



# M.M. MEMORIAL PUBLIC SR. SEC. SCHOOL

## GLOBAL TALENT SEARCH EXAMINATION # 5

### GTSE # 5 (2024)

#### Pre Nurture & Career Foundation Courses

**Time: 3 Hrs.**

**Maximum Marks: 600**

Name of the Candidate .....

Class :- 6th

Reg. No. : GTS/.....

Examination Centre: .....

#### **Instructions for the candidate :**

**Please read the following instructions carefully before opening the Question Booklet :**

1. This Question Booklet consists of 150 questions. Subject wise Serial Order of the questions is as following :

Question No.	Subject
1 – 20	– English
21 – 70	– Mathematics
71 – 90	– Physics
91 – 110	– Chemistry
111 – 130	– Biology
131 – 150	– Mental Ability

2. Each multiple choice question has four options namely (A), (B), (C) and (D). Out of which only ONE option is correct (except MSQs). Each correct answer earns a credit of **4 marks**. A wrong answer carries a penalty of – 1 mark as negative marking.

3. **Use black or blue ball point pen only on OMR sheet.** Use of pencil is strictly prohibited.

4. Folding, damaging or leaving any identifiable mark on the OMR sheet is strictly prohibited.

5. No Candidate should possess any document other than Admit Card and Photo Identity Card.

6. Candidate may take Question Booklet with him/her only after handing over OMR sheet to invigilating staff.

7. Rough work should be done on the blank space provided on each page of the booklet.

8. For the given 4 alternative, choose only one alternative (expect MSQ's) and dark the selected circle properly as



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## ENGLISH

**Question No. 1 to 4 are of Assertion and Reason type questions. Each question consists of two statements namely; Assertion (A) and Reason (R) :**

**1.** Assertion (A) : Punctuation marks are used in language.

Reason (R) : With the help of punctuation marks we can make a meaningful sentence.

(A) Both Assertion (A) and Reason (R) are true and Reason (R) is a correct explanation of Assertion (A).

(B) Both Assertion (A) and Reason (R) are true but Reason (R) is not a correct explanation of Assertion (A).

(C) Assertion (A) is true and Reason (R) is false.

(D) Assertion (A) is false and Reason (R) is true.

**2.** Assertion (A) : A pronoun is a word used instead of noun.

Reason (R) : Sometime noun acts as a pronoun.

(A) Both Assertion (A) and Reason (R) are true and Reason (R) is a correct explanation of Assertion (A).

(B) Both Assertion (A) and Reason (R) are true but Reason (R) is not a correct explanation of Assertion (A).

(C) Assertion (A) is true and Reason (R) is false.

(D) Assertion (A) is false and Reason (R) is true.

**3.** Assertion (A) : A preposition is a word or group of words used before noun or pronoun.

Reason (R) : Prepositions are used to show direction, time, Place and location.

(A) Both Assertion (A) and Reason (R) are true and Reason (R) is a correct explanation of Assertion (A).

(B) Both Assertion (A) and Reason (R) are true but Reason (R) is not a correct explanation of Assertion (A).

(C) Assertion (A) is true and Reason (R) is false.

(D) Assertion (A) is false and Reason (R) is true.

**4.** Assertion (A) : We use 'a' / 'an' with singular noun.

Reason (R) : If we say that someone or something is unique then we only article 'a'.

(A) Both Assertion (A) and Reason (R) are true and Reason (R) is a correct explanation of Assertion (A).

(B) Both Assertion (A) and Reason (R) are true but Reason (R) is not a correct explanation of Assertion (A).

(C) Assertion (A) is true and Reason (R) is false.

(D) Assertion (A) is false and Reason (R) is true.

### Q.5 to 8 are Comprehension Type Questions

**Read the passage given below and answer the questions that follow :**

It is 10 O'clock. The sun is **shining** brightly. The farmers (5) \_\_\_\_\_ working in their fields (6) \_\_\_\_\_ three hours. They usually start work at sunrise. Some of (7) \_\_\_\_\_ have taken their breakfast already. Others are doing so now. They have fed their oxen before they sit down for their own meals.

**5.** (A) has been (B) are being  
(C) have been (D) are be

**6.** (A) of (B) from  
(C) at (D) for

**7.** (A) them (B) they  
(C) their (D) None of these

**8.** Antonymous of 'Shining':

(A) Dull (B) Glowing  
(C) Clear (D) Sparkling

### Q.9 to 16 are SCQ (Single Choice Questions):

**9.** We generally \_\_\_\_\_ Football in the evening but today we \_\_\_\_\_ Hockey.

(A) play/plays  
(B) play/play  
(C) play/were playing  
(D) play/are playing

**10.** This table is made \_\_\_\_\_ wood.

(A) with (B) for  
(C) of (D) from

\*\*\*\*\*ROUGH WORK\*\*\*\*\*

11. 'Stand up.' is a/an \_\_\_\_\_ sentence.  
 (A) imperative (B) assertive  
 (C) exclamatory (D) Both (A) and (B)
12. Odhan is a big village. The underlined part is \_\_\_\_\_ .  
 (A) Subject (B) Verb  
 (C) Predicate (D) Phrase
13. Past form of 'Strike':  
 (A) Struck (B) Stroke  
 (C) Striked (D) All of these
14. He carried a small bag on the plane as the rest of the \_\_\_\_\_ was checked at the counter.  
 (A) Bag (B) bags  
 (C) luggage (D) suitcases
15. Kashmir is \_\_\_\_\_ little paradise on earth. It is known as \_\_\_\_\_ Switzerland of India.  
 (A) the/x (B) a/the  
 (C) an/x (D) x/x
16. What is the \_\_\_\_\_ news on NDTV India ?  
 (A) latter (B) later  
 (C) late (D) latest

**Q. 17 to 20 are MSQs (Multiple Selection Questions) :**

17. An adverb is used to modify \_\_\_\_\_.  
 (A) verb (B) adjective  
 (C) adverb (D) preposition
18. Choose the **correct spelt word**:  
 (A) Obediently (B) Competition  
 (C) Grammar (D) Servent
19. \_\_\_\_\_ was a better plan than \_\_\_\_\_.  
 (A) Yours / mine (B) Your / mine  
 (C) Mine/yours (D) Mine/her
20. Although he is intelligent, he failed in exam.  
 Chose the **synonymous** of underlined word:  
 (A) Smart (B) Talented  
 (C) Stupid (D) Brilliant

**MATHEMATICS**

**Assertion and Reason Questions (AR)**

21. Assertion (A): 1000 metre = 1 kilometre  
 Reason (R): 1 centimetre = 10 millimetre  
 (A) Both A and R are true and R is the correct explanation of A  
 (B) Both A and R are true but R is not the correct explanation of A  
 (C) A is true but R is false  
 (D) A is false but R is true
22. Assertion (A):- Perimeter of a regular pentagon =  $5 \times \text{length of a side}$   
 Reason (R):- The region of surface enclosed by a closed figure is called its area  
 (A) Both A and R are true and R is the correct explanation of A  
 (B) Both A and R are true but R is not the correct explanation of A  
 (C) A is true but R is false  
 (D) A is false but R is true
23. Assertion (A) : The simplest form of  $\frac{45}{20}$  is  $\frac{4}{9}$ .  
 Reason (R) : A fraction is a number representing part of a whole.  
 (A) Both A and R are true and R is the correct explanation of A  
 (B) Both A and R are true but R is not the correct explanation of A  
 (C) A is true but R is false  
 (D) A is false but R is true
24. Assertion (A) : The HCF of 36 and 24 is 12.  
 Reason (R) : HCF helps us to Reduce a fraction to its lowest form.  
 (A) Both A and R are true and R is the correct explanation of A  
 (B) Both A and R are true but R is not the correct explanation of A  
 (C) A is true but R is false  
 (D) A is false but R is true

\*\*\*\*\*ROUGH WORK\*\*\*\*\*

**25.** Assertion (A) :-  $2.75 = 2.750 = 2.7500$ .

Reason (R):- On putting any number of zeros to the extreme right side of the decimal part of a decimal, does not change the value of the decimal.

- (A) Both A and R are true and R is the correct explanation of A
- (B) Both A and R are true but R is not the correct explanation of A
- (C) A is true but R is false
- (D) A is false but R is true

**26.** Assertion (A):- X has vertical line of symmetry

Reason (R):- The symmetry of an object is defined as one half of the object is a mirror image of the other half

- (A) Both A and R are true and R is the correct explanation of A
- (B) Both A and R are true but R is not the correct explanation of A
- (C) A is true but R is false
- (D) A is false but R is true

**27.** Assertion (A):- A line contains a countless number of points

Reason (R):- Line extends indefinitely in both directions.

- (A) Both A and R are true and R is the correct explanation of A
- (B) Both A and R are true but R is not the correct explanation of A
- (C) A is true but R is false
- (D) A is false but R is true

**28.** Assertion (A) : The diagonal of a square bisect each at  $90^\circ$ .

Reason (R) : Square have 4 sides.

- (A) Both A and R are true and R is the correct explanation of A
- (B) Both A and R are true but R is not the correct explanation of A
- (C) A is true but R is false
- (D) A is false but R is true

**29.** Assertion (A):- A pyramid is a shape with a single base, the other faces are triangles

Reason (R):- The flat surface which makes all the sides of the cube is known of the face.

- (A) Both A and R are true and R is the correct explanation of A
- (B) Both A and R are true but R is not the correct explanation of A
- (C) A is true but R is false
- (D) A is false but R is true

**30.** Assertion (A):-  $5\text{m} = 500\text{mm}$

Reason (R):- Length is a measure of how long an object is or the distance b/w two points.

- (A) Both A and R are true and R is the correct explanation of A
- (B) Both A and R are true but R is not the correct explanation of A
- (C) A is true but R is false
- (D) A is false but R is true

### Comprehensive Type Questions

**Direction:-** A child was given 5 quiz tests and the scores of his were recorded as follows:

$-3, 7, 0, -2, 6$

**31.** What is the lowest score the child got?

- (A)  $-3$
- (B)  $-2$
- (C)  $0$
- (D)  $6$

\*\*\*\*\*ROUGH WORK\*\*\*\*\*



32. What is the difference between the highest and the lowest score?

- (A) 4 (B) -4 (C) -10 (D) 10

33. Which integer lies to the extreme left—on the number line?

- (A) -2 (B) 0 (C) -3 (D) 7

34. Find the sum of -3, 7, 0, -2, 6

- (A) -4 (B) 8  
(C) 4 (D) None of these

35. Successor of -3 is

- (A) -2 (B) -1  
(C) 4 (D) None of these

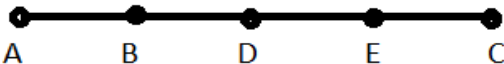
**Single Choice Question (SCQs)**

36. Which of the following is an even prime number?

- (A) 0 (B) 1 (C) 2 (D) 3

37. What is the value of CLXVI?

- (A) 146 (B) 156 (C) 166 (D) 170

38. 

in the figure, how many line segments are there?

- (A) 10 (B) 8 (C) 6 (D) 4

39. Sum of -30 and -12 is

- (A) 42 (B) -18 (C) -42 (D) 18

40.  $4 + 4.44 + 44.4 = ?$

- (A) 52.08 (B) 50.48 (C) 52.84 (D) 5.284

41. Find  $x$  if  $3:7 = 6:x$

- (A) 14 (B) 12 (C) 11 (D) 15

42. What is the perimeter of regular hexagon having each side 6.5cm?

- (A) 39cm (B) 38cm (C) 42cm (D) 46cm

43.  $4x - 2 = 3x + 6$ ; value of  $x$  -

- (A) 12 (B) 3 (C) 8 (D) 4

44. The number of lines of symmetry in a circle is

- (A) 0 (B) 2  
(C) 4 (D) More than 4

45. The side of square is 25m. find the diagonal of the square.

- (A)  $24\sqrt{2}$ m (B)  $25\sqrt{2}$ m  
(C)  $33\sqrt{2}$ m (D)  $50\sqrt{2}$ m

46. If Dividend = 19587, Divisor = 156, Remainder = 87 find the quotient

- (A) 150 (B) 75 (C) 125 (D) 110

47. Add :

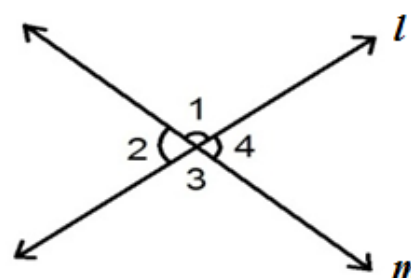
$a^2 + b^2 + c^2, -c^2 + b^2 + a^2$  and  $-a^2 - b^2 + c^2$

- (A)  $a^2 + b^2 + 2c$  (B)  $a^2 + b^2 + c^2$   
(C)  $a^2 + b^2 + c^2$  (D)  $a + b^2 + c^2$

48. A:B = 2:3, B:C = 2:3 find A:B:C

- (A) 4:6:11 (B) 4:6:9  
(C) 2:3:9 (D) 2:3:6

49. If  $\angle 1 = 135^\circ$ , then, find complement of  $\angle 2$ , respectively.



- (A)  $45^\circ$  (B)  $135^\circ$  (C)  $60^\circ$  (D)  $90^\circ$

50. Which by the following values are equal

- (i)  $1^4$  (ii)  $4^\circ$  (iii)  $0^4$  (iv) 4  
(A) i and ii (B) ii and iii  
(C) i & iii (D) i & iv

51. The area of a square is  $64\text{cm}^2$ . Then its perimeter is

- (A) 65cm (B) 32cm (C) 46cm (D) 48cm

52. If 12 men could complete a work in 16 days, then in how many days, 3 men will complete the same work?

- (A) 60 (B) 64 (C) 75 (D) 50

53. The difference between the length and the breadth of a rectangle is 8cm and the perimeter is 64cm, which of the following can be the length and breadth of the rectangle?

- (A) L = 12cm, B = 4cm (B) L = 20cm, B = 8cm  
(C) L = 20cm, B = 12cm (D) L = 12cm, B = 8cm

54. In a college, the ratio of the number of boys to girls is 8:5. If there are 500 girls, the total number of students in the college is

- (A) 1200 (B) 1300  
(C) 800 (D) 720

\*\*\*\*\*ROUGH WORK\*\*\*\*\*

55. Four bells ring at intervals of 6,8,12 and 20 minutes. They ring simultaneously at 7a.m. At what time will they ring together next?

- (A) 8 a.m. (B) 9 a.m.  
(C) 10 a.m. (D) 9:30 am

56. The number of rectangles that can drawn with 18 cm as the perimeter is

- (A) 6 (B) 4 (C) 3 (D) 5

57. The cost of flooring a room at Rs 16 per square meter is Rs 480. The area of the floor is

- (A) 35 sq.m (B) 40 sq.m  
(C) 30 sq.m (D) 25 sq.m

58. 20 stickers are divided between Hema and Rekha in the ratio 3:7, How many more stickers does Rekha have?

- (A) 14 (B) 6 (C) 8 (D) 4

59. A figure formed by two rays with a common initial point is

- (A) a line segment (B) A line  
(C) a ray (D) an angle

60. How many  $\frac{1}{10}$  together make 1?

- (A) 10 (B) 1 (C) 100 (D) 1000

#### Multiple Selection Questions

61. Which of the following statements is /are true

- (A) In a rhombus diagonals bisect each other at right angle  
(B) The diagonals of a rectangle are equal  
(C) The diagonals of a parallelogram bisect each other  
(D) Each angle of a square is  $60^\circ$

62.  $6x - 1 = 2x + 9$  then value of  $x$

- (A)  $5/2$  (B)  $-5/2$   
(C)  $-2\frac{1}{2}$  (D)  $2\frac{1}{2}$

63. Which of the following statement is/are not true.

- (A) If a number is divisible by 3, It must be divisible by 9  
(B) If a number is divisible by 9, It must be divisible by 27  
(C) If a number is divisible by 9, It must be divisible by 3  
(D) If a number is divisibly by 27, It must be divisible by 9

64. If the angles of a triangle are in the ratio 2 : 3 : 4, then the difference between the greatest and smallest angle is

- (A)  $10^\circ$   
(B) Complement angle of  $50^\circ$   
(C)  $40^\circ$   
(D)  $30^\circ$

65. Factorise :  $9a^2 - 6ax$

- (A)  $a(9a + 6x)$  (B)  $3a(3a + 2x)$   
(C)  $3a(3a - 2x)$  (D)  $a(9a - 6x)$

66. Circumference of a circle is equal to

- (A)  $\pi r$  (B)  $\pi d$  (C)  $\pi r^2$  (D)  $2\pi r$

67. Which of the following is a proper fraction:

- (A)  $\frac{1}{2}$  (B)  $\frac{7}{8}$   
(C)  $\frac{5}{2}$  (D)  $2\frac{1}{3}$

68. Which number is equal to  $\left(\frac{0.1}{0.01} + \frac{0.01}{0.1}\right)$

- (A) 10.1 (B) 10.10  
(C)  $\frac{101}{10}$  (D) 10.01

69.  $16 : 24 = \text{-----}$

- (A) 2:3 (B) 22:33  
(C) 18:27 (D) None of these

70. The smallest positive integer is

- (A) 0 (B)  $100^\circ$  (C) 1 (D) 9

\*\*\*\*\*ROUGH WORK\*\*\*\*\*

## PHYSICS

### **Assertion/Reason questions (Q.71 to Q.74)**

**Directions:-** The questions from 71 to 74 below consist of an assertion and a Reason. Use the following key to choose the appropriate answer.

- (A) Both A and R are True and R is the correct explanation of A.  
(B) Both A & R are true but R is not the correct explanation of A  
(C) A is true but R is false  
(D) A is false but R is true

**71.** Assertion (A): A domestic electric appliance working on a three pin, will continue working even if the top pin is removed.

Reason (R): The third pin is used only for safety purpose

**72.** Assertion (A): A simple magnetic compass can be prepared by inserting a magnetised iron needle in a piece of cork and allow the cork to float in water kept in a bowl.

Reason (R) : In the above arrangement, the needle must touch water while floating.

**73.** Assertion (A) :- In a closed circuit, the electric current passes from one terminal of the electric cell to the other terminal.

Reason (R) :- Switch is a simple device that is used to either break the electric circuit or to complete it.

**74.** Assertion (A) :- When the light from a source falls on a mirror it gets reflected.

Reason (R) : On being reflected there is no change in the direction of light.

### **Comprehension type questions (Q.75 to Q.78)**

**Direction :** The questions from 75 to 78 have to be answered from the following paragraph.

Observe a tailor working on a sewing machine. The sewing machine remains at the same location while its wheel moves with a circular motion. It also has a needle that moves up and down continuously, as long as wheel rotates.

**75.** The up and down motion of the needle of sewing machine can be classified as:-

- (A) Circular motion (B) Periodic motion  
(C) Rotatory motion (D) None of these

**76.** Select, that remains at rest when you were making the above observation.

- (A) Tailor  
(B) sewing machine  
(C) Both tailor and sewing machine  
(D) None of the above

**77.** In this observation the circular motion was observed in:-

- (A) Wheel of machine (B) Needle of machine  
(C) Both (A) and (B) (D) None of these

**78.** The motion in which an objects repeats its motion after a fixed interval of time.

- (A) Rotational motion (B) Circular motion  
(C) Periodic motion (D) None of these

### **Single choice questions (Q.79 to Q.86)**

**79.** When an opaque object comes in path of light it forms

- (A) an image with colours  
(B) shadow  
(C) white and black image  
(D) depends on colour of the light

**80.** Bulb glows only in

- (A) closed circuit  
(B) open circuit  
(C) both a and b  
(D) open circuit if bulb is not fused

\*\*\*\*\*ROUGH WORK\*\*\*\*\*

**81.** Sumit puts some water into four cups made of steel, porcelain, grass and forested glass. Which one of these cups will allow him to see level of water clearly?

- (A) Porcelain glass cup (B) Frosted glass up  
(C) Steel cup (D) Glass cup

**82.** The invention of which of the following has made a great change in modes of transport ?

- (A) Wheet (B) Steam engine  
(C) Fire (D) Taming animals

**83.** Which among the following is in motion?

- (A) clock (B) hands of the clock  
(C) both of them (D) none of them

**84.** Take a comb in your right hand and bring it to your hair and look at yourself in mirror. You can see your own face in the mirror. This is your mirror image. In your mirror image you appear to be holding the comb in your

- (A) left hand (B) right hand  
(C) comb is not visible (D) None of these

**85.** Which of the following is not a luminous object

- (A) Unlit candle (B) Glow worm  
(C) Sun (D) Burning gas lantern

**86.** The colored plasting covering on an electric wire makes it

- (A) More attractive  
(B) Resistance to corrosion  
(C) Long lasting (D) Safe to touch

#### Multiple Selection Questions (Q.87 to Q.90)

**87.** A student of MM Memorial School appears in IIT Jee Exam, the room allotted to him for giving exam has the dimensions. 40 m x 40 m x 3 m. Choose the correct options regarding dimension in other units

- (A) 40 cm × 40 cm × 3 cm  
(B) 4000 cm × 4000 cm × 300 cm  
(C) 400 dm × 400 dm × 30 dm  
(D) 0.04 km × 0.04 km × 0.003 km

(∴ M → meter, Cm → Centimeter, dm → decimeter, km → kilometer)

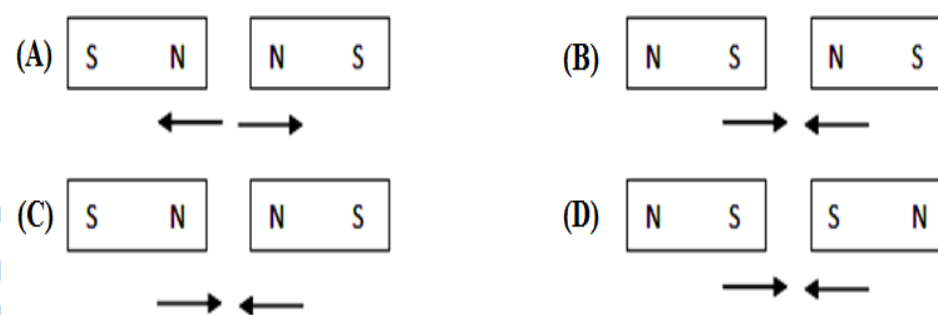
**88.** Choose the correct statements

- (A) Objects which can emit their own light are known as luminous objects  
(B) When you are able to see clearly through an object then this object must be transparent in nature  
(C) When you are not able to see clearly through an object than such objects are called Translucent  
(D) Opaque objects do not allow light to pass through them while translucent objects allow light to pass through them partially

**89.** Choose the correct statements

- (A) North – North poles may attract each other  
(B) North – South poles may attract each other  
(C) Magnet can loose its magnetic strength on heating, hammering etc  
(D) Magnetic compass has a non magnetised needle pivoted inside a Box.

**90.** Choose the Incorrect options



#### CHEMISTRY

##### Assertion/Reason questions

Directions:- The questions from 91 to 94 below consist of an assertion and a Reason. Use the following key to choose the appropriate answer.

- (A) Both A and R are True and R is the correct explanation of A.  
(B) Both A & R are true but R is not the correct explanation of A  
(C) A is true but R is false  
(D) A is false but R is true

**91.** Assertion (A):- Evaporation can be used to separate a solid dissolved in a liquid.

Reason (R):- Evaporation is the process in which liquid gets converted into its vapour

\*\*\*\*\*ROUGH WORK\*\*\*\*\*



**92.** Assertion (A):- Objects be sorted based on their colour, shape, size and weight  
Reason (R):- Sorting is method of arranging items into groups or sets on the basis of their properties

**93.** Assertion (A):- The materials which can be compressed or stretched easily are called soft.  
Reason (R):- The space between the particles of a solid is negligible

**94.** Assertion (A):- We should drink plenty of water.  
Reason (R):- Milk is not rich in nutrients.

**Comprehension types questions:-**

**Directions:-** The questions from 95 to 98 have to be answered from the following paragraph.

You are asked to add two spoons of solid salt to some liquid water taken in a beaker. On stirring, if you find that whole of the salt has disappeared and only liquid can be seen in beaker.

**95.** After stirring the salt completely disappears & you can see only liquid in a beaker. The liquid in beaker is:-

- |            |              |
|------------|--------------|
| (A) Water  | (B) Solution |
| (C) Solute | (D) Solvent  |

**96.** Which of the following processes will be useful to get salt from this solution?

- |                  |                   |
|------------------|-------------------|
| (A) Condensation | (B) Evaporation   |
| (C) Filtration   | (D) Sedimentation |

**97.** Which process can you use to get liquid water from the water vapours if you collect them in another container?

- |                   |                 |
|-------------------|-----------------|
| (A) Sedimentation | (B) Evaporation |
| (C) Condensation  | (D) Filtration  |

**98.** Clouds in the atmosphere form because:-

- (A) The water vapour freezes  
(B) The water vapour becomes cold and condenses into a liquid.  
(C) The water vapour becomes warm & condenses into liquid  
(D) The water vapour evaporates

**Single Choice Questions (SCQs)**

**99.** Which of the following materials do not has lustre?

- (A) Iron      (B) Gold      (C) Silver      (D) Wood

**100.** Which of the following process is used to separate grains from stalks?

- (A) Threshing      (B) Winnowing  
(C) Hand picking      (D) All of the above

**101.** Which of the gases make up about 99% of the air?

- (A) Oxygen and carbon dioxide  
(B) Carbon dioxides & Nitrogen  
(C) Nitrogen and oxygen  
(D) Nitrogen and Ozone

**102.** Correct order of abundance of various gases in air?

- (A) Nitrogen > Oxygen > Carbondioxide > Argon  
(B) Nitrogen > Oxygen > Argon > Carbondioxide  
(C) Oxygen > Nitrogen > Carbondioxide > Argon  
(D) Carbon dioxide > Nitrogen > Oxygen > Argon

**103.** Which of the following statement is incorrect:-

- (A) Some materials appear shiny, while others appear dull.  
(B) Some materials are rough while others are smooth  
(C) Certain materials are hard while others are soft  
(D) Some stones are transparent while some glasses are opaque

**104.** Why do you feel cool after you start sweating ?

- (A) Evaporation of water droplets.  
(B) Condensation of water droplets.  
(C) Freezing of water droplets.  
(D) Solidification of salts in the water droplets.

**105.** Dissolving sugar in water is a:-

- (A) Combination reaction  
(B) reversible change  
(C) Decomposition reaction  
(D) Periodic change

**106.** Which one of the following gas does not form a part of the atmosphere?

- |                   |              |
|-------------------|--------------|
| (A) Nitrogen      | (B) Chlorine |
| (C) Carbondioxide | (D) Oxygen   |

\*\*\*\*\*ROUGH WORK\*\*\*\*\*

### Multiple Selection Questions (MSQs)

- 107.** Which of the following is a miscible liquid?  
(A) Ink and water (B) Petrol and water  
(C) Oil and water (D) Milk and water
- 108.** You are provided with the following materials.  
Identify which of the following above materials as transparent?  
(A) magnifying glass (B) mirror  
(C) stainless steel (D) glass tumbler
- 109.** Which of the following substance would float in a tumbler half filled with water?  
(A) Coin (B) Feather  
(C) Thermocol (D) Plastic ball
- 110.** Which of the following are pure substances ?  
(A) Copper (B) Sugar solution  
(C) Water (D) Gold

### BIOLOGY

#### Assertion/Reason questions

**Directions:-** The questions from 111 to 114 below consist of an assertion and a Reason. Use the following key to choose the appropriate answer.

- (A) Both A and R are True and R is the correct explanation of A.  
(B) Both A & R are true but R is not the correct explanation of A  
(C) A is true but R is false  
(D) A is false but R is true

- 111.** Assertion (A):- The elbow joint is a hinge joint.  
Reason (R):- Hinge joint allows movement in one plane only.
- 112.** Assertion (A) – Plants are usually grouped into herbs, shrubs and trees  
Reason (R) – The plants are classified on the basis of their height, nature of stem and branches.

- 113.** Assertion (A):- Obesity occurs when one takes more food than requirements.  
Reason (R):- The extra food gets stored as fat and the person becomes too fat.
- 114.** Assertion(A):- Deer has strong teeth & long ears.  
Reason(R):- The speed of deer helps them to run from prey.

#### Comprehension Type Questions

**Directions :-** The questions from 115 to 118 have to be answered from the following paragraph.

Abiotic factors like air, water, light and heat are important for the growth of plants. In fact, abiotic factors are important for all living organisms. We find that organisms exist in very cold as well very hot climates, this is because they manage to survive through adaptation.

Adaption is the method by which organisms get well adjusted to the climate. Adaptation does not take place in a short time because the abiotic factors of a region also change very slowly. Those organisms which cannot adapt to these changes die and only the adopted ones survive. Organisms adapt to different abiotic factors in different ways. This results in a wide variety of organisms in different habitats.

- 115.** Adaptation can happen in a short span of time.  
(A) True  
(B) False  
(C) Not defined  
(D) None of the above
- 116.** Which of the following is NOT an Abiotic factor?  
(A) Human beings (B) Air  
(C) Water (D) Heat
- 117.** \_\_\_\_\_ helps organisms to exist in extreme climates.  
(A) Abiotic components (B) Habitats  
(C) Adaptation (D) None of the above

\*\*\*\*\*ROUGH WORK\*\*\*\*\*

- 118.** Animals and plants have certain features which make them to survive in a particular habitat. This is called:-  
 (A) Adaptation (B) Speciation  
 (C) Specialisation (D) Evolution

**Single Choice questions (Q.119 to Q.126)**

- 119.** Which is correct set of parts of gynoecium  
 (A) ovary, style, filament  
 (B) ovary, style, stigma  
 (C) ovary, anther, filament  
 (D) filament and Anther
- 120.** Excessive intake of calcium in our diet results in \_\_\_\_\_.  
 (A) Stroke (B) Diarrhoea  
 (C) Constipation (D) Kidney stones
- 121.** When the organic matter present in the sanitary landfill decomposes, it generates  
 (A) Methane (B) Nitrogen  
 (C) Hydrogen (D) All of the above
- 122.** Air plants that grow upon other plant for physical support.  
 (A) Epiphytes (B) Hydrophytes  
 (C) Aerial animals (D) None of the above
- 123.** Certain changes in an organism occur over a short period of time. They help to adjust to the changes in its surroundings. This is called  
 (A) Puberty (B) Adaptation  
 (C) Acclimatization (D) None
- 124.** Which of the following plants have parallel venation in its leaves?  
 (A) Mustard (B) Mango tree  
 (C) Banana (D) Chino rose
- 125.** Joints that allows only a back and forth movement is called  
 (A) Ball & Socket joint (B) Pivotal joint  
 (C) Hinge joint (D) Fixed joint

- 126.** The habitat of a lion is  
 (A) terrestrial habitat (B) forest habitat  
 (C) grass land habitat (D) All of the above

**Multiple Selection questions (Q.127 to Q.130)**

- 127.** 3 R means  
 (A) recycling (B) reuse  
 (C) recot (D) reduce
- 128.** Which of the following food item produce dietary fibres  
 (A) Pulses (B) Whole grains  
 (C) Fruits and vegetables (D) Milk
- 129.** Which of the following has fibrous root?  
 (A) Peas (B) Wheat  
 (C) Neem (D) Rice
- 130.** Which of the following statements are correct  
 (A) Biodegradable house – hold wastes can increase soil fertility  
 (B) Planting of trees can help in preventing soil erosion.  
 (C) Tidal energy is produced from water geysers.  
 (D) Terrace farming helps in preventing soil erosion.

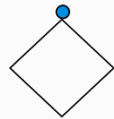

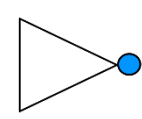
**MENTAL ABILITY**

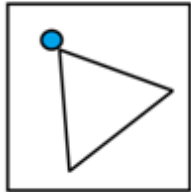
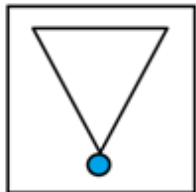


- 131.** Arrange the following words in a logical sequence.  
 1. State 2. Country 3. Town  
 4. Continent 5. District  
 (A) 4, 3, 1, 2, 5 (B) 5, 4, 3, 2, 1  
 (C) 3, 5, 1, 2, 4 (D) 3, 2, 4, 1, 5
- 132.** How many such symbols are there in the given arrangement, each of which is immediately preceded by a number and immediately followed by a consonant?  
**R 5 M E % 4 W 1 A 2 D # K \$ 3 P 9 @ F B © 8 J I**  
**7 \* H 6 Q V Y**  
 (A) One (B) Two  
 (C) Three (D) More than three

\*\*\*\*\*ROUGH WORK\*\*\*\*\*

**Direction (Q.133) :** Arrange the following words as per their order in the dictionary

133. 1. Divide                      2. Divisions                      3. Divine  
4. Divest                      5. Direct  
(A) 5, 4, 3, 2, 1                      (B) 5, 4, 1, 3, 2  
(C) 1, 2, 3, 4, 5                      (D) 3, 5, 4, 1, 2

134. If  is related to , the  is related to \_\_\_\_\_.

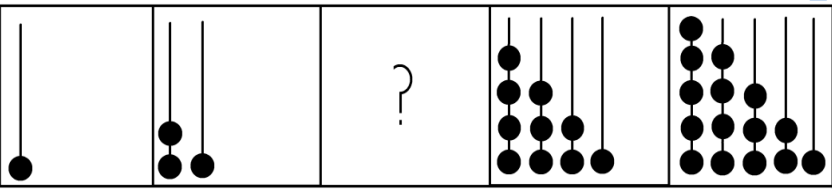
- (A)  (B)   
(C)  (D) 

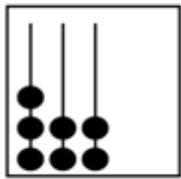
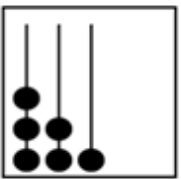
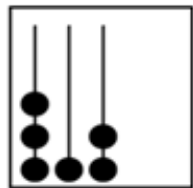
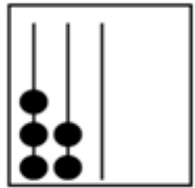
135. Choose the number which will replace the question mark.

1234 : 10 :: 6789 : ?

- (A) 30                      (B) 15                      (C) 26                      (D) 35

136. Which of the following option will continue the given series ?



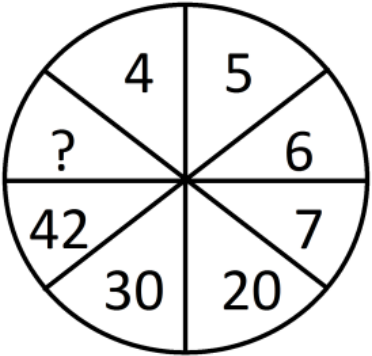
- (A)  (B)   
(C)  (D) 

137. Which of the following option will continue the given series ?

3, 7, 15, 27, 43, ?

- (A) 52                      (B) 61  
(C) 71                      (D) 63

138. Find the missing number, if a certain rule is followed in the figure.



- (A) 13                      (B) 43  
(C) 56                      (D) 29

139. Praveen walked 30 metres towards East, took a right turn and walked 20 metres, again took a right turn and walked 30 meters. How far is he from his starting point?

- (A) 35 metres  
(B) 80 metres  
(C) 20 metres  
(D) 30 metres

140. Ayan walks 20 m north from his house, turn right and walks 10 m, turns left and walks 15 m reach his grandfather's house. In which direction is his grandfather's house from his house?

- (A) South – West  
(B) North – East  
(C) East  
(D) North

141. Pointing towards a boy, Namrata says, "He is the son of my grandfather's only child. How is the boy related to Namrata ?

- (A) Brother                      (B) Cousin  
(C) Uncle                      (D) Data inadequate

\*\*\*\*\*ROUGH WORK\*\*\*\*\*



142. While going to his office P meets a man Q who is related to P, because P has R, a son, who is married to T. T is the daughter of Q. T has a daughter A. How is P related to A?  
 (A) Grandfather (B) Grandmother  
 (C) Uncle (D) Father – in – law

143. Find the water image of the given figure (X).

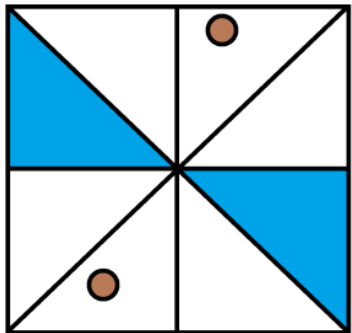
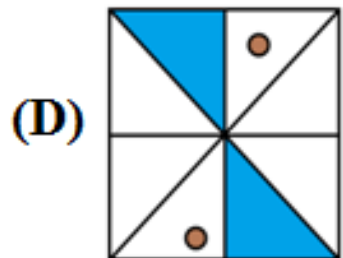
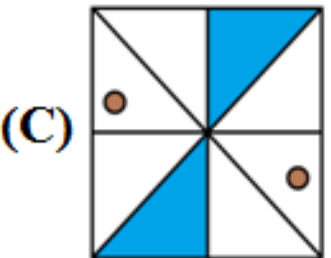
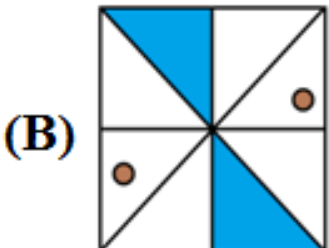
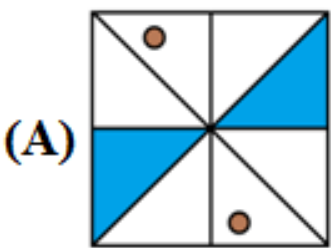


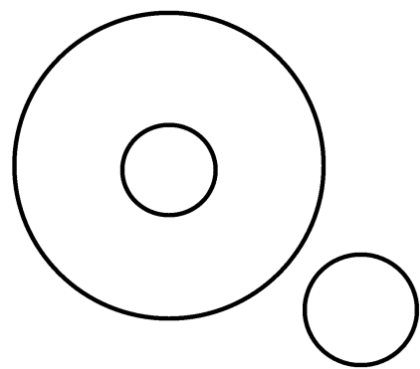
Fig. (X)



144. If ‘\$’ means ‘+’, ‘#’ means ‘-’, ‘@’ means ‘x’ and ‘\*’ means ‘÷’, what is the value of  
 32 \$ 8 @ 10 # 144 \* 16?  
 (A) 103 (B) 112  
 (C) 136 (D) 99
145. If ‘M’ means ‘multiplied by’, ‘U’ means ‘subtracted from’, ‘S’ means ‘added to’ and ‘V’ means ‘divided by’, what is the value of 28 V 7 M 8 U 6 S 4 ?  
 (A) 34 (B) 32  
 (C) 30 (D) 42
146. If P = 6, J = 4, L = 8 and M = 24, the value of  $M \div L \times J + P$  is –  
 (A) 16 (B) 0  
 (C) 36 (D) 18
147. If in a certain code, O is written as P, A as B, M as N, S as T and so on, then how will COMPANIES be written in that code?  
 (A) DPNQBOJFT (B) DPNQBJOFT  
 (C) DPOQBPIES (D) DPNQBOJET
148. If T = 19 and TRUE = 60, then TRUTH = \_\_\_\_\_.  
 (A) 75 (B) 82  
 (C) 78 (D) 80
149. In a certain code, RAID is written as \$%#\* and RIPE is written as \$#£©. How is DEAR written in that code?  
 (A) \*©%\$ (B) %\*#\$  
 (C) #%\*\$ (D) ©#\*£

\*\*\*\*\*ROUGH WORK\*\*\*\*\*

150. Which of the following elements satisfies the Venn diagram given here?



- (A) Teacher, College, Student
- (B) Father, Mother, Parents
- (C) Judge, Thief, Criminal
- (D) Polygons, Rectangles, Squares

\*\*\*\*\*ROUGH WORK\*\*\*\*\*