VMC Vidyamandir Classes SINCE 1986
IIT JEE | MEDICAL | FOUNDATION

CODE A

Vidyamandir Intellect Quest | 7 Year

Duration: 3.0 Hrs.   **Maximum Marks: 350**

SAMPLE PAPER

For Students going to class VI in April' 2022 (Stream: Pre-Foundation)

PAPER SCHEME:

- The paper contains **60 Objective Type Questions** divided into three sections: **Section - I, Section – II and Section – III.**
- **Section I** contains **10 Multiple Choice Questions (1-10)** based on **Mental Aptitude**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE CHOICE is correct**.
- **Section II** contains **35 Multiple Choice Questions (11-45)** based on **Mathematics**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE CHOICE is correct**.
- **Section III** contains **15 Multiple Choice Questions (46-60)** based on **Science**. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE CHOICE is correct**.

MARKING SCHEME:

- **Section I** : For each question, **5 marks** will be awarded for correct answer and **–1 negative marking** for incorrect answer.
- **Section II & III** : For each question, **6 marks** will be awarded for correct answer and **–1 negative marking** for incorrect answer.

GENERAL INSTRUCTIONS:

- For answering a question, an **ANSWER SHEET (OMR SHEET)** is provided separately. Please fill your **Name, Roll Number, Seat ID, Date of Birth** and the **PAPER CODE** properly in the space provided in the **ANSWER SHEET.** IT IS YOUR OWN RESPONSIBILITY TO FILL THE OMR SHEET CORRECTLY.
- A blank space has been provided on each page for rough work.
- Violating the examination room discipline will immediately lead to the cancellation of your paper and no excuses will be entertained.
- No one will be permitted to leave the examination hall before the end of the test.
  Please submit both the question paper and the answer sheet to the invigilator before leaving the examination hall.

FILL THE FOLLOWING INFORMATION PROPERLY BEFORE YOU PROCEED

| NAME		SEAT ID	
ROLL NUMBER		ROOM NO.	
INVIGILATOR'S SIGNATURE		OMR BAR CODE	

SUGGESTIONS:

- *Before starting the paper, spend 2-3 minutes to check whether all the pages are in order and report any issue to the invigilator immediately.*
- Try to attempt the Sections in their respective order.
- Do not get stuck on a particular question for more than 3-4 minutes. Move on to a new question as there are 60 questions to solve.

SECTION - I [MENTAL APTITUDE]

1. Find the odd one out.
   (A) Table   **(B)** Chair   **(C)** Computer   **(D)** Bed

2. Select a figure from amongst the four options, which when placed in the blank space of fig.(X) would complete the pattern?
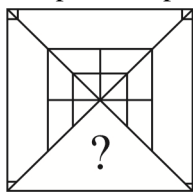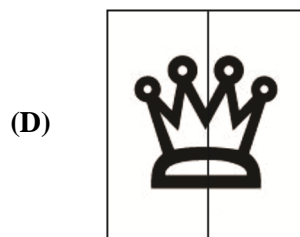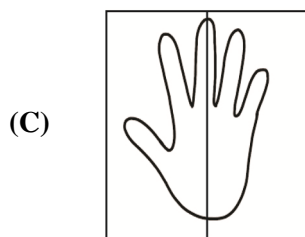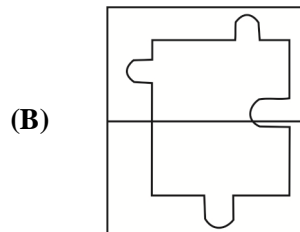

   (A)   **(B)**   **(C)**   **(D)**

3. Identify the relation between the given pair on either side of : : and find the missing term. 8 : 72 :: 12 :?
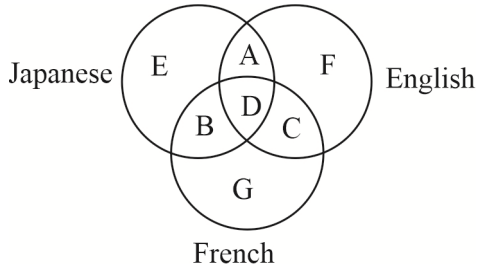   **(A)** 152   **(B)** 144   **(C)** 175   **(D)** 160

4. Which figure has a line of symmetry?

   (A)   **(B)**

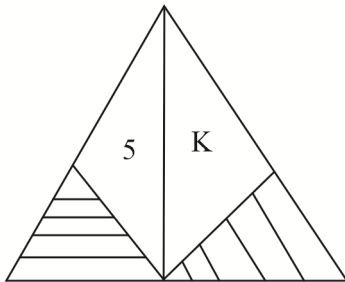   **(C)**   **(D)**

5. In a certain code, BEHIND is written as EBIHDN, then how can be MARKET is written in that code?
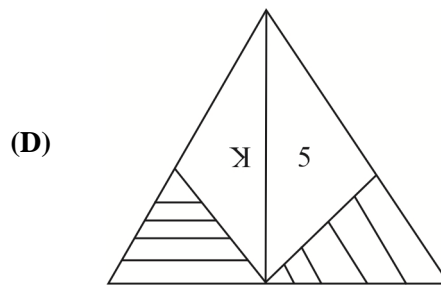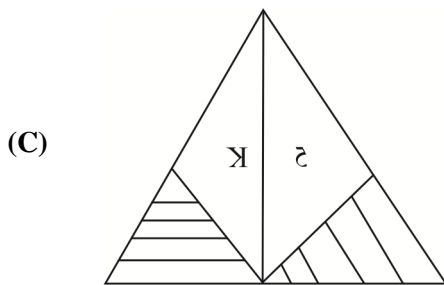   **(A)** TEKRAM1   **(B)** MARTEK   **(C)** AMKRTE   **(D)** AEMTKR

6. Study the diagram and identify the people who can speak only one language.

(A) E   **(B)** G   **(C)** G + F + E   **(D)** A + B + C

7. Find the odd one out.

(A) 4298   **(B)** 3629   **(C)** 2384   **(D)** 3756

8. Find the mirror image of each of given figure (X)
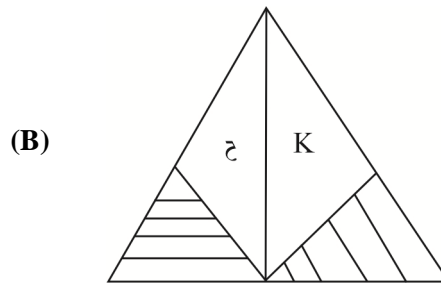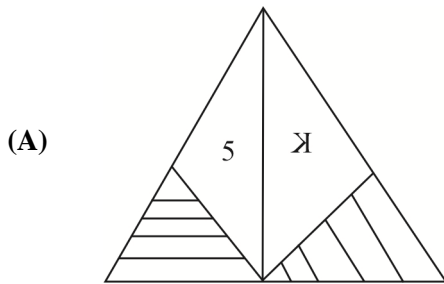
9. In a certain code, COCONUT is written as COCOTUN, then how can be CHOCOLATE is written in that code?

(A) HCCOLOTAE   **(B)** COHCOETAL   **(C)** ETALOCOHC   **(D)** DHOCOLATF

10. Among L, M, N and Q, M is heavier than L and N, N is not as heavy as L, Q is heavier than M. Who is the lightest?

(A) M   **(B)** Q   **(C)** L   **(D)** N

SECTION - II [MATHEMATICS]

11. Represent the shaded part in the following figures as a fraction and solve them.

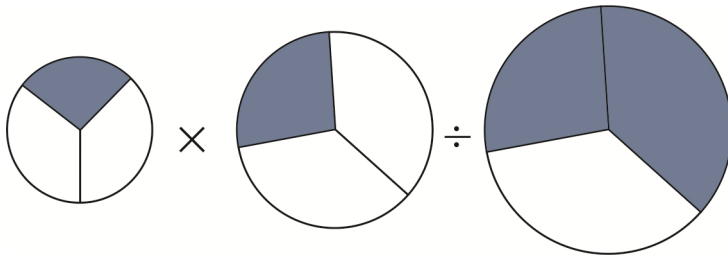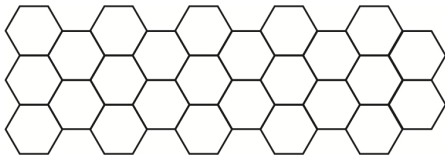   **(A)** $\dfrac{1}{8}$ **(B)** $\dfrac{3}{4}$ **(C)** $\dfrac{1}{4}$ **(D)** $\dfrac{1}{6}$

12. The value of $3\dfrac{1}{12} - \left[1\dfrac{3}{4} + \left\{2\dfrac{1}{2} - \left(1\dfrac{1}{2} - \dfrac{1}{3}\right)\right\}\right]$ is

    (A)   0   **(B)** $\dfrac{1}{3}$ **(C)**   1   **(D)**   2

13. How many of the shapes must be shaded so that $\dfrac{3}{5}$ of the figure is unshaded?

    (A)   5   **(B)**   10   **(C)**   15   **(D)**   20

14. The cost of $1l$ of milk is Rs. $15\dfrac{3}{5}$. What is the cost of $\dfrac{55}{3}l$ of milk?

    (A)   Rs.55   **(B)**   Rs.286   **(C)**   Rs. $\dfrac{78}{5}$ **(D)**   Rs. $\dfrac{5}{78}1$

15. How many more squares must be shaded so that $\dfrac{1}{3}$ of the figure is shaded?

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

16. After removing some square from a big square, the following figure is obtained. The length of one side of a small square is 3 cm. Find the area of the figure.
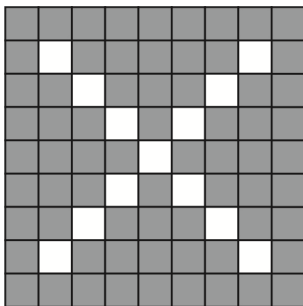
    (A)   68 cm^2 **(B)**   603 cm^2 **(C)**   612 cm^2 **(D)**   729 cm^2

17. Simplify, $\dfrac{5}{2} \times \left(\dfrac{7}{2} \times \dfrac{4}{11} \right) \div \dfrac{1}{2}$?

(A) $\dfrac{14}{99}$ (B) $\dfrac{45}{99}$ (C) $\dfrac{70}{11}$ (D) $\dfrac{3}{99}$

18. Which of the following set of numbers is divisible by 10?

(A) 40,310,800   (B) 68, 110, 284   (C) 36, 144, 417   (D) All of these

19. The fraction which represents the shaded part in the figure 1 is __ the fraction which represents the shaded part in the figure 2.
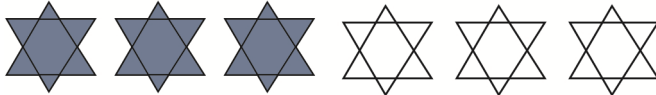

Figure 1

Figure 2

(A) Smaller than   (B) Grater than

(C) Equal to   (D) Can not be determined

20. The value of $14 \times 7 + 36 \div 4 + 14 =$

(A) 98   (B) 135   (C) 121   (D) 224

21. A shopkeeper mixed 3.6 kg of hazelnuts with 0.75 kg of raisins. He packed the mixture equally into 5 boxes. What is the mass of each box?

(A) 14.25 kg   (B) 4.35 kg   (C) 0.87 kg   (D) 0.72 kg

Directions for questions 22-23

The given graph shows the temperature taken on a certain day, Study the graph and answer the following questions.
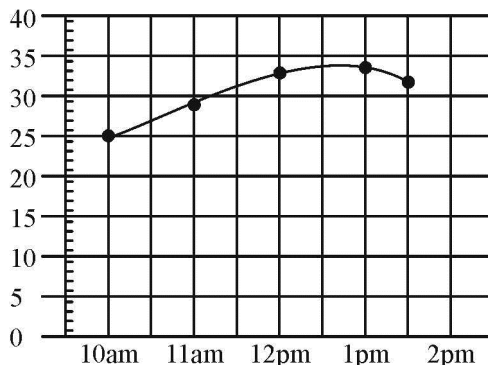
22. When is the temperature maximum?

(A) 12 pm   (B) 1 pm   (C) 2 pm   (D) 11 am

23. The increase in temperature is greatest between _____.

(A) 10 am to 11 am (B) 11 am to 12 pm (C) 12 pm to 1 pm (D) 1 pm to 2 pm

24. Farheen worked on an art project for 2 hrs 20 minutes she finished the project at 7 : 40 pm. When did she start the project.

(A)   5 : 20 pm   (B)   6 : 30 pm   (C)   7 : 40 pm   (D)   10.00 pm
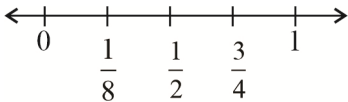
25. The radius of a circle is 4 cm. The diameter of the circle is

(A)   2 cm   (B)   8 cm   (C)   3 cm   (D)   5 cm

26. Convert 435.047 into fraction form

(A) $\dfrac{435047}{100}$ (B) $\dfrac{435047}{1000}$ (C) $\dfrac{435047}{10000}$ (D) $\dfrac{435047}{100000}$

27. What is the value of $5\dfrac{1}{2} - 2\dfrac{5}{6}$?

(A) $1\dfrac{1}{2}$ (B) $1\dfrac{2}{3}$ (C) $2\dfrac{1}{3}$ (D) $2\dfrac{2}{3}$

28. Consider the following two statements:

Statement 1: A proper fraction has smaller numerator than denominator

Statement 2: An improper fraction has greater numerator than denominator

Which one of the following options is correct about the above statements?

(A)   Statement 1 is false and 2 is true   (B)   Statement 1 is true and 2 is false

(C)   Both statements are false   (D)   Both statements are true

29. 50th multiple of X is obtained by which one of the following expression?

(A) $50 \times X$ (B) $\dfrac{50}{X}$ (C) $\dfrac{2(50)}{X}$ (D) $2(50) \times X$

30. The product of two numbers is $9\dfrac{3}{4}$ if one of them is $3\dfrac{1}{4}$, find the other number.

(A) $2\dfrac{1}{4}$ (B)   3   (C) $\dfrac{1}{4}$ (D) $1\dfrac{1}{4}$

31. Suman quickly estimated the product of 796×19 in the following manner: He rounded each number to the nearest ten.

He multiplied these new numbers together.

What was Suman's estimate?

(A)   14,000   (B)   15,010   (C)   15,200   (D)   16,000

32. Which of the following, when rounded off to the nearest thousand, is 38,000?

(A)   38,400   (B)   38,500   (C)   38,600   (D)   38,700

33. The product of a fractional number and its multiplicative inverse is.

(A)   0   (B)   1   (C)   Number itself (D)   None of these

34. What fraction on the number line below is in the wrong place?

(A)   1   (B) $\dfrac{1}{8}$ (C) $\dfrac{1}{2}$ (D) $\dfrac{3}{4}$

35. In a school, there are 70356 desks to place into 22 classrooms. If the same number of desks is placed in each classroom, how many desks will be in each room?

(A) 3198   (B) 3246   (C) 4198   (D) 4246
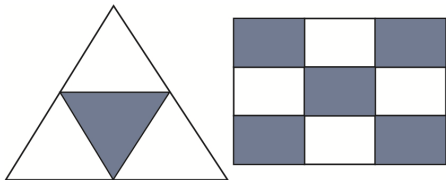
36. What fraction of the figure is shaded?
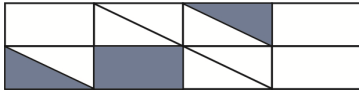
(A) $\dfrac{1}{4}$ (B) $\dfrac{3}{8}$ (C) $\dfrac{3}{14}$ (D) $\dfrac{1}{3}$

37. Which fraction is greater than $\dfrac{1}{2}$?

(A) $\dfrac{1}{4}$ (B) $\dfrac{1}{3}$ (C) $\dfrac{3}{8}$ (D) $\dfrac{3}{4}$

38. 56 has ___ factors.

(A) 4   (B) 6   (C) 7   (D) 8

39. IX + XV + XX = ____.

(A) 45   (B) 35   (C) 44   (D) 76

40. $$\frac{4}{5}+\frac{6}{7}+\frac{19}{3}=7\frac{A}{105}$$

Which one of the following should come in place of A in the given above expression?

(A) 104   (B) 94   (C) 105   (D) 44

**41.** What is the product of the fractions of shaded parts?

(A) $\dfrac{15}{36}$ (B) $\dfrac{7}{36}$ (C) $\dfrac{1}{36}$ (D) $\dfrac{5}{36}$

42. There are A, B, C and D are the four points on the circumference of a circle. Jack joins A to B, B to C, C to D and A to D. All these line segments are ____.

(A) Radius   (B) Arc   (C) Chord   (D) All of these

43. The given figure is obtained by removing some small squares from a big rectangle. The length of one side of small square is 2 cm. Find the perimeter of the figure.
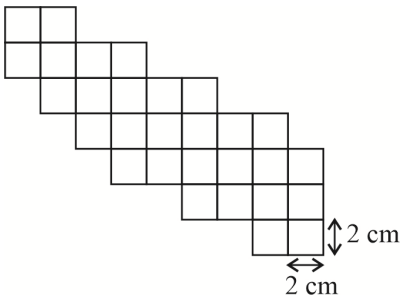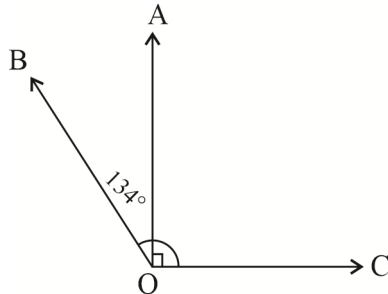

(A) 32 cm   (B) 56 cm   (C) 64 cm   (D) 128 cm

44. What is the area of the shaded part in the figure? (If the unshaded portion is a square)
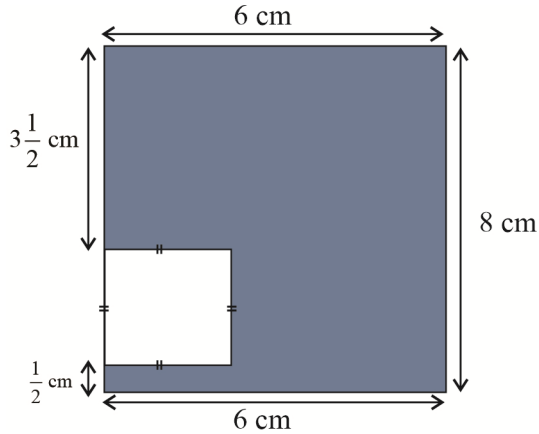
(A) 16 cm^2 (B) 24 cm^2 (C) 32 cm^2 (D) 48 cm^2

45. The measures of $\angle AOB$ in the following figure is

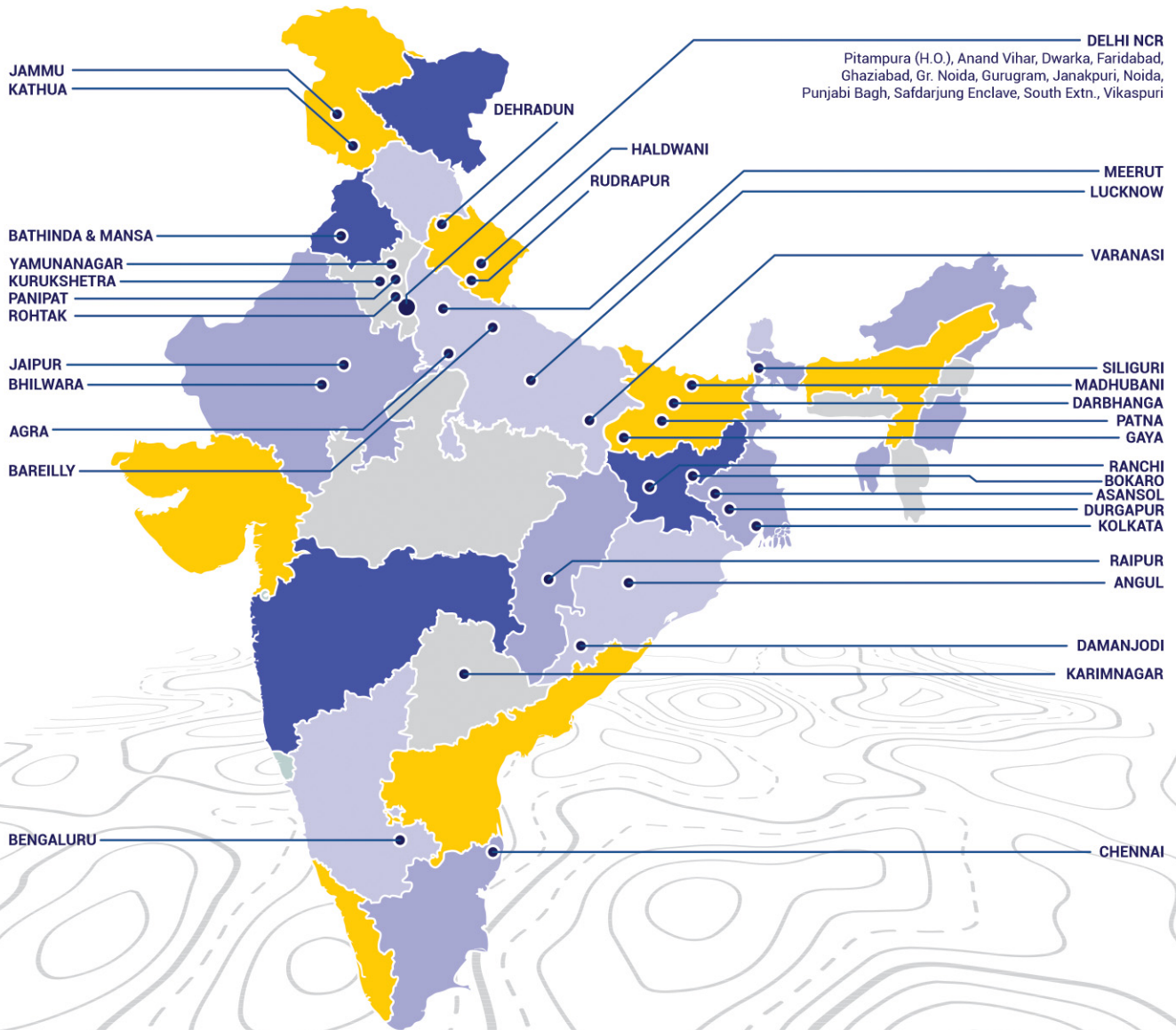(A) $90°$ (B) $44°$ (C) $224°$ (D) $134°$

SECTION - III [SCIENCE]

46. As a balloon is filled with water, it expands and increases in weight. This shows that water:
(A) has mass   (B) occupies space
(C) is a kind of matter   (D) All of these

47. The body is able to move because the muscular system works together with _____ system.
(A) respiratory   (B) skeletal   (C) digestive   (D) circulatory

48. Polio is also called
(A) infantile paralysis   (B) lockjaw
(C) hydrophobia   (D) varicella

49. What helps in preventing communicable diseases?
(A) Keeping the surroundings clean   (B) Vaccinations
(C) Boiling and filtering of drinking water   (D) All the above

50. An example of a force in the direction of motion is
(A) opening a door   (B) applying brakes suddenly to a moving car
(C) a batsman hitting a cricket ball   (D) drawing water form a well

51. A non-biodegradable waste is
(A) metallic tins   (B) plastic   (C) polythene   (D) all the above

52. Storm waves are called

(A) tsunami (B) wind (C) air (D) lava

53. At any given time, different parts of the earth experience different seasons. Apart from the earth's revolution around the Sun. Which of these is the reason for this?

(A) The Earth's rotation (B) The elliptical shape of the Earth's orbit

(C) The presence of the moon (D) The tilt of the Earth's axis of rotation

54. Which part of the human skeleton protects the heart?

(A) Skull (B) Ribs (C) Backbone (D) Limbs

55. Total number of bones in a new born baby are

(A) 206 (B) 209 (C) 250 (D) 300

56. More amount of salt dissolve in water at a higher temperature. This is because, upon heating.

(A) the molecules move faster and farther

(B) the number of molecules decrease causing more space

(C) the molecules become smaller creating more space

(D) all of these

57. Which of the following is a communicable disease?

(A) Obesity (B) Allergy (C) Anaemia (D) Typhoid

58. Identify the sources of vitamin D.

(A) Amla (B) Ground nut all (C) Meat (D) Milk

59. What do you mean by noncommunicable disease?

(A) The disease that spread from a sick person to a healthy person

(B) The disease that do not spread from a sick person to a healthy person

(C) A common disease

(D) An uncommon disease

60. Which of the following statements is correct?

(A) Solids have definite shape and volume

(B) Liquids have fixed volume but not definite shape.

(C) Gases have definite shape but not definite volume

(D) Both (a) and (b) are correct

❧ ❧ ❧ **End of Vidyamandir Intellect Quest | 7 Year [Pre-Foundation]** ❧ ❧ ❧

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