Case I: Train and car are moving in the same directions.

$$\text{Then } x = (72 - 18) \times \frac{5}{18} \times 35 = 525 \text{ m}$$

Case II: Train and car are moving in opposite directions.

$$\text{Then } (72 + 18) \times \frac{5}{18} \times 35 = 875 \text{ m}$$

So second statement alone is not sufficient.

Even by using both the statements together, we cannot find a definite value for x.

Choice (D)

### Solutions for questions 5 to 8:

5. Ajay is 17<sup>th</sup> from left and 20<sup>th</sup> from right. Hence, there are  $(20 + 17 - 1)$  i.e., 36 children in the row.  
 ∴ Number of girls and boys, respectively, are (2 : 1) 24 and 12. Ajay is 8<sup>th</sup> among the boys and 17<sup>th</sup> among all children in the row from left i.e., there are nine girls to the left of Ajay and 15 on his right. There are 19 children in all to Ajay's right among whom  $19 - 15 = 4$  are four boys.

Choice (B)

6.  $y \leq 1 \Rightarrow y = 0$  or  $y = 1$   
 Consider  $y = 0 \Rightarrow |(p-1)(q-4)(r-5)| = 0$   
 $\Rightarrow p = 1$  or  $q = 4$  or  $r = 5$ .  
 Probability that  $p = 1$  or  $q = 4$  or  $r = 5$   
 $= 1 - \text{probability that } p \neq 1 \text{ and } q \neq 4 \text{ and } r \neq 5$   
 $= 1 - \left(\frac{5}{6}\right)\left(\frac{5}{6}\right)\left(\frac{5}{6}\right) = \left(\frac{91}{216}\right)$   
 Consider  $y = 1 \Rightarrow |(p-1)(q-4)(r-5)| = 1$   
 $\Rightarrow p = 2, q = 3 \text{ or } 5, r = 4 \text{ or } 6$ .  
 Probability that  $p = 2$  and  $q = 3$  or  $5$  and  $r = 4$  or  $6$  is  
 $\frac{1}{6} \times \frac{2}{6} \times \frac{2}{6} = \frac{4}{216}$   
 $\therefore \text{Probability that } y = 0 \text{ or } y = 1 \text{ is } \frac{91}{216} + \frac{4}{216} = \frac{95}{216}$

Choice (C)

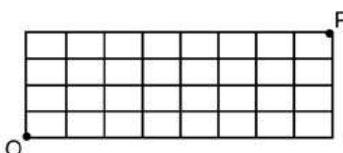
7. Let  $N$  be the number. Since  $N$  has 4 factors we can represent  $N$  in the following ways:  $N = a^3$  or  $N = b.c$   
 Where  $a, b, c$  are prime numbers.  
 It is given that the sum of the factors other than 1 and  $N$  is 56.  
 When  $N = a^3$ , the factors of  $N$  are 1,  $a, a^2, a^3$ .  
 Now,  $a + a^2 = 56 \Rightarrow a(a+1) = 56$  So,  $a = 7$ .  
 When  $N = bc$ , the factors of  $N$  are 1,  $b, c$  and  $bc$ .  
 Now,  $b + c = 56$ .

$b$	$56 - b$
2	54
3	53
5	51
7	49
11	45
13	43
17	39
19	37
23	33
29	27
31	25

Thus the values for which  $56 - b$  is also a prime are (3, 53), (13, 43) and (19, 37).  
 So the values which  $N$  can take are  $7^3, 3(53), 13(43)$  and  $19(37)$ .  
 i.e., 4 values.

Choice (D)

8. A close observation of the diagram reveals that it is equivalent to travelling paths in a rectangular grid of  $i \times j$  when travelling from O to point  $(L_i, R_j)$ .  
 In this case, the equivalent grid is shown below.



The given question is equivalent to finding the number of ways of travelling the shortest distance from O to P.  
 ∴ From a total of 13 segments, a person can choose any 5 vertical segments.  
 $\therefore \text{Total ways of travelling} = {}^{13}C_5 = 1287$

Choice (A)

### Solutions for questions 9 to 11:

Given that at least one performance is there on each day. Also the number of performances on each day increase in an arithmetic progression, starting from Day 1. We have three possibilities:

The number of performances on Day 1, Day 2 and Day 3 respectively can be 1, 4, and 7 OR 2, 4 and 6 OR 3, 4, and 5

Now, given some artistes perform in pairs they are F and G, B and C, K and L, I and H.

Also A, B, E and J do not perform on 3<sup>rd</sup> day. As C performs with B, C also does not perform on 3<sup>rd</sup> day.

9. Out of the 5 people A, B, C, E and J, only A, B and C are dancers. So they do not perform on 2<sup>nd</sup> day. Hence they should perform on day 1. Therefore, the number of performers on each day would be 3, 4 and 5 respectively.  
 Now on day 3, D, F, G, H, I, K and L can perform as we need to have 5 people performing on day 3 and we have 3 pairs. Therefore one of the 3 pairs would not be performing on day 3.  
 But D would surely perform on 3<sup>rd</sup> day.

Choice (B)

10. Given all the three items i.e., dancing, singing and playing music must be performed on each day.  
 There are two possibilities.  
 On day 1: A, E, and J  
 On day 2: B, C, H and I  
 On day 3: D, F, G, K and L  
 (or)  
 On day 1: A, H, and I  
 On day 2: B, C, E and J  
 On day 3: D, F, G, K and L  
 In both cases B performs on day 2.

Choice (D)

11. Statement I: It is not definitely true because when the combination is 1, 4, and 7 the statement does not hold good.  
 Statement II: it is also not definitely true because when the combination is 2, 4, and 6 then D would not be performing on day 3.

Choice (D)

### Solution for question 12:

12. Let the cost price (c. P) and selling price (s. P) of P, Q, R is represented as follows.

	P	Q	R
c.p	$3x$	$7x$	$5x$
s.p	$y$	$4y$	$2y$
Difference	$ 3x - y $	$ 7x - 4y $	$ 5x - 2y $

From statement I:

Given all the difference a equal

$$\text{i.e., } |3x - y| = |7x - 4y| = |5x - 2y|$$

case 1: if all the articles are sold at either profit or loss, then  $3x - y = 7x - 4y = 5x - 2y$

$$3x - y = 7x - 4y \text{ and } 7x - 4y = 5x - 2y$$

$$\frac{x}{y} = \frac{3}{4} \quad \frac{x}{y} = 1$$

Data inconsistent

Case 1 is invalid

Case 2: if the loss is made only on R or loss is made only on P and Q.

Then

$$3x - y = 7x - 4y = 2y - 5x$$

$$3x - y = 7x - 4y \text{ and } 7x - 4y = 2y - 5x$$

$$\frac{x}{y} = \frac{3}{4} \quad \text{and} \quad \frac{x}{y} = 3$$

Data is inconsistent.

Case 2 is invalid

Case 3: if loss is made only on Q or loss is made only on P and R then

$$3x - y = 4y - 7x = 5x - 2y$$

$$3x - y = 4y - 7x \text{ and } 4y - 7x = 12x$$

$$\Rightarrow \frac{x}{y} = 1/2 \quad \frac{x}{y} = 1/2$$

Case 3 is valid

Case 4: if loss is made only on P or loss is made only on Q and R then

$$y - 3x = 7x - 4y = 5x - 2y$$

$$y - 3x = 7x - 4y \text{ and } 7x - 4y = 5x - 2y$$

$$5y = 10x \text{ and } 2x = 2y$$

$$\frac{x}{y} = 1/2 \quad \frac{x}{y} = 1$$

Data inconsistent

Case 4 is invalid

$\therefore$  loss is made only on Q or loss is made only on P and R

Difference of C. P and S. P of P =  $|3x - y|$

$$X = K, Y = 2K,$$

$$\Rightarrow d = |3x - 2k| = K$$

$\therefore$  Loss is made on P ad R.

Given difference = 100

$$\Rightarrow K = 100$$

$\therefore$  Cost price of R is  $5K = 500$

$\therefore$  Statement I alone is sufficient

From statement II alone we cannot infer anything.

Choice (A)

### Solutions for questions 13 to 15:

13.

Marked Price (MP)	Discount	Selling Price (SP)	Cost Price (SP)	Profit	Profit Amount
8K	3K	5K	4K	K	25%

Since the discount is 37.5% which is  $3/8$ , let us assume the marked price as 8K.

$$\therefore \text{Discount} = 37.5\% \text{ of } (8K) = 3K$$

$$\therefore \text{Selling Price} = \text{M.P} - \text{Discount} = 8K - 3K = 5K$$

Since the profit is  $1/3^{\text{rd}}$  of the discount, the profit is K.

So, the Cost Price = SP - Profit =  $5K - K = 4K$

$$\text{Profit Percent} = \frac{\text{Profit}}{\text{C.P}} \times 100 = \frac{K}{4K} \times 100 = 25\%$$

Choice (B)

14. We need  $\frac{2^{164}}{164}$

$$164 = 4(41)$$

$$\text{Rem } \frac{2^4(2^{4(40)})}{2^2(41)} = \text{Rem } \frac{4(4)(2^{4(40)})}{4(41)}$$

$$= 4 \text{ Rem } \frac{4(2^{4(40)})}{41}$$

$$\text{Now, Rem } \frac{4}{41} = 4 \text{ and Rem } \frac{2^{40(4)}}{41} = \left(\text{Rem } \frac{2^{40}}{41}\right)^4 = 1.$$

$$\text{By Fermat's theorem, } \text{Rem } \frac{a^{p-1}}{p} = 1 \text{ where } p \text{ is a prime}$$

and a is not a multiple of p.

$$\text{Actual Remainder} = (4 \times 1) 4 = 16. \quad \text{Choice (C)}$$

15. Let the probability that a missile misses the bridge be a and that it hits be b. (Given  $b = \frac{1}{2}$ ,  $\therefore a = \frac{1}{2}$ )

As the number of missiles fired (n) increases, the probability that the bridge is destroyed (p) keeps increasing. The probability that the bridge is not totally destroyed ( $1 - p$ ) keeps decreasing, i.e., the probability that only 0, 1 or 2 shots hit the bridge keeps decreasing we

denote the probability that i shots hit the bridge as  $P_i$ .

$$P_0 = {}^nC_0 a^n, P_1 = {}^nC_1 a^{n-1} b, P_2 = {}^nC_2 a^{n-2} b^2, \dots, P_n = {}^nC_n a^n b^n$$

Now  $P = P_3 + P_4 + \dots + P_n$  and  $1 - P = P_0 + P_1 + P_2$

$$= ({}^nC_n + {}^nC_{n-1} + {}^nC_{n-2}) (1/2)^n = [1 + n + \frac{n(n+1)}{2}] (1/2)^n$$

$$= \frac{n^2 + n + 2}{2^{n+1}}$$

$$\text{We want the least value of } n \text{ such that } \frac{n^2 + n + 2}{2^{n+1}} < \frac{1}{100}$$

$$\text{or } 100(n^2 + n + 2) < 2^{n+1}.$$

$$\text{For } n = 13,$$

$$\text{LHS} = 100(169 + 13 + 2) = 18,400,$$

$$\text{while RHS} = 2^{14} = 16,384.$$

$$\text{For } n = 14,$$

$$\text{LHS} = 100(196 + 14 + 2) = 21,200,$$

$$\text{while RHS} = 32,768.$$

$$\therefore n = 14. \quad \text{Choice (C)}$$

### Solutions for questions 16 to 19:

16. Total transaction time available in slot  $S_1 = 120$  minutes.

$\therefore$  Maximum number of transactions possible

$$= \frac{120}{6} = 20 \quad (\because \text{Average time per transaction is 6 minutes})$$

Given, ratio of transactions at counters 1, 2, 3, & 4 is  $3 : 2 : 5 : 1$  respectively.

$\therefore$  Let the number of transactions be  $3k, 2k, 5k, k$  and  $x$  at counters 1, 2, 3, 4, and 5 respectively.

Total number of transactions in slot  $S_1$  on Monday is 64.

$$\Rightarrow 3k + 2k + 5k + k + x = 64$$

$$\Rightarrow 11k + x = 64$$

$$\Rightarrow x = 64 - 11k.$$

Also, maximum number of transactions at any counter is 20.

$$\Rightarrow 3k \leq 20, 2k \leq 20, 5k \leq 20, k \leq 20$$

$\therefore$  Maximum value of k is 4.

$$\Rightarrow X_{\text{minimum}} = 64 - 44 = 20 \quad \text{Choice (C)}$$

17. Let the  $i^{\text{th}}$  transaction in the day be denoted by  $x_i$ .

The 1<sup>st</sup> transaction of the day,  $x_1$ , takes place at counter 3,  $C_3$ ,  $x_2$  takes place at  $C_2$  and  $x_3$  at  $C_1$ .

Since  $x_1$  is completed after 1 minute at which point transactions  $x_2$  and  $x_3$  are still in progress, transaction  $x_4$  will also take place at  $C_3$ . In this manner, transactions that take place in counters  $C_1, C_2, C_3$ , in the first six minutes can be listed as shown in the table below.

$C_1$ (3 min)	$C_2$ (2 min)	$C_3$ (1 min)			
Time period (in min)	Transaction Number	Time period (in min)	Transaction	Time period (in min)	Transaction Number
0 - 3	$x_3$	0 - 2	$x_2$	0 - 1	$x_1$
3 - 6	$x_8$	2 - 4	$x_6$	1 - 2	$x_4$
		4 - 6	$x_{10}$	2 - 3	$x_5$
				3 - 4	$x_7$
				4 - 5	$x_9$
				5 - 6	$x_{11}$

At the end of the first six minutes, it can be observed that a total of 11 transactions across the three counters have taken place and all the three counters are now available for transaction. That is, the situation is now identical to that at  $t = 0$ .

$\therefore$  Every cycle of 6 minutes, 11 transactions take place.

74 transactions include 6 cycles of 11 transactions each.

$\therefore 74^{\text{th}}$  transaction would be equivalent to 8<sup>th</sup> transaction.

From the table, it can be seen that 8<sup>th</sup> transaction has taken place in counter  $C_1$ .

$\therefore 74^{\text{th}}$  transaction also takes place in counter  $C_1$ .

Choice (B)

18. It 't' is the time taken per transaction, the total time expended on transactions in slot  $S_3$  on Tuesday = 51t.

Total available time for transaction in slot  $S_3$  on Tuesday =  $5 \times 120 - (2 \times 30 + 3 \times 15)$  minutes. = 600 - 105 minutes

$\therefore$  Idle period in slot S<sub>3</sub> on Tuesday  
 = Total available time – Time spent on transactions  
 = 600 – 105 – 51t  
 Similarly, idle period in slot S<sub>4</sub> on Wednesday  
 = 600 – 2 × 15 – 71t = 600 – 30 – 71t  
 Given idle periods are equal  
 $\Rightarrow 600 – 105 – 51t = 600 – 30 – 71t$   
 $\Rightarrow t = \frac{75}{20} = 3.75$  minutes. Choice (D)

19. Given that not more than 50% of the transactions in any slot happen in the 1<sup>st</sup> hour of the slot.

Maximum no. of transactions (50%)	Minimum number remaining transactions
S <sub>1</sub> → 43	43
S <sub>2</sub> → 40	41
S <sub>3</sub> → 37	37
S <sub>4</sub> → 39	40
S <sub>5</sub> → 37	39
S <sub>6</sub> → 43	44

Given that the average number of transactions in the 1<sup>st</sup> hour is 38.

To maximize the number of transactions in the 2<sup>nd</sup> hour the number of transactions in the 1<sup>st</sup> hour should be minimized. It can be noted from the table above, that the minimum number of remaining transactions is highest in S<sub>6</sub>, i.e., 44.

$\therefore$  The number of transactions in the first hour of S<sub>6</sub> has to be minimized. This is possible when the number of transactions in the 1<sup>st</sup> hour of each of the remaining slots is the maximum possible.

$\Rightarrow$  43 transactions in S<sub>1</sub>, 40 in S<sub>2</sub> in 37 in S<sub>3</sub>, 38 in S<sub>4</sub> and 37 in S<sub>5</sub>.

$\therefore$  Minimum number of transactions that could have taken place in the 1<sup>st</sup> hour of

$$S_6 = 38 \times 6 - (43 + 40 + 37 + 39 + 37) = 32$$

$\Rightarrow$  Maximum number of transactions in the 2<sup>nd</sup> hour = 87 – 32 = 55 in S<sub>6</sub>. Choice (C)

#### Solutions for questions 20 and 21:

Let A, B, C, D, E, F, G denote the seven students in alphabetical order.

Consider the conditions given.

- (i) C  $\Rightarrow$  CF but CE is not possible.
- (ii) B  $\Rightarrow$  BA
- (iii) E  $\Rightarrow$  EA
- (iv) B  $\Rightarrow$  BD
- (v) B  $\Rightarrow$  BG

From (ii), (iv) and (v), BGD should, if B is selected, be selected together.

20. For a team of size 1, i.e., consisting of only one member, any one out of A, D, F and G can be selected.

For a team of size 2 members, AD, AE, AF, AG are some of the possible combinations.

For a team of size 3 members, BGD is one of the possible combinations.

For a team of size 4 members, ACFG is one of the possible combinations.

For a team of size 5 members, BCDFG is one of the possible combinations.

No team of size 6 is possible because out of A and B only one can be selected and out of C and E only one can be selected.

$\therefore$  Out of 7 at most only 5 can be selected.

$\therefore$  Five different team sizes are possible. Choice (D)

21. EADFG, BDGCF and ACDFG are three possible 5 member combinations.

$\therefore$  None of E, A, B can be definitely ruled out.

**Note:** Since 'None of the above' is not present in the answer choices given, this question has been ignored for evaluation of results.

#### Solution for question 22:

22. Let number of students in the batch be = x  
 Then number of male students are = 0.3x and 0% of females have work experience

$\Rightarrow$  0.07x females have work experience.  
 Using I alone, 0.2x have work experience  
 $\Rightarrow$  The number of male who have work experience is 0.13x  
 Hence I alone is sufficient.  
 Using II alone, the number of males having work experience is 1.25 times 0.07x = 0.0875 x.  
 Hence II alone is also sufficient. Choice (C)

#### Solutions for questions 23 to 25:

Let the total commission earned in 2006 by Anil and Pranav in the four regions be 100x<sub>1</sub> and 100x<sub>2</sub> respectively.

Let the total number of policies issued in 2006 by Anil and Pranav in the four regions be 100y<sub>1</sub> and 100y<sub>2</sub> respectively.

$\therefore$  In 2006, commission earned per policy issued is as below for the four regions.

**For Anil:**

$$\text{Region A} \rightarrow \frac{30\% \text{ of } 100x_1}{25\% \text{ of } 100y_1} = \frac{30x_1}{25y_1}$$

$$\text{In 2005, the corresponding ratio is } \frac{\left(\frac{30x_1}{1.1}\right)}{\left(\frac{25y_1}{1.2}\right)} = \frac{30x_1}{25y_1} \times \frac{1.2}{1.1}$$

Similarly, the other ratios for the remaining years in the four regions can be tabulated as below.

	Anil		Pranav	
	2006	2005	2006	2005
A	$\left(\frac{30x_1}{25y_1}\right)$	$\left(\frac{30x_1 \times 1.2}{25y_1 \times 1.1}\right)$	$\left(\frac{15x_2}{20y_2}\right)$	$\left(\frac{15x_2 \times 1}{20y_2 \times 1.2}\right)$
B	$\left(\frac{35x_1}{25y_1}\right)$	$\left(\frac{30x_1 \times 1.15}{25y_1 \times 1.20}\right)$	$\left(\frac{20x_2}{25y_2}\right)$	$\left(\frac{20x_2 \times 1.25}{25y_2 \times 1.15}\right)$
C	$\left(\frac{15x_1}{20y_1}\right)$	$\left(\frac{15x_1 \times 1}{20y_1 \times 1.15}\right)$	$\left(\frac{30x_2}{25y_2}\right)$	$\left(\frac{30x_2 \times 1.05}{25y_2 \times 1.1}\right)$
D	$\left(\frac{20x_1}{30y_1}\right)$	$\left(\frac{20x_1 \times 1.2}{30y_1 \times 1.1}\right)$	$\left(\frac{30x_2}{30y_2}\right)$	$\left(\frac{35x_2 \times 1.1}{30y_2 \times 1.1}\right)$

23. Since there is no other information available to compare  $\frac{x_1}{y_1}$  and  $\frac{x_2}{y_2}$ , the answer cannot be determined.

**Note:** Since 'cannot be determined' is not present in the answer choices given, this question has been ignored for evaluation of results.

24. In 2006, Anil had issued 20% fewer policies compared to Pranav but earned the same commission.

$$\Rightarrow x_1 = x_2, y_1 = 0.8y_2$$

Ratio of commission earned to number of policies issued in 2006, for Anil is as below.

$$A: \frac{30x_1}{25y_1} = \frac{30x_2}{25 \times 0.8y_2}$$

$$B: \frac{35x_1}{25y_1} = \frac{35x_2}{25 \times 0.8y_2}$$

$$C: \frac{15x_1}{20y_1} = \frac{15x_2}{20 \times 0.8y_2}$$

$$D: \frac{20x_1}{30y_1} = \frac{20x_2}{30 \times 0.8y_2}$$

Comparing with the corresponding ratios for Pranav in 2006, it can be seen that ratio is highest  $\left(\frac{35x_2}{25 \times 0.8y_2}\right)$  for Anil in region B.

Choice (A)

25. Only in two regions – B and C – did Anil experience an increase in commission earned per policy issued from 2005 to 2006.

Only in region B did Pranav experience a decrease in commission earned per policy issued from 2005 to 2006.  
 $\therefore I > II$

Choice (A)

#### Solution for question 26:

$$\begin{aligned} 26. \quad (432)_6 &= 4(6)^2 + 3(6) + 2 = 164 \\ (343)_5 &= 3(5)^2 + 4(5) + 3 = 98 \\ \therefore (321)_n &= 164 + 98 \\ &\Rightarrow 3n^2 + 2n + 1 = 262 \\ \therefore 3n^2 + 2n - 261 &= 0 \\ 3n^2 - 27n + 29n - 261 &= 0 \\ 3n(n - 9) + 29(n - 9) &= 0 \\ (3n + 29)(n - 9) &= 0 \\ \therefore 3n &\neq -29, n = 9 \end{aligned}$$

Choice (C)

#### Solutions for questions 27 and 28:

Let us assume A always tells the truth, then according to A, Physics – A; Maths – C; Chemistry – B  
 Now, if we compare statements of B and C

	I	II	III
B	True	False	True
C	False	False	False

$\therefore$  B alternates between truth and lie and C always lies.  
 Now let us assume B always tells the truth, then according to B, C – Chemistry; B – Maths; A – Physics  
 If we compare statements of A and C

	I	II	III
A	True	False	False
C	False	True	True

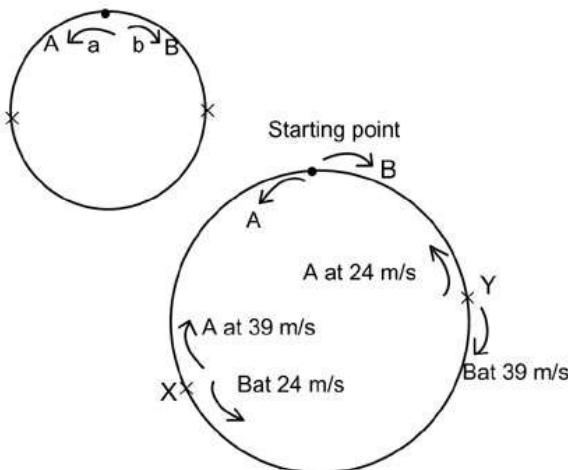
This situation is not possible. Let us assume C always tells the truth, then according to C, the two possibilities are

- (I) Physics – B; Maths – A; Chemistry – C.  
 But if we compare statements of A and B, there is no person who always lies.  $\therefore$  This is not possible.
- (II) Physics – C; Chemistry – A; Maths – B.  
 But if we compare statements of A and B, there is no person who always lies.  $\therefore$  This is not possible.  
 $\therefore$  A is the person who always tells the truth and B alternates between truth and lie and C always lies.

27. As discussed above, A is the owner of the Physics book.  
 Choice (C)
28. As discussed above, all the three statements are correct.  
 Choice (D)

#### Solutions for questions 29 and 30:

29. Starting point



The track length is given (1260 m)

The speeds are given (A – 24 m/s and B 29 m/s). Actually,

A, B keep interchanging the speeds)

The time interval between two A and B meet, each time they cover the total distance i.e., together they must cover the entire length of the track once to meet each other.

Let them meet for the first time after t second

In time t, A covers 24t and B covers 39t (in m)

$$\text{Now, } 24t + 39t = 1260 \Rightarrow t = \frac{1260}{63} = 20$$

So, when they meet for the first time at X, A covers 24(20) = 480 m and B covers 39(20) = 780 m.

Next, A travels at 39 m/s in the clockwise direction and B travels at 24 m/s in the anticlockwise direction. To meet again, they need to together cover the total length of the track. So, after 20s, they meet at Y, A having covered 780 m and B 480 m i.e., Y is 480 m from X in the anti-clockwise direction. They meet each time they cover the entire length of the track, i.e., after every 20 seconds.

Between their 23<sup>rd</sup> meeting and 293<sup>rd</sup> meeting the time gap is  $(293 - 23) (20)$  seconds = 90 (3) (20) seconds = 90 minutes.

Thus they will meet for the 293<sup>rd</sup> time 90 minutes from 8:00 p.m. i.e., at 9:30 p.m.  
 Choice (B)

30. We have seen in the previous question that they meet every time at a distance of 480m from the previous meeting point in anti-clockwise direction. To meet at the starting point  $480 \times n = 1260K$ . Where n is the required meeting when they meet at the starting point for the first time and K is the least natural number which satisfies the given condition.

$$K = \frac{48n}{126} = \frac{8n}{21}$$

So the minimum value of K = 8.

So they meet for the first time at the starting point when they are meet for the 21<sup>st</sup> time.  
 Choice (D)

Difficulty level wise summary - Section I	
Level of Difficulty	Questions
Very Easy	-
Easy	-
Medium	1, 2, 3, 4, 5, 7, 8, 13, 14, 16, 18, 21, 22, 23, 24, 25, 26, 27, 28
Difficult	6, 9, 10, 11, 12, 15, 17, 19, 20, 29, 30
Very Difficult	-

## SECTION – II

#### Solutions for questions 1 to 3:

1. We know that (a) starts the paragraph. We find that it introduces a sport, describing it as one that presents adventure and exhilaration. (b) talks of 'these .... challenges' and would therefore follow (e) and (f), that present risks and challenges. (c) talks of coming through in one piece, and would therefore follow the thought of facing the challenges (the sequence containing (b), (e) and (f)). Also, (c) would follow (d) since it offers the answer to the question (d) asks. With this, we narrow the choices to B and C. Between (efb) and (feb), the latter is correct, since the general idea of risk in (f) is followed by the specific risk in (e). Thus febdc.  
 Choice (C)
2. Since the group is small, thirty five would refer to the age of the persons, therefore 'under' – (a). Challenges are 'surmountable' – (a). Succeeding in facing a difficulty is 'coming through' – (b). Something about a situation 'prompts' the taking of risk – (b). When implements are put to use they are 'employed' – (b). The risks are actually explained, so they are not 'untold' but 'aplenly' – (b). Thus aabbba.  
 Choice (C)
3. (a) Since we are speaking of a small group catapulted down the river, the context refers to an inflatable raft, and not a number of them. So, 'raft' and not 'rafts'. (b) Protective gear would be the set of things used for protection. This would therefore be singular. So, 'helps' and not 'help'. (c)

The context here is of an activity that the enthusiasts engage in. It's the activity (doing) and not a state that provides the joy. The sentence would, therefore, be appropriate with '....the sheer joy of experiencing incredible motion, and the thrill of coming...'. (d) is appropriately phrased. (e) '....seem grossly inadequate...' is the thought into which '....in the event....' is inserted. Commas are therefore required on either side of 'in the event'. (f) is appropriately phrased. Thus abce. Choice (B)

#### Solutions for questions 4 to 6:

##### Number of words and Explanatory notes for RC:

Number of words : 549

4. The concluding portion of the passage states that scientist like Newton did not believe in a dichotomy between science and religion. In this context, choice (A) is the assumption that could lead to erroneous conclusions. Choices (B), (C) and (D) are appropriate in Newton's context.

Choice (A)

5. Keynes supports the view that Newton and his contemporaries took a keen interest in the mystic sciences, thus choice (D) is appropriate. Choice (A) is not true. Choice (B) is beside the point. Choice (C) is far-fetched.

Choice (D)

6. The passage states that Newton was "dismayed" when it was made clear that god had no hand in the principles of gravitational physics. Thus, choice (D) is correct. Choice (C) contradicts the passage. Choice (A) is not stated in the passage. Choice (B) is wrongly attributed to Newton.

Choice (D)

#### Solutions for questions 7 to 9:

7. The sentence has the 'not ..... but' conjunction (not because ..... but because) where each part of the conjunction must be followed by the same structure. This makes choice (D) right ..... not because it's unimportant but because it's ..... In choice (A), 'but' is not followed by 'because'. Choices (B) and (C) distort with the misplacement of 'not' as well as with an inappropriate wording of the standard phrase 'ought not to .....'

Choice (D)

8. There are two errors – one is the positioning of 'even'. It can qualify 'better' (and so precede it) or 'the original films' (and so precede it). It cannot qualify (or precede) 'than'. Second 'special-effects' should be hyphenated since it qualifies technology. Choice (B) is free of these errors.

Choice (B)

9. The choices have various errors. One, it should be 'end up' (wind up) not end (stop or come to an end). Two it should be '..... to avoid drawing .....' Further the adjective 'conformist' is needed, not the noun 'conformists'. Only choice (C) is free of these errors.

Choice (C)

#### Solutions for questions 10 to 12:

10. The argument states that REM sleep, where dreams occur, is important for the brain to integrate the memories of the day. We have to identify an option that would bolster this theory.

- (1) This point explains the dynamics of REM sleep without pointing out its relation to memory.
- (2) This point restates the argument without adding any fresh value.
- (3) This point decisively strengthens the argument that it is only deep sleep that offers a mental boost – a shallow nap offers no perceptible benefits.
- (4) This point also restates the argument without adding any fresh insight.

Choice (C)

11. Here, we have to identify an option that reassures us that the speechless world of digital communication is not a damaging case.

- (1) This point amply suggests that the world of communication is in a state of flux and we can ill-afford not to keep up with the times.
- (2) This point does not assuage parental concerns.
- (3) This point restates the argument without addressing the parental concerns.
- (4) This point fuels the concerns of the parenting expert.

Choice (A)

12. X equates victory at the Olympics to unlimited business prospects. Y argues that no cash prizes are offered to winners. We have to identify an option that would reconcile these two points of view.
- (1) This point is a mere repetition of X's opinion
  - (2) This point correctly reveals that winners at the Olympics can cash in on their medals in the corporate world through endorsements.
  - (3) This point does not explain how the athletes make money.
  - (4) This point goes unsubstantiated.

Choice (B)

#### Solutions for questions 13 to 15:

##### Number of words and Explanatory notes for RC:

Number of words : 471

13. The word 'apostasy' means a renunciation or abandonment of former loyalties. Choice (D) can be inferred from the last line of para 3, the first 2 lines of para 4 and from the sentence that follows the use of the word in the 1<sup>st</sup> sentence of the last para.

Choice (D)

14. Refer to the third paragraph where the words in quote occur – it refers to a belief in science in some areas (climate change) and being suspicious in others (nuclear power or genetic engineering).

Choice (C)

15. Refer to paras 4 and 5. He would like to have the areas of nuclear energy biotechnology and social and economic systems looked at afresh.

Choice (A)

#### Solutions for questions 16 to 18:

16. A persual of all the lines helps us to understand that the paragraph is about animals kept in zoos, the distance (from humans) at which the animals feel safe, and the difference it makes to them when this distance is compensated for. We are also told that statement (d) is the 4th statement in this set. The 3 statements (d), (e) and (f) would work together since they explain what animals have as, and how they judge, their 'flight distances'. (d) being the 4th sentence would mean that (e), though it seems a possible opening sentence, would not be so. This leaves (b) the only other opening possibility since it brings in the explanation of 'flight distance' and how the understanding of this is necessary to make animals in a zoo feel safe. The 'it' in 'when it works' in (a) can only refer to some method or solution that is applied, since the sentence presents the positive results. What 'it' refers to is in (c), the explanation of the method (diminishing flight distance) through the provision of the components. Thus (ca) would be a sequence, and this sequence concludes the para by summing up the benefits. Since (d) is the 4th sentence, the end sequence would be (dca). The starting statement is (b). Thus bfedca.

Choice (C)

17. (a) is appropriately phrased. (b) This presents one aim not two. The aim is to diminish 'flight distance' so what follows is an explanation of the term, in which 'and' should be removed. (c) This presents the tools, a series that should be parallel - all nouns. So, 'providing food and shelter' should be 'the provision of food and shelter' or 'the food and shelter that we provide'. (d) is appropriately phrased. (e) The plural 'bears' should be used. (f) This needs 'it will become tense' since it's a conditional statement. Thus bcef.

Choice (D)

18. (a) The thoughts of emotional stability and reproduction indicate that the word we want is 'socialises' - (b). (b) Something is 'kept' at a distance - (b). (c) We 'afford' protection - (a). (d) Crabs 'scurry' - (b). (e) The measuring of distance is better delivered with 'gauge' - (a). (f) A sudden reaction is 'triggered' - (a). Thus bbabaa.

Choice (B)

#### Solutions for questions 19 to 21:

##### Number of words and Explanatory notes for RC:

Number of words : 472

19. Choice (A) is ruled out because there is no reassurance (see the last sentence of the passage). Choice (D) can be ruled out because he does not 'set right' any misunderstanding. Between choices (B) and (C), the latter is better since the author is concerned about Americas' situation and not that of the world.

Choice (C)

20. Statements (a) and (c) being categorical ('in no way' and '.... no need..') can be ruled out especially since the author indicates there may be negative aspects. Statements (b) and (d) are backed by the last paragraph and the penultimate paragraph. Statement (e) is irrelevant since other countries have not been mentioned in the passage.

Choice (A)

21. Refer to the penultimate paragraph – the author mentions Mars and world economy to show that the current account may not be accurate. But he does not rule it out altogether as the last sentence of the para and the next show.

Choice (B)

#### Solutions for questions 22 to 24:

##### Number of words and Explanatory notes for RC:

Number of words : 951

22. Choice (B) is not true 'brain drain' is a given. Choice (D) is too specific. Between choice (C) and choice (A), (C) is more pertinent to the whole passage, given the example of the African countries.

Choice (C)

23. The reference is given in the passage '--he will under invest in it (individual's education)---- (para 5).

Choice (C)

24. All choices are mentioned in the passage '--- just 4.3% of its ---- graduate population ----' (para 7), '---- hatch an indigenous software industry----'(para 6), '---- source of know-how and money----' and '---- entrees into foreign markets----'(para 7).

Choice (D)

#### Solutions for questions 25 to 27:

25. Option D is incorrect. You answer a person, question or letter, you do not answer to them. But you reply to somebody or something. Therefore the correction is 'I am writing to answer the headmaster's queries' or it can be written as 'I am writing to reply to the head master's queries.'

Choice (D)

26. The error lies in option B. Here, the use of the article a before game is incorrect. The correction is '.....yet he is game for it'. To be game for something means to be willing.

Choice (B)

27. The expression 'to be a fair game' is incorrect in choice D. The correction is 'to be fair game'. If a person or thing is said to be fair game, it is considered acceptable to play jokes on them.

Choice (D)

#### Solutions for questions 28 to 30:

28. Statement 1: While the information about what the protest was, fifty years ago, is in the nature of historical narrative, the intention of the author is to opine that this protest bore no fruit. This statement is a JUDGEMENT.

Statement 2: While there are observations about blacks and whites today, these are provided to support the author's understanding that the situation now is different. This statement is an INFERENCE.

Statement 3: Though the statement carries a shade of opinion in "statues and paintings could be just as divisive", the focus of the statement is on recounting occasions of dispute or conflict. This statement presents FACT.

Statement 4: Here too, inspite of the descriptive "veritable firestorm", the focus of the statement is on reporting the event. This statement presents FACT.

Statement 5: While the information about the painting of slogans is in the nature of reporting, the intention of the author is to opine that sensitivity to historical symbolism still exists in the Southern states. This statement is a JUDGEMENT. Thus, JIFFJ

Choice (B)

29. Statement 1: Is the author's view on what circumstances make an event of self-immolation one that serves any purpose. This statement is a JUDGEMENT.

Statement 2: Is the author's understanding that the various factors (after the colon) amount to the reasons for guilt. This is an INFERENCE.

Statement 3: Just as statement 1 is, this too is the author's view on what circumstances make an event of self-immolation one that serves any purpose. This statement is a JUDGEMENT.

Statement 4: What the author presents are his views on the circumstances of self-immolation. This statement is a JUDGEMENT.

Statement 5: Again, as in statements A and C, this is the author's view on what the self-immolator 'achieves'. This statement is a JUDGEMENT. Thus, JIJJJ. Choice (D)

30. Statement 1: This presents the author's view of what India needs. This is a JUDGEMENT.

Statement 2: This presents the author's understanding that, as a result of the corruption scandal, chances are low. This is an INFERENCE.

Statement 3: The words "allowed to drift", present the author's opinion that not much has been done. This is a JUDGEMENT.

Statement 4: The use of the phrases "govt. has frozen", "long delays", "small decisions", indicate that the author is delivering his view on the govt's functioning. This is a JUDGEMENT.

Statement 5: the focus is the author's understanding that plans backfire, backed with the example that provides reason. This is an INFERENCE. Thus, JIJI.

Choice (C)

Difficulty level wise summary - Section II	
Level of Difficulty	Questions
Very Easy	-
Easy	5, 27
Medium	2, 4, 6, 10, 11, 12, 13, 14, 15, 21, 22, 23, 24, 25, 26
Difficult	1, 7, 8, 9, 16, 18, 19, 20, 30
Very Difficult	3, 17, 28, 29