



پوهنتون کاردان
KARDAN UNIVERSITY

Entry Test Question Paper Department of Civil Engineering

Kabul
Fall 2023

Entry Test

Directions: Please solve all the two mark. Transfer the correct answer to your answer sheet.

Section One – Mathematics

64 Marks (Forty Minutes)

32 questions in this section, every question has

- The simplified form of the expression $50 \div 10 * 5 - 25 =$
A. 0 B. 24 C. 24 D. 50
- The simplified form of the expression $4(x + 2) + 3(x + 6) =$
A. $10x + 5$ B. $7x + 26$ C. $9x + 18$ D. $6x + 2$
- The solution of linear equation $7x - 3 = 5x + 9$ is
A. 10 B. 11 C. 15 D. 6
- The solution of the inequality expression $-2x + 1 > 5$ is equal to
A. $X < -2$ B. $X > 2$ C. $X < 2$ D. $X > -2$
- The solution of the inequality expression $-5(x-1) < 10$ is equal to
A. $X > 1$ B. $X < 1$ C. $X > -1$ D. $X < -1$
- The difference square formula $a^2 - b^2 =$
A. $(a+b)(a - b)$ B. $(a+b)(a + b)$ C. $(a-b)(a - b)$ D. None of them
- The factorization of the expression $x^2 - 4 =$
A. $(x-2)(x-2)$ B. $(x-2)(x+2)$ C. $(x+2)(x+2)$ D. None of them
- The group factorization of the expression $ab^2 - 4b^2 + 3a - 12 =$
A. $(a - 4)(b^2 + 3)$ B. $(a + 4)(b^2 + 3)$ C. $(a - 4)(b^2 - 3)$ D. $(a + 4)(b^2 - 3)$
- The group factorization of the expression $x^2 - x + 5x - 5 =$
A. $(x + 1)(x + 5)$ B. $(x - 1)(x + 5)$ C. $(x - 1)(x - 5)$ D. $(x + 1)(x - 5)$
- If the whole power of the algebraic expression become zero, then the result is equal to
A. 0 B. 1 C. -1 D. None of them
- The simplified form the expression $10^{-3} \cdot 10^2 =$
A. 10 B. -10 C. 1/10 D. -1/10
- The simplified form of the expression $(100 a^{12} b^6 / 50 a^{11} b^5)^2$
A. $4a^2 b^2$ B. $4a^{23} b^2$ C. $4a^2 b^{11}$ D. $-4a^2 b^2$
- The simplified form of the expression $(x^{12} / x^{10})^{-1}$
A. X^{-2} B. X^2 C. X^{22} D. X^{-22}
- When solving $\sqrt{-4}$ the possible answer is
A. 2 B. -2 C. No real solution D. None of them
- The solution of radical equation $\sqrt{2x - 5} = 7$ is

- A. 27 B. 54 C. $19/2$ D. $-19/2$
16. The solution of radical equation $\sqrt{x-1} = -1$
- A. 2 B. -2 C. 0 D. None of them
17. The solution of $x^2+4 = 0$ is
- A. -2 B. 2 C. $\pm 2i$ D. None of them
18. If Discriminant $b^2-4ac < 0$ then
- A. The equation has two nonzero complex solution
 B. The equation has one real solution
 C. The equation has two real solution
 D. None of them
19. Quadratic equation is always of
- A. 2nd degree equation B. 1st degree equation C. 3rd degree equation D. None of them
20. The equation in which the power of variable is one is called
- A. Linear equation B. Quadratic equation C. Constant equation D. Identity equation
21. The graph of linear equation always represents
- A. A straight-line B. A Parabola C. A Curve D. None of them
22. Which of the following is true for x-intercept and y-intercept respectively?
- A. $(-x, 0)$ and $(0, y)$ B. $(x, 0)$ and $(0, -y)$ C. $(x, 0)$ and $(0, y)$ D. $(0, 0)$ and $(0, y)$
23. The graph of $x=2$ is always represents
- A. Horizontal line B. Vertical line C. Non-vertical line D. None of them
24. The graph of $y=2$ is always represents
- A. Horizontal line B. Vertical line C. Non-vertical line D. None of them
25. The distance between the points $(2,3)$ and $(5,7)$ is
- A. 5 B. -5 C. 3 D. 0
26. The Slope between the points $(4, -2)$ and $(-1, 5)$ is
- A. $7/5$ B. $-7/5$ C. $5/7$ D. $-5/7$
27. Two lines are said to be parallel if their slopes
- A. $m_1 = m_2$ B. $m_1 \neq m_2$ C. $m_1 > m_2$ D. $m_1 < m_2$
28. Two lines are said to be Perpendicular if their slopes
- A. $m_1 = m_2$ B. $m_1 \cdot m_2 = 1$ C. $m_1 \cdot m_2 = -1$ D. None of them
29. Which of the following set of order pairs represent function?
- A. $\{(1,4), (3,5), (1,9)\}$ B. $\{(1,4), (1,5), (1,9)\}$
 C. $\{(1,4), (3,5), (3,9)\}$ D. $\{(1,4), (3,5), (10,9)\}$
30. A function which is defined in the form $f(x) = c$ is called
- A. Constant function B. Identity function C. Linear function D. Both "A" and "C"

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31. The graph of Quadratic equation is always representing

- A. A straight line B. Hyperbola C. Parabola D. None of them

32. The solution of logarithmic equation $\text{Log}_{10}X + \text{Log}_{10}(X+9) = 1$ is

- A. $x=1$ only B. $x= -10$ only C. Both "A" and "B" D. None of them

Section Two – Logic

64 Marks (Forty Minutes)

32 questions in this section, every question has

33. What is the missing letter in the sequence A, C, E, G, ___?

- a) H b) I c) J d) K

34. If a plane crashes on the border between Canada and the United States, where do they bury the survivors?

- a) Canada b) United States c) You don't bury survivors d) None

35. What has a neck but no head?

- a) Pencil b) Cup c) Bottel d) All of them

36. What is always in front of you but can't be seen?

- a) Future b) Time c) Day d) Night

37. If you have one match and you enter a room with a kerosene lamp, a candle, and a fireplace, which do you light first?

- a) Lamp b) Candle c) Fireplace d) Match

38. What is black when it's clean and white when it's dirty?

- a) Paper b) Chalkboard c) Marker-board d) None

39. What has a head and a tail but no body?

- a) Coin b) Ant c) Spider d) Dog

40. What has a thumb and four fingers but is not alive?

- a) Human b) Bird c) Animal d) Glove

41. What starts with a T, ends with a T, and has T in it?

- a) Start b) Target c) Teapot d) All

42. What goes up but never comes down?

- a) Lift b) Plane c) Age d) None

43. Look at this series: 36, 34, 30, 28, 24, ... What number should come next?

- a) 22 b) 20 c) 23 d) 26

44. Which word does NOT belong with the others?

- a) Tyer b) Engine c) Steering Wheel d) Car

45. Cup is to coffee as bowl is to_____.

- a) Dish b) Soup c) Spoon d) Food

46. Select the wrongly spelt word!

- a) Calandar b) Stream c) Career d) Sewing

47. The quality of public health care _____ on the amount of money allocated to it

- a) Dependent b) Depending c) Depends d) Depend

48. Suresh, the son of Mahesh is married to Sia, whose sister Jia is married to Amar, the brother of Suresh. How is Jia related to Mahesh?

- a) Daughter-in-law b) Cousin c) Sister-in-law d) Sister
49. The day before yesterday was Saturday. What day will it be the day after tomorrow?
 a) Sunday b) Monday c) Tuesday d) Wednesday
50. A book always has _____
 a) Story b) Content c) Pages d) Binding
51. Complete the following series with correct number 32, 34, 36, _____, 40
 a) 37 b) 38 c) 39 d) 41
52. If you have a bowl with six apples and you take away four, how many do you have?
 a) 2 b) 4 c) 6 d) 3
53. What breaks and never falls, and what falls and never breaks?
 a) Paper b) Wall c) Cement d) Day breaks and night falls
54. What goes up and down, but always remains in the same place?
 a) Time b) Day c) Stairs d) None
55. What is the difference between yesterday and tomorrow?
 a) Day after tomorrow b) Today c) Day before yesterday d) All
56. Where is an ocean with no water?
 a) America b) Africa c) Asia d) On a map
57. A police department purchases badges at 16-Afs each for all the graduates of the police training academy. The last training class graduated 10 new officers. What is the total amount of money the department will spend for badges for these new officers?
 a) 70-Afs b) 116-Afs c) 160-Afs d) 180-Afs
58. What is found necessarily in desert?
 a) Sand b) Watermelon c) Camel d) Wind
59. A river always has
 a) Fished b) Boat c) Banks d) Bridges
60. My Ten years old nephew is taller than my Twelve years old son
 a) Always b) Never c) Often d) Sometimes
61. What provides the strength and power to walk through walls?
 a) Door b) Boots c) Stairs d) None
62. What do you always see at the beginning of a paper?
 a) Lines b) Numbers c) P d) Dots
63. How can a woman go eight days without sleep?
 a) Sleeps before b) Sleeps at night c) Sleeps after d) None
64. What type of hair does an ocean have?
 a) Curly b) Brown c) Wavy d) All

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Section Three – General Knowledge

64 Marks (Thirty Minutes)

32 questions in this section, every question has

65. Which river is the longest in Afghanistan?
A) Amu Darya B) Kabul River C) Helmand River D) Hari Rud
66. Afghanistan shares its longest border with which country?
A) Iran B) Pakistan C) Tajikistan D) China
67. The historical Buddha was born in which modern-day country?
A) India B) Nepal C) Sri Lanka D) Afghanistan
68. What mountain range forms a natural barrier between Afghanistan and Pakistan?
A) Himalayas B) Hindu Kush C) Karakoram Range D) Pamir Mountains
69. Which ancient trade route passed through Afghanistan connecting the East and West?
A) Silk Road B) Spice Route C) Incense Route D) Amber Road
70. Which Afghan king is known as the "Father of the Nation" and modernized the country in the 20th century?
A) Ahmad Shah Durrani B) Amanullah Khan C) Habibullah Khan
D) Sher Ali Khan
71. The famous ancient statues, destroyed in 2001, were located in which Afghan city?
A) Herat B) Mazar-i-Sharif C) Kabul D) Bamiyan
72. What is the national sport of Afghanistan?
A) Football (Soccer) B) Buzkashi C) Cricket D) Wrestling
73. Afghanistan was never colonized by which European colonial power?
A) United Kingdom B) France C) Russia D) Austria
74. In which month does Ramadan, the Islamic holy month of fasting, usually occur?
A) Shawwal B) Dhul-Hijjah C) Ramadan D) Safar
75. What is the national flower of Afghanistan?
A) Tulip B) Lilly C) Rose D) Poppy
76. Afghanistan was a monarchy until 1973 when a coup led to the overthrow of the king. Who was the last Afghan king?
A) Zahir Shah B) Mohammed Nadir Shah C) Mohammed Zahir Shah
D) Habibullah Khan
77. The famous ancient city of Herat, known for its rich cultural heritage, is located in which region of Afghanistan?

- A) Central Afghanistan B) Eastern Afghanistan C) Western Afghanistan
D) Northern Afghanistan
78. Which of the following is not an Afghan dish?
A) Mantu B) Qorma C) Biryani D) Bolani
79. Afghanistan has a rich tradition of storytelling through oral poetry. What is this form of poetry called?
A) Ghazal B) Qasida C) Tappa D) Dehqan
80. The famous ancient city of Balkh, also known as Bactra, is considered one of the oldest cities in the world. In which province is it located?
A) Balkh Province B) Herat Province C) Kabul Province D) Kandahar Province
81. The Minaret of Jam, a UNESCO World Heritage Site, is an ancient Islamic monument located in which province of Afghanistan?
A) Badghis Province B) Faryab Province C) Herat Province D) Ghor Province
82. What is the traditional Afghan footwear, often made of leather and worn by both men and women?
A) Sandals B) Clogs C) Loafers D) Peshawari Chappal
83. Which famous Afghan female artist became the first woman to represent Afghanistan in the Olympics in 2004?
A) Kubra Ali B) Tahmina Kohistani C) Robina Muqimyar D) Friba Razayee
84. Afghanistan is divided into how many provinces?
A) 26 B) 28 C) 30 D) 34
85. The ancient city of Kandahar was a significant center along which historical trade route?
A) Silk Road B) Spice Route C) Incense Route D) Trans-Saharan Trade Route
86. The Afghan New Year, also known as "Nawruz," is celebrated on which day?
A) March 21 B) April 1 C) May 1 D) June 21
87. What is the traditional Afghan dance performed on joyous occasions, often involving twirling movements and colorful dresses?
A) Attan B) Kathak C) Bhangra D) Ghoomar
88. Which famous ancient fortress, also known as the "Red City," is a UNESCO World Heritage Site located in Afghanistan?
A) Qalat-i-Ghilzai B) Qila-e-Bost C) Citadel of Herat D) Arg-e-Bam
89. Which province of Afghanistan is known as the "Garden of Afghanistan" for its fertile agricultural land?
A) Nangarhar Province B) Laghman Province C) Balkh Province D) Kunduz Province
90. Afghanistan is a landlocked country, bordered by how many countries?
A) 4 B) 6 C) 8 D) 10
91. The Khyber Pass, an important historical and strategic route, connects Afghanistan with which country?
A) India B) China C) Pakistan D) Iran
92. What is the Largest lake in Afghanistan?
A) Hamun-e-Sabari B) Band-e-Amir C) Hamun-e-Hilmand D) Sabera
93. The famous 6th-century Buddha statues in Bamiyan were carved into which type of rock?
A) Limestone B) Granite C) Sandstone D) Marble
94. What is the traditional Afghan Music Instrument, a type of Tambourine, often played at wedding and celebration?
A) Rabab B) Harmonium C) Dholak D) Daira

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95. What is the traditional Afghan wrestling sport, also known as "the sport of heroes"?

- A) Kushti B) Taekwondo C) Sumo D) Karate

96. In which year did Afghanistan gain independence from British influence and establish

full sovereignty?

- A) 1919 B) 1947 C) 1963 D) 1978

Section Four – English Language

64 Marks (Forty Minutes)

32 questions in this section, every question has

97. Ali abstained _____ school.

- a. at b. from c. to D: for

98. She was charged _____ stealing the money.

- a. with b. for c. of D: from

99. The police will inquire _____ the matter.

- a. in b. about c. into D: above 100.

Allah has bestowed many comfort _____ us.

- a. upon b. to c. for D: at

101. _____ is the best policy to overcome.

- a. honesty b. the honesty c. the integrity D: Honest

102. She will receive _____ at the film fare ceremony for her best performances.

- a. a special honor b. honor c. special honor D: honored

103. Farhad gave _____ to his dog.

- a. bone b. some bones c. some bone D: few bones 104. She

needs to buy _____ of corn.

- a. two pieces b. two ears c. two claps D: two piece

105. This train is bound _____ India.

- a. for b. at c. with D: from

106. I wish I _____ a singer.

- A: were B: was C: can be D: will be

107. It is _____ that we can't afford to purchase it.

- A: such expensive car B: such an expensive car C: so expensive car D: so car

108. Neither Ahmad nor Shaker _____ a musical instrument at school. A:

play B: are playing C: plays D: were playing

109. Yama wishes that he _____ his friend to the movie which he didn't like.

- A: has taken B: has been taken C: hadn't taken D: took
110. If I had your address in Kabul, I _____ you many letters.
A: would have written B: would write C: wrote D: will write
111. Both Tameem and Arash _____ beautifully.
A: sings B: sing C: is signing D: was signing
112. Henna is late. When do you expect her to arrive? She _____ at 2:00.
A: might be arriving B: might be arrive C: should be arriving D: should be arrived
113. If we _____ her, she would have stayed for dinner.
A: have asked B: has asked C: asked D: had asked
114. She will get used to _____ with her aunt in Kabul.
A: live B: to living C: lived D: living
115. Idress is caught _____ in Afghanistan history studies.
A: with B: up C: about D: of
116. Shakeel is going to _____ his favorite fantasies in the next dramas.
A: acting out B: act out C: to act out D: acted out
117. Diana, _____ is a new actress, is going to be known soon because of her best performance.
A: which B: who C: that D: whom
118. _____ People applied for the job. I'm sure I will get a job.
A: such a few B: such few C: so few D: so a few
119. Next year Tahir is going to travel around the world unless the air fare _____.
A: is expensive B: is cheap C: isn't expensive D: is reasonable
120. I phoned my friend. He wasn't at home so, he _____.
A: might has gone B: might have went C: went D: might have gone
121. You must bend _____ backwards to earn much money.
A: over B: about C: on D: in
122. Don't you know that the problems of safety in every one's home _____ by the Mayer.
A: is discuss B: should discuss C: should be discussed D: is discussed
123. I _____ that he is going to come as soon as you can expect.
A: thinks B: am thinking C: think D: was thinking
124. There are _____ in this article. It is difficult to remember them.
A: so many words B: so much words C: so a few words D: so little vocabulary
125. Is it simple to catch _____ what the instructor says?
A: about B: in C: on D: none of them
126. When I started working as a manager, I promised _____ the best service I could do.
A: to give B: giving C: give D: gave
127. Try to avoid _____ cigars.
A: to smoke B: smoke C: smoking D: smoked
128. Sheema _____ in IRC School for a long time, but then she was transferred in Amani High School.
A: had been teaching B: has been teaching C: has taught D: is teaching

Entry Test

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Section Five – Sciences
64 Marks (Thirty Minutes)

Directions:

32 questions in this section, every question has

129. Which of the following is not an Alloy?
A. Brass B. Solder C. Bronze D. Silver
130. Isotonic solution are the solutions having the same
A. Surface tension B. Concentration C. Osmotic pressure D. Viscosity
131. A pure substance which contains only one type of atom is called
A. an element B. a compound C. a solid D. a liquid
132. The density of water may be
A. Equal to that of ice B. Less than that of ice
B. C. Greater than that of ice D. All are possible
133. Which of the following is a homogeneous mixture?
A. Oil and Water B. Sugar and Water C. Salt and Sulphur
D. Sodium chloride and Iron filings
134. Homogeneous mixture of two or more than two compounds is called
A. Solution B. Compound C. Radical D. Ion
135. Number of moles in 1 kg of solvent is called
A. Normality B. Molarity C. Molality D. Mole fraction
136. Gases deviate from ideal behavior because molecules
A. are colorless B. are spherical C. attract each other D. have high speeds
137. Water of crystallization can be removed by
A. Drying B. Heating C. Evaporation D. All the above
138. Coal is produced after a long-time decay of
A. Animals B. Fossils C. Wood D. All the above
139. In which of the following layer of atmosphere there is more thickness of the ozone layer?
A. Troposphere B. Stratosphere C. Mesosphere D. Photosphere
140. What is the cause of diffraction?
A. Interference of primary wavelets B. Reflection of primary wavelets
C. Reflection of secondary wavelets D. Interference of secondary wavelets
141. Which one of the following is similar between electrostatic force and gravitational force?
A. Force can be attractive or repulsive
B. The force depends on the medium between the bodies
C. Both the forces are strong forces
D. Force is inversely proportional to the distance between the bodies
142. Identify the condition under which the force acting on a charge moving through a uniform magnetic field is maximum.
A. $\theta = 90^\circ$ B. $\theta = 180^\circ$ C. $\theta = 0^\circ$ D. $\theta = 360^\circ$
143. What is the space around a current-carrying conductor, in which its magnetic effect can be experienced called?

Entry Test

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the correct answer to your answer sheet.

two mark. Transfer

- A. Electric field distribution B. Magnetic pole C. Magnetic field D. Charge
-

144. Unit vector \hat{n} is along
A. X-axis B. Normal on a surface C. Y-axis D. Z-axis
145. What is the net electrostatic field in the interior of a conductor?
A. Positive B. Negative C. Zero D. Depends on the nature of the conductor
146. What is the force exerted by a stationary charge when it is placed in a magnetic field?
A. Zero B. Maximum C. Minimum D. Depends on the strength of the magnetic field
147. If a body a mass of 2 kg is raised vertically through 2m, then the work done will be
A. 38.2 J B. 392.1 J C. 39.2 J D. 3.92 J
148. Identify the condition under which the force acting on a charge moving through a uniform magnetic field is minimum.
A. $\theta = 90^\circ$ B. $\theta = 180^\circ$ C. $\theta = 270^\circ$ D. $\theta = 340^\circ$
149. Which among the following is false?
A. Coulomb force is a weak force B. Coulomb force is a central force
C. The force between two charges depend on the medium between them
D. The net force on a charge is the vector sum of the forces acting on it due to several other charges
150. DNA is stored in which of the following cell organelle?
a. Cell wall b. Cell Membrane c. Nucleus d. Cytoplasm
151. Which of the following organisms doesn't have a cell?
a. Virus b. Bacteria c. Fungi d. Algae
152. RNA is present in which of the following cell organelles?
a. Cell wall b. Ribosome c. Nucleus d. Cytoplasm and Golgi complex
153. Which of the following cell is found in the brain?
a. Neuron b. Hepatocyte c. Nephron d. Epithelial cell
154. Which of the following is the process of synthesis of glucose?
a. saccharification b. glycolysis c. gluconeogenesis d. neogenesis
155. Which of the following is not a component of cell membranes?
a. Phosphotriglycerides b. Cholesterol
c. Sphingolipids d. Phosphodiglycerides
156. Which of the following cells do not lack the ability to divide?
a. red blood cells b. muscle cells c. skin cells d. nerve cells
157. Loss of appetite due to the fear of becoming obese is-----?
a. Anorexia nervosa b. Bulimia nervosa c. Piles d. Dyspepsia
158. Co-ordination in man is brought about by-----?
a. Nervous system b. Endocrine system c. Both of these d. none of these.
159. In which of the following pigments major energy reserves and cell wall are like plants?
a. Rhodophyta b. Chlorophyta c. Phaeophyta d. Chrysophyta
160. The only group of algae having no flagellated motile cells at any stage is---?
a. Chrysophyta b. Phaeophyta c. Pyrrophyta d. Rhodophyta