AL/2021(2022)/12/E

අධ්‍යයන පොදු සහතික පත්‍ර (උසස් පෙළ) විභාගය, 2021(2022)
கல்விப் பொதுத் தராதரப் பத்திர (உயர் தர)ப் பரீட்சை, 2021(2022)
General Certificate of Education (Adv. Level) Examination, 2021(2022)

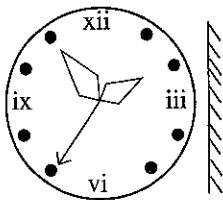| සාමාන්‍ය පොදු පරීක්ෂණය
 பொதுச் சாதாரணப் பரீட்சை
 Common General Test | **12** **E** | පැය දෙකයි
 இரண்டு மணித்தியாலம்
 Two hours |

Instructions:

* Answer **all** the questions.
* Use of calculators is not allowed.
* Write your **Index Number** in the space provided in the answer sheet.
* Instructions are given on the back of the answer sheet. Follow them carefully.
* In each of the questions from **1** to **50**, pick one of the alternatives from (1), (2), (3), (4), (5) which is **correct or most appropriate** and **mark your response on the answer sheet with a cross** (×) in accordance with the instructions given on the back of the answer sheet.

1. Archaeologists have found a collection of ancient objects in a cave in Sri Lanka that includes the oldest known bow-and-arrow technology outside Africa, dating back to 48 000 years ago. What is this cave?

    (1) Lahugala cave   (2) Pahiyangala cave   (3) Pannila cave

    (4) Rawana Ella cave   (5) Rotupihilla cave

2. In December 2020, the Thambapavani Power Plant located in Mannar was connected to the National Electricity Grid. This is a

    (1) coal power plant.   (2) diesel power plant.

    (3) hydroelectric power plant.   (4) solar power plant.

    (5) wind power plant.

3. About two years ago, the maize cultivation in several areas of Sri Lanka came under the attack of some caterpillars, locally named as 'Sena'. What is the other name used for this caterpillar?

    (1) The Fall Army Worm   (2) Rice Army Worm

    (3) Beet Army Worm   (4) Southern Army Worm

    (5) True Army Worm

4. Which of the following two countries played in the 2019-2021 ICC World Test Cricket Championship final in June 2021?

    (1) Australia and India   (2) England and New Zealand

    (3) England and India   (4) England and Australia

    (5) New Zealand and India

5. In the year 2021, the Consumer Affairs Authority tested the quality of coconut oil that was available in the local market due to possible existence of a hazardous compound. What is the name of this compound?

    (1) Acetone   (2) Acetamide   (3) Acetate   (4) Aflatoxin   (5) Aluminium

6. Kanya D' Almeida, became the first Sri Lankan to win a certain international literary award in 2021. What is the name of the award?

    (1) Commonwealth Book Prize   (2) Commonwealth Writer's Prize

    (3) Commonwealth Short Story Prize   (4) London Magazine Short Story Competition

    (5) The International Booker Prize

7. Which of the following vaccines is **not** used against Corona virus disease-2019 (COVID-19)?

    (1) Anthrax   (2) Covaxin   (3) Moderna

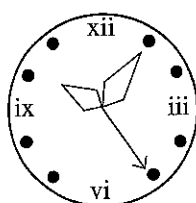   (4) Oxford-AstraZeneca   (5) Pfizer-BioNTech

[*See page two*

8. In May 2021, a cargo ship carrying chemicals caught fire off the coast of Sri Lanka causing an environmental disaster. What is the name of the ship?
  (1) MV Sea Star   (2) MT New Diamond   (3) MV Conception
  (4) MV Colombo Express   (5) X-press pearl

9. Which one of the following practices at home is harmful to the environment?
  (1) Eating less meat   (2) Planting some trees   (3) Using batteries
  (4) Using solar power   (5) Using LED light bulbs

10. What is the name of the space flight that took the first group of passengers including Richard Branson into suborbital space on 11 July 2021?
  (1) Shenzhou–12   (2) New Shepard   (3) Space Ship Two
  (4) Virgin Galactic Unity–22 (5) SpaceX Crew–2

11. A factory has two machines A and B, producing the same item. Machine A takes 6 hours to produce 32 items and Machine B takes 5 hours to produce 40 items. The two machines start at the same time to produce 220 items. How much time will they take?
  (1) 08 hours 15 minutes   (2) 14 hours 30 minutes
  (3) 16 hours 15 minutes   (4) 16 hours 20 minutes
  (5) 16 hours 30 minutes

12. Two men are walking in the same direction at the rate of 2 $km\,h^{-1}$ and 3 $km\,h^{-1}$ parallel to a railway line. A train engine travelling in the same direction, overtakes them completely in 9 seconds and 12 seconds respectively. What is the length of the train engine?
  (1) 10 m   (2) 12 m   (3) 15 m   (4) 16 m   (5) 18 m

13. Mr. Silva deposited on the same day a total of Rs. 150 000 in two banks A and B, at simple annual interest rates of 8% and 10% respectively. After a period of two years, he earned a total simple interest of Rs. 27 200 for his two deposits. What was the amount he initially deposited in the bank B?
  (1) Rs. 70 000   (2) Rs. 75 000   (3) Rs. 78 000   (4) Rs. 80 000   (5) Rs. 82 000

14. Mrs. Perera bought 120 blouses at the rate of Rs. 375 per blouse from a wholesale market. It cost Rs. 1200 to transport them to her store. Further, she had to spend Rs. 25 as ironing charges per blouse and a total of Rs. 2400 as packaging charges before selling the items. Now, she plans to sell them with a profit of 30% from each blouse. What should be the selling price of a blouse?
  (1) Rs. 515   (2) Rs. 559   (3) Rs. 560   (4) Rs. 585   (5) Rs. 595

15. Before starting his drive, Bandula estimated that he can reach point X at 12.00 noon if he travels at 60 $km\,h^{-1}$ and he can reach the same point at 11.30 a.m. if he travels at 75 $km\,h^{-1}$. Eventually, if he reached the point X at 11.35 a.m. what was his average speed?
  (1) 70 $km\,h^{-1}$ (2) 71 $km\,h^{-1}$ (3) 72 $km\,h^{-1}$ (4) 73 $km\,h^{-1}$ (5) 74 $km\,h^{-1}$

16. To make a drink, juice A is mixed with juice B in the ratio 4:3 in a jug. After serving 7 litres of this drink from the jug, another 7 litres of juice B were added to the jug making the new ratio of juice A to juice B in the jug 4:5. How many litres of juice A were used initially?
  (1) 12 litres   (2) 15 litres   (3) 18 litres   (4) 22 litres   (5) 36 litres

17. Asitha calculated that the average score of the Math test as 52 in his class of 45 students. Then the teacher discovered that three marks among the 45 items that Asitha used to calculate the average were incorrectly recorded as 18, 27 and 36, instead of the correct values 81, 72 and 63 respectively. What is the correct average score of the Math test?
  (1) 54   (2) 55   (3) 56   (4) 57   (5) 59

18. A surveyor made an error of 3% in excess of the actual length when measuring the length of the side of a square plot. Then he calculated the area of the square plot by using that value. What is the percentage of the error in the calculation of area?
  (1) 1.06 %   (2) 3.09 %   (3) 4.09 %   (4) 5.09%   (5) 6.09 %

19. A watch runs faster gaining time uniformly. It was 3 minutes behind at 11.00 a.m. on a Sunday and was 5 minutes and 45 seconds ahead at 6.00 p.m. on the following Sunday. When did the watch show the correct time during that period?

    (1) 11.00 a.m. on Tuesday   (2) 10.00 p.m. on Tuesday

    (3) 11.00 p.m. on Tuesday   (4) 11.30 p.m. on Tuesday

    (5) 11.00 p.m. on Wednesday

20. Four years ago, the average age of Mr. and Mrs. Fernando and their daughter was 25 years and six years ago, the average age of Mrs. Fernando and the daughter was 22 years. What is the present age of Mr. Fernando?

    (1) 29 years   (2) 30 years   (3) 31 years   (4) 32 years   (5) 35 years

21. Which of the following entities has the most out of three properties stiffness, fluxion and warmth?

    (1) Lava   (2) Steam   (3) Smoke   (4) Cement   (5) Fire

22. Akmal bought an axe consists of a steel blade and a wooden handle five years ago. He replaced its blade every eight months and its handle every two years. After buying the axe for the first time, how many more times has he enjoyed the luxury of owning a brand–new axe?

    (1) Once   (2) Twice   (3) Thrice   (4) Quarce   (5) Never

23. A frog and a toad living in the bottom of a well start climbing up the well at the same time. At the beginning of each consecutive minute, half of the distance from the top of the well to the frog is covered by the frog during that minute. For the toad, it is one third of the respective distance. After two minutes, if they are 7 m apart how deep is the well?

    (1) 32 m   (2) 34 m   (3) 36 m   (4) 40 m   (5) 64 m
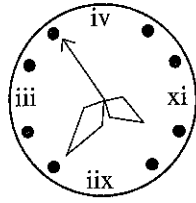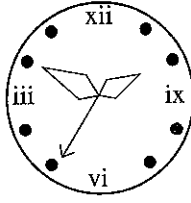
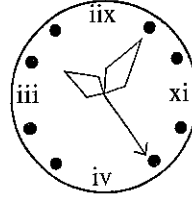**24.** Which one of the following figures gives the correct mirror image of the face of the clock shown in the diagram?

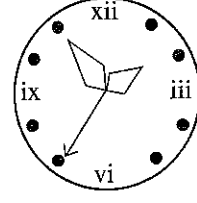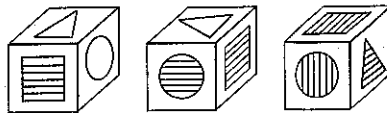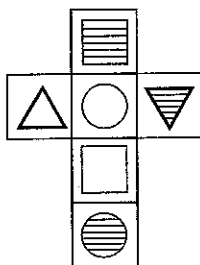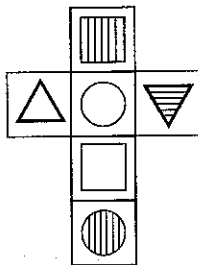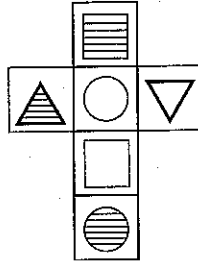**25.** Each of the following diagrams shows the figures drawn on the exposed facets of a cube.

Which one of the following blocks could be used to construct the cube given above?
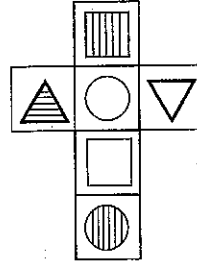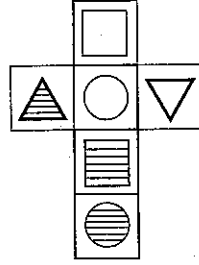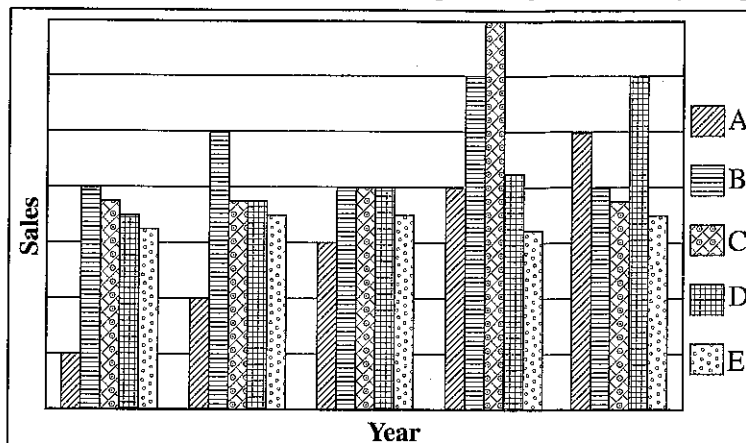
● Questions number 26 and 27 are based on the following graph which shows the sales of each year of five companies A, B, C, D and E respectively in a five year period.

26. Which company has the highest rate of sales increase throughout this period?

    (1) A   (2) B   (3) C   (4) D   (5) E

27. Which company shows the highest stability in this period?

    (1) A   (2) B   (3) C   (4) D   (5) E

● Questions number 28 and 29 require to classify each of the four given statements as definite (A), probable (B), less probable (C) or impossible (D).

28.   1. In a group of 14 persons, there are two persons born in the same month.

     2. Any three straight lines meet at a single point.

     3. When an unbaised coin is tossed 100 times, the outcome is head in 99 times.

     4. $x = 1$ when $x^2 = 1$.

    The above four statements can respectively be classified as

    (1) C, D, D, A.   (2) B, B, D, A.   (3) B, A, D, B.   (4) A, D, C, B.   (5) A, B, D, A.

29.   1. A mother whose all six children are daughters delivers another female child.

     2. If any three straight lines meet at a single point, then any four straight lines also meet at a single point.

     3. When an unbaised coin is tossed 10 times, the outcome is head in 5 times.

     4. All birds can fly.

    The above four statements can respectively be classified as

    (1) B, A, A, B   (2) B, A, B, D.   (3) C, B, B, C.   (4) C, B, C, D.   (5) C, D, A, B.

● Questions from number 30 to 32 are based on the following information.

Five students got caught after knocking down seven mangoes and five oranges by pelting fruit trees in the school yard. Following answers were given when each student was asked about the number of fruits that student knocked down from the trees.

    Amal   – a mango and an orange only

    Bhavan – two mangoes and an orange only

    Cassim – two mangoes only

    David   – a mango and two oranges only

    Emil   – an orange only

30. If only one person is lying and he has in fact plucked a mango and an orange only, who could that be?

    (1) Amal   (2) Bhavan   (3) Cassim   (4) David   (5) Emil

31. If only one person is lying and he has in fact plucked three mangoes and an orange only, who could that be?

    (1) Amal   (2) Bhavan   (3) Cassim   (4) David   (5) Emil

32. If the number of mangoes plucked by the truth-speakers is four, and the number of oranges plucked by the liars is two, what has Amal actually plucked?

(1) Two mangoes only   (2) An orange only

(3) A mango and an orange only   (4) A mango and two oranges only

(5) Three mangoes and an orange only

● Questions from number **33** to **35** are based on two mythical kingdoms named Beegypt and Seagypt. One used base 2 and the other base 3 to write down numbers in their own numerals. The number ~@~ in Beegyptian was written as &# in Seagyptian.

33. How did the Seagyptians write the number which Beegyptians wrote as ~~~?

(1) &#   (2) #&   (3) $&   (4) ###   (5) &&&

34. How did the Beegyptians write the number which Seegyptians wrote as ## ?

(1) ~@@   (2) ~~@   (3) @~~   (4) ~@@@   (5) ~@~@

35. How did the Beegyptians write the number which Seegyptians wrote as &$?

(1) ~~   (2) ~~@   (3) $~~   (4) ~@*   (5) ~@~

● Questions from number **36** to **38** are based on the following information:

Out of the students sat for G.C.E. Advanced Level Examination - 2020, from a central college, the top seven scorers for Common General Test were selected to offer scholarships. This group of top seven scorers consisted of two Physical Science students, one Bio Science student, two Technology students, one Commerce student and one Arts student. No Common General Test scores of any two of them were equal.

Further more, out of these seven students,

＊ Technology students did not have the first place or the fifth place.

＊ Commerce student did not have the second place or the sixth place.

＊ Only one student was placed between the place of the higher scorer of the Technology students and the place of the Commerce student.

＊ the place of the Arts student was immediately after the place of the lower scorer of the Technology students.

＊ the place of the Bio Science student was immediately after the place of the higher scorer of the Physical Science students.

36. From which subject stream was the top scorer of this school for Common General Test in G.C.E. Advanced Level Examination 2020?

(1) Physical Science   (2) Bio Science   (3) Technology

(4) Commerce   (5) Arts

37. From which subject stream was the student for the seventh place?

(1) Physical Science   (2) Bio Science   (3) Technology

(4) Commerce   (5) Arts

38. Which places were the two students from the Technology stream occupied?

(1) 2 and 3   (2) 2 and 4   (3) 2 and 6   (4) 3 and 6   (5) 4 and 6

39. Select the strongest evidence (if true) that weakens the following claim:

"These days every ship has a recorder that records the location of the ship in each hour."

(1) All recorders in the modern ship Flex-Press-Whirl were used only to record the sound of the sea waves.

(2) The Captain of a ship can decide on which days the hourly position of the ship must be recorded.

(3) On every voyage Columbus appointed a sailor to record the hourly position of the ship.

(4) Google can trace the position of any ship so there is no need to record it by the ship.

(5) Only the daily position of the ship had been recorded in the recorders found in the recently sunken ship Ever-Race.

40. A photo printer uses only three-basic colours red, blue and yellow. Due to an error, yellow and blue were interchanged and colour-distorted prints were generated as a result. An image of which entity from the following would undergo the least colour-distortion when generated by this printer?

(1) A grasshopper (2) A sweet potato (3) The moon

(4) A carrot (5) A rainbow

● Questions number **41** and **42** are based on the following information:

Applications are called from the citizens of Sri Lanka who have fulfilled the following requirements, to be enrolled in a Vocational Training course.

1. Not less than 18 years and not more than 22 years of age as on 01ˢᵗ of January 2022.

2. Having passed six subjects in G.C.E. Ordinary Level Examination including at least credit passes for Information and Communication Technology (ICT), English, Mathematics and Science in one sitting.

Note:

(i) Applicants who have not obtained a credit pass for ICT will be considered with the consent of the Academic Affairs Council of the Institute, if a credit pass in General Information Technology Examination has been obtained.

(ii) Applicants who have not obtained a credit pass for English will be considered if they agree to sit a qualifying examination in English Language and score more than 50 marks.

According to the information given in each question,

if the applicant has fulfilled all the requirements, select .... *a*

if the applicant has not fulfilled the requirements, select .... *b*

if the applicant has to sit the qualifying examination, select .... *c*

if the applicant has to get the consent of the Academic Affairs Council, select .... *d*

if the data provided are not sufficient to come to a conclusion, select .... *e*.

41. Arul, a Sri Lankan, born on 01st of January 2000 has sat G.C.E. Ordinary Level Examination only once and obtained credit passes in Tamil Language, Saivaneri, History, Science, ICT and Carnatic Music, and Ordinary passes in Mathematics and English.

(1) *a* (2) *b* (3) *c* (4) *d* (5) *e*

42. Savithri, a Sri Lankan, born on 31ˢᵗ December 2003 has obtained credit passes in Tamil Language, Saivaneri, History, Mathematics, Science, English Language, Carnatic Music and Agriculture in one sitting of G.C.E. Ordinary Level Examination. She has also obtained a very good pass (B pass) in General Information Technology Examination.

(1) *a* (2) *b* (3) *c* (4) *d* (5) *e*

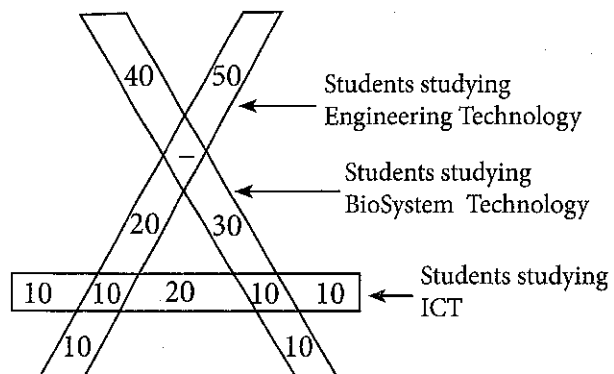● Questions number **43** and **44** are based on the following information:

The diagram illustrates the numbers of students following the G.C.E. (Adv. Level) Technology stream in a school. In addition the numbers of the students studying the subject Information and Communication Technology (ICT) are also illustrated in it.

43. How many of the students in Technology stream study the subject ICT?

(1) 20 (2) 30

(3) 40 (4) 50

(5) 60

44. It is compulsory for all students in Technology stream to study the subject 'Science for Technology'. Therefore, how many students are there in the Technology stream who study the subject 'Science for Technology'?
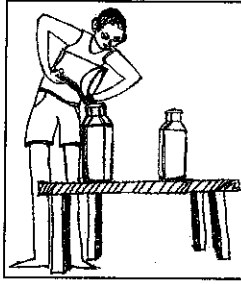
(1) 60 (2) 90

(3) 110 (4) 160

(5) 180

Students studying Engineering Technology

Students studying BioSystem Technology

Students studying ICT

45. In this question, the sentences *A, B, C, D, E* between two sentences denoted by 1 and 7 are **not** in the correct order. Select the appropriate arrangement of them to form a logical sequence of the seven sentences.

    1 - Jak tree requires nutrients in addition to air, water and sunlight for its growth and development.

    A - Nutrients are both metallic and non-metallic in nature.

    B - Both phosphorus and potassium too are absorbed by jak tree through its roots.

    C - While NPK are taken by roots, another major component known as carbohydrate is synthesized by chlorophyll pigments in the leaves.

    D - Although nitrogen is found in large proportion in air, jak tree takes its requirement of nitrogen through its roots.

    E - Major metallic and non-metallic substances required by plants are referred to as NPK.

    7 - Carbohydrates together with NPK and other minerals absorbed by roots are used to synthesize all the building blocks of jak tree for its growth and development.
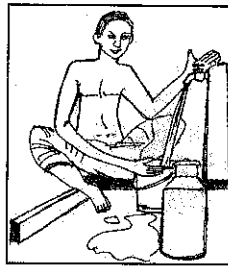
    (1) *A, D, E, B, C*   (2) *A, D, E, C, B*

    (3) *A, E, D, B, C*   (4) *B, C, D, E, A*

    (5) *D, B, C, A, E*

46. Each of the following five paragraphs *A, B, C, D, E* consist of three statements. Which one of these paragraphs contains statements that could be rearranged in a meaningful sequence?

    A   *(a)* There are two rainy seasons in an year.

        (b) Heavy-rain occurs during the period October to December whereas light rain sets on during the period March to May.

        (c) During the period of heavy rain, reservoirs and dams get filled with water.

    B   *(a)* Palmyrah trees flower during only one season from December to April.

        (b) Cashew trees flower during two seasons in an year extending from February to June and from September to November.

        (c) Coconut trees flower throughout the year.

    C   *(a)* Roy is good at sports and very popular among all at school.

        (b) Ramya is good at speech, drama and studies at school.

        (c) Principal and school disciplinary board recommended both Roy and Ramya to be appointed as school prefects.

    D   *(a)* Luxmy became unconscious and fell down while carrying a water pot.

        (b) Luxmy gets headache on and off.

        (c) Luxmy underwent an operation when she was admitted to the hospital.

    E   *(a)* Banks are providing housing loans at a very low interest rate falling within a single digit.

        (b) Interest rates for fixed deposits and savings deposits in banks are reduced to a single digit by the Government.

        (c) Reduction of interest rates aims to support the Government policy to provide housing loans for all citizens.

    (1) *A*   (2) *B*   (3) *C*   (4) *D*   (5) *E*

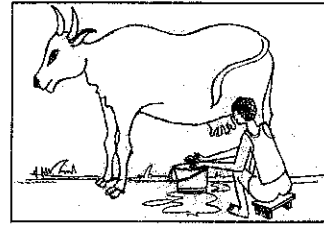**47.** Consider the event described by the following pictures:
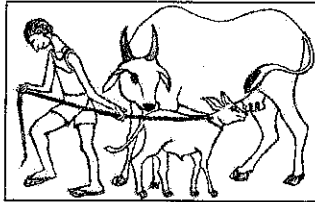

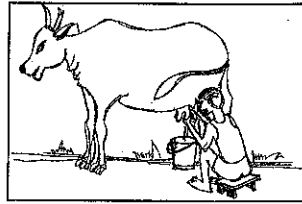A   B   C

D   E   F

Which of the following arrangements gives the correct sequence of the event?

   (1) *D, E, C, F, B, A*   (2) *D, E, C, A, B, F*   (3) *D, C, E, A, F, B*

   (4) *B, C, D, E, A, F*   (5) *B, D, C, E, A, F*

● Questions from number **48** to **50** are based on the following conversation.

After having returned from school, three children with their mother go to a ground to fly kites. There, they meet children's uncle Sam.

The following dialogues from *A* to *L* illustrate a conversation among children, their mother and uncle Sam. The conversation among them is **not** arranged in the correct sequence.

   A. Sam uncle, you can see Raj flying an eagle kite. Did you see brother Rasu?

   B. Yes, I saw him with a snake kite half an hour ago.

   C. Eldest brother Raj, We can't see the snake kite or Rasu anywhere near us but I see uncle Sam coming towards us.

   D. But this ground has a very big open space and a lot of people are here. As such we can't search for Rasu easily.

   E. Uncle Sam, your corona kite looks very grand. Who made it?

   F. There was a Covid checking up place on my way back.

   G. Where has younger brother Rasu gone?

   H. He has gone to fly his snake kite.

   I. Okay, take younger brother Raney also with you.

   J. I am also going to fly my eagle kite.

   K. Raj, why are you late from school?

   L. I made it with the help of a person who also illuminated the kite.

48. In which one of the following have the parts of the conversation between the mother and the eldest son Raj been correctly arranged?

   (1) *K, F, H, G, J, I*   (2) *K, F, G, H, J, I*   (3) *K, F, I, G, H, J*

   (4) *K, F, J, H, I, G*   (5) *K, F, J, I, G, H*

49. In which one of the following have the parts of the conversation between uncle Sam and the youngest son Raney been correctly arranged?

   (1) *A, B, E, D, L*   (2) *B, A, D, L, E*   (3) *A, B, D, E, L*

   (4) *D, A, E, L, B*   (5) *D, A, L, E, B*

50. Which of the following is the logical sequence of the whole conversation?

   (1) *K, F, G, H, J, I, C, A, B, D, E, L*   (2) *K, F, H, G, J, I, C, D, A, E, L, B*

   (3) *K, F, I, G, H, J, C, D, A, E, L, B*   (4) *K, F, J, H, I, G, C, D, A, L, E, B*

   (5) *K, F, J, I, G, H, C, D, A, B, L, E*

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