Sample Paper GAT A

Instructions

Total number of Sections = 03
Total number of Questions = 29
Time Allowed = 35 minutes

The Sample Paper is totally MCQ Based, consisting of Question statements and four/five (i.e. A-D/E) Answer choices. You have to select the correct answer choice.

Instructions about Answer Sheet + Right Answer Keys are at the end of Exercise.

Note: This sample paper does not include quantitatively the same number of questions as there would be in actual paper. This is merely meant to provide conceptual guidance to the users or prospective candidates.

VERBAL

This section assesses the skills of English Language. Main stress of this section is on the grammar, vocabulary and reading comprehension.

Complete the sentences by choosing the most appropriate word, from the given lettered choices (A to D) below each.

1. Ocean currents play a _____ role in setting long-term climate_____.

    A.   vital ... date
    B.   important ... variations
    C.   major ... patterns
    D.   unusual ... changes

Each question below consists of a related pair of words, followed by five lettered pairs of words. Select the lettered pair that best expresses a relationship similar to that expressed in the original pair.

2. LIQUID: HYDRAULICS::

    A.   motion: dynamics
    B.   water: hydroponics
    C.   data: statistics
    D.   music: eurythmics

Read the passage to answer question 3-8

No actual black hole has yet been located or studied, but the concept has provided endless imaginative fodder for science fiction writers and endless theoretical fodder for physicists and astrophysicists.
Black holes are one of the more exotic theoretical manifestations of general relativity. The standard model for the formation of a black hole involves the collapse of a large star. For extremely massive stars that are four to five times the mass of our sun, the exclusion principle—the resistance between the molecular particles within the star as they are compressed—will not be strong enough to offset the gravity generated by the star's own mass. The star's increasing density will overwhelm the exclusion principle. What follows is runaway gravitational collapse. With no internal force to stop it, the star will simply continue to collapse in on itself, until it reaches a point of infinite density and zero volume, a phenomenon known as a singularity.
The star now disappears from the perceivable universe, like a cartoon character who jumps into a hole and pulls the hole in after him. What this process leaves behind is a different kind of hole—a profound disturbance in spacetime, a region where gravity is so intense that nothing, not even light, can escape from it. Any object falling within the boundary of a black hole will be sucked in and will disappear from our universe forever.

What would happen to an object, such as an astronaut, as it vanished into the black hole? Physicists have been amusing themselves with this question for years. Most believe that the astronaut would be destroyed by the intense gravitational forces within the black hole, or would explode in a flash of gamma rays as he or she approached the singularity at the hole's core. Theoretically, an astronaut who managed to survive the passage would experience some very strange things, including acute time distortion, which would enable him or her to know, in a few brief seconds, the entire future of the universe in all its detail.

3. The word "fodder" is closest in meaning to

    A.   material
    B.   stories
    C.   support
    D.   problems

4. The opposing force between the molecular particles inside a star is called

    A.   general relativity
    B.   the exclusion principle
    C.   infinite density
    D.   a singularity

5. The word "offset" could best be replaced by

    A.   carry
    B.   arrange
    C.   overflow
    D.   counteract

6. It can be concluded from paragraph 3 that light

    A.   destroys a black hole
    B.   can barely reveal a black hole
    C.   does not exist near a black hole
    D.   originates in spacetime

7. Which of the following is NOT mentioned as the possible fate of an astronaut who falls into a black hole?

    A.   Experience of amusement
    B.   Death by gamma rays
    C.   Knowledge of the universe
    D.   Destruction by gravity

8. It can be inferred from the passage that black holes are

    A.   soon to be located and studied
    B.   a scientific impossibility
    C.   the key to the entire future of the universe
    D.   a source of inspiration and entertainment

Choose the lettered word or phrase that is most nearly opposite in meaning to the word in capital letters.

9. **PHYSICAL:**

    A. bodily
    B. mental
    C. material
    D. corporeal

ANALYTICAL REASONING

The questions in this section need simple analysis of the given data and logical reasoning of the candidate. Each question or group of questions is based on a passage or set of conditions, and the candidate has to select the best answer choice.

Questions 10-13

The supervisor of a commuter airline is scheduling pilots to fly the round-trip from City X to City Y. The trip takes only two hours, and the airline has one round-trip flight in the morning and one round-trip flight in the afternoon, each day, Monday through Friday. Pilots must be scheduled in accordance with the following rules:

Only W, X, and Y can fly the morning flight.
Only V, X, and Z can fly the afternoon flight.
No pilot may fly twice on the same day.
No pilot may fly on two consecutive days.
X must fly the Wednesday morning flight.
Z must fly the Tuesday afternoon flight.

10.Which of the following must be true?

    A.   W flies the Monday morning flight
    B.   X flies the Monday afternoon flight
    C.   Y flies the Tuesday morning flight
    D.   W flies the Thursday morning flight
    E.   Z flies the Thursday afternoon flight

11.If X flies on Friday morning, which of the following must be true?

    A.   X does not fly on Monday afternoon
    B.   V flies on Friday afternoon
    C.   W flies Thursday morning
    D.   Y flies Thursday morning
    E.   Neither W nor Y flies Thursday morning

12.If X flies only one morning flight during the week, which of the following must be true?

    A.   W flies exactly two days during the week
    B.   X flies exactly three days during the week
    C.   Y flies only one day during the week
    D.   Z flies Monday afternoon and Friday afternoon
    E.   X flies more times during the week than V

13.If W is not scheduled to fly at all during the week, all of the following must be true EXCEPT

    A.   X flies on Monday morning
    B.   V flies on Monday afternoon
    C.   Y flies on Thursday morning
    D.   Z flies on Friday afternoon
    E.   X flies on Friday morning

There are those who claim that reductions in the spending on and deployment of weapons systems would result in a so-called "climate of peace," thereby diminishing the likelihood of armed conflict. The facts show otherwise. These self-proclaimed pacifists are either the victims or the propagators of a false argument.

14. **Which of the following is an assumption underlying the conclusion of the passage above?**

   A. Military actions involving our forces can be instigated by any number of different factors
   B. Our buildup of weapons systems and combat personnel has prevented our adversaries from increasing their own spending on defense
   C. The increased defense spending of the past 10 years has lessened the need for significant military expenditure in future decades
   D. At the present time, state-of-the-art weapons systems and the augmentation of combat personnel are equally important to a nation's defense
   E. An established correlation between greater spending on weapons systems and a decreased incidence of conflict will persist

Questions 15-18

An obedience school is experimenting with a new training system. To test the system, three trainers (Luqman, Mehreen, and Omama) and three dogs (Lassie, Mugs, and Onyx) are assigned to three different rooms, one trainer, and one dog per room. The initial assignment is as follows:

Room 1: Luqman and Lassie
Room 2: Mehreen and Mugs
Room 3: Omama and Onyx

The participants have learned five different commands, each of which they will execute as soon as the command is given.

Command W requires the trainer in Room 1 to move to Room 2, the trainer in Room 2 to move to Room 3, and the trainer in Room 3 to move to Room 1.
Command X requires the dogs in Rooms 1 and 2 to change places.
Command Y requires the dogs in Rooms 2 and 3 to change places.
Command Z requires the dogs in Rooms 3 and 1 to change places.
Command A requires each of the dogs to go to the room containing the trainer it was matched with in the initial assignment.

15. **If the participants in the initial assignment are given exactly one command, Command W, which of the following will be true in the resulting arrangement?**

   A. Omama and Mugs will be in the same room
   B. Mehreen will be in Room 3
   C. Mehreen and Lassie will be in the same room
   D. Luqman will be in Room 3
   E. Luqman and Onyx will be in the same room

16. Which of the following commands or series of commands will yield a final arrangement in which Onyx is in Room 2?

    A.   One call of W
    B.   Two calls of X
    C.   Two calls of W followed by one call of A
    D.   Two calls of W followed by one call of Z
    E.   Two calls of X followed by one call of Z

17. Which of the following sequences of commands will yield a final arrangement in which Omama and Lassie are in Room 2?

    A.   X, Y, W
    B.   X, W, W
    C.   Z, W, A
    D.   X, Y, A, W
    E.   Z,W,W, X

18. Which of the following sequences of commands could result in a final arrangement in which Mehreen and Onyx are in Room 1, Omama and Mugs are in Room 2, and Luqman and Lassie are in Room 3?

    A.   Z, W, X
    B.   W, Y, Z
    C.   W, A, Y, W
    D.   W, Z, W, X
    E.   X, Z, W, W

Should present trends continue, within five years it will be cheaper for audio enthusiasts to build their stereo systems around sets of separate, high quality tuners and amplifiers, rather than around integrated tuners and amplifiers, known as. While receivers have been considered the necessary compromise for those with budget restrictions, recent trends in retail pricing seem destined to change that perception. The average retail price of a high-quality tuner has declined at a rate of 20 percent each of the last two years, and the average retail price of a high-quality amplifier has declined at the rate of 35 percent for each of those years. At the same time, the average retail price of integrated receivers has declined only 12 percent.

19. In evaluating the claim made in the passage above, information about which of the following would be most useful?

    A.   the average life expectancy of stereo tuners as compared to the average life expectancy of stereo amplifiers
    B.   the number of integrated receivers sold each year and the number of sets of separate tuners and amplifiers sold each year
    C.   the present average retail price of an integrated receiver and the present average retail price of a tuner and amplifier set
    D.   the number of separate tuner and amplifier sets expected to be purchased over the next five years and the number of integrated receivers expected to be purchased over the next five years
    E.   the percentage of audio enthusiasts who prefer separate tuner and amplifier sets to integrated receivers

QUANTITATIVE

This section assesses the basic quantitative skills of the candidate. The section is developed in the light of the basic quantitative concepts.

20. Of the 20 people who won prize money, 7 have come forward to claim their winnings. What percent of the people have not yet appeared?

    A.   20%
    B.   35%
    C.   42%
    D.   65%
    E.   70%

21. What single discount is equivalent to two successive discounts of 10% and 15%?

    A.   25%
    B.   24%
    C.   24.5%
    D.   23.5%
    E.   22%

22. If $27^n = 9^8$, then n =?

    A.   4/3
    B.   2
    C.   8/3
    D.   3
    E.   8

23. If $2^x . 2^y = 3^z$, $\dfrac{x + y}{z} = ?$

    A.   1.330
    B.   1.750
    C.   0.750
    D.   1.585
    E.   1.425

24. $(a + 2i)(b - i) =$

    A.   a + b - i
    B.   ab + 2
    C.   ab + (2b - a)i + 2
    D.   ab - 2
    E.   ab + (2b - a)i − 2

25. If the result obtained by multiplying a number, x, by a number 1 less than itself is 4 less than multiplying x by itself, then x =?

    A.   1
    B.   2
    C.   3
    D.   4
    E.   5

26. Which of the following is closest to the square root of $\frac{1}{2}$?

    A.   0.25
    B.   0.5
    C.   0.6
    D.   0.7
    E.   0.8

27. The sum of five odd numbers is always:

    A.   even
    B.   divisible by three
    C.   divisible by five
    D.   a prime number
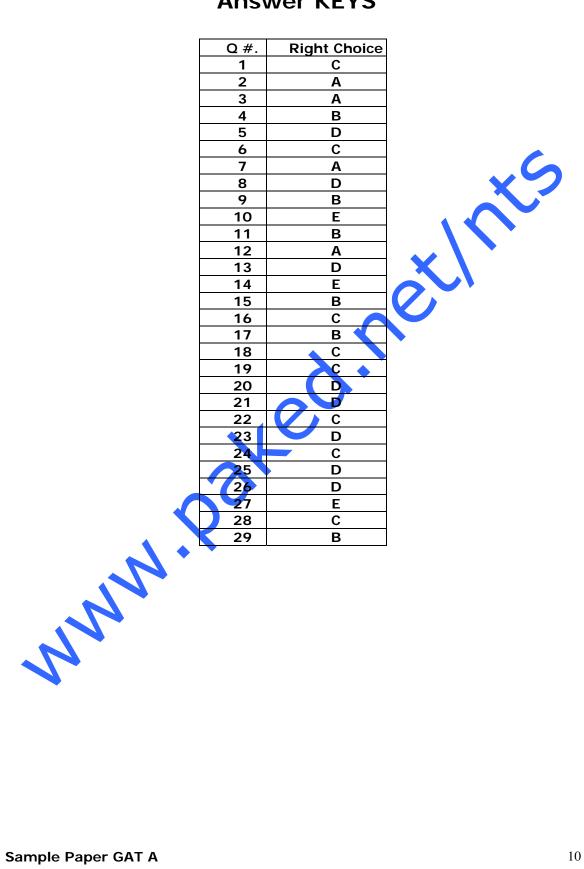   E.   none of the above

28. If $3m < 48$ and $2m > 24$, then m could equal which of the following?

    A.   10
    B.   12
    C.   14
    D.   16
    E.   18

29. The area of a 2-foot-wide walk around a garden that is 30 feet long and 20 feet wide is:

    A.   104 sq. ft.
    B.   216 sq. ft.
    C.   680 sq. ft.
    D.   704 sq. ft.
    E.   1416 sq. ft.

Answer KEYS

Q #.	Right Choice
1	C
2	A
3	A
4	B
5	D
6	C
7	A
8	D
9	B
10	E
11	B
12	A
13	D
14	E
15	B
16	C
17	B
18	C
19	C
20	D
21	D
22	C
23	D
24	C
25	D
26	D
27	E
28	C
29	B