Directions: Study the following information carefully and answer the questions below:

Modern birds evolved from ground–dwelling reptiles as their increasingly refined parenting skills led them into the trees, where they could better protect their young, proposes a researcher at the University of California, Davis. This new theory, contradicts the two leading theories on the evolution of avian flight. “The evidence indicates that a whole site of behavioral and physical traits, including feathers and wings evolved along with improved parenting and brood care traits,” said James Carey, a UC Davis demographer and ecologist.

Once the precursors to birds began to fly, the ecological interplay of flight and parental care may have been mutually, continuing the evolution of both traits and accelerating the rate at which the physical features of the modern bird were acquired. The origin of bird flight is a fundamental issue in biology and in overall evolutionary theory. Many scientists point to the fossilized specimens of Archaeopteryx as evidence that there was a transitional vertebrate species that developed during the evolution from reptilian dinosaurs to birds. Furthermore, they suggest that the development of flight may explain why bird – like dinosaurs avoided extinction.

Until now, there have been two basic theories on the origins of bird flight. The first, the arboreal theory, is a tree to ground model, suggesting that bird’s primitive ancestors were tree dwellers that leapt from branches. Through the ages, the ability to glide and later fly developed because gliding slowed their fall to earth when they missed a branch. The second, the cursorial theory, is a ground up model that suggest that birds evolved from four legged reptiles. According to the theory, scales on these creatures gradually developed into front limbs with features that gave them upward thrust when they ran and eventually enabled them to fly.

On the other hand, the parental care theory is consistent with both the physical and behavioral changes that appear to have occurred as reptiles evolved into modern birds. Researchers suggest that modern bird’s very early ancestors were reptiles that established and guarded their nests on the ground, much like crocodiles. Over time these creatures developed hard – shelled rather than leathery eggs and the ability to modulate their own body temperature in order to provide a more constant environment for their young ones’ development. Scales evolved into feathers better camouflaging and insulating the parents. In time these early ancestors of birds developed more advanced techniques for caring for their young. They started to feed their young in the nest, pumping liquid food or placing small food items in their mouths. They also began to produce fewer and more dependent offspring and smaller eggs and began nesting in bushes. Some of these creatures became feathered and even more elongated, enabling them to better manipulate their eggs and to ‘parachute’ from their tree nests to a soft landing. Later they would develop the ability to glide and eventually fly by flapping their wings. Carey hypothesizes that bird beaks also developed in the context of parental care. The beak, he suggests, serves both as a point source of food for small hatchings in the same way the nipple is used to feed mammalism young and also as the tool for sophisticated use because they weigh less than teeth and so are better adapted for flight. He points out that flight provided these ancient ancestors of birds with numerous advantages including the ability to safely place their young – high in trees and cliffs, maximize the food sources through seasonal migrations and supply more and higher quality food by expanding their foraging range.

He adds that fossil record, specifically Archaeopteryx, provides ample evidence that the evolution of parental care was the main driving force behind the evolution of avian flight.

1. According to the parental care theory, which of the following is true about the very early ancestors of present day birds?
   a) They laid their eggs on the ground and tended to their young there
   b) They stayed only on the ground and laid their eggs there
c) They stayed on the ground but migrated to the trees to lay their eggs

d) They stayed on the trees but laid their eggs on the ground

e) They could do it anyway they wanted

2. Carey is least likely to agree with which of the following views?
   a) The scales in birds evolved into feathers to provide better insulation
   b) Development of flight increased the catchments area of the birds thereby increasing the quality and quantity of food available
   c) Birds evolved beaks to serve both as a point source of food for small hatchings and as a tool for nest construction
   d) Evolutionary advancement led to an increase in the progeny of the ancestor’s of the modern day birds
   e) Both (a) and (c)

3. Which of the following is the most suitable title for the given passage?
   a) Conflicting Theories on Evolution of Avian flight
   b) Improved Parenting and Brood – Care Traits in Birds
   c) Evolution of Bird Flight Linked to Parental Care
   d) Evolution of Birds from Reptiles
   e) Birds and Predator

4. Carey is likely to agree with which of the following views?
   a) Bird like dinosaurs may have avoided extinction because of the development of flight
   b) The intermediate stages between the four legged reptiles are the birds with developed feathers
   c) Early ancestors of birds developed more advanced techniques to increase their chances of survival
   d) None of The Above
   e) Both (b) and (c)

5. Flight was advantageous for the ancestor of birds in which of the following cases?
   a) It enabled them to modulate their own body temperature in order to provide a more constant environment for their developing young
   b) Flight enabled the birds to better guard and manipulate their eggs
   c) Flight gave them the ability to increase their sources of food and the ability of seasonal migration
   d) All of The Above
   e) Only (a) and (c)

6. It can be inferred from the passage that an ecologist is one who studies:
   a) The natural environment
   b) The relations of organisms with one another and their surroundings
   c) Living organisms
   d) Both (a) and (b)
   e) Can’t be Determined

Directions: (7 – 11) In the sentence below a word is given as blank, below the sentence five words/group of words are suggested, one of which can replace the blank. Find the appropriate word/group of words in each case.

In the 24 years since the birth of Louise Brown, the world’s first test – tube baby, thousands of would – be parents have been assured that as far as scientists knew there was no extra risk of genetic damage ______ (1) with in – vitro fertilization, or IVF. No matter how sperm meets egg- whether in a woman’s body or in a Petri dish and even if the sperm needs some help getting inside the
egg – nature is equally ______(2) about preventing serious genetic mishaps from coming to term. With those assurances, test – tube births have soared from a few hundred a year in the early 1980s to tens of thousands today.

But according to a pair of reports in last week’s New England Journal of Medicine, that conventional wisdom may be wrong. In the first study, doctors in Britain and Australia found that infant sperm injection, in which sperm is injected directly into the egg, have an 8.6% risk of major birth defects – including heart and kidney abnormalities, cleft palate and undescended testicles – ________ (3) with the 4.2% rate in babies made the old – fashioned way.

The second study, conducted by the U.S. Center for Disease Control and Prevention (CDC), reported that babies ________ (4) through what doctors call assisted reproductive technologies (ART) have 2.6 times the risk of low or very low birth weight – a significant risk factor for cardiac and cognitive problems. “Our findings are controversial,” concedes Dr. Jennifer Kurinczuk, a perinatal epidemiologist at the University of Leicester in English, who co – authored the birth – defected study, “and they are not going to be the final word on the issue. But parents should be aware of the ________(5).”

7. a) Affiliated  
   b) Joined  
   c) Accompanied  
   d) Associated  
   e) None of The Above

8. a) Agoge  
   b) Acute  
   c) Heedless  
   d) Vigilant  
   e) None of The Above

9. a) Correlated  
   b) Compared  
   c) Combine  
   d) Linked  
   e) None of The Above

10. a) Apprehend  
    b) Compass  
    c) Abort  
    d) Conceived  
    e) None of The Above

11. a) Forebearance  
    b) Bickering  
    c) Argument  
    d) Controversy  
    e) None of The Above

Directions (12 – 16) – In the question given below, a sentence has been divided into parts, out of which one part has an error. Choose the part which has error as your answer. In case there is no error then choose option (e) that is ‘no error’.

12. (a) During an hour – long meeting Naveen asked Mukesh (b) keeping in mind the power and position he holds (c) as a senior police officer and advised him (d) to be careful in future so that such things do not recur. (e) No Error
13. (a) The project was initiated in 2011 (b) and was to be funded by Universal Service Obligation Fund (c) with the aim of providing (d) broadband connectivity in over 2 lakh gram panchayats (e) No Error

14. (a) A farmer’s body approached the National Green Tribunal (b) against the demolition drive on their farms (c) carried in by DDA in pursuance to the green panel’s ban (d) order on cultivation of edible crop on flood plains of the Yamuna (e) No Error

15. (a) The Delhi High Court sought the response of AIIMS forensic department head (b) who was alleged discrimination, after he claimed (c) to have refused to act unprofessionally (d) in the Sunanda Pushkar autopsy matter (e) No Error

16. (a) After receiving complaints, Gurgaon police informed (b) the District Town and country planning department, (c) which found out that the builder (d) had not even began construction (e) No Error

Directions: (17 – 22) Study the following information carefully and answer the questions below:

Nine years ago when several eastern European countries were making the transition from communism to free market policies, inevitable difficulties arose in government, social, medical and educational sectors. At that time I was elected to the SATE committee and my feelings was that we teachers of English could make a contribution towards helping colleagues in one of these countries to alleviate their very poor conditions.

The echo from members of our association was positive, and although help abroad was not a function of SATE, a modest sum was approved to fund assistance in a limited way. Knowing that most teachers have a number of superfluous English books on their shelves at home and at school, I set out to collect these and send them to teachers of English in Albania. It was a known fact, how classes functioned there – badly equipped schools, usually the teacher had a textbook (perhaps twenty years old) and pupils – for reasons of economy – would write grammar notes and word lists in very small writing in their notebooks. When we were able to send a class set to a fortunate teacher she was delighted. At the same time I addressed pupils and asked them to write me a letter, explaining ‘why we are learning English in our class’. It was surprising to read the replies I received, well written, many in a refreshing, original style. The classes that submitted such a piece of work got an extra book as a prize, usually an English dictionary. My contacts were usually members of the National Albanian English Teachers’ Association (NAETA), and I coordinated the sorting and delivery of material with the vice – president, Mrs Ksanthipi Dodi.

When I received hundreds of books from our members, those of the ETAS and from other sources, I enlisted the help of some volunteers to help sort and pack the books, tapes etc. ready for dispatch. We invited teachers to come to Switzerland from Albania for a study period of two weeks, sponsored by the International Teachers’ Exchange Organization and SATE. These colleagues usually stayed with me and I set up a programme of visits to several types of schools, teacher training or university courses for a short period. Sometimes they could attend ETAS convention, a WBZ course or a professional workshop. The SATE and ETAS members were always ready to welcome our guests, to discuss educational matters and to provide help, often showing hospitality at their schools or their homes.

It was a memorable moment for me when I was invited to Albania as a guest of the NEATA, to meet personally some of the teachers with whom I had been in correspondence. I was known at schools all over the country as Mrs Jean and enjoyed hospitality at colleagues’ homes. At schools and at Tirana University I gave some talks and workshops and was able to witness how some of the books that we had sent were now the core of a new library, and to hear how teachers and educational authorities were encouraged by the rather modest help we had provided.

In spring 1997, it became practically impossible to send books to Albania, on account of the political crisis. I could not stockpile any more material, so reluctantly I sent the last load to schools in Hungary, where the books and tapes were also welcome. The hospitality program continued until last...
years but now funds for his purpose are no longer available, and I have had to bring this to a close. Happily, conditions in Albania have been improving: bookshops have a wide range of publications available and so I see it to be fitting now to end our assistance to English teachers there.

I am indebted to many people and organization who gave me moral, financial and physical support during these last nine years by their voluntary help: the SATE committee, especially Daryl Babcock, the ETAS Committee, Georgina Hanselmann, Alice Meister of the Ladies’ English Club KVZ, Michel Kenedy who helped with transport, Ksanthipiedodhi at the receiving end, Peter Erhard, St Andrews Church Bazaar and the Swiss Embassy at Tirana. And my thanks go particularly to You, dear readers. Who had sent me books, tape, letters and encouragement.

17. According to the passage, the author did not send the English course materials to which of the following?
   I. Tirana
   II. Switzerland
   III. Albania
   IV. Hungary
   a) I & II
   b) Only III
   c) All of The Above
   d) Only II
   e) None of The Above

18. What according to the author could be cited as a possible solution to alleviate poverty?
   a) Teaching English
   b) Providing aids in government, medical, social and educational sectors
   c) Providing books on government, medical and social subjects to the schools
   d) The question is irrelevant on the basis of what is provided in the passage
   e) None of the Above

19. According to the passage, around when did the author probably start dispatching materials under SATE to Albania?
   a) 1989
   b) 1988
   c) 1987
   d) 1990
   e) Can Not Be Determined

20. What according to the passage can be cited as the probable reason for the author getting surprise over the replies that she received from the students of the Tirana University?
   a) She was enthralled with the level of participation on the part of the students
   b) The replies were in large numbers
   c) The replies were well – written and had a refreshing original style
   d) The author’s ego was satisfied
   e) She was ruffled by their views and opinions

21. Which of the following can be inferred to be the objective of the ITEO?
   a) Providing English education to students
   b) Providing English education teaching aids to teachers
   c) Endorsing teachers from different countries and form an international opinion on teaching methodologies
   d) Endorsing equipment related teaching to the teachers so as to benefit the students
   e) None of The Above
22. Based on the information in the passage, in which year, could we possibly infer that the author has written, the same?
   a) 1997
   b) 1998 or 1999
   c) 1988
   d) 1996
   e) Can’t Be Determined

Directions (23 – 25) – In each questions below, a sentence with four words printed in bold as (a), (b), (c) and (d). One of these may be either wrongly spelt or inappropriate in the context of the sentence find out the word which is wrongly spelt or inappropriate, if any. If all the words printed in bold are correctly spelt and also appropriate in the context of the sentence, mark (e) i.e. “All Correct” as your answer.

23. No country can long endure (a)/ if its foundations (b)/ were not laid (c)/ deep in the material prosperity (d)/ All correct (e)
24. Mahatma Gandhi did not solve (a)/ all the future (b)/ problems but he did solve (c)/ problems of his own age (d)/ All Correct (e)
25. I did not like (a)/ his comments (b)/ on my paper but I had no alternative (c)/ as I had agreed (d)/ to keep quiet (e)/ All correct (e)

QUANTITATIVE APTITUDE

26. Seema walks 30m North. Then , she turns right and walks 30m then she turns right and walks 55m. Then, she turns left and walks 20m. Then, she again turn left and walks 25m. How many meters away is she from her original position?
   (a) 45m
   (b) 50m
   (c) 66m
   (d) 55m
   (e) None of The Above

27. Rachel starts walking towards North. After walking 15m, she turns towards South and walks 20m. She then turns towards East and walks 10m. Then, again she walks 5m towards North. How far is she from her starting point and in which direction?
   (a) 10m, West
   (b) 5m, East
   (c) 5m, North
   (d) 10m, East
   (e) None of The Above

28. A and B both are walking away from point ‘X’. A walked 3m and B walked 4m from it, then A walk 4m North of X and B walked 5m of South of A. What is the distance between them now?
   (a) 9.5m
   (b) 9m
   (c) 16m
   (d) 11.40m

29. Vishal Bector goes to a shop to buy a radio costing Rs. 2568. The rate of sales tax is 7%. He sells the shopkeeper to reduce the price of the radio to such an extent that he has to pay Rs. 2568, inclusive sales tax. Find the reduction needed in the price of the radio.
   a) Rs. 179.76
b) Rs. 170  
c) Rs. 168  
d) Rs. 169  
e) None of The Above

Directions for questions (30 – 34) – Refer to the following table and solve the questions based on it.

The table given below gives the marks obtained by six students in six subjects:

<table>
<thead>
<tr>
<th>Students</th>
<th>History (150)</th>
<th>Science (200)</th>
<th>Geography (150)</th>
<th>English (200)</th>
<th>Hindi (100)</th>
<th>Math (200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>75</td>
<td>110</td>
<td>90</td>
<td>140</td>
<td>75</td>
<td>170</td>
</tr>
<tr>
<td>B</td>
<td>105</td>
<td>130</td>
<td>75</td>
<td>130</td>
<td>80</td>
<td>140</td>
</tr>
<tr>
<td>C</td>
<td>95</td>
<td>105</td>
<td>80</td>
<td>150</td>
<td>90</td>
<td>160</td>
</tr>
<tr>
<td>D</td>
<td>85</td>
<td>115</td>
<td>95</td>
<td>125</td>
<td>65</td>
<td>135</td>
</tr>
<tr>
<td>E</td>
<td>115</td>
<td>135</td>
<td>110</td>
<td>145</td>
<td>70</td>
<td>125</td>
</tr>
<tr>
<td>f</td>
<td>120</td>
<td>160</td>
<td>96</td>
<td>110</td>
<td>55</td>
<td>145</td>
</tr>
</tbody>
</table>

Marks in bracket are Total Marks

30. What is the difference between the percentage marks obtained by student B in History and the percentage marks obtained by student C in Hindi?
   a) 25  
b) 20  
c) 35  
d) 30  
e) None of The Above

31. The marks obtained by student A in Math are how many times the percentage marks obtained by student F in Science?
   a) 2.5  
b) 4.125  
c) 1.125  
d) 2.125  
e) None of The Above

32. What is the difference between the percentage marks obtained by student C in English and the average percentage marks of all the six subjects?
   a) 82  
b) 38  
c) 7  
d) 14  
e) None of The Above

33. In how many of the given subjects has student D got more than seventy percent marks?
   a) None  
b) One  
c) Two  
d) Three  
e) Four

34. Approximately, what is the average percentage marks obtained by the six students in English?
   a) 67%
b) 72%
c) 80%
d) Data Inadequate
e) 75%

35. Anand and Deepak started a business investing Rs.22,500 and Rs.35,000 respectively. Out of a total profit of Rs.13,800, Deepak’s share is :
   a) Rs.5400  
b) Rs.7200  
c) Rs.8400  
d) Rs.9600  
e) None of these

36. A, B and C enter into a partnership. A initially invests Rs.25 lakhs and adds another Rs.10 lakhs after one year. B initially invests Rs.35 lakhs and withdraws Rs.10 lakhs after 2 years and C invests Rs.30 lakhs. In what ratio should the profits be divided at the end of 3 years?
   a) 10 : 10 : 9  
b) 20 : 20 : 19  
c) 20 : 19 : 18  
d) Data inadequate  
e) None of these

37. A and B started a business jointly. A’s investment was thrice the investment of B and the period of his investment was two times the period of investment of B. If B received Rs.4000 as profit, then their total profit is :
   a) Rs.16,000  
b) Rs.20,000  
c) Rs.24,000  
d) Rs.28,000  
e) None of these

38. A, B and C started a shop by investing Rs.27,000, Rs.72,000 and Rs.81,000 respectively. At the end of the year, the profits were distributed among them. If C’s share of profit be Rs.36,000, then the total profit was :
   a) Rs.80,000  
b) Rs.95,600  
c) Rs.1,08,000  
d) Rs.1,16,000  
e) None of these

39. A and B are partners in a business. A contributes \( \frac{1}{4} \) of the capital for 15 months and B received \( \frac{2}{3} \) of the profit. For how long B’s money was used?
   a) 6 months  
b) 9 months  
c) 10 months  
d) 1 year  
e) None of these

40. A, B, C enter into a partnership investing Rs.35,000, Rs.45,000 and Rs.55,000 respectively. The respective shares of A, B, C in an annual profit of Rs.40,500 are :
   a) Rs.10,500, Rs.13,500, Rs.16,500  
b) Rs.11,500, Rs.13,000, Rs.16,000  
c) Rs.11,000, Rs.14,000, Rs.15,500  
d) Rs.11,500, Rs.12,500, Rs.16,500  
e) None of these

41. In how many different ways can the letters of the word ‘SOFTWARE’ be arranged in such a way that the vowels always come together?
   a) 120  
b) 360  
c) 1440  
d) 13440  
e) 720

42. In how many different ways can the letters of the word ‘AUCTION’ be arranged in such a way that the vowels always come together?
   a) 30  
b) 48  
c) 144  
d) 576  
e) None of these

43. In how many ways can 21 books on English and 19 books on Hindu be placed in a row on a shelf so that two books on Hindi may not be together?
   a) 3990  
b) 1540  
c) 1995  
d) 3672  
e) None of these
44. Two numbers a and b are chosen at random from the set of first 30 natural numbers. The probability that \( a^2 - b^2 \) is divisible by 3 is:
   a) \( \frac{37}{87} \)  
   b) \( \frac{47}{87} \)  
   c) \( \frac{17}{29} \)  
   d) Data inadequate  
   e) None of these

45. From a pack of 52 cards, two are drawn one by one without replacement. Find the probabilities that both of them are kings.
   a) \( \frac{11}{253} \)  
   b) \( \frac{13}{121} \)  
   c) \( \frac{1}{221} \)  
   d) \( \frac{3}{121} \)  
   e) None of these

46. A shopkeeper gives two successive discounts on an article marked Rs. 450. The first discount given is 10%, if the customer pays Rs. 344.25 for the article, then second discount is:
   a) 12%  
   b) 11%  
   c) 15%  
   d) 10%  
   e) None of The Above

47. A service provider purchases connections at the rate of 10 connections for Rs. 54 and sold them at 6 connections for Rs. 38? Find the number of connections he should sell to have a profit of Rs. 1120.
   a) 1480  
   b) 1060  
   c) 1240  
   d) 1200  
   e) None of The Above

48. Alexander bought 5 packets of chicken and Stephen bought 2 packets of fried rice, per packet of fried rice costing twice that of chicken. John bought nothing but paid Rs. 120 for his share of food which they shared equally. If John’s Rs. 150 covered his share, then what is the cost fried rice per packet?
   a) Rs. 40  
   b) Rs. 100  
   c) Rs. 80  
   d) Rs. 60  
   e) None of The Above

49. On selling a pen at 5% loss and a book at 15% gain, Mohan gains Rs. 7, if he sells the pen at 5% gain and the book at 10% gain, then he gains Rs. 13. The actual price of the book is:
   a) Rs. 100  
   b) Rs. 80  
   c) Rs. 10  
   d) Rs. 400  
   e) None of The Above

50. Akshay purchased a horse and a carriage for Rs. 1800. He sold the horse at a profit of 20% and the carriage at a profit of 30%. His total profit was 25 \( \frac{5}{8} \)%. The cost price of the horse is:
   a) Rs. 1050  
   b) Rs. 1200  
   c) Rs. 750  
   d) Rs. 975  
   e) Rs. 1125
51. Three taps A, B and C can fill a tank in 12, 15 and 20h respectively. If A is open all the time and B and C are open for one hour each alternatively, the tank will be filled in:
   a) 6h  
   b) 7h  
   c) 5h  
   d) 9h  
   e) None of The Above

Directions for Questions (52 – 55) – Go through the data sets given below and solve the questions based on it.

Following data sets given below present the statistics related to the Indian watch industry. There are five companies and their respective market share of the year 2010 is given in the pie chart given below.

**Chart 1**

<table>
<thead>
<tr>
<th>Market Share in Sales Value (in 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMT</td>
</tr>
<tr>
<td>6%</td>
</tr>
</tbody>
</table>

Following line chart presents the Titan Sales volume (in million units) for the years 2008 to 2012. All the values are even numbers.

**Chart 2**

**Titan Sales (in million units)**

Following bar chart presents the average selling price (in Rs.) of these companies in the year 2010:

**Chart 3**
52. For how many years, is it possible to calculate the size of domestic watch market (in Rs.)?
   a) 0  
   b) 1  
   c) 2  
   d) 5  
   e) None of The Above

53. Which company has the second lowest sales (in Rs. terms) in the year 2010?
   a) Citizen  
   b) Rolex  
   c) HMT  
   d) Timex  
   e) None of The Above

54. Which year saw the lowest growth rate in number of unit sold over the previous year for Titan?
   a) 2009  
   b) 2010  
   c) 2011  
   d) 2012  
   e) None of The Above

55. What is the size of the domestic market in the year 2010 (in Rs.)?
   a) Rs. 757 crores  
   b) Rs. 7578 crores  
   c) Rs. 75789 crores  
   d) Can’t be Determined  
   e) None of The Above

56. Rajan got married 8 years ago. His present age is 6/5 times his age at the time of his marriage. Rajan’s sister was 10 years younger to him at the time of his marriage. The age of Rajan’s sister is
   a) 32 years  
   b) 36 years  
   c) 38 years  
   d) 40 years  
   e) None of these

57. The ratio between the present ages of P and Q is 6 : 7. If Q is 4 years old than P, what will be the ratio of the ages of P and Q after 4 years?
58. Present ages of X and Y are in the ratio 5 : 6 respectively. Seven years hence this ratio will become 6 : 7 respectively. What is X’s present age in years?
   a) 35  b) 42  c) 49
d) Data inadequate  e) None of these

59. The ratio of the father’s age to his son’s age is 7 : 3. The product of their ages is 756. The ratio of their ages after 6 years will be:
   a) 5 : 2  b) 2 : 1  c) 11 : 7
d) 13 : 9  e) None of these

60. The age of father 10 years ago was thrice the age of his son. Ten years hence, father’s age will be twice that of his son. The ratio of their present ages is:
   a) 5 : 2  b) 7 : 3  c) 9 : 2
d) 13 : 4  e) None of these

61. At a game of billiards, A can give B 15 points in 60 and A can give C 20 points in 60. How many points can B give C in a game of 90?
   a) 30 points  b) 20 points  c) 10 points
d) 12 points  e) None of these

62. A can run 22.5 m while B runs 25 m. In a kilometer race B beats A by:
   a) 100 m  b) 111 1/9 m  c) 25 m
d) 50 m  e) None of these

63. A, B and C are three contestants in a km race. If A can give B a start of 40 m and A can give C a start of 64 m, how many metre’s start can B give C?
   a) 30 m  b) 25 m  c) 40 m
d) 35 m  e) None of these

64. A runs 2 2/3 times as fast as B. If A gives B a start of 80 m, how far must the winning post be so that A and B might reach it at the same time?
   a) 200 m  b) 300 m  c) 270 m
d) 160 m  e) None of these

65. In a 100 m race, A beats B by 10 m and C by 13 m. In a race of 180 m, B will beat C by:
   a) 5.4 m  b) 4.5 m  c) 5 m
d) 6 m  e) None of these

Directions for questions (66 – 70) – Refer to the following table and solve the following questions based on it.

Given below are the forecasts of the world and Asian energy demand for the years 1991, 2001 and 2011. The demand is given in million barrels per day, crude oil equivalent.

<table>
<thead>
<tr>
<th></th>
<th>1991</th>
<th>2001</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>World</td>
<td>Asia</td>
<td>World</td>
</tr>
<tr>
<td>Petrol</td>
<td>50.0</td>
<td>4.0</td>
<td>70.0</td>
</tr>
<tr>
<td>Naphtha</td>
<td>30.0</td>
<td>0.5</td>
<td>40.0</td>
</tr>
<tr>
<td>Solid Fuels</td>
<td>50.0</td>
<td>4.0</td>
<td>60.0</td>
</tr>
<tr>
<td>Nuclear Fuel</td>
<td>10.0</td>
<td>0.5</td>
<td>20.0</td>
</tr>
</tbody>
</table>
66. What can be inferred from the given table?
   a) Percentage increase in the number of petrol using vehicles/agents has increased in Asia rather than the world, in the decade 1991 – 2001.
   b) Exploration of Naphtha is low in Asia as compared to the exploration of Naphtha in the world throughout the period
   c) Both (a) and (b)
   d) None of The Above
   e) All of The Above

67. During 1991 – 2011, which two fuels meet more than 60% of the total energy demand of both the world and Asia?
   a) Petrol and Naphtha
   b) Petrol and Solid Fuels
   c) Naphtha and Solid Fuels
   d) None of The Above
   e) All of The Above

68. Which fuel’s proportion in the total energy demand increases over the decade 1991 – 2001 and decreases over the decade 2001 – 2011 for both the world and Asia?
   a) Petrol
   b) Naphtha
   c) Solid Fuels
   d) Nuclear Fuel
   e) None of The Above

69. In Asia for which fuel does the proportion in the total energy demand decrease continuously over the period 1991 – 2011?
   a) Naphtha
   b) Solid Fuels
   c) Nuclear Fuel
   d) Hydro Energy
   e) None of The Above

70. For which fuel does the proportion in the total energy demand of the world remain constant over the period 1991 – 2011; but its proportion increases in the total energy demand in Asia?
   a) Solid Fuels
   b) Nuclear Fuel
   c) Hydro Energy
   d) Naphtha
   e) None of The Above

71. A can do a work in 15 days and B in 20 days. If they work on it together for 4 days, then the fraction of the work that is left is:
   a) 1/4
   b) 1/10
   c) 7/15
   d) 8/15
   e) None of these

72. A can lay railway track between two given stations in 16 days and B can do the same job in 12 days, with help of C, they did the job in 4 days only. Then, C alone can do the job in:
   a) 9 $\frac{1}{5}$
   b) 9 $\frac{2}{5}$
   c) 9 $\frac{3}{5}$
   d) 10
   e) None of these
73. A, B and C can do a piece of work in 20, 30 and 60 days respectively. In how many days can A do the work if he is assisted by B and C on every third day?
   a) 12 days  b) 15 days  c) 16 days
   d) 18 days  e) None of these

74. A is thrice as good as workman as B and therefore is able to finish a job in 60 days less than B. Working together, they can do it in:
   a) 20 days  b) 22 \frac{1}{2} days  c) 25 days
   d) 30 days  e) None of these

75. A alone can do a piece of work in 6 days and B alone 8 days. A and B undertook to do it for Rs.3200. With the help of C, they completed the work in 3 days. How much is to be paid to C?
   a) Rs.375  b) Rs.400  c) Rs.600
   d) Rs.800  e) None of these

**REASONING ABILITY**

**Question (76 – 80):- Study the information carefully and answer the questions below:**

Seven persons namely Paramjit, Tarun, Morya, Jeeva, Vaani, Ram and Waqar are good friends and are studying in M.Com, M.A. and M.Sc courses. Three are doing M.Com, two are in M.A. and another two are in M.Sc. Each of them has a very distinct and favorite color choice ranging from blue, red, yellow, white, black, pink and brown but not necessarily in the same order. None doing M.Com like either red or black. Morya is doing M.A. and he likes blue. Ram is doing M.Sc and likes brown. Jeeva is doing M.Com and likes yellow. Paramjit who does not like red is in the same discipline of Ram. Tarun is in the same discipline of Morya. Vaani does not like pink.

76. Which among the following groups is doing M. Com?
   a) Jeeva, Vaani and Waqar
   b) Vaani, Waqar and Tarun
   c) Jeeva, Vaani and Tarun
   d) Jeeva, Paramjit and Ram
   e) None of The Above

77. What is the color combination choice of those who are in M.Sc discipline?
   a) Brown and Pink
   b) Black and White
   c) Black and Brown
   d) Yellow and Black
   e) None of The Above

78. Which color does Vaani like?
   a) Yellow
   b) Pink
   c) White
   d) Brown
   e) None of The Above

79. What is the color combination choice of those who are in M.A. discipline?
   a) Red and Black
   b) Blue and Red
   c) Blue and Black
d) None of The Above  
  e) All of The Above  

80. Morya is related with which discipline?  
  a) M.Sc.  
  b) M.A.  
  c) M.Com  
  d) Can’t Determine  
  e) None of The Above  

Question (81 – 85) 
Study the following information carefully to answer the questions given below.  

P, Q, R, S, T, U and V are 7 friends who travel to college everyday by a particular train which stops at 5 stations – 1, 2, 3, 4 and 5 respectively after it leaves base stations. 3 among them get in the train at the base station. S gets down at the next station at which U gets down. Q gets in with 2 persons and does not get down with either P or T. V alone gets in at station 3 and gets down with R after 1 station. P travels between only 2 stations and gets down at station 5. None of them gets in at station 2. R gets in with U but does not get in with either Q or S. T gets in with 2 others and gets down alone after S. Q and S going to same college and they get down together at station 3. None of them gets down at station 1.  

81. At which station does T get down?  
  a) Station 2  
  b) Station 4  
  c) Station 3  
  d) Station 5  
  e) None of these  

82. At which station does R, U get in?  
  a) Base station  
  b) Station 2  
  c) Station 1  
  d) Station 3  
  e) None of these  

83. After how many station does Q get down?  
  a) 4  
  b) 3  
  c) 1  
  d) 2  
  e) None of these  

84. At which of the following station does Q and T get in?  
  a) Base Station  
  b) Station 1  
  v) Station 2  
  d) Station 3  
  e) None of these  

85. Which of the following is correct?  
  a) T gets in at the base station  
  b) R gets in at the Station 3  
  c) V gets down at Station 5
d) U gets down at Station 2

e) None of these

Directions (Q.86 to 90) : Study the following information carefully and answer the questions given below :

Seven boys A, D, Y, U, P, Q and J live in three different buildings – Ashiana, Top-view and Ridge. Each of them is flying kites of different colours i.e. red, green, blue white, black, yellow and pink, not necessarily in that order. Not more than three or less than two stay in any of the buildings. Q is flying a pink and does not live in Ridge building. U does not live in the same building as A or P and is flying a yellow coloured kite. D lives in Ridge building with only one more person and is flying a green kite. None in the Top-view building flies a white kite. P does not fly a blue kite.

86. Who live in Ridge building?
   a) D, U
   b) D, A, P
   c) Y, A, P
   d) A, P
   e) None of these

87. Who is flying the blue kite?
   a) A
   b) J
   c) P
   d) Data inadequate
   e) None of these

88. Who flies the red kite?
   a) A
   b) J
   c) P
   d) Data inadequate
   e) None of these

89. Who stay in Top-view building?
   a) Y, J, P
   b) A, P
   c) A, P, D
   d) Y, U, J
   e) None of these

90. What coloured kite is J flying?
   a) Blue
   b) White
   c) Black
   d) Data inadequate
   e) None of these

Directions (91-95): Read the following information carefully and answer the questions given below it—

Six exams Maths, science, History, Economics, English and Hindi are to be scheduled starting from 2nd March and ending on 8th march with Sunday being an off day, not necessarily in the same order. Each of the exam has different time duration: 40 mins, 50 mins, 60 mins, 75 mins, 90 mins and 100 mins, again not necessarily in the same order.
8th March is not Sunday and an exam of 40 mins is scheduled on that day. Maths exam is for less than 60 mins and is scheduled immediately before English exam. There are two exams scheduled between Hindi exam which is for 100 mins and History exam which is for 60 mins. English exam is before Sunday and there are two days between Sunday and Maths exam. Economics exam which is for 75 mins is not scheduled on 2nd March. The exam schedules on Saturday is of 100 mins.

91. How many exams are scheduled before Sunday?
   a) Two
   b) One
   c) Five
   d) Three
   e) None of these

92. Which of the following combinations of exam - Day - Time Duration is correct?
   a) English - Wednesday - 75 mins
   b) Maths - Thursday - 50 mins
   c) History - Thursday - 60 mins
   d) Hindi - Tuesday - 100 mins
   e) None is correct

93. What is the time duration of science exam?
   a) 90 mins
   b) 75 mins
   c) 50 mins
   d) 40 mins
   e) None of these

94. On which day is Economics exam scheduled?
   a) Monday
   b) Saturday
   c) Tuesday
   d) Friday
   e) Cannot be determined

95. Which day is Sunday?
   a) 3rd March
   b) 2nd March
   c) 5th March
   d) 6th March
   e) Cannot be determined

Question:– 96 – 102) Study the information carefully and answer the questions below:

Arti, Baby, Chandni, Dolly, Esha, Falguni, Gopi and Himani are sitting around a square table in such a way that four of them sit at four corners of the square while four sit in the middle of each of the four sides. The one who sits at the four corners face the centre of the table while those who sit in the middle of the sides faces outside.

Each of them likes a different subject - Mathematics, Hindi, English, Biology, Chemistry, Physics, History and Geography. (None of the information given is necessarily in the same order)

- Chandni sits third to the left of the person who likes Geography. The one who likes Geography faces outside. There are only two persons sit between Chandni and Himani.
- Dolly sits on the immediate left of the one who likes Physics. Gopi does not likes Physics.
- Esha likes History. Esha is not immediate neighbour of Arti.
- The person who likes Hindi is an immediate neighbour of Esha.
- The person who likes Biology is an immediate neighbour of Falguni.
- The one who likes Mathematics sits in the immediate right of Himani. The one who likes Chemistry sits second to the right of Gopi. G is neither an immediate neighbour of Himani nor Chandni. Gopi does not like Geography.
- There is only one person sits between Arti and the one who likes Chemistry.

96. Who among the following sits diagonally opposite the one who likes Mathematics?
   a) The one who likes Hindi
   b) Dolly
   c) Arti
   d) The one who likes English
   e) The one who likes Biology

97. Who among the following represent the immediate neighbours of the one who likes Chemistry?
   a) Baby, Falguni
   b) Chandni, Esha
   c) Baby, Esha
   d) Dolly, Falguni
   e) Falguni, Himani

98. Who among the followings select exactly between Himani and Baby?
   a) Chandni
   b) The one who likes Hindi
   c) The one who likes Biology
   d) Gopi
   e) Arti

99. Which of the following is true regarding Baby?
   a) Baby is one of the immediate neighbours of Dolly
   b) The one who likes Geography is an immediate neighbour of Baby
   c) Baby sits second to the left of Himani
   d) Baby likes History
   e) Baby is the immediate neighbour of the one who like Mathematics.

100. What is the position of the one who likes Physics with respect to Gopi?
    a) Second to the Left
    b) Third to the right
    c) Fourth to the left
    d) Second to the right
    e) Third to the left

101. Which of the following subjects does Dolly like?
    a) Biology
    b) Mathematics.
    c) Hindi
    d) Chemistry
    e) English

102. Who among the following likes Geography?
    a) Baby
    b) Falguni
    c) Himani
Directions (103 – 107)– In each question below is given a statement followed by two assumptions numbered I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumption(s) is/are implicit in the statement.

Give Answer

(a) Only Assumption I is implicit
(b) Only Assumption II is implicit
(c) Either Assumption I or II is implicit
(d) Neither Assumption I nor II is implicit
(e) Both Assumptions I and II are implicit

103. Statement – The General administration Department has issued a circular to all the employees informing them that hence forth the employees can avail their lunch break at any of the half hour slots between 1:00 pm and 2:30 pm.

Assumptions

I. The employees may welcome the decision and avail lunch break at different time slots.
II. There may not be any break in the work of the organization as the employees will have their lunch break at different time slots.

104. Statement – The Government has decided against reduction of prices of petroleum products through there is a significant drop in the crude oil prices in the international market.

Assumptions

I. The prices of crude oil in the international market may again increase in the near future.
II. The present price difference of petroleum products will help the government to withstand any possible price rise in future.

105. Statement - The Government has made an appeal to all the citizens to honestly pay income tax and file returns reflecting the true income level to help the Government to carry out development activities.

Assumptions –

I. People may now start paying more taxes in response to the appeal.
II. The total income tax collection may considerably increase in the near future.

106. Statement – The State Government has decided to appoint four thousand primary school teachers during the next financial year.

Assumptions

I. There are enough schools in the state to accommodate four thousand additional primary school teachers.
II. The eligible candidates may not be interested to apply as the Government may not finally appoint such a large number of primary school teachers.

107. Statement - The school authority has decided to increase the number of students in each classroom to seventy from the next academic session to bridge the gap between income and expenditure to a larger extent.

Assumptions

I. The income generated by way of fees of the additional students will be sufficient enough to bridge the gap.
II. The school will get all the additional students in each class from the next academic session.
Directions (108 - 115) – A marketing firm wants to recruit trainee officers. Following is the criteria for selection.

The candidate must

I. Be a graduate in any discipline with at least 55% marks.
II. Have completed post – graduate degree/diploma in marketing management with at least 65% marks
III. Have cleared the selection test with at least 50% marks
IV. Have cleared the interview with at least 55% marks
V. Be willing to sign a bond for 2 years
VI. Be not less than 21 years and not more than 26 years of age as on 1st February, 2009

However, if a candidate satisfies all the above criteria except

(a) At (ii) above but has working experience in the marketing department for at least one year and has a post – graduate degree/diploma with any specialization, the case is to be referred to the Vice – President.
(b) At (V) above but is willing to pay an amount of Rs.1 Lakh in case, if the candidates leaves the case is to be referred to the head of marketing department.

In each of the question below, information of one candidate is given. You have to take one of the following five decisions based on the information provided and the criteria and conditions given above. You are not to assume anything other than the information provided in each question. All these cases are given to you as on 1st February, 2009. You have to indicate your decision by marketing answer to each question as follows.

a) If the case is to be referred to Vice – President
b) If the case is to be referred to head of marketing department
c) If the data provided is inadequate to take a decision
d) If the candidate is to be selected
e) If the candidate is not to be selected

108. MeenalSoni is a graduate passed with 58% marks. She has done MBA HR with 64% marks in August 2004 and is working in the marketing department of a bank since January 2005. She has completed 24 yr of age in November 2008. She is willing to sign the bond for 2 yr. She has cleared the selection test with 58% marks and interview with 56% marks.
   a) The case is to be referred to Vice – President
   b) The case is to be referred to head of marketing department
c) The data provided is inadequate to take a decision
d) The candidate is to be selected
e) The candidate is not to be selected

109. AvinashChavan is a post – graduate in management with specialization in marketing, passed with 67% marks. He is working as a junior officer in the marketing department of a private company. He is not willing to sign the bond but is willing to pay Rs. 1 lakh in case, if he leaves. He has cleared the selection test with 52% marks and interview with 59% marks. His date of birth is 17th July, 1983.
   a) The case is to be referred to Vice – President
   b) The case is to be referred to head of marketing department
c) The data provided is inadequate to take a decision
d) The candidate is to be selected
e) The candidate is not to be selected

110. Sujay passed BE with 67% marks and MBA marketing with 69% marks. He has scored 56% in selection test and 63% marks in interview. He has recently celebrated his 25th birthday on 17th September, 2008. He does not want to sign a bond but is willing to pay Rs. 1 lakh, if he leaves.
a) The case is to be referred to Vice – President
b) The case is to be referred to head of marketing department
c) The data provided is inadequate to take a decision
d) The candidate is to be selected
e) The candidate is not to be selected

111. Rohan Bhalla is 24 yr old Science graduate passed with 58% marks and MBA in marketing with 68% marks. He has scored 53% marks in selection test as well as in interview. He is willing to sign the bond for 2 yr.
a) The case is to be referred to Vice – President
b) The case is to be referred to head of marketing department
c) The data provided is inadequate to take a decision
d) The candidate is to be selected
e) The candidate is not to be selected

112. Nandita Sharma B.Com graduate passed in the first class diploma in marketing management with 62% marks and has passed post graduate with 72% marks. She has cleared selection test and interview with 56% and 58% marks, respectively. His date of birth is 21st December, 1985. She is willing to sign the bond for 2 yr.
a) The case is to be referred to Vice – President
b) The case is to be referred to head of marketing department
c) The data provided is inadequate to take a decision
d) The candidate is to be selected
e) The candidate is not to be selected

113. Statement – Cases of Asthama sufferers have been rising, particularly in the big cities.

Courses of Action
I. Civic authorities should ensure adequate supply of medicine at normal rates
II. Civic authorities need to control the air pollution caused due to emission from vehicles.
III. Act of tree cutting without permission should be severely punished.

a) Both I and II follow
b) Both II and III follow
c) Only III follows
d) Only II follows
e) None of The Above

114. Statement – A large number of management institutes are mushrooming all over the country and not all the MBA’s coming out are worth it.

Courses of Action
I. The Government should follow stringent norms for granting permission to the management institutes.
II. The students while taking admission should examine the market value for the degree, they are going to get.
III. The employers should make MBA as an essential qualification only for the positions where it is genuinely essential.

a) Only I follows
b) Only II follows
c) Both I and II follow
d) All follow
e) None of The Above
115. T, S and R are three brothers. T's son Q is married to K and they have one child Rahul blessed to them. M the son of S is married to H and this couple is blessed with a daughter Madhvi. R has a daughter N who is married to P and this couple has one daughter Karuna born to them. How is Madhvi related to S?

a) Daughter  
b) Niece  
c) Granddaughter  
d) Aunt  
e) None of The Above

Directions (116 – 118) Read the following information carefully to answer the questions that follow:

A family consists of six members P, Q, R, X, Y and Z. Q is the son of R but R is not the mother of Q. P and R are married couple. Y is the brother of R. X is the daughter of P and Z is the brother of P.

116. Who is the brother – in – law of R?

a) P  
b) Z  
c) Y  
d) X  
e) None of The Above

117. How many female members are there in the family?

a) One  
b) Two  
c) Three  
d) Four  
e) None of The Above

118. Which of these is a pair of brothers?

a) P and X  
b) P and Z  
c) Q and X  
d) R and Y  
e) None of The Above

119. A word is represented by only one set of numbers as given in anyone of the alternatives. The sets of numbers given the alternatives are represented by two classes of alphabets as in two matrices given below. The columns and rows of Matrix I are numbered from 0 to 4 and that of Matrix II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column e.g. ‘N’ can be represented by 02, 24 etc. and ‘Q’ can be represented by 56, 78 etc. Similarly, you have to identify the set for the word ‘SPORTS’.

<table>
<thead>
<tr>
<th>Matrix I</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 1 2 3 4</td>
</tr>
<tr>
<td>0 L M N O K</td>
</tr>
<tr>
<td>1 N M K L O</td>
</tr>
<tr>
<td>2 L K M O N</td>
</tr>
<tr>
<td>3 N O K M L</td>
</tr>
<tr>
<td>4 O M K L N</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Matrix II</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 6 7 8 9</td>
</tr>
<tr>
<td>5 N M K L O</td>
</tr>
<tr>
<td>6 O M K L N</td>
</tr>
<tr>
<td>7 L M K L N</td>
</tr>
<tr>
<td>8 N O M K L</td>
</tr>
<tr>
<td>9 M K L N O</td>
</tr>
</tbody>
</table>
Directions (121 –125) In each of the questions below, a group of numerals is given followed by four groups of symbol/letter combinations lettered (a), (b), (c) and (d). Numerals are to be coded as per the codes and conditions given below. You have to find out which of the combinations (a), (b), (c) and (d) is correct and indicate your answer accordingly. If none of the four combinations represents the correct code, mark (e) as your answer.

<table>
<thead>
<tr>
<th>Numerals</th>
<th>3</th>
<th>5</th>
<th>7</th>
<th>4</th>
<th>2</th>
<th>6</th>
<th>8</th>
<th>1</th>
<th>0</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter/Symbol Code</td>
<td>*</td>
<td>B</td>
<td>E</td>
<td>A</td>
<td>@</td>
<td>F</td>
<td>K</td>
<td>%</td>
<td>R</td>
<td>M</td>
</tr>
</tbody>
</table>

Following conditions apply
(i) If the first digit as well as the last digit is odd, both are to be coded as ‘X’.
(ii) If the first digit as well as the last digit is even, both are to be coded as $.
(iii) If the last digit is zero, it is to be coded as #.

121. 487692
   a) $ K E F M @
   b) A K E F M @
   c) A K E F M $
   d) $ K E F M $
   e) None of The Above

122. 713540
   a) X % * B A #
   b) E % * B A #
   c) E % * B A R
   d) X % * B A R
   e) None of The Above

123. 765082
   a) E F B # K @
   b) X F B R K @
   c) E F B R K @
   d) E F B R # K

120. X, F, Y, G, ..........., H
    a) Z
    b) A
    c) B
    d) Y
    e) None of The Above
e) None of The Above

124. 364819
a) 0 F A K % X
b) X F A K & M
c) * F A K % M
d) * E A K * %
e) None of The Above

125. 546839
a) X A F K * X
b) X A F K * M
c) B A F K * X
d) B A F K * M
e) None of The Above

MARKETING APTITUDE

126. Which among the following is oldest variable of market segmentation?
   a) Geography
   b) Demography
   c) Psychography
   d) General Lifestyle
   e) Sociomapping

127. Which among the following helps a marketer to help the product occupy a distinct and valued place in the target customer’s mind?
   a) Pricing
   b) Promotion
   c) Positioning
   d) Advertisement
   e) Display

128. "Terms & Conditions" is a sub element of which of the 4Ps of marketing?
   a) Product
   b) Price
   c) Place
   d) Promotion
   e) None of them

129. Which among the following provides "core benefits"?
   a) Generic product
   b) Expected product
   c) Augmented product
   d) Potential Product
   e) Branded product

130. Which among the following is not a quality of Banking Service?
   a) Intangible
   b) Perishable
   c) Inseparable
   d) Customizable
131. In marketing reduction in the sales volume, sales revenue, or market share of one product as a result of the introduction of a new product by the same producer is called as?
   a) Decoy effect
   b) Co-marketing
   c) Cannibalization
   d) Cross merchandising
   e) Complex sales

132. The Unilever's products Rin Bar, Wheel Bar, Rin Powder, Wheel Powder, Surf and Surf excel can be kept in which of the following?
   a) Product Line
   b) Product Mix
   c) Product Items
   d) Product bundling
   e) Product Index

133. The Unilever's products Rin Bar, Le sancy Soap, Close up toothpaste, Ponds talcum Powder and Lakme cream can be kept in which of the following categories?
   a) Product Line
   b) Product Mix
   c) Product Bundling
   d) Product Items
   e) Product Index

134. In which stage of the product Life Cycle (PLC) the Profits are low / negligible?
   a) Introduction,
   b) Growth
   c) Maturity
   d) Decline
   e) none of the above

135. Emphasis should be laid down on which of the following in the Introduction phase of Product Life Cycle?
   a) Profits
   b) Cash Inflows
   c) Market establishment
   d) Distribution Strategy
   e) Market Segmentation

136. Which among the following involves Physical means of carrying goods?
   a) Transportation
   b) Warehousing
   c) Merchandising
   d) Communication
   e) Distribution Channel

137. Which among the following does not come under "packaging"?
   a) Containers
   b) Wrappers
   c) Bottles
   d) Cartoons
   e) Instructions for use
138. Date of Production, Date of expiry, precautions, legal warnings etc. come under which of the following?
   a) Social Stigma
   b) Advertising
   c) Labeling
   d) Packaging
   e) None of the above

139. In which of the following departments the information from Marketing Department flows directly to?
   a) Production Department
   b) Purchase Department
   c) Human Resource Department
   d) Security Department
   e) Production and Purchase Department

140. Which among the following is increased by "Marketing Research"?
   a) Nominal Cost
   b) Real Cost
   c) Marginal Cost
   d) Revenue
   e) Profits

141. Which among the following is ultimate outcome of "Increase in Sales"?
   a) Sales price
   b) Purchase Price
   c) Total Cost
   d) Distribution Cost
   e) National Income

142. Which among the following is the ultimate aim of "Relationship Marketing"?
   a) Increased Sales
   b) Increased Profits
   c) Increased number of customers
   d) Increased Cross Selling
   e) Decrease marginal cost

143. Which among the following is not an essential of "Effective Marketing"?
   a) Motivation
   b) communication skills
   c) empathy
   d) sympathy
   e) perseverance

144. Which among the following can be marketed to HNI group of individuals?
   a) Essential Commodities
   b) Luxury Goods
   c) Low cost Substitutes
   d) Potential Goods
   e) Core products

145. A "Lead" in marketing means ----?
   a) Prospective Buyer
   b) Market Leader
   c) Point of Sales
d) A company available for sale  
e) None of the above

146. Market Segmentation means:  
a) Segmenting the salesmen  
b) Segmenting the employees  
c) Segmenting the customers as per their needs  
d) Segmenting the products  
e) All of The Above

147. A market plan is:  
a) Company’s prospectus  
b) Memorandum of Association  
c) Document for marketing strategies  
d) Business Goals  
e) Action plan for better production

148. Niche Market means:  
a) Free Market  
b) Social Market  
c) Equity Market  
d) Capital Market  
e) Specified Market for a Target Group

149. In Marketing, POS stands for:  
a) Preparation for Sales  
b) Point of Superiority  
c) Point of Sales  
d) Primary Outlook Salesman  
e) Positions of Sales

150. Sales Plan involves:  
a) Price of Product and Services  
b) Sales Area  
c) Determination of Sales Method  
d) All of The Above  
e) None of The Above

151. Which one is larger in size?  
a) Served Market Share  
b) Overall Market Share  
c) Both of The Above are equal  
d) Un – Served Market Share  
e) None of The Above

152. Sequence of a sales process is:  
a) A call, a lead, presentation and sale  
b) A lead, a call, presentation and sale  
c) Presentation, sale, lead and call  
d) Both (a) and (c) are correct  
e) None of The Above

153. Marketing is require for:  
a) Boosting Production  
b) Reducing Costs  
c) Boosting Profits
154. Mostly the advertisements belong to which of the following categories?
   a) Advocacy
   b) Comparison
   c) Informative
   d) Persuasive
   e) None of The Above

155. Sales promotion can be evaluated by:
   a) Survey
   b) Examining Sales Data
   c) Experiment
   d) Observation
   e) None of The Above

156. Which of the following is a barrier to effective planning?
   a) External Inflexibilities
   b) Internal Inflexibilities
   c) Rapid Change
   d) All of The Above
   e) None of The Above

157. Consumer information sources are:
   a) Personal Source and Commercial Source
   b) Public Source
   c) Experimental Source
   d) All of The Above
   e) Only (a) and (b)

158. Zero – Based Budgeting means:
   a) A tool for marketing cost analysis
   b) A tool for financial analysis
   c) Each year, budgeting starts from a scratch
   d) A certain percentages of sales
   e) Only (a) and (b)

159. The best source of advertisement is:
   a) Glow sign boards
   b) Internet
   c) T.V. Media
   d) Print Media
   e) Which satisfies a customer

160. SWOT analysis refers to:
   a) Marketing tool to understand constraints and potentials of self and competitor
   b) External environment analysis
   c) Internal environment analysis
   d) Strategic planning for selling product
   e) South – west organization for trade

161. For an economic organization, MIS stands for:
   a) Middle Income Scheme
   b) Management Information System
c) Management of Information and Science  
d) Marketing Information System  
e) Only (b) and (c)  

162. The ‘USP’ of product denotes:  
a) Main functions  
b) High selling features of a product  
c) Unique selling point  
d) Universal stock process  
e) None of The Above  

163. Post – sales activities include:  
a) Sales presentation  
b) Customer sympathy  
c) Customer feedback  
d) Both (a) and (b)  
e) None of The Above  

164. A good brand can be built by way of:  
a) Consistent offering of good services  
b) Ignoring competitors  
c) Reducing the margins  
d) Both (b) and (c)  
e) None of The Above  

165. Incentives are paid to sales persons:  
a) For designing products  
b) For surpassing the target  
c) For identifying leads  
d) Both (a) and (b)  
e) None of The Above  

166. Promotional mix includes:  
a) Price  
b) Policy  
c) Production  
d) Personal selling  
e) None of The Above  

167. Effective selling involves:  
a) Good physical appearances  
b) Good communication skills  
c) Methodological approach  
d) Aggressiveness  
e) All of The Above  

168. A prospects means:  
a) A likely buyer  
b) A religious head  
c) A team leader  
d) A corporate boss  
e) None of The Above  

169. Marketing channels for banks are:  
a) ATMs and back office set ups
b) Only branches  
c) Bank branches and ATMs  
d) Both (a) and (b)  
e) None of The Above

170. Retailing is: 
    a) Banks  
b) Whole seller  
c) Supermarket  
d) All of The Above  
e) None of The Above

171. Which is the latest distribution system? 
    a) E – Mail  
b) Mobile Phones  
c) E – Commerce  
d) Telephonic Distribution  
e) All of The Above

172. Direct Distribution Channel is: 
    a) Produce – Retailer  
b) Producer – Agent – Retailer  
c) Producer – Consumer  
d) Producer – Wholesaler – Agent  
e) None of The Above

173. A direct selling agent (DSA) is required to be adept in which of the following: 
    a) Market Research  
b) Communication Skills  
c) Internet Skills  
d) OTC Marketing  
e) None of The Above

174. Find the wrong option: 
    a) Marketing is an ancient concept  
b) Marketing is a modern concept  
c) Marketing is a continuous affair  
d) A team effort  
e) None of The Above

175. Bank marketing is treated as: 
    a) Transaction Marketing  
b) Service Marketing  
c) Indoor Marketing  
d) All of The Above  
e) None of The Above

176. “Conversion” in sales language means: 
    a) Converting a buyer into a seller  
b) Converting a seller into a buyer  
c) Converting a prospect into customer  
d) All of The Above  
e) None of The Above

177. DSA means:
a) District Sales Authority  
b) Direct Selling Agent  
c) Distributor and Sales Agent  
d) None of The Above  
e) All of The Above  

178. Which is the assumption of social marketing?  
a) Long Term Profit  
b) Long run satisfaction of customer  
c) Social Performance  
d) Social welfare  
e) All of The Above  

179. Social Marketing Concept involves:  
a) Long run welfare of society  
b) Long run satisfaction of customer  
c) Research and Development  
d) All of The Above  
e) None of The Above  

180. Which among the following is not the concept of marketing?  
a) Social marketing concept  
b) Product disposal planning concept  
c) Marketing Concept  
d) Product Concept  
e) All of The Above  

181. Market Research is needed for:  
a) Deciding the market area  
b) Deciding the right product to be sold  
c) Making proper marketing decisions  
d) Deciding right time to sell  
e) All of The Above  

182. A campaign is a:  
a) Specific message being sent to specific group of recipients  
b) System  
c) Plan  
d) Market  
e) None of The Above  

183. If a particular company wants to adopt the marketing concept. To be consistent with move, it should adopt which of the following philosophies?  
a) The customer is always right  
b) Making money is our business  
c) Sell, sell, sell  
d) Keep prices low  
e) Focus on today  

184. The marketing concept is a way of thinking or a management philosophy that affects:  
a) Only marketing activities  
b) Most efforts of the organization  
c) Mainly the efforts of sales personnel  
d) Mainly customer relations  
e) Only business organizations
185. A physical, concrete product you can touch is:
   a) A server
   b) A good
   c) An Idea
   d) A concept
   e) A philosophy

186. The marketing environment is BEST described as being:
   a) Composed of controlled variables
   b) Composed of variables independent of one another
   c) An indirect influence on marketing activity
   d) Dynamic and Changing
   e) None of The Above

187. Marketing is best defined as:
   a) Matching a product with its market
   b) Promoting and selling products
   c) Facilitating satisfying exchange relationships
   d) Distributing products at the right price to stores
   e) Distributing products at low price to stores

188. A package which has a secondary, usefulness after its contents have been consumed is called:
   a) Dual use package
   b) Bulk package
   c) Both (a) and (b)
   d) Consumer Package
   e) Industrial Package

189. A person who ultimately determines any part or whole of the buying decision is called:
   a) Decider
   b) Buyer
   c) User
   d) Influencer
   e) Initiator

190. Which among the following is a feature of good forecasting method?
   a) Accuracy
   b) Simplicity
   c) Economy
   d) Availability
   e) All of The Above

191. Which among the following is a fixed expense in Sales Budget?
   a) Incentives
   b) Rent
   c) Communication Expense
   d) Commission
   e) Awards

192. The goods which are used for further production are called:
   a) Durable Goods
   b) Market Goods
c) Derived Goods  
d) Consumer Goods  
e) Capital Goods

193. The research which is basically concerned with establishing cause and effect relationship, is called:  
a) Diversified Research  
b) Technical Research  
c) Casual Research  
d) Predictive Research  
e) Exploratory Research

194. When a firm sells off part of its business to another organization, it is called:  
a) Diversification  
b) Divestment  
c) Pruning  
d) Strategy  
e) Joint Venture

195. A defense strategy of identifying weakness in the competitor and aggressively going after that market niche is called:  
a) Pre-emptive  
b) Counter offensive  
c) Mobile Defense  
d) Position Defense  
e) Flanking Defense

196. In market segmentation, which among the following is not an economic component?  
a) Age  
b) Sex  
c) Both (a) and(b)  
d) Income Level  
e) Taxes

197. Which among the following is not a tool for Marketing Planning appraisal?  
a) External appraisal  
b) Internal appraisal  
c) Gap analysis  
d) SWOT analysis  
e) PCOT analysis

198. Marketing Planning helps in:  
a) Avoiding future uncertainties  
b) Achieving objectives  
c) Control  
d) Complete satisfaction  
e) All of The Above

199. 4 P’s stands for:  
a) Product, price, place, promotion  
b) Product, price, policy, place  
c) Product, place, promotion, policy  
d) Place, people, product, policy  
e) Promotion, product, price, people
200. Vegetable market in India is nearly an example of:
   a) Perfect competition
   b) Monopoly
   c) Oligopoly
   d) Imperfect competition
   e) High monopoly

**Answers:**

1. Option A
2. Option D
3. Option C
4. Option A
5. Option C
6. Option D
7. Option D
8. Option D
9. Option B
10. Option D
11. Option D
12. Option C

Replace ‘advised’ with ‘advised’

13. Option D

Replace “in” with “to”.

14. Option C

Replace ‘carried in’ with ‘carried out’

15. Option B

Replace ‘was’ with ‘had’

16. Option D

Replace ‘began’ with ‘begun’

17. Option D
18. Option D
19. Option D
20. Option C
21. Option C
22. Option B
23. Option E
24. Option E
25. Option B
26. Option B
27. Option D

Let the initial point of Rachel be 'A'.

28. Option D

29. Option C
   Let reduce price be Rs. x
   \[ x + 7\% \text{ of } x = 2568 \]
   \[ x = 2400 \]
   Reduction needed = 2568 – 2400 = Rs. 168

30. Option B
   The difference in percentage marks of B (History) and C (Hindi) = 90 – 70 = 20

31. Option D
   The percentage of marks obtained by F in Science = \[ \frac{160}{200} \times 100 = 80\% \]
   Required Value = \[ \frac{170}{80} = 2.125 \]
32. Option C
Average percentage of marks of C = 680/1000 × 100 = 68%
Percentage of marks of C in English = 150/200 × 100 = 75%
Required difference = 75 − 68 = 7

33. Option A

34. Option A
Average percentage of marks in English
= (140 + 130 + 150 + 125 + 145 + 110) / 6 × 100 / 200
= 67%

35. Option C
Ratio of their shares = 22500 : 35000 = 9 : 14
Deepak’s share = Rs. [13800 × \frac{14}{23}] = Rs.8400

36. Option E
A : B : C = (25 lakhs × 1) + (35 lakhs × 2) : (35 lakhs × 2 + 25 lakhs × 1) : (30 lakhs × 3)
= 95 lakhs : 95 lakhs : 90 lakhs = 19 : 19 : 18

37. Option D
Suppose B invested Rs. x for y months. Then, A invested Rs.3x for 2y months.
So, A : B = (3x × 2y) : (x × y) = 6xy : xy = 6 : 1
So, B’s profit : total profit = 1 : 7
Let the total profit be Rs. x. Then, \[ \frac{1}{7} = \frac{40000}{x} \] or x = 28000

38. Option A
A : B : C = 27000 : 72000 : 81000 = 3 : 8 : 9
So, C’s share : total profit = 9 : 20
Let the total profit be Rs. x. Then, \[ \frac{9}{20} = \frac{36000}{x} \] or \[ x = \frac{36000 × 20}{9} = 80000 \]

39. Option C
Let the total profit be Rs. z. Then,
B’s share = Rs. \[ \frac{22}{3} \] , A’s share = Rs. \[ z × \frac{22}{3} \] = Rs. \[ \frac{2}{3} \]
So, A : B = \[ \frac{2}{3} : \frac{22}{3} \] = 1 : 2
Let the total capital be Rs. x and suppose B’s money was used for x months. Then,
\[ \frac{1}{3} × \frac{15}{2} \] = \[ \frac{1}{2} \]
y = \[ \frac{15 × 2}{3} \] = 10
Thus, B’s money was used for 10 months.

40. Option A
A : B : C = 35000 : 45000 : 55000 = 7 : 9 : 11
A’s share = Rs. \[ 40500 × \frac{7}{27} \] = Rs.10500
B’s share = Rs. \[ 40500 × \frac{9}{27} \] = Rs.13500
C’s share = Rs. \[ 40500 × \frac{11}{27} \] = Rs.16500

41. Option E
The word ‘SOFTWARE’ contains 8 different letters.
When the vowels OAE are always together, they can be supposed to form one letter.
Thus, we have to arrange the letters SFTWR (OAE).
Now, 5 letters can be arranged in $6! = 720$ ways
The vowels (OAE) can be arranged among themselves in $3! = 6$ ways.
Required number of ways = $(720 \times 6) = 4320$

42. Option D
The word AUCTION has 7 different letters.
When the vowels AUO are always together, they can be supposed to form one letter.
Then, we have to arrange the letters CTN (AUO).
Now, 4 letters can be arranged in $4! = 24$ ways.
The vowels (AUO) can be arranged among themselves in $4! = 24$ ways.
Required number of ways = $(24 \times 24) = 576$

43. Option B
In order that two books on Hindi are never together, we must place all these books as under:
X E X E X E X …. X E X
Where E denotes the position of an English book and X that of a Hindi book.
Since there are 21 books on English, the number of places marked X are therefore, 22
Now, 19 places out of 22 can be chosen in $22C_{19} = \frac{22!}{3! \times 2 \times 1} = 1540$ ways
Hence, the required number of ways = 1540

44. Option B
Out of 30 numbers 2 numbers can be chosen in $30C_2$ ways.
So, exhaustive number of cases = $30C_2 = 435$
Since $a^2 - b^2$ is divisible by 3 if either a and b are divisible by 3 or none of a and b is divisible by 3.
Thus, the favourable numbers, of cases = $10C_2 + 20C_2 = 235$
Hence, required probability = $\frac{235}{435} = \frac{47}{87}$

45. Option C
Required probability = $\frac{4}{52} \times \frac{3}{51} = \frac{1}{221}$

46. Option C
Let x% is second discount, then $45 \times 450 \times \frac{90}{100} \times (100 - \frac{x}{100}) = 344.25$
$= 405 (100 - \frac{x}{100}) = 344.25 = 100 - x = 85$
x = 15

47. Option D
CP of 60 connections = $\frac{54}{10} \times 60 = 324$
SP = $\frac{38}{6} \times 60 = 380$
For gain of $(380 - 324) = 56$, no. of connections = 60 for 1120, connections = $60 \times 20 = 1200$

48. Option C
$5x + 2 \times (2x) = 120 \times 3 \rightarrow 40$
$2x = 80$

49. Option B
$0.95x + 1.15y = (x + y) + 7$
$1.05x + 1.1y = (x + y) + 13$
y = 80
x = CP of Pen
y = CP of book

50. Option C
Here, the rule of allegation is to be used
\[
\text{Cost of Horse} = \frac{\frac{4}{12} \times 1800}{\frac{5}{12} + \frac{5}{6}} = \frac{\frac{5}{12} \times 1800}{\frac{11}{12}} = Rs. 750
\]

51. Option B
Filling by \((A + B)\) in 1st hr \(1/12 + 1/15 = 3/20\), filling by \((A + C)\) in 2nd hr. \(= 1/12 + 1/20 = 2/15\)
Filling done in first 2 hr \(3/20 + 2/15 = 17/60\) in first 6 hr \(= 17/60 \times 3 = 15/60\), Rest filling \(= 1 - 51/60 = 2/15\)
Now in 7th hr, filling is done by \((A + B)\) in \(\frac{3}{20}\) = 1 hour
Total time = 7 hour

52. Option B
Sales Value = Sales Volume \times Average Price per Unit
Total Market Size :-
\[
= \text{Sales Value of Company X / Market Share (in %) of company X} \times 100
\]
Question is asking for size of domestic market (in Rs.). Out of three different data sets given in the question (a pie chart, a line chart and a bar chart), we have Rupees value in only one data set – Bar chart. In pie chart and line chart, we do not have any information in Rupees Terms. So to answer any question in Rupees terms, we need to use Chart 3 – Bar Chart.
How do we calculate the size of domestic watch market:
Chart 1 provides the market share in sales volume in 2010. Chart 2 provides the sales volume of Titan from 2008 to 2012.
Using chart 2, Sales volume of Titan in 2010 = 32 million units and using chart 3, average selling price = Rs. 900/watch. So, total market value for Titan in 2010 = 32 million units \times Rs. 900/watch = Rs. X (Assume) [we are not required to calculate this value as question is only asking for the possibility of market size calculation].
Now using chart I, market share of Titan is known = 38% = Rs. X. Using this, we can calculate 100% = Total market size of domestic watch market.
Hence it is possible to calculate only for the year 2010. We do not have Average Selling Price of Titan for the year other than 2010. So we can’t calculate the domestic market size for any year other than 2010.
Hence option B is the correct answer.

53. Option B
54. Option D
Now this is no brainer. You just have to calculate the percentage growth in the number of units sold of Titan.
2012 saw the minimum growth rate = 4.6%. Hence, option D is the answer.

55. Option B
Using the data from A1,
So, total market value of Titan in 2010 = 32 million units × Rs. 900/watch = Rs. 28800 million
Titan has a market share of 38% in 2010.
Hence 38% = Rs. 28800 million
100% = Rs. 75789.47 million = Rs. 7578.9 crores
Hence, option B is the answer.

56. Option C
Let Rajan’s present age be x years
Then, his age at the time of marriage = (x - 8) years
Therefore
\[ \frac{6}{7} (x - 6) = 5x = 6x - 48 \]
\[ x = 48 \]
Rajan’s sister’s age at the time of his marriage = (x - 18) = 30
= (x - 8) - 10
Rajan’s sister’s present age = (30 + 8) = 38 years

57. Option E
Let P’s age and Q’s age be 6x years and 7x years respectively.
Then,
\[ 7x - 6x = 4 \]
\[ x = 4 \]
So, required ratio = (6x + 4) : (7x + 4) = 28 : 32 = 7 : 8

58. Option A
Let the present ages of X and Y be 5x years and 6x years respectively.
Then,
\[ \frac{5x + 7}{6x + 7} = \frac{6}{7} \]
\[ 7 (5x + 7) = 6 (6x + 7) \]
\[ x = 7 \]
So, X’s present age = 5x = 35 years

59. Option B
Let the present ages of the father and son be 7x and 3x years respectively.
Then, 7x × 3x = 756
\[ 21x^2 = 756 \]
\[ x^2 = 36 \]
\[ x = 6 \]
So, required ratio = (7x + 6) : (3x + 6) = 48 : 24 = 2 : 1

60. Option B
Let the ages of father and son 10 years ago be 3x and x years respectively.
Then, (3x + 10) + 10 = 2 [(x + 10) + 10]
\[ 3x + 20 = 2x + 40 \]
\[ x = 20 \]
So, required ratio = (3x + 10) : (x + 10) = 70 : 30 = 7 : 3

61. Option C
A : B = 60 : 45 and A : C = 60 : 40
So, \[ \frac{B}{C} = \frac{\frac{B}{A} \times \frac{A}{C}}{\frac{60}{40}} = \frac{45}{60} \times \frac{60}{40} = \frac{45}{40} = \frac{90}{80} = 90 : 80 \]
So, B can give C 10 points in a game of 90.
62. **Option A**
   When B runs 25 m, A runs \(\frac{45}{2} \times 25\) m
   When B runs 1000 m, A runs \(\frac{45}{2} \times 1 \times 1000\) m = 900 m
   So, B beats A by 100 m

63. **Option B**
   While A covers 1000 m, B covers (1000 - 40) m = 960 m and C covers (1000 - 64) m or 936 m
   When B covers 960 m, C covers \(\frac{936}{960} \times 1000\) m = 975 m
   So, B can give C a start of (1000 - 975) or 25 m

64. **Option A**
   Ratio of the speeds of A and B = \(\frac{5}{3} : 1 = 5 : 3\)
   Thus, in a race of 5 m, A gains 2 m over B.
   2 m are gained by A in a race of 5 m.
   80 m will be gained A in a race of \(\frac{5}{2} \times 80\) m = 200 m
   So, winning post is 200 m away from the starting point.

65. **Option D**
   \(A : B = 100 : 90\) and \(A : C = 100 : 87\)
   \(\frac{B}{C} = \frac{B}{A} \times \frac{A}{C} = \frac{90}{100} \times \frac{106}{87} = \frac{30}{29}\)
   When B runs 30 m, C runs 29 m
   When B runs 180 m, C runs \(\frac{29}{30} \times 180\) m = 174 m
   So, B beats C by (180 - 174) m = 6 m

66. **Option D**
   Option (b) is obviously can’t be inferred. Option (a) seems to be probable, but number of vehicle/agents need not be increasing. There can be other reasons also like reduction in the efficiency of the vehicle etc. Therefore option (d) is the correct answer.

67. **Option B**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>150.0</td>
<td>10.0</td>
<td>200.0</td>
<td>20.0</td>
<td>250.0</td>
<td>33.3</td>
</tr>
<tr>
<td>Naphtha</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>30.0</td>
<td>0.5</td>
<td>40.0</td>
<td>2.5</td>
<td>50.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Proportion</td>
<td>20%</td>
<td>5%</td>
<td>20%</td>
<td>12.50%</td>
<td>20%</td>
<td>15.01</td>
</tr>
<tr>
<td>Solid Fuels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>50.0</td>
<td>4.0</td>
<td>60.0</td>
<td>5.0</td>
<td>75.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Proportion</td>
<td>33.30%</td>
<td>40%</td>
<td>30%</td>
<td>25%</td>
<td>30%</td>
<td>30.03</td>
</tr>
<tr>
<td>Petrol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>50.0</td>
<td>4.0</td>
<td>70.0</td>
<td>10.0</td>
<td>80.0</td>
<td>15.0</td>
</tr>
<tr>
<td>Proportion</td>
<td>33.30%</td>
<td>40%</td>
<td>35%</td>
<td>50%</td>
<td>32%</td>
<td>45.04</td>
</tr>
</tbody>
</table>

Hence, solid fuels and petrol combined constitute more than 60% of the total energy in both the world and Asia for the given period.

68. **Option A**
   It can be seen from the table that Petrol is the fuel whose proportion in the total energy demand increases during 1991 – 2001 and decreases during 2001 – 2011 for both the world and Asia. Therefore option A is the correct answer.
69. Option D
For the answer choices given and for Asia we can make the following table.

<table>
<thead>
<tr>
<th>Particulars</th>
<th>1991</th>
<th>2001</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Energy</td>
<td>10</td>
<td>20</td>
<td>33</td>
</tr>
<tr>
<td>Naphtha</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>0.5</td>
<td>2.5</td>
<td>5</td>
</tr>
<tr>
<td>Proportion</td>
<td>5%</td>
<td>12.50%</td>
<td>15.15%</td>
</tr>
<tr>
<td>Solid Fuels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>4</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Proportion</td>
<td>40%</td>
<td>25%</td>
<td>30.30%</td>
</tr>
<tr>
<td>Nuclear Fuel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>0.5</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Proportion</td>
<td>5%</td>
<td>5%</td>
<td>3.90%</td>
</tr>
<tr>
<td>Hydro Energy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
</tr>
<tr>
<td>Proportion</td>
<td>10%</td>
<td>7.50%</td>
<td>6.06%</td>
</tr>
</tbody>
</table>

Hence, we can see that the proportion of Hydro Energy goes on decreasing over the given period.

70. Option D
For the answer choices given and for the world, we can make the following table.

<table>
<thead>
<tr>
<th>Particulars</th>
<th>1991</th>
<th>2001</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Energy</td>
<td>150</td>
<td>200</td>
<td>250</td>
</tr>
<tr>
<td>Naphtha</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>30</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>Proportion</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Solid Fuels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>50</td>
<td>60</td>
<td>75</td>
</tr>
<tr>
<td>Proportion</td>
<td>33%</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Nuclear Fuel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>10</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Proportion</td>
<td>6.66%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Hydro Energy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>10</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Proportion</td>
<td>6.66%</td>
<td>5%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Hence, we can see that the proportion of Naphtha remains constant over the given period.
From the given information the following table can be prepared.

71. Option D
A’s 1 day’s work = \( \frac{1}{15} \)
B’s 1 day’s work = \( \frac{1}{20} \)
(A + B)’s 1 day’s work = \( \frac{1}{15} + \frac{1}{20} = \frac{7}{60} \)
(A + B)’s 4 day’s work = \( \frac{7}{60} \times 4 = \frac{7}{15} \)
Therefore, Remaining work = \( 1 - \frac{7}{15} = \frac{8}{15} \)

72. Option C
(A + B + C)’s 1 day’s work = \( \frac{1}{4} \)
A’s 1 day’s work = \frac{1}{16}
B’s 1 day’s work = \frac{1}{12}
C’s 1 day’s work = \frac{1}{4}\left(\frac{1}{16} + \frac{1}{12}\right) = \frac{1}{4}\left(\frac{7}{48}\right) = \frac{7}{48}
So, C alone can do the work in \frac{48}{5} = 9 \frac{3}{5}

Option B

A’s 2 day’s work = \left[\frac{1}{20} \times 2\right] = \frac{1}{10}
(A + B + C)’s 1 day’s work = \left[\frac{1}{20} + \frac{1}{30} + \frac{1}{60}\right] = \frac{6}{60} = \frac{1}{10}
Work done in 3 days = \left[\frac{1}{10} + \frac{1}{10}\right] = \frac{1}{5}
Now, \frac{1}{5} work is done in 3 days.
Whole work will be done in \(3 \times 5 = 15\) days

Option B

Ratio of times taken by A and B = 1 : 3
The time difference is \((3 - 1)\) 2 days while B take 3 days and A takes 1 day.
If difference of time is 2 days, B takes 3 days.
If difference of time is 60 days, B takes \(\frac{3}{2} \times 60\) = 90 days
So, A takes 30 days to do the work.
A’s 1 day’s work = \frac{1}{30}
B’s 1 day’s work = \frac{1}{90}
(A + B)’s 1 day’s work = \left[\frac{1}{30} + \frac{1}{90}\right] = \frac{4}{90} = \frac{2}{45}
A and B together can do the work in \frac{45}{2} = 22 \frac{1}{2} days

Option B

C’s 1 day’s work = \frac{1}{3}\left(\frac{1}{6} + \frac{1}{8}\right) = \frac{7}{24} = \frac{1}{24}
A’s wages : B’s wages : C’s wages = \frac{1}{6} : \frac{1}{8} : \frac{1}{24} = 4 : 3 : 1
C’s share (for 3 days) = Rs.\left[3 \times \frac{1}{24} \times 3200\right] = Rs.400

<table>
<thead>
<tr>
<th>Persons</th>
<th>Courses</th>
<th>Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeeva</td>
<td>M.Com</td>
<td>Yellow</td>
</tr>
<tr>
<td>Vaani</td>
<td>M.Com</td>
<td>White</td>
</tr>
<tr>
<td>Waqar</td>
<td>M.Com</td>
<td>Pink</td>
</tr>
<tr>
<td>Morya</td>
<td>M.A.</td>
<td>Blue</td>
</tr>
<tr>
<td>Tarun</td>
<td>M.A.</td>
<td>Red</td>
</tr>
<tr>
<td>Ram</td>
<td>M.Sc.</td>
<td>Brown</td>
</tr>
<tr>
<td>Paramjit</td>
<td>M.Sc.</td>
<td>Black</td>
</tr>
</tbody>
</table>

76. Option A
77. Option C
78. Option C
79. Option B
80. Option B
81. Option B  
82. Option C  
83. Option D  
84. Option A  
85. Option A

<table>
<thead>
<tr>
<th>Boy</th>
<th>Building</th>
<th>Kite</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Top-View</td>
<td>Blue</td>
</tr>
<tr>
<td>D</td>
<td>Ridge</td>
<td>Green</td>
</tr>
<tr>
<td>Y</td>
<td>Top-View</td>
<td>Black</td>
</tr>
<tr>
<td>U</td>
<td>Ridge</td>
<td>Yellow</td>
</tr>
<tr>
<td>P</td>
<td>Top-View</td>
<td>Red</td>
</tr>
<tr>
<td>Q</td>
<td>Ashiana</td>
<td>Pink</td>
</tr>
<tr>
<td>J</td>
<td>Ashiana</td>
<td>White</td>
</tr>
</tbody>
</table>

86. Option A  
87. Option A  
88. Option C  
89. Option E  
90. Option B

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Exam</th>
<th>Time Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd March</td>
<td>Wednesday</td>
<td>History</td>
<td>60 mins</td>
</tr>
<tr>
<td>3rd March</td>
<td>Thursday</td>
<td>Maths</td>
<td>50 mins</td>
</tr>
<tr>
<td>4th March</td>
<td>Friday</td>
<td>English</td>
<td>90 mins</td>
</tr>
<tr>
<td>5th March</td>
<td>Saturday</td>
<td>Hindi</td>
<td>100 mins</td>
</tr>
<tr>
<td>6th March</td>
<td>Sunday</td>
<td>Off</td>
<td>Off</td>
</tr>
<tr>
<td>7th March</td>
<td>Monday</td>
<td>Economics</td>
<td>75 mins</td>
</tr>
<tr>
<td>8th March</td>
<td>Tuesday</td>
<td>Science</td>
<td>40 mins</td>
</tr>
</tbody>
</table>

91. Option E  
92. Option B  
93. Option D  
94. Option A  
95. Option D
Further, Assumption II is also implicit as it is assumed that the stipulated target will be met.

Assumption I is implicit because when a division is made, it is assumed to be effective.

Assumption II is not valid as it is more of a presumption.

Teachers can’t be appointed in a vacuum and the reason Assumption I is a valid assumption.

Assumption I and II both are implicit because both are imminent positive outcomes assumed.

A decision is taken if it is felt that the decision would be an acceptance among most of the people. Hence, Assumption I is implicit. Assumption II is also implicit. It is also implicit as the reason behind need.

It is not necessary that the price rise be there in the mind of Government while taking the decision. In fact the truth is that our petroleum companies are running losses even after the drop in international price. Hence, both are invalid assumptions.

Assumption I and II both are implicit because both are imminent positive outcomes assumed.

Assumption I is implicit because when a division is made, it is assumed to be effective.

Further, Assumption II is also implicit as it is assumed that the stipulated target will be met.

<table>
<thead>
<tr>
<th>Question No.</th>
<th>Candidates</th>
<th>(I)</th>
<th>(II) (a)</th>
<th>(III)</th>
<th>(IV)</th>
<th>(V) (b)</th>
<th>(VI)</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meenal</td>
<td>√</td>
<td>(✓)</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>a</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Avinash</td>
<td>?</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>(✓)</td>
<td>c</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Sujay</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>(✓)</td>
<td>b</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Rohan</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>x</td>
<td>-</td>
<td>e</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Nandita</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>d</td>
<td></td>
</tr>
</tbody>
</table>

108. Option A
109. Option C
110. Option B
111. Option E
112. Option D
113. Option A
Civic authorities should ensure adequate supply of medicine at normal rates. By this we can control asthma. Hence, course of action I follows. Pollution is caused due to emission of fumes from vehicles. Due to this, problem in breathing is caused and asthma spreads. Hence, controlling pollution is necessary. Hence, II follows but course of action III is not related to the statement.

114. Option C
   It is necessary for the Government to follow stringent norms for granting permission to the management institutes. For the students too, it is necessary to examine the market value of the degree while taking admissions. But course of action III is not related to the statement. Hence, course of action I and II are appropriate.

115. Option C

116. Option B (Z is brother – in – law of R)
117. Option B (X and P are females)
118. Option D (R and Y is the pair of brothers)
119. Option C (Correct Code for SPORTS is 67, 55, 31, 57, 69, 87)
120. Option A

121. Option D
122. Option B

123. Option C

124. Option E

125. Option A
126. Option A
127. Option C
128. Option B
129. Option A
130. Option E
131. Option C
132. Option A
133. Option B
134. Option A
135. Option C
136. Option A
137. Option E
138. Option C
139. Option E
140. Option E
141. Option E
142. Option D
143. Option D
144. Option B
145. Option A
146. Option C
147. Option C
148. Option E
149. Option C
150. Option D
151. Option A
152. Option B
153. Option D
154. Option D
155. Option B
156. Option D
157. Option D
158. Option C
159. Option E
160. Option A
161. Option B
162. Option B
163. Option C
164. Option A
165. Option B
166. Option D
167. Option E
168. Option A
169. Option C

Condition (i) is applied
170. Option C
171. Option E
172. Option C
173. Option B
174. Option A
175. Option B
176. Option C
177. Option B
178. Option D
179. Option D
180. Option B
181. Option E
182. Option A
183. Option A
184. Option B
185. Option B
186. Option D
187. Option C
188. Option A
189. Option A
190. Option E
191. Option B
192. Option E
193. Option C
194. Option B
195. Option B
196. Option C
197. Option E
198. Option E
199. Option A
200. Option A