Stream 2: Eng, Phys, Chem, Ma

University of Agriculture, Faisalabad

Entry test for Admission to the First Degree Programs

Time: 90 minutes | August 22, 2021 at 04:00 p.m. | Maximum Marks: 1

IMPORTANT INSTRUCTIONS FOR THE CANDIDATES

The candidates are given the question paper sheets of their chosen subject stream along with an answer sh (bubble sheet) carrying 100 bubbles in four groups i.e., 25 bubbles (squares) for each subject. They required to DARK SHADE the correct choice CAREFULLY within the boundary of a BUBBLE. Calcula can be used but MUST NOT be shared with others. A candidate can leave the test hall after half time.

Please DO NOT DETACH the Bubble Sheet from the Question Paper

ENGLISH

COVID-19 SOPs will fol

Choose the correct answers to the words in underlined CAPITAL letters.

1. I was told that the instructions were easy, but I found them extremely COMPLICATED.
   A. Ridiculous | B. Intricate | C. Irrelevant | D. Easy
2. I didn't COMPREHEND the nature of the project until I had read your brief report.
   A. Contend | B. Understand | C. Follow | D. Embrace
3. The speaker tried to CONVEY her feelings concerning the urgency of a favorable decision.
   A. Import | B. Communicate | C. Assuage | D. Summon
4. The feeling of COMPETITION in the classroom is noticeable to all teachers.
   A. Cooperation | B. Rivalry | C. Conquest | D. Discovery
5. Kashaf feels CONFIDENT about her grade on the test she has just taken.
   A. Sure | B. Depressed | C. Ecstatic | D. Uncertain
6. That matter is so CONFIDENTIAL that it must not be discussed outside the office.
   A. Alarming | B. Secret | C. Important | D. Intricate
7. An increase in CRIMINAL BEHAVIOR is a common result of high unemployment.
   A. Mistake | B. Crime | C. Fault | D. Error
8. Neurologists have developed ways to help Sufferers COPE WITH dyslexia.
   A. Deal with | B. Dispense with | C. Retard | D. Cure
9. The CURRENT edition of the magazine discusses the ancient civilizations of Anatolia.
   A. Latest | B. Special | C. First | D. Running
10. The CONGESTION on the streets makes mass transport very desirable in big cities.
    A. Crucial | B. Contamination | C. Faux pas | D. Crowding
11. Henry Cavendish CONFIRMED that water is a combination of hydrogen and oxygen.
    A. Verified | B. Researched | C. Proposed | D. Doubted
12. CONSCIENTIOUS researchers always pay attention to details while carrying out research.
    A. Meticulous | B. Clever | C. Fearless | D. Hasty
13. The coach CONGRATULATED Sidra on her outstanding display of leadership.
    A. Praised | B. Scolded | C. Alluded | D. Warned

Pick the correct option from the given choices to fill in the blanks.

14. The accused was released _____ bail.
    A. Up | B. Above | C. For | D. On
15. All t hat _____ is not gold.
    A. Glitters | B. Glitter | C. Glittering | D. Glittered
16. Care kill s the _____.
    A. Cat | B. Dog | C. Man | D. Lamb
17. Cut your coat according to your _____.
    A. Clothes | B. Cloth | C. Size | D. Shirt
18. A good face needs no _____.
    A. Paint | B. Contour | C. Make up | D. Smile
19. He did hard wor k and _____.
    A. Succeed | B. Succeeds | C. Succeeded | D. Has succeeded
20. Would that I _____ rich.
    A. Was | B. Were | C. Am | D. Will be
21. Do yo u know why an apple _____ down?
    A. Fall | B. Has fall | C. Did fall | D. Falls
22. We tried to tide _____ our difficulties.
    A. Upon | B. Up | C. Over | D. On
23. You must comply _____ the teacher's advice.
    A. By | B. For | C. To | D. With

24. He hu ated _____ the lost book.
A. For B. On C. To D. By

25. He _____ his breakfast at 9 O' Clock and went to the office.
A. Had B. Would have C. Was having D. Has had

PHYSICS

26. If the radius of earth is doubled then the value of critical velocity becomes
a) b) c) d)

27. In dryer, water is pushed out of wet clothes due to
a) Retarding force b) Abundance of centripetal Force
c) Lack of centripetal force d) Friction

28. The SI unit of flow rate is
a) b) c) d)

29. At which place the motion of a simple pendulum will be slowest
a) Karachi b) K2 c) Murree d) Lahore

30. Oscillation of shock absorber of a car is a practical example of
a) Damped Oscillation b) Forced Oscillation c) SHM d) Undamped Oscillation

31. Sound waves cannot be:
a) Reflected b) Refracted c) Polarized d) diffracted

32. The percentage error in the measurement of radius is 1%. The error in the calculated value of volume is:
a) 7% b) 5% c) 3% d) 1%

33. The resultant of two forces 3N and 4N acting at right angles to each other is
a) 5N b) 6N c) 1N d) 7N

34. Slope of velocity time graph describes a physical quantity called
a) Displacement b) Average acceleration c) Average velocity d) Momentum

35. The velocity of projectile is maximum at
a) Highest point b) Point of projection c) Point of launching d) Half of the height

36. At the open end of an organ pipe---------- are formed:
a) Nodes b) Antinodes c) Overtones d) None of these

37. Angle between the ray of light and wavefront is
a) b) c) d)

38. The ECG records ---------between points on human skin generated by electric process in the heart
a) Heart Beat b) Pulse Rate c) Pressure d) Voltage

39. During negative half cycle of AC, PN junction offers
a) High resistance b) Low resistance c) No resistance d) All of these

40. The term transistor stands for:
a) Transfer of current b) Transfer of voltage c) Transfer of resistance d) None of these

41. Emission of electrons by metals on heating is called:
a) Secondary emission b) Field emission c) Photoelectric emission d) Thermionic emission

42. In an electronic transition atom cannot emit
a) Infrared radiations b) γ-radiations c) Ultraviolet radiations d) Visible radiations

43. The dead time of GM counter is:
a) b) c) d)

44. Mass of meson is :
a) Less than proton b) Greater than proton c) Equal to proton d) Equal to neutron

45. Two opposite point charges of same magnitude separated by distance 2d, electric potential midway between t
a) b) 2V c) Zero d)

46. Resistivity at a given temperature depends upon:
a) Area of cross section b) Length c) Nature of material of conductor d) Both leng

47. If the number of turns become double but length remain same, then magnetic field in the solenoid becomes:
a) Half b) Double c) Remain same d) Zero

48. When the back e.m f in a circuit is zero, it draws
a) Maximum current b) Zero current c) Minimum current d) Average current

49. The frequency of AC used in Pakistan is:
a) 50 CPS b) 60 CPS c) 100 CPS d) 120 CPS

50. A device used to detect very weak magnetic field produced by brain is
a) CAT scan b) Squid c) CRO d) MRI

CHEMISTRY

51. Which of the following is not a dehydrating agent?
a) $CaCl_2$ b) Silica gel c) $CdCl_2$ d) P_2O_5

absolute temperature of gas is doubled and pressure is reduced to one half the volume of gas will be
a) Remains unchanged b) V/4 c) 4V d) 2V

gas lowest rate of diffusion
a) He b) H_2 c) O_2 d) N_2

the strongest acid among halogen acids is
a) HCl b) HBr c) HF d) HI

feeling uncomfortable breathing in unpressurized cabins is due to
a) High pressure of CO_2 b) Low pressure of O_2 c) Low pressure of CO_2 d) Fatigue

Mass of one mole of electron is
a) 0.55mg b) 1.008mg c) 1.6673mg d) 0.184mg

One mole of SO_2 contains
a) 18.1×10^{23} atoms of oxygen b) 6.02×10^{23} atoms of sulphur
c) 6.02×10^{23} atoms f oxygen d) 4gram atoms of SO_2

58. Ascorbic acid is vitamin
a) A b) B c) E d) C

59. The rate of E1 reactions depend upon
a) Concentration Of Substrate b) Concentration of Nu
c) Both a & b d) None of these

60. Which is the best leaving group?
a) I^- b) Br^- c) Cl^- d) F^-

61. Value of 6d orbital is
a) 8 b) 9 c) 10 d) 11

62. Born-Haber cyle is a best example of
a) Boyle's law b) Charles law c) Graham's law d) Hess law

63. In t-butyl leohol, tertiary carbon is attached bonded to
a) Two H atoms b) Three H atoms c) One H atom d) No H atom

64. Which one is not a molecular ion?
a) CH_4^+ b) NH_4^+ c) CO^+ d) He^+

65. Synthetic rubber is made by polymerization of
a) Chloroform b) Acetylene c) Divinyl acetylene d) Chloroprene

66. The electrophile in aromatic sulphonation is
a) H_2SO_4 b) HSO_4^- c) SO_3 d) SO_3^+

67. Benzene cannot undergo
a) Substitution reaction b) Addition reaction c) Oxidation reaction d) Elimination react

68. Linear shape is associated with which hybridization?
a) sp^3 b) sp^2 c) sp d) dsp^2

69. Formula of chloroform is
a) $CHCl_3$ b) CH_3Cl c) CH_2Cl_2 d) CCl_4

70. Which compound is more reactive?
a) Ethane b) Ethene c) Ethyne d) Benzene

71. Which compound is more soluble in water?
a) C_6H_5OH b) C_2H_5OH c) $C_6H_{13}OH$ d) $C_7H_{15}OH$

72. % of nitrogen in Urea
a) 76 b) 46 c) 86 d) 56

73. The purpose of ozone is to protect earth from
a) IR rays b) Cosmic rays c) UV rays d) Visible rays

74. The comparative rates at which the solutes moves in the paper chromatography depends upon
a) Size of paper b) Rf values
c) Size of chromatographic tank d) Temperature of experiment

75. Allotropy is a property of
a) Element b) Compound c) Atom d) Molecule

MATHEMATICS

76. If - p is true, then p is
(a) false (b) has no information (c) true (d) equivalent to p

77. A conjunction of two statements p and q is true only if
(a) p is true (b) both p and q are true (c) q is true (d) both p and q

78. p: Islamabad is a capital of Pakistan q: Lahore is a city of Pakistan, the conjunction $p \wedge q$ is
(a) false (b) true (c) not valid (d) unknown

79. Disjunction of two statements p and q is true if
(a) p is false (b) both p and q are false (c) one of p and q is true (d) q is false

80. A disjunction of two statements p and q is false if
(a) p is false (b) both p and q are false (c) one of p and q is true (d) q is false

81. A decimal which has only finite number of decimal places is called _____ decimal
(a) recurring (b) non-recurring (c) non-terminating (d) terminating

82. The additive identity of real numbers is
(a) 0 (b) 1 (c) 2 (d) 3

83. If order of a matrix A is 2x1 and of matrix B is 3x3 then order of AB is
(a) 3x2 (b) 2x2 (c) 3x3 (d) 2x3

84. If each element of a matrix is zero, then it is called
(a) Hermitian (b) Symmetric (c) Null matrix (d) Skew symmetric

85. $[a\ b\ c]$ is a:
(a) zero matrix (b) diagonal matrix (c) column matrix (d) row matrix

86. The transpose of a column matrix is a
(a) zero matrix (b) diagonal matrix (c) column matrix (d) row matrix

87. If the sum of the roots of the equation $ax^2 - 2x + 2a - 0$ is equal to their product, then the value of a is
(a) 1 (b) 2 (c) 3 (d) 4

88. The common ratio of a geometric sequence cannot be
(a) $\frac{1}{2}$ (b) 1 (c) 2 (d) n

89. The 5th term of the G.P. 3, 6, 12, ... is
(a) 15 (b) 48 (c) 9 (d) 3

90. The series obtained by adding the terms of a geometric sequence is called the
(a) harmonic series (b) geometric series (c) arithmetic series (d) infinite series

91. For $a, b \in R$, $a > b$ or $a = b$ or $a < b$ is the
(a) trichotomy property of real numbers (b) left distributive property of real numbers
(c) right distributive property of real numbers (d) cancellation property of real

92. Trichotomy is property of
(a) inequality (b) equality (c) division (d) subtraction

93. The sum of an infinite geometric series exists only if the condition on the common ratio r is
(a) $-1<r<1$ (b) $-1\leq r\leq 1$ (c) $r<-1, r>1$ (d) $-1, r\geq 1$

94. The number 1 is a
(a) prime number (b) irrational number (c) even number (d) odd number

95. For any subsets A and B of U, $(A \cap B)' =$
(a) $A \cap B$ (b) $A \cup B$ (c) Φ (d) $A' \cup B'$

96. If A and B are two sets, then $A - B =$
(a) $A \cup B'$ (b) $(A \cup B)'$ (c) $A \cap B'$ (d) $(A \cap B)'$

97. $P \wedge q$ is true if both are true. This is known as
(a) conjunction (b) negation (c) disjunction (d) none of the

98. If A is a matrix of order 3x2 then the order of_____is
(a) 3x3 (b) 2x3 (c) 2x2 (d) 3x2

99. If A is a matrix of order n x n and B is a matrix of order $n * p$ then the order of AB is
(a) p x m (b) p x n (c) n x p (d) m x p

100. If A is a matrix of order 3x4 then order of AA' is
(a) 4 x 3 (b) 3 x 4 (c) 4 x 4 (d) 3 x 3

$A = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 1 & 1 \end{bmatrix}$ $B = \begin{bmatrix} 1 & 4 & 2 \\ 2 & 5 & 1 \\ 3 & 6 & 4 \end{bmatrix}$

$AB = [$