

## **VERBAL REASONING**

Complete the sentences by choosing the best option, from the given lettered choices (A to D) below each.

1. I imagine Sally was about \_\_\_\_\_ when I asked her to type a letter for me.

- A. having left
- B. to be leaving
- C. to have left
- D. to leave

2. It is widely believed \_\_\_\_ watching television too much isn't healthy for children.

- A. that
- B. when
- C. where
- D. which

Four lettered pairs (A to D) follow a related pair of words given in the question. Select the lettered pair that best expresses a relationship similar to that expressed in the original pair in capital letters.

3. UNIQUE: UNCOMMON::

- A. bitter: delicious
- B. disgusting: unpleasant
- C. pleasant: unkind
- D. spicy: powerful

4. SUGGEST: DEMAND::

- A. deny: request
- B. give: receive
- C. question: answer
- D. take: grab

Choose the lettered word or phrase that is MOST NEARLY OPPOSITE in meaning to the word in capital letters.

5. The jury was BIASED and not \_\_\_\_\_.

- A. educated
- B. expert
- C. neutral
- D. qualified

**Choose the lettered word or phrase that is MOST NEARLY SIMILAR in meaning to the word in capital letters.**

**6. In school since he is known to be a CRUEL and often behaves \_\_\_\_\_.**

- A. badly
- B. consistently
- C. greedily
- D. violently

**Questions 7-8 are based on the following paragraph.**

A cruel lion lived in the forest. Every day, he killed and ate a lot of animals. The other animals were afraid the lion would kill them all. The animals told the lion, "Let's make a deal. If you promise to eat only one animal each day, then one of us will come to you every day. Then you don't have to hunt and kill us." The plan sounded well-thought-out to the lion, so he agreed, but he also said, "If you don't come every day, I promise to kill all of you the next day!" Each day after that, one animal went to the lion so that the lion could eat it. Then, all the other animals were safe. Finally, it was the rabbit's turn to go to the lion. The rabbit went very slowly that day, so the lion was angry when the rabbit finally arrived. The lion angrily asked the rabbit, "Why are you late?" "I was hiding from another lion in the forest. That lion said he was the king, so I was afraid." The lion told the rabbit, "I am the only king here! Take me to that other lion, and I will kill him." The rabbit replied, "I will be happy to show you where he lives." The rabbit led the lion to an old well in the middle of the forest. The well was very deep with water at the bottom. The rabbit told the lion, "Look in there. The lion lives at the bottom." When the lion looked into the well, he could see his own face in the water. He thought that was the other lion. Without waiting another moment, the lion jumped into the well to attack the other lion. He never came out. All of the other animals in the forest were very pleased with the rabbit's clever trick.

**7. What is this story about?**

- A. How a clever rabbit tricked a cruel lion
- B. How a rabbit pleased an angry lion
- C. How rabbits learned to hide from lions
- D. How to be safe when you hunt in the forest

**8. Why did the rabbit take the lion to the well in the middle of the forest?**

- A. So a lot of animals could see the rabbit walking with the lion**
- B. So the lion could attack the “other” lion**
- C. So the lion could drink water**
- D. So the other animals would be afraid of the rabbit**

SAMPLE PAPER-USAT-PRE-ENGINEERING

## QUANTITATIVE REASONING

9. Evaluate  $[31 + (-48)] + 2[-16 - (-120)] = \underline{\hspace{2cm}}$ .

- A. -289
- B. -191
- C. 191
- D. 289

10. A train is moving with a speed of 60Km/h crosses a pole in 9 seconds. The length of train is  $\underline{\hspace{2cm}}$ .

- A. 25m
- B. 140m
- C. 150m
- D. 175m

11. The sum of roots of equation  $x^2 + 8x + 9 = 0$  is  $\underline{\hspace{2cm}}$ .

- A. -9
- B. -8
- C. 8
- D. 9

12. The interior angles of a hexagon are in ratio 1:3:5: 7:2:6. The measure of smallest angle is  $\underline{\hspace{2cm}}$ .

- A.  $15^\circ$
- B.  $30^\circ$
- C.  $60^\circ$
- D.  $90^\circ$

13. If  $B:A = 3:7$  and  $A:C = 4:3$  then  $A:B:C = \underline{\hspace{2cm}}$ .

- A. 28 : 12 : 21
- B. 12 : 21 : 28
- C. 12 : 28 : 21
- D. 21 : 28 : 12

14. If 4200 men have sufficient food for 32 days at a rate of 12 hectogram per person. For how many men the same food be sufficient for 42 days at a rate of 12 hectogram per person?

- A. 2400
- B. 2800
- C. 3200
- D. 5512

## **PHYSICS**

**15. Which one of the following is also known as Law of inertia?**

- A. Newton's First Law
- B. Newton's Law of Interference
- C. Newton's Second Law
- D. Newton's Third Law

**16. The energy possessed by a spinning body about its axis with constant angular velocity is called as \_\_\_\_\_ energy.**

- A. kinetic
- B. potential
- C. rotation kinetic
- D. rotation potential

**17. Which one of the following phenomena's is found prominent when the wavelength of light is large as compared with the size of the obstacle?**

- A. Diffraction of light
- B. Interference of light
- C. Reflection of light
- D. Refraction of light

SAMPLE PAPER-USAT-PRE-ENGINEERING

## **CHEMISTRY**

**18. The conversion of a gas into a liquid requires \_\_\_\_\_ pressure and \_\_\_\_\_ temperature.**

- A. high ... high
- B. high ... low
- C. low ... high
- D. low ... low

**19. Which one of the following is an ionic solid?**

- A. Mg
- B. MgO
- C. SiC
- D. SiO<sub>2</sub>

**20. The electronic configuration  $1s^2, 2s^2, 2p^6$  belongs to \_\_\_\_\_.**

- A. fluorine
- B. neon
- C. nitrogen
- D. oxygen

SAMPLE PAPER-USAT-PRE-ENGINEERING

## MATHEMATICS

21.  $(\cos \pi + i \sin \pi)^{\frac{1}{6}} = \underline{\hspace{2cm}}$ .

- A.  $(\sqrt{3} + i)/2$
- B.  $(1 - i\sqrt{3})/2$
- C.  $(1 + i\sqrt{3})/2$
- D.  $(-1 + i\sqrt{3})/2$

22. "All numbers are even" is a false statement then true statement is       .

- A. all numbers are not even
- B. all numbers are odd
- C. some numbers are not even
- D. some numbers are odd

23. If  $a_{n-3} = 2n - 7$  then  $a_n = \underline{\hspace{2cm}}$ .

- A.  $2n - 11$
- B.  $2n - 1$
- C.  $2n + 1$
- D.  $2n + 11$

### ANSWER KEY

<b>1</b>	<b>D</b>	<b>7</b>	<b>A</b>	<b>13</b>	<b>A</b>	<b>19</b>	<b>B</b>
<b>2</b>	<b>A</b>	<b>8</b>	<b>B</b>	<b>14</b>	<b>C</b>	<b>20</b>	<b>B</b>
<b>3</b>	<b>B</b>	<b>9</b>	<b>C</b>	<b>15</b>	<b>A</b>	<b>21</b>	<b>A</b>
<b>4</b>	<b>D</b>	<b>10</b>	<b>C</b>	<b>16</b>	<b>C</b>	<b>22</b>	<b>C</b>
<b>5</b>	<b>C</b>	<b>11</b>	<b>B</b>	<b>17</b>	<b>A</b>	<b>23</b>	<b>B</b>
<b>6</b>	<b>D</b>	<b>12</b>	<b>B</b>	<b>18</b>	<b>B</b>		

**Note:** Write two essays (one argumentative and one narrative) on the following topics either in English or in Urdu language on the given sheet.

نوت: نیچے دیئے گئے دونوں سوالات فراہم کردہ شیٹ پر اردو یا انگریزی زبان میں حل کریں۔

**24. Write an argumentative essay on any one of the following topics.** 15 Marks

- I. Does technology limit creativity?
- II. Are standardize tests effective?
- III. Can we reduce poverty in Pakistan?

مندرجہ ذیل میں سے ۱۵ نمبر

- کسی ایک عنوان پر مضمون لکھیں۔
- I. کیا ٹیکنالوجی تخلیقی صلاحیتوں کو محدود کرتی ہے؟
  - II. کیا معیاری ٹیسٹ موثر ہیں؟
  - III. کیا ہم پاکستان میں غربت کم کر سکتے ہیں؟

**25. The beginnings of three narrative essays are given below. Select anyone beginning and write the complete essay** 10 Marks

- I. A day at the Amusement Park.
- II. The novel that touched me the most.
- III. A time when you experienced something truly frightening.

مندرجہ زیل مضمایں کے عنوانات میں سے ایک شروعات چن کر مکمل مضمون تحریر کریں۔

- ۱۰ نمبر
- I. ایک دن تفریح پارک میں۔
  - II. وہ ناول جس نے مجھے سب سے زیادہ متاثر کیا۔
  - III. ایک ایسا وقت جب آپ نے واقعی خوفناک چیز کا تجربہ کیا۔