

LIAQUAT UNIVERSITY OF MEDICAL AND HEALTH SCIENCES – JAMSHORO**English:**

Identify the word or phrase that needs to be changed for the sentences to be correct:

1. Many of the new plastics is made from oil. No error
A B C D E
2. Do not let your radio blare so as to disturb your neighbors. No error
A B C D E

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

3. SHALLOW:
a) Deep
b) Dear
c) Thin
d) Clean
e) Pure
4. FAULT:
a) Error
b) Mistake
c) Blunder
d) Accurate
e) Slip

Choose the word most similar in meaning to the capitalized ones:

5. ENGULF:
a) Ingest
b) Show
c) Wipe
d) Clarify
e) Waste
6. STUMBLE:
a) Walk
b) Fall
c) Study
d) Acquire
e) Compose

Questions 7 – 8 are based on the following passage.

The steam engine improved in efficiency during the nineteenth century and in 1843 String fellow, an Englishman, achieved a remarkable technical and scientific triumph by getting a

model aeroplane, powered a small steam engine to fly. However it never seemed likely – that a steam engine fitted to an aeroplane would ever get its own weight and that of a man off the ground. Unlike the airship and the balloon which are lighter than air the aeroplane is a heavier than air machine which must move rapidly if it is to fly at all. Consequently it must have an engine that is very powerful in proportion to its weight.

7. It can be inferred from the passage that airship and balloon are
 - a) Heavier than air
 - b) Heavier than aeroplane
 - c) Lighter than the aeroplane
 - d) Of the same weight as the air
 - e) Of the same weight as the aeroplane
8. The word “its” in the passage refers to the
 - a) Balloon
 - b) Steam engine
 - c) Man
 - d) Airship
 - e) None of the above

Complete the sentences by choosing the most appropriate word. From the given lettered choices (A to E) below each.

9. It should be _____ Karachi than it is here.
 - a) Warms in
 - b) Warm in
 - c) Warmest in
 - d) Warmer in
 - e) Warmed in
10. The municipality prohibits parking _____ the main road.
 - a) At
 - b) On
 - c) Off
 - d) In
 - e) Over

Physics:

11. The mathematical statement of Hooke’s law is:
 - a) $F_s = ma$
 - b) $F_s = -kx$
 - c) $F_s = mgh$
 - d) $F_s = ka$
 - e) None of the above
12. Light can be polarized by all of the following methods except:
 - a) Selective absorption

- b) Double refraction
 - c) Scattering of light
 - d) Diffraction
 - e) Reflection
13. A chess piece 4 cm high is located 10 cm from the covering lens, whose focal length is 20 cm. the image will be formed at a distance of:
- a) -10 cm
 - b) +10 cm
 - c) +20 cm
 - d) -20 cm
 - e) -15 cm
14. When a force acts opposite to the direction displacement the work done is:
- a) Zero
 - b) Negative
 - c) Positive
 - d) Both B and C
 - e) None of the above
15. A neutron of mass 1.7×10^{-27} kg travels a distance of 12 m in a time interval of 3.6×10^{-4} sec. assuming speed was constant its kinetic energy is:
- a) 9.256×10^{-19} joule
 - b) 8.005×10^{-19} joule
 - c) 9.001×10^{-29} joule
 - d) 8.256×10^{-4} joule
 - e) 7.256×10^{-29} joule
16. The electric force between two static point charges varies directly to the product of charges and inversely with the square of the distance between them is:
- a) Ohm's law
 - b) Lenz's law
 - c) Coulomb's law
 - d) Ampere's law
 - e) Faraday's law
17. The electric flux is maximum when the angle " θ " between electric intensity and vector area is:
- a) $\theta = 90^\circ$
 - b) $\theta \leq 90^\circ$
 - c) $\theta = 0^\circ$
 - d) $\theta \geq 90^\circ$
 - e) $\theta = 180^\circ$
18. According to Ohm's law the relationship that exists between current and potential difference is:
- a) Parabolic
 - b) Hyperbolic
 - c) Linear

- d) Symbolic
e) None of the above
19. At a constant pressure the volume "V" of a given mass of a gas is directly proportional to its absolute temperature "T", is stated by:
- a) Boyle's law
b) Charle's law
c) Daltor's law
d) General Gas law
e) None of the above
20. Which if the following statement/s regarding second law of Thermodynamic is/are correct?
- a) It is impossible to derive a continuous supply of work by cooling body to a temperature lower than that of the coldest of its surrounding
b) It is possible to derive a continuous supply of work by cooling temperature body to a temperature lower than that of the coldest of its surrounding
c) It is impossible to derive a continuous supply of work by heating temperature body to a temperature more than that of the hottest of its surrounding
d) None of the above
21. A circuit in which there is a current of 15 amperes is changed so that the current falls to zero in 0.5 seconds. If the average e.m.f of 300 volts is induced. What is the self inductance of the circuit?
- a) 4 henrys
b) 6 henrys
c) 8 henrys
d) 10 henrys
e) 2 henrys
22. Potentiometer is a device used measuring the _____ between two points of a circuit.
- a) Flux density
b) Resistance
c) Current
d) Voltage
e) None of the above
23. A galvanometer has a resistance of 50 ohms and gives full scale deflection when a current of 0.005 amperes flows in it. Find the value shunt resistance to convert it into a meter of range 20 amperes.
- a) 0.316 ohms
b) 0.0125 ohms
c) 0.007 ohms
d) 2.9 ohms
e) 1.5 ohms
24. A battery of 10 volts is connected to two resistors of 3Ω and 2Ω joined together in series. The current through the circuit will be:
- a) 1.2 amperes

- b) 1.0 amperes
c) 2.0 amperes
d) 3.0 amperes
e) 5.0 amperes
25. A magnetic field is a region in which a force is experienced on a moving charge or a magnet, this force depends upon:
- The magnetic field of induction
 - The speed of the moving charge
 - The magnitude of charge
- a) I only
b) II and III only
c) I and III only
d) I and II only
e) I, II and III
26. Three dimensional images of objects by using lasers is a process called:
- Plating
 - Photography
 - Welding
 - Holography
 - Doping
27. Which of the following statements is correct?
- The neutrons has a mass slightly greater than the proton and it carries no charge
 - The protons has a mass slightly greater than the neutron and it carries no charge
 - The neutron has mass slightly less than the proton and it carries a charge
 - The neutron has mass slightly less than the proton and it carries no charge
 - None of the above
28. The audible frequency range for a normal human ear is:
- 20 Hz to 20,000 Hz
 - 20 Hz to 200,000 Hz
 - 200 Hz to 20,000 Hz
 - 20 Hz to 80 Hz
 - 20 Hz to 200 Hz
29. The length of a measuring g is 1 m when it is at rest. What will be its length if it moving with a velocity one third of the speed of light?
- $\frac{2\sqrt{2}}{3} m$
 - $\frac{2\sqrt{2}}{9} m$
 - $\frac{4\sqrt{2}}{3} m$
 - $\frac{4\sqrt{2}}{9} m$
 - $\frac{3\sqrt{2}}{9} m$

30. The horizontal distance from the length ($x = 0$, $y = 0$) to the point where the projectile returns ($X=R$, $Y=0$) is called:
- Angle of the projectile
 - Height of the projectile
 - Range of the projectile
 - Direction of the projectile
 - None of the above
31. The right hand rule is applied to find:
- The direction of a vector obtained by the vector product of two vectors
 - The magnitude of a vector obtained by the vector product of two vectors
 - Neither the direction nor the magnitude
 - Both A and B
 - None of the above
32. The center of mass of a system of particles:
- Coincides always with the center of gravity
 - Never coincides with the center of gravity only in a uniform gravitational field
 - Coincides always with the center of gravity only in a changing gravitational field
 - None of the above
33. If we go away from the surface of the earth a distance equal to the radius of the earth the value of g will become:
- One fourth
 - One eighth
 - One ninth
 - One sixteenth
 - Four times
34. Geiger counter is a portable device widely used for the direction of:
- Charge
 - Ionizing particles
 - Velocity
 - Speed
 - Acceleration

Chemistry:

35. Ideal gas equation is obtained by combining:
- Boyle's law, Dalton's law and Charle's law
 - Boyle's law, Charle's law and Avogadro's law
 - Dalton's law, Charle's law and Avogadro's law
 - Boyle's law, Dalton's law and Avogadro's law
 - All of the above
36. Which light color has the longest wave length?
- Violet
 - Blue
 - Red

- d) Green
e) Yellow
37. Which of the following has empirical formula and molecular formula?
a) CH₄
b) H₂O
c) NaCl
d) MgO
e) All of the above
38. In the Boyle's law, if the volume of a gas is plotted versus the reciprocal of the pressure, the curve obtained is:
a) Parabolic curve
b) Hyperbolic curve
c) Straight line
d) Symbolic
e) All of the above
39. Indicators are complex molecules that themselves are:
a) Strong acids
b) Strong bases
c) Weak acids
d) Weak bases
e) Both C and D
40. For a chemical reaction
A → B
The threshold energy of reaction is 50 K.J/mole. The average internal energy of A is 25 K.J/mole. The activation energy of A is:
a) 25 K.J/mole
b) 50 K.J/mole
c) 100 K.J/mole
d) 125 K.J/mole
e) 0 K.J/mole
41. In a reaction :
$$2\text{H}_2\text{O}_2(\text{aq}) \xrightarrow{\text{MnO}_2} 2\text{H}_2\text{O}(\text{l}) + \text{O}_2(\text{g})$$

MnO₂ is a:
a) Positive catalyst
b) Negative catalyst
c) Auto catalyst
d) Bio catalyst
e) None of the above
42. When the product the ionic concentration is equal to the solubility product the solution is said to exist in:
a) Unsaturated form
b) Saturated form
c) Super – saturated form

- d) Both A and B
e) None of the above
43. The conductance of electric current through solutions:
- Increases with dilution
 - Increases with increase in concentration
 - Increases with the decrease on absolute velocities of ions in a solution
 - Increase by decreasing the temperature by 1°C
 - Increases by large increase in pressure
44. Which of the following is characteristics of alkali metals?
- Low melting point
 - High ionization energy
 - Low electro negativity
 - Low boiling point
 - None of the above
45. The formula of soda ash is:
- $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O}$
 - NaOH
 - Na_2CO_3
 - NaHCO_3
 - NaCl
46. In the purification of Bauxite, the method used for the purification of Bauxite containing excess of silica is known as:
- Hall's method
 - Baeyer's method
 - Serpek's method
 - Electrolysis of pure alumina
 - Hoope's electrolysis method
47. The composition of turner's yellow pigment is:
- $\text{Pb}_3(\text{OH})_2 \cdot (\text{CO}_2)_2$
 - Pb_3O_4
 - PbCrO
 - $\text{PbCrO}_4 \cdot \text{PbO}$
 - $\text{PbCl}_2 \cdot 4\text{PbO}$
48. According to _____, the element are arranged in the according order of their atomic weight.
- Dobereiner's triaes
 - Lothar Meyer's classification
 - Newland's law of octaves
 - Modern periodic law
 - None of the above
49. Methane when heated in the absence of oxygen, gives a byproduct "carbon black" which is used in:
- Rubber industry

- b) Pigment for paints
 c) Type writer carbon papers
 d) Pigment for plastics
 e) All of the above
50. Which of the following contains single bond?
 a) Benzene
 b) Alkyne
 c) Alkene
 d) Alkane
 e) None of the above
51. 2 – chloro – 2 – methyl propane is an example of:
 a) Primary alkyl halide
 b) Secondary alkyl halide
 c) Tertiary alkyl halide
 d) Primary alcohol
 e) Secondary alcohol
52. Potassium dichromate is moderately soluble in water and gives:
 a) Blue color in solution
 b) Orange color in solution
 c) Yellow color in solution
 d) Purple color in solution
 e) Black color in solution
53.
$$\begin{array}{c} \text{CH}_3 \\ | \\ \text{CH}_3 - \text{C} - \text{CH}_3 \\ | \\ \text{CH}_3 \end{array}$$
 is an example of:
 a) Potassium isomerism
 b) Skeletal isomerism
 c) Functional group isomerism
 d) Metamerism
 e) None if the above
54. When sodium acetate is heated with soda lime, a hydrocarbon is obtained what is that?
 a) Methane
 b) Ethane
 c) Ethene
 d) Ethyne
 e) Benzene
55. In the first step of S_N1 reaction _____ molecule(s) is/are involved so it is called _____.
 a) One ... unimolecular
 b) Two ... bimolecular
 c) Three ... trimolecular
 d) Four ... tetra molecular

- e) Many ... multimolecular
56. Which of the following is the composition of methylated spirit?
- | | Ethanol | Water | Methanol |
|----|---------|-------|----------|
| a) | 60% | 20% | 20% |
| b) | 75% | 10% | 15% |
| c) | 85% | 11% | 4% |
| d) | 90% | 5% | 5% |
| e) | 95% | 4% | 1% |
57. Which one of the following is not a use of ACETONE?
- It is used as nail polish remove
 - It is used in the silvering of mirrors
 - It is used in the formation of chloroform
 - It is used in the preparation of chloroform
 - It is used in the preparation of synthetic rubber
58. The advantage of synthetic fibers are:
- Lightness of weigh
 - Ease of ironing
 - Softness
 - Heat retention
 - All of the above
59. Change in the property of a system (in thermodynamics) is equal to:
- Value of a property in the final state - value of the same property in the initial state
 - Value of a property in the initial state - value of the same property in the final state
 - Value of a property in the initial state + value of the same property in the final state
 - Value of a property in the final state x value of the same property in the initial state
 - Does not depend upon the initial and final value of properties
60. When a system absorb energy, the sign of ΔH is:
- Negative
 - Positive
 - Neither positive nor negative
 - Continuously changing
 - None of the above
61. "The rate at which a substance reacts is proportional to its active mass and the rate of a chemical reaction is proportional to the product of the active mass of reaction" is
- Boyle's law
 - Law of Mass action
 - Charle's law
 - Avogadro's law
 - Dalton's law
62. Covalent compounds:
- Crystal are made up of ions
 - Are non – electrolytes
 - Are insoluble in the organic solvent

- d) Are soluble in water
 - e) Are electrolytes
63. Which of the following is a planar trigonal molecule?
- a) HCL
 - b) BeCl₂
 - c) BF₃
 - d) CO₂
 - e) CS₂

Biology:

64. White blood cells picking up foreign bodies from the blood stream is an example of:
- a) Pinocytosis
 - b) Exocytosis
 - c) Phagocytosis
 - d) Osmosis
 - e) None of the above
65. Arboviruses cause:
- I. Encephalitis
 - II. Yellow fever
 - III. Dengue
- a) I only
 - b) II and III only
 - c) I and III only
 - d) I and II only
 - e) I, II and III
66. The most common method of bacterial reproduction is:
- a) Fission
 - b) Transduction
 - c) Endospore
 - d) Conjugation
 - e) Transformation
67. The number of protist phyla is:
- a) 1
 - b) 3
 - c) 5
 - d) 7
 - e) 9
68. Which of the following is an example(s) of cloning?
- I. Identical twins in humans
 - II. Asexual reproduction in plants
 - III. Tumor
- a) I only
 - b) II and III only

- c) I and III only
 - d) I and II only
 - e) I, II and III
69. Halo enzymes consist of:
- a) Apo enzymes and prosthetic group
 - b) Proenzymes and prosthetic group
 - c) Coenzymes and prosthetic group
 - d) Proenzymes and Apo enzymes
 - e) Apo enzymes and co enzymes
70. Excess water is forced out in the form of droplets through:
- a) Stomata
 - b) Cuticle
 - c) Hydathodes
 - d) Lenticels
 - e) All of the above
71. Which of the following statement is correct?
- a) Aldosterone is secreted by adrenal medulla
 - b) Parathormone is secreted by thyroid gland
 - c) Vasopressin is secreted by posterior gland
 - d) Aldosterone increases the reabsorption of potassium ions in the nephron
 - e) Parathormone increases the reabsorption of sodium ions in the nephron
72. Total number of bones in a human skeleton is:
- a) 207
 - b) 206
 - c) 208
 - d) 205
 - e) 203
73. Each myosin filament is surrounded by:
- a) 4 thin filaments
 - b) 6 thin filaments
 - c) 8 thin filaments
 - d) 12 thin filaments
 - e) 14 thin filaments
74. The largest gland of the body is:
- a) Pancreas
 - b) Liver
 - c) Pituitary gland
 - d) Thyroid gland
 - e) Parathyroid gland
75. In the process of inspiration _____ and _____ are involved.
- a) Intercostals muscles ... diaphragm
 - b) Deltoid muscles ... diaphragm
 - c) Trapezius ... intercostals muscles

- d) Biceps ... triceps
e) None of the above
76. Blinking of eye is an exam of:
a) Taxes
b) Reflex
c) Learning
d) Insight learning
e) Imprinting
77. Parthenogenesis is a type of reproduction which requires:
a) One parent – female
b) One parent – male
c) Two parents
d) No parents
e) None of the above
78. Which of the following is a female sexual defect?
a) Microcephaly
b) Polydactyl
c) Turner's syndrome
d) Klinefelter's syndrome
e) Cleft lip and palate
79. The chromosome number is human is:
a) 13 pairs
b) 3 pairs
c) 23 pairs
d) 33 pairs
e) 43 pairs
80. In down's syndrome of the 21st pair of chromosomes:
a) Lacks one chromosome
b) Has an extra chromosome attached to it is missing
c) Lacks genes
d) None of the above
81. Which of the following activities occur during interphase?
I. DNA duplication
II. RNA synthesis
III. Volume of the cell roughly doubles
a) I only
b) III only
c) I and II only
d) I, II and III
82. A man who is normal for color vision marries normal heterozygous woman. What is the chance of their son being color blind?
a) 0%
b) 25%

- c) 50%
 - d) 75%
 - e) 100%
83. The enzyme used to seal the sticky ends of DNA restriction fragment is:
- a) Ligase
 - b) Polymerase
 - c) Adenosine deaminase
 - d) Tripsin
 - e) All of the above
84. Which of the following statements is false based on Darwin's theory of evolution?
- a) Natural selection is the driving force of evolution
 - b) Favorable genetic variations become more and more common in individuals throughout their lives
 - c) There is always a tendency of overproduction in a species
 - d) All individuals of a species are not 100% alike
 - e) None of the above
85. All of the following are primary consumers except:
- a) Grass hopper
 - b) Frog
 - c) Sheep
 - d) Cow
 - e) Rabbit
86. The sea zone below 2000 meters is called:
- a) Euphotic zone
 - b) Bathyal zone
 - c) Abyssal zone
 - d) Pelagic zone
87. Mushrooms belongs to:
- a) Zygomycota
 - b) Ascomycota
 - c) Basidiomycota
 - d) Deuteromycota
 - e) Yeasts
88. The botanical name of touch – me – not is:
- a) *Acacia nilotica*
 - b) *Mimosa pudica*
 - c) *Acacia catechu*
 - d) *Prosopis glandulose*
 - e) *Albizzia lebbek*
89. Bat is:
- a) A bird
 - b) An insect
 - c) A mammal

- d) A reptile
 - e) An amphibian
90. Annelida are:
- a) Acoelomate
 - b) Pseudo coelomate
 - c) Haemo coelomate
 - d) Coelomate
 - e) None of the above
91. Which of the following processes has a net reaction of:
Pyruvic acid + 3H₂O + 5 carries → 3CO₂ + 5 carries (2H⁺)
- a) Glycolysis
 - b) Fermentation
 - c) Tricarboxylic acid cycle
 - d) Electron transport chain
 - e) None of the above
92. The source of oxygen in photosynthesis is:
- a) CO₂
 - b) Glucose
 - c) ATP
 - d) H₂O
 - e) NADP