

54. Which of the following is conservative force?
- Frictional force
  - Gravitational force
  - Tension in a string
  - Normal reaction
55. At what angle, range of projectile becomes equal to height of projectile?
- $30^\circ$
  - $45^\circ$
  - $76^\circ$
  - $60^\circ$
56. According to the Equation of continuity, if we double the diameter of pipe then speed of fluid in that pipe will become \_\_\_\_\_ of initial speed.
- Four times
  - One fourth
  - Half
  - Double
57. If we double the radius of droplet falls through air then its terminal velocity will become
- Half
  - Double
  - Four times
  - Remains same
58. The slope of ohm's law graph is equal to
- Resistance
  - Conductance
  - Resistivity
  - Conductivity
59. If kinetic energy of electron becomes four times then wavelength becomes
- Half
  - Double
  - Four times
  - One fourth
60. Potential gradient is a
- Vector quantity
  - Scalar quantity
  - Number
  - Phasor
61. At what angle between force and displacement, work done is half of maximum work?
- $60^\circ$
  - $30^\circ$
  - $45^\circ$
  - $75^\circ$
62. The slope of energy frequency graph is
- Plank's constant
  - Wein's constant
  - Stephen constant
  - Compton's wavelength
63. If a charge particle is moving parallel to the magnetic field then path made by the charge particle will be
- Circular
  - Helical
  - Straight
  - Spiral

44. Earth is \_\_\_\_\_ frame of reference.
- Inertial
  - Non-inertial
  - Both A and B
  - None of these
45. If momentum of a body becomes double then Kinetic energy will become
- Double
  - Four times
  - Eight times
  - Remain same
46. Wheatstone bridge circuit is used to measure \_\_\_\_\_.
- Voltage
  - Current
  - Resistance
  - Temperature
47. According to Archimedes principle, when an object is immersed in a liquid, it experiences upward thrust which is \_\_\_\_\_ weight of liquid displaced.
- Equal to
  - More than
  - Less than
  - All are possible
48. If temperature of the sun becomes three times then energy emitted from the sun will be
- Eighty one times
  - Three times
  - Nine times
  - Twenty
49. If we double the angular speed of coil then induced emf in coil of generator will be
- Four times
  - Half
  - One fourth
  - Double
50. In photoelectric effect, when intensity of light increases then which quantity will increase?
- Stopping potential
  - Work function
  - Frequency
  - Current
51. System errors can be
- Either positive or negative
  - Positive only
  - Negative only
  - None of these
52. In which of the following process all heat given is converted into internal energy?
- Isothermal
  - Adiabatic
  - Isochoric
  - Isobaric
53. Which experiment confirms the particle nature of light?
- Interference
  - Diffraction
  - Polarization
  - Compton's effect

34. Increase level of calcium in urine is called \_\_\_\_\_

- A. Hypercalciuria
- B. Urolithiasis
- C. Hyperoxaluria
- D. Hypertoncalium

35. \_\_\_\_\_ hormone plays role in maintaining proper level of calcium in blood.

- A. Cretinism
- B. Thyroxin
- C. Calcitonin
- D. Oxytocin

36. The attractive force between dissimilar molecules is called \_\_\_\_\_ force.

- A. Cohesive
- B. Specific heat
- C. Adhesive
- D. Hydrophobic

37. The group of ribosomes attached to a single mRNA is known as \_\_\_\_\_

- A. Cyclosis
- B. Cisternae
- C. Disomes
- D. Polysome

38. The isolation of cellular components to determine their structure and chemical composition is called cell \_\_\_\_\_

- A. Fractionation
- B. Microscopy
- C. Tissue culture
- D. Chromaography

39. The \_\_\_\_\_ is the largest gland in human body.

- A. Bile
- B. Pancreas
- C. Pituitary
- D. Liver

40. In human beings, there are \_\_\_\_\_ pair of spinal nerves.

- A. 12
- B. 25
- C. 22
- D. 31

## PHYSICS

41. The reverse process of x-ray production is

- A. Compton's effect
- B. Pair production
- C. Photoelectric effect
- D. Annihilation of matter

42. If we double the length and half the area of wire, then new resistance of wire will become

- A. Double
- B. Half
- C. Four times
- D. One fourth

43. Inertia is a measure of

- A. Mass
- B. Weight
- C. Force
- D. Velocity

## Questions 9-10

The principle of balloon flight is simple. The propane is ignited in a burner that is placed directly beneath the opening in the bottom of the balloon. The balloon rises because the air inside the bag is warmer, therefore lighter, than the outside air. If the balloon begins to descend too soon, the crew reignites the burner, sending another blast of lift-producing heat into the bag.

A balloon consists of only three major parts: bag, basket, and burner. The bags (or envelopes, as they are technically called) are made of nylon or polyester. They range in capacity from 33,000 to 100,000 cubic feet, and some reach as high as a seven-story building. The crew basket, constructed from wicker or aluminum, is suspended from the bag by strong tapes. The burner is fixed to a metal platform above the basket.

9. The crew basket on a balloon is usually constructed of wicker or aluminum. What might you predict as an outcome if the crew basket were exchanged for one made of iron or steel?

- A. the balloon would be harder to control
- B. the balloon would rise more easily from the ground
- C. the balloon would be unlikely to rise from ground at all
- D. the balloon would rise more slowly

10. In the reading above, the balloon rises because the air inside the bag is warmer. This occurs because:

- A. when air is heated, its density changes
- B. the balloon is constructed of light materials
- C. molecules move more vigorously in cool air
- D. cool air always moves towards warm air

## BIOLOGY

11. Some bacteria have third outermost protective covering called \_\_\_\_\_

- A. Capsule
- B. Slime
- C. Glycocalyx
- D. Mesosomes

12. Animals that produce and excrete uric acid are called \_\_\_\_\_

- A. Ureotelic
- B. Ureterine
- C. Uricic
- D. Ammonia

13. In Pakistan, \_\_\_\_\_ is the top milk producing buffalo.

- A. Nili-Jahore
- B. Nili-ravi
- C. Kundo
- D. Godavari

14. The part of earth where life exists is called \_\_\_\_\_

- A. Ecology
- B. Biosphere
- C. Population
- D. Species

15. The color of plant flowers is controlled by specialized organelle called \_\_\_\_\_

- A. Chloroplast
- B. Dermoplast
- C. Chromoplast
- D. Leucoplast

16. Substances in plants that absorb visible light are called \_\_\_\_\_

- A. Tagmen
- B. Locus
- C. Chlorophyll
- D. Pigment

17. The inner side of virus capsid contain another part known as \_\_\_\_\_

- A. Gene
- B. DNA
- C. Genome
- D. mRNA

18. At the catalytic site of enzyme \_\_\_\_\_ are responsible for catalytic activity.

- A. Co-factor
- B. Co-enzyme
- C. Amino acid
- D. Prosthetic

19. The process of exchange of gases in plants takes place mainly through minute opening called \_\_\_\_\_

- A. Guard cells
- B. Stomata
- C. Grana
- D. Granulues

20. The shrinkage of cytoplasm is known as \_\_\_\_\_

- A. Cytolysis
- B. Plasmodia
- C. Plasmodium
- D. Plasmolysis

21. Fungi body is made up of thread like structure called \_\_\_\_\_

- A. Hyphae
- B. Mycelium
- C. Heterotrophs
- D. Chitin

22. AIDS is caused by virus \_\_\_\_\_

- A. HIC
- B. HII
- C. HID
- D. HIV

23. Human skeleton comprises of \_\_\_\_\_ and \_\_\_\_\_

- A. Bones , tissues
- B. Tissues , cartilage
- C. Bones , cartilage
- D. Cartilage , Tagmen

## ENGLISH

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

1. It is essential that all teachers \_\_\_\_\_ a minimum of a master's degree.

- A. have
- B. has
- C. are
- D. is

2. I say good morning \_\_\_\_\_ father and mother.

- A. off
- B. to
- C. too
- D. up

3. They \_\_\_\_\_ television every evening.

- A. watch
- B. watches
- C. watching
- D. be watching

4. This photograph \_\_\_\_\_ taken a long time ago.

- A. is
- B. are
- C. was
- D. were

5. Unless new reserves are found soon, the world's supply of coal is being \_\_\_\_\_ in such a way that with demand continuing to grow at present rates reserves will be \_\_\_\_\_ by the year 2050.

- A. consumed ... completed
- B. depleted ... exhausted
- C. reduced ... argument
- D. burnt ... destroyed

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

6. DARK: LIGHT::

- A. little: big
- B. fat: heavy
- C. small: tiny
- D. modest: average

7. LATITUDE: LONGITUDE::

- A. equator: tropic of cancer
- B. fluctuate: flout
- C. preamble: postscript
- D. length: breadth

8. BARK: DOG::

- A. sheep: beef
- B. gaggle: chicken
- C. mew: cat
- D. flock: goat

74. When enthalpy of reactant is higher than product than reaction will be

- A. Non spontaneous
- B. Spontaneous
- C. Exothermic
- D. Endothermic

75. Evaporation of water is possible

- A. Above  $100^{\circ}\text{C}$
- B. At  $0^{\circ}\text{C}$
- C. At  $100^{\circ}\text{C}$
- D. At all temperature

76. Which one of the following is not state function

- A. Temperature
- B. Work done
- C. Internal energy
- D. Pressure

77. Solution with maximum concentration of solute is called

- A. Ideal solution
- B. Concentrated solution
- C. Unsaturated solution
- D. Dilute solution

78. The constant factor in Boyle's law is

- A. Pressure
- B. Moles
- C. Volume
- D. Temperature

79. The spreading of fragrance in air is due to

- A. Effusion
- B. Diffusion
- C. osmosis
- D. hydrolysis

80. Distillation under reduced pressure

- A. Steam distillation
- B. Fraction distillation
- C. Destructive distillation
- D. Vaccum distillation

81. Multiples bonds (double and trip bonds) are treated as single bond by theory

- A. VBT
- B. MOT
- C. VSEPR
- D. Plank's theory

82. The protein part of enzyme is called

- A. Apo enzyme
- B. Holo enzyme
- C. Co enzyme
- D. Cofactor

83. Which of the following liquid has highest boiling points

- A. HCl
- B. HBr
- C.  $\text{H}_2\text{O}$
- D.  $\text{Br}_2$

95. Hydrogen bond is present in

- A.  $\text{CH}_4$
- B.  $\text{HBr}$
- C.  $\text{HCl}$
- D.  $\text{NH}_3$

96. Diamond and graphite are example of

- A. Polymorphism
- B. Isomorphism
- C. Isomerism
- D. Allotropy

97. The strongest acid among the following is

- A.  $\text{HBr}$
- B.  $\text{HCl}$
- C.  $\text{HF}$
- D.  $\text{HI}$

98. Which of the following cannot conduct electricity?

- A.  $\text{NaCl}$ (solid)
- B.  $\text{NaCl}$ (molten)
- C.  $\text{NaCl}$  (aqueous)
- D. Both B and C

99. Boiling point of water is reduced at mount everst due to

- A. Decrease in vapor pressure
- B. Increase in vapor pressure
- C. More humidity
- D. Both B and C

100. What is the molarity of solution containing urea in  $500\text{cm}^3$  of solution

- A. 1.5 molar
- B. 2.0 molar
- C. molar
- D. 0.5 molar

64. As the speed of moving fluid increases, the pressure in the fluid
- A. Increases
  - B. Decreases
  - C. May increase or decrease depending on viscosity
  - D. Remains same
65. On what factors, the resistivity of material depends?
- A. Nature of material
  - B. Temperature
  - C. Both A and B
  - D. None of these
66. The electromagnetic waves are produced by \_\_\_\_\_.
- A. Accelerating charges
  - B. Uniformly moving charges
  - C. Charges at rest
  - D. Moving neutrons
67. If we double the mass and velocity of object, then centripetal force will become
- A. Four times
  - B. Two times
  - C. Eight times
  - D. Half
68. When three capacitors are connected in series then which quantity in all capacitors remain same?
- A. Charge
  - B. Voltage
  - C. Both A and B
  - D. None of these

69. If the percentage error in mass is 2% and velocity is 3% then percentage in momentum will be

- A. 2%
- B. 1%
- C. 3%
- D. 5%

70. If electron, proton and alpha particle are moving with same velocity then which particle will have larger wavelength?

- A. Alpha particle
- B. Proton
- C. Electron
- D. All have same wavelength

## CHEMISTRY

71. Which of the following show trigonal pyramidal shape

- A.  $\text{CH}_4$
- B.  $\text{H}_2\text{O}$
- C.  $\text{NH}_3$
- D.  $\text{H}_2\text{S}$

72. The concept of hybridization was introduced by

- A. Lewis
- B. Faraday
- C. Pauling and Slater
- D. Hund

73. Measure of internal resistance of a liquid is called

- A. Surface tension
- B. Evaporation
- C. Boiling point
- D. Viscosity

24. Bone is a type of \_\_\_\_\_ tissue.

- A. Nervous
- B. Epithelial
- C. Connective
- D. Permanent

25. \_\_\_\_\_ is a process of removal of metabolic waste produced during biochemical reactions in body.

- A. Urea
- B. Excretion
- C. Removal
- D. Osmoregulation

26. \_\_\_\_\_ disease is transmitted through the air.

- A. Hepatitis
- B. Cancer
- C. Polio
- D. Measles

27. The outer layer of human skin is made up of \_\_\_\_\_ tissue.

- A. Epithelial
- B. Connective
- C. Muscular
- D. Nervous

28. In human beings, arthritis affects \_\_\_\_\_

- A. Skull
- B. Vertebrae
- C. Joints
- D. Vertebral disc

\_\_\_\_\_ helps bacteria cell in locomotion.

- A. Cilia
- B. Pili
- C. Cyst
- D. Plasmid

30. Deforestation result with the great loss in \_\_\_\_\_

- A. Biosphere
- B. Biodiversity
- C. Population
- D. Trees

31. Chlorophyll molecules mainly absorb \_\_\_\_\_ from visible light.

- A. Infra-red
- B. Orange red
- C. Indigo
- D. Green

32. The nucleic acids are polymers of five sugar based compound called \_\_\_\_\_

- A. Nucleic acid
- B. DNA
- C. RNA
- D. Nucleotide

33. In the lipid bilayer of plasma membrane, \_\_\_\_\_ are also present beside lipids.

- A. Starch
- B. Carbohydrates
- C. Fat
- D. Protein