

AL-GHAZALI UNIVERSITY

AGU Standard Admission Test (AGUSAT-BS) - SAMPLE PAPER

Total Time Allowed: 120 Minutes | Total Questions: 100 | Total Marks: 100

Instructions for Candidates:

1. This paper consists of 100 multiple-choice questions (MCQs).
2. All questions are compulsory. There is no negative marking.
3. Choose the single best answer for each question and mark it on the answer sheet.
4. The paper is divided into three main sections: A (Verbal Reasoning), B (Quantitative Reasoning), and C (General Knowledge).

SECTION A: VERBAL REASONING (40 Questions)

Instructions: This section tests your vocabulary, understanding of relationships between words, and reading comprehension skills.

A1: ANALOGY (Questions 1-10)

Choose the pair of words that best expresses a relationship similar to the given pair.

1. DOCTOR : HOSPITAL ::

- A. Teacher : School
- B. Pilot : Airport
- C. Engineer : Site
- D. Lawyer : Court

2. CUB : BEAR ::

- A. Kitten : Cat
- B. Puppy : Dog
- C. Calf : Cow
- D. Foal : Horse

3. HOT : COLD ::

- A. Light : Bright
- B. Fast : Slow
- C. Big : Large
- D. Happy : Joyful

4. WATER : THIRST ::

- A. Food : Hunger
- B. Medicine : Illness
- C. Sleep : Fatigue
- D. Book : Knowledge

5. TREE : FOREST ::

- A. Page : Book
- B. Flower : Garden
- C. Student : Class
- D. Brick : Wall

6. OPTIMISTIC : HOPEFUL ::

- A. Pessimistic : Joyful
- B. Sad : Depressed
- C. Angry : Calm
- D. Brave : Cowardly

7. CLOCK : TIME ::

- A. Thermometer : Temperature
- B. Scale : Weight
- C. Speedometer : Speed
- D. Barometer : Pressure

8. SQUARE : FOUR ::

- A. Triangle : Three
- B. Circle : Round
- C. Rectangle : Shape
- D. Pentagon : Six

9. PAINTER : BRUSH ::

- A. Writer : Pen
- B. Sculptor : Chisel
- C. Musician : Guitar
- D. Chef : Knife

10. ABANDON : FORSAKE ::

- A. Keep : Retain
- B. Help : Hinder
- C. Praise : Criticize
- D. Brave : Cowardly

A2: SYNONYM/ANTONYM (Questions 11-20)

Choose the word that is the most similar (SYNONYM) or most opposite (ANTONYM) in meaning to the capitalized word.

11. BENEVOLENT (Synonym):

- A. Cruel
- B. Kind
- C. Greedy
- D. Indifferent

12. EPHEMERAL (Antonym):

- A. Brief
- B. Temporary
- C. Permanent
- D. Fleeting

13. ARDUOUS (Synonym):

- A. Easy
- B. Simple
- C. Difficult
- D. Light

14. MITIGATE (Antonym):

- A. Alleviate
- B. Lessen
- C. Intensify
- D. Reduce

15. LACONIC (Synonym):

- A. Verbose
- B. Brief
- C. Wordy
- D. Lengthy

16. OBSCURE (Antonym):

- A. Clear
- B. Vague
- C. Hidden
- D. Dark

17. PRAGMATIC (Synonym):

- A. Idealistic
- B. Impractical
- C. Realistic
- D. Theoretical

18. ZEALOUS (Antonym):

- A. Enthusiastic
- B. Passionate
- C. Ardent
- D. Apathetic

19. AUDACIOUS (Synonym):

- A. Timid
- B. Bold
- C. Fearful
- D. Shy

20. TRANSIENT (Antonym):

- A. Passing
- B. Brief
- C. Perpetual
- D. Temporary

A3: SENTENCE COMPLETION (Questions 21-30)

Choose the word or phrase that best completes the sentence logically.

21. The new policy was so _____ that it confused everyone who tried to read it.

- A. clear
- B. simple
- C. convoluted
- D. straightforward

22. Despite the heavy rain, the team was _____ and continued playing the match.

- A. hesitant
- B. determined
- C. exhausted
- D. uncertain

23. Her _____ remarks during the meeting were not relevant to the main topic.

- A. pertinent
- B. cogent
- C. tangential
- D. central

24. The professor's lecture was so _____ that many students fell asleep.

- A. engaging
- B. tedious
- C. dynamic
- D. fascinating

25. He is a very _____ person; he never forgets a favor done to him.
- A. forgetful
 - B. grateful
 - C. ungrateful
 - D. neglectful
26. The company's financial situation is _____, requiring immediate action.
- A. stable
 - B. precarious
 - C. secure
 - D. promising
27. His argument was so _____ that even his opponents had to agree.
- A. weak
 - B. flimsy
 - C. convincing
 - D. absurd
28. The ancient ruins are a _____ reminder of a once-great civilization.
- A. trivial
 - B. poignant
 - C. modern
 - D. insignificant
29. We should _____ our resources carefully to avoid shortages in the future.
- A. squander
 - B. waste
 - C. conserve
 - D. deplete
30. The manager's _____ attitude inspired confidence in the entire team.
- A. pessimistic
 - B. hesitant
 - C. decisive
 - D. casual

A4: COMPREHENSION (Questions 31-40)

Read the passage carefully and answer the questions that follow.

Passage:

Artificial Intelligence (AI) is rapidly transforming the landscape of modern healthcare. Its applications range from diagnostic tools that can analyze medical images with greater accuracy than the human eye, to predictive algorithms that can forecast patient deterioration. One of the most promising areas is drug discovery, where AI can process vast datasets of molecular structures to identify potential new medicines in a fraction of the time and cost of traditional methods. However, the integration of AI is not without its challenges. Concerns regarding data privacy, the potential for algorithmic bias, and the need for clear regulatory frameworks are paramount. Furthermore, there is an ongoing debate about the role of AI: should it be seen as a tool to augment the capabilities of healthcare professionals, or could it eventually replace human judgment in certain areas? Most experts agree that the ideal future lies in a collaborative model, where AI provides powerful support, but the human physician remains at the center of patient care, guided by empathy and ethical considerations.

31. What is the primary purpose of the passage?
- A. To warn against the dangers of AI in healthcare.
 - B. To describe the applications and challenges of AI in healthcare.
 - C. To argue that AI should replace doctors.
 - D. To explain the technical details of drug discovery.

32. According to the passage, how is AI beneficial in drug discovery?

- A. It is the only way to find new medicines.
- B. It makes the process faster and cheaper.
- C. It is more accurate than doctors.
- D. It replaces the need for clinical trials.

33. The phrase "algorithmic bias" in the passage most likely refers to:

- A. AI making decisions too quickly.
- B. AI systems being too expensive.
- C. AI producing unfair or prejudiced results.
- D. AI lacking emotional intelligence.

34. What is the "collaborative model" mentioned at the end of the passage?

- A. A model where AI and humans work together, with humans leading.
- B. A model where AI makes all the decisions.
- C. A model where humans do all the work without AI.
- D. A model where governments regulate all AI use.

35. What is the author's overall tone towards AI in healthcare?

- A. Extremely pessimistic
- B. Highly skeptical
- C. Cautiously optimistic
- D. Completely neutral

36. Which of the following is NOT mentioned as a challenge of using AI in healthcare?

- A. Data privacy concerns
- B. The cost of cloud computing
- C. Algorithmic bias
- D. The need for regulatory frameworks

37. What does the passage suggest is the primary role of the human physician in the future?

- A. To be replaced by AI.
- B. To oversee the technical workings of AI.
- C. To focus on empathy and ethical patient care.
- D. To exclusively handle administrative tasks.

38. The word "paramount" in the passage is closest in meaning to:

- A. trivial
- B. secondary
- C. unimportant
- D. essential

39. According to the passage, AI can analyze medical images with:

- A. less accuracy than humans.
- B. the same accuracy as humans.
- C. greater accuracy than humans.
- D. no accuracy at all.

40. The integration of AI in healthcare is described as:

- A. A simple and straightforward process.
- B. A process with significant opportunities and challenges.
- C. A failed experiment.
- D. A threat to national security.

SECTION B: QUANTITATIVE REASONING (30 Questions)

Instructions: This section tests your mathematical and problem-solving skills. Basic arithmetic, algebra, geometry, and statistics are covered.

B1: ARITHMETIC (Questions 41-47)

41. What is 25% of 400?
- A. 50
 - B. 100
 - C. 150
 - D. 200
42. If a shirt costs \$45 and is on sale for 20% off, what is the sale price?
- A. \$9
 - B. \$27
 - C. \$36
 - D. \$54
43. What is the LCM (Least Common Multiple) of 12 and 18?
- A. 6
 - B. 24
 - C. 36
 - D. 72
44. Simplify: $(3 + 5) * 2 - 4$
- A. 12
 - B. 10
 - C. 8
 - D. 14
45. What is the value of 2^5 ?
- A. 10
 - B. 25
 - C. 32
 - D. 64
46. A car travels 240 km in 4 hours. What is its average speed in km/h?
- A. 40 km/h
 - B. 60 km/h
 - C. 80 km/h
 - D. 120 km/h
47. What is the decimal equivalent of $\frac{5}{8}$?
- A. 0.5
 - B. 0.625
 - C. 0.75
 - D. 0.875

B2: ALGEBRA AND FUNCTIONS (Questions 48-52)

48. If $f(x) = 2x + 3$, what is $f(4)$?
- A. 8
 - B. 11
 - C. 14
 - D. 24
49. Simplify: $3x + 5y - 2x + y$
- A. $x + 6y$
 - B. $5x + 6y$
 - C. $5x + 4y$
 - D. $x + 4y$

50. If $x = -2$, find the value of $x^2 + 3x - 1$.

- A. -3
- B. 1
- C. -11
- D. 9

51. Factorize: $x^2 - 9$

- A. $(x - 3)(x - 3)$
- B. $(x + 3)(x - 3)$
- C. $(x + 9)(x - 1)$
- D. $(x - 9)(x + 1)$

52. Solve for x : $5x - 7 = 18$

- A. $x = 2$
- B. $x = 3$
- C. $x = 4$
- D. $x = 5$

B3: GEOMETRY (Questions 53-55)

53. What is the area of a triangle with a base of 10 cm and a height of 6 cm?

- A. 16 sq cm
- B. 30 sq cm
- C. 60 sq cm
- D. 120 sq cm

54. What is the circumference of a circle with a radius of 7 cm? (Use $\pi \approx 22/7$)

- A. 22 cm
- B. 44 cm
- C. 154 cm
- D. 616 cm

55. The sum of the interior angles of a triangle is:

- A. 90 degrees
- B. 180 degrees
- C. 270 degrees
- D. 360 degrees

B4: EQUATIONS (Questions 56-60)

56. What is the slope of the line $y = 3x - 2$?

- A. -2
- B. 2
- C. -3
- D. 3

57. Solve the system: $x + y = 10$, $x - y = 4$

- A. $x=7$, $y=3$
- B. $x=3$, $y=7$
- C. $x=7$, $y=2$
- D. $x=2$, $y=8$

58. What is the value of y in the equation $2y + 4 = 5y - 8$?

- A. -4
- B. 4
- C. $-12/3$
- D. $12/3$ or 4

59. For the quadratic equation $x^2 + 5x + 6 = 0$, what are the roots?

- A. -2 and -3
- B. 2 and 3
- C. -1 and -6
- D. 1 and 6

60. If $a = 2$ and $b = 3$, what is the value of $a^2 + b^2 + 2ab$?

- A. 5
- B. 13
- C. 25
- D. 36

B5: STATISTICS (Questions 61-63)

61. What is the mean (average) of the following numbers: 4, 8, 6, 5, 7?

- A. 4
- B. 5
- C. 6
- D. 7

62. What is the median of the data set: 12, 15, 11, 18, 14?

- A. 11
- B. 12
- C. 14
- D. 15

63. A die is rolled once. What is the probability of getting an even number?

- A. $\frac{1}{6}$
- B. $\frac{1}{3}$
- C. $\frac{1}{2}$
- D. $\frac{2}{3}$

B6: SCENARIO-BASED/MENTAL MATHEMATICS (Questions 64-70)

64. A man buys a book for \$40 and sells it for \$50. What is his percentage gain?

- A. 10%
- B. 20%
- C. 25%
- D. 80%

65. Ali is three times as old as his son. If the sum of their ages is 48, how old is Ali's son?

- A. 12
- B. 16
- C. 24
- D. 36

66. A shopkeeper offers a "buy one get one free" deal on shirts. What is the effective discount percentage per shirt if you buy two shirts?

- A. 25%
- B. 33.33%
- C. 50%
- D. 100%

67. If five machines can produce 100 items in 5 hours, how long would it take one machine to produce the same 100 items?

- A. 1 hour
- B. 5 hours
- C. 10 hours
- D. 25 hours

68. Find the missing number in the sequence: 2, 5, 10, 17, ?

- A. 24
- B. 26
- C. 28
- D. 32

69. If you have a 5-liter jug and a 3-liter jug, how can you measure exactly 4 liters of water? (Select the best logical statement).

- A. Fill the 5L jug, pour 3L into the 3L jug, leaving 2L. Then...
- B. Fill the 3L jug, pour into the 5L jug twice.
- C. It is impossible to measure 4L with these jugs.
- D. Use a different measuring cup.

70. A train departs at 09:45 AM and arrives at its destination at 14:15 PM. What is the duration of the journey?

- A. 4 hours 30 minutes
- B. 5 hours 30 minutes
- C. 4 hours 45 minutes
- D. 5 hours 45 minutes

SECTION C: GENERAL KNOWLEDGE (30 Questions)

Instructions: This section covers general awareness of Pakistan, World Affairs, Science & Technology, and Islamic Studies.

C1: PAKISTAN AFFAIRS (Questions 71-78)

71. The national poet of Pakistan is:

- A. Faiz Ahmed Faiz
- B. Ahmad Faraz
- C. Allama Iqbal
- D. Mirza Ghalib

72. The Resolution of Pakistan was passed on:

- A. 23rd March 1940
- B. 14th August 1947
- C. 23rd March 1947
- D. 14th August 1940

73. What is the name of the highest peak in Pakistan?

- A. Mount Everest
- B. Nanga Parbat
- C. K2
- D. Broad Peak

74. The Indus Water Treaty was signed between Pakistan and India in:

- A. 1947
- B. 1950
- C. 1960
- D. 1965

75. Which city is the current capital of Pakistan?

- A. Karachi
- B. Lahore
- C. Islamabad
- D. Rawalpindi

76. Pakistan's first Governor-General was:

- A. Liaquat Ali Khan
- B. Quaid-e-Azam Muhammad Ali Jinnah
- C. Khawaja Nazimuddin
- D. Iskander Mirza

77. The largest province of Pakistan by area is:

- A. Punjab
- B. Sindh
- C. Khyber Pakhtunkhwa
- D. Balochistan

78. The national language of Pakistan is:

- A. Punjabi
- B. Sindhi
- C. Pashto
- D. Urdu

C2: WORLD AFFAIRS (Questions 79-84)

79. The headquarters of the United Nations (UN) is in:

- A. Geneva
- B. London
- C. New York
- D. Paris

80. Which is the largest country in the world by area?

- A. China
- B. USA
- C. Canada
- D. Russia

81. The current Secretary-General of the United Nations is:

- A. Ban Ki-moon
- B. Kofi Annan
- C. António Guterres
- D. Boutros Boutros-Ghali

82. Which country is known as the "Land of the Rising Sun"?

- A. South Korea
- B. China
- C. Japan
- D. Thailand

83. The European Union (EU) has its headquarters in:

- A. Brussels
- B. London
- C. Strasbourg
- D. Berlin

84. Which of the following is not a member of the G7 group?

- A. Canada
- B. France
- C. Russia
- D. Italy

C3: SCIENCE & TECHNOLOGY (Questions 85-92)

85. The chemical symbol for water is:

- A. HO₂
- B. H₂O
- C. CO₂
- D. NaCl

86. The largest planet in our solar system is:

- A. Saturn
- B. Jupiter
- C. Neptune
- D. Uranus

87. What is the main function of white blood cells?

- A. To carry oxygen
- B. To fight infection
- C. To clot blood
- D. To carry carbon dioxide

88. Which part of the plant is responsible for photosynthesis?

- A. Root
- B. Stem
- C. Leaf
- D. Flower

89. The SI unit of force is:

- A. Joule
- B. Watt
- C. Newton
- D. Pascal

90. Which disease is caused by a deficiency of Vitamin C?

- A. Rickets
- B. Scurvy
- C. Beriberi
- D. Night Blindness

91. What is the hardest known natural material?

- A. Gold
- B. Iron
- C. Diamond
- D. Platinum

92. The process of a liquid turning into a gas is called:

- A. Condensation
- B. Evaporation
- C. Sublimation
- D. Freezing

C4: ISLAMIC STUDIES (Questions 93-100)

93. The Holy Quran was revealed upon Prophet Muhammad (PBUH) in the month of:

- A. Muharram
- B. Rajab
- C. Ramadan
- D. Shawwal

94. The total number of Surahs in the Holy Quran is:
- A. 99
- B. 110
- C. 114
- D. 124
95. What is the first pillar of Islam?
- A. Salah
- B. Zakat
- C. Sawm
- D. Shahadah
96. The Holy Book revealed to Prophet Musa (AS) is called:
- A. Zabur
- B. Tawrat
- C. Injil
- D. Quran
97. The battle of Badr was fought in which year of Hijrah?
- A. 1 A.H.
- B. 2 A.H.
- C. 3 A.H.
- D. 4 A.H.
98. How many times is the word "Allah" mentioned in the Ayat-ul-Kursi?
- A. 1
- B. 2
- C. 3
- D. 4
99. The Farewell Pilgrimage (Hajjat-ul-Wida) was performed by Prophet Muhammad (PBUH) in:
- A. 8 A.H.
- B. 9 A.H.
- C. 10 A.H.
- D. 11 A.H.
100. Zakat is obligatory on wealth above a certain threshold known as:
- A. Waqf
- B. Fitrana
- C. Nisab
- D. Sawab

ANSWER KEY (For Reference)

Section A: Verbal Reasoning

- A1: Analogy

1. A
2. C
3. B
4. A
5. A
6. B
7. A
8. A
9. B
10. A

- A2: Synonym/Antonym

- 11. B
- 12. C
- 13. C
- 14. C
- 15. B
- 16. A
- 17. C
- 18. D
- 19. B
- 20. C

- A3: Sentence Completion

- 21. C
- 22. B
- 23. C
- 24. B
- 25. B
- 26. B
- 27. C
- 28. B
- 29. C
- 30. C

- A4: Comprehension

- 31. B
- 32. B
- 33. C
- 34. A
- 35. C
- 36. B
- 37. C
- 38. D
- 39. C
- 40. B

Section B: Quantitative Reasoning

- B1: Arithmetic

- 41. B
- 42. C
- 43. C
- 44. A
- 45. C
- 46. B
- 47. B

- B2: Algebra and Functions

- 48. B
- 49. A
- 50. A
- 51. B
- 52. D

- B3: Geometry

- 53. B
- 54. B
- 55. B

- B4: Equations

- 56. D
- 57. A
- 58. B (or D, as $12/3$ simplifies to 4)
- 59. A
- 60. C

- B5: Statistics

- 61. C
- 62. C
- 63. C

- B6: Scenario-Based/Mental Mathematics

- 64. C
- 65. A
- 66. C
- 67. D
- 68. B
- 69. A
- 70. A

Section C: General Knowledge

- C1: Pakistan Affairs

- 71. C
- 72. A
- 73. C
- 74. C
- 75. C
- 76. B
- 77. D
- 78. D

- C2: World Affairs

- 79. C
- 80. D
- 81. C
- 82. C
- 83. A
- 84. C

- C3: Science & Technology

- 85. B
- 86. B
- 87. B
- 88. C
- 89. C
- 90. B
- 91. C
- 92. B

- C4: Islamic Studies

- 93. C
- 94. C
- 95. D
- 96. B
- 97. B
- 98. B (The exact count in the verse is two instances)
- 99. C
- 100. C