RIPHAH INTERNATIONAL UNIVERSITY

Doctor of Physical Therapy - DPT

# Sample Admission Test

**BIOLOGY:**

***Directions:*** *For each question below you are given four choices. SELECT ANY ONE THAT IS MOST APPROPRIATE ANSWER*

***ALL ANSWER MUST BE GIVEN ON THE ANSWER SHEET.***

*YOUR ANSWERS MUST BE INDICATED BY LETTERS (A, B, C, D) AND NOT BY THE WORDS THEMSELVES.*

|  |  |  |
| --- | --- | --- |
| 1. | A largest community primarily determined by climate is a |  |
|  | A) | Ecosystem | B) | Biodiversity |
|  | C) | Biome | D) | Diversity |

|  |  |
| --- | --- |
| 2. | The molecules with high molecular weight such as starch and proteins are |
|  | A) | Micro molecules | B) | Macromolecules |
|  | C) | Organic molecules | D) | Inorganic molecules |

|  |  |
| --- | --- |
| 3. | If a theory is continuously supported by experimental evidence it becomes a |
|  | A) | Law | B) | Theory |
|  | C) | Hypotheses | D) | Scientific law |

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| --- | --- | --- |
| 4. | The most abundant compound in all organisms is |  |
|  | A) | Protein | B) | Carbohydrate |
|  | C) | Water | D) | Lipid |

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| --- | --- | --- |
| 5. | The compound that has two amino acid sub- units is called |  |
|  | A) | Polypeptide | B) | Peptide |
|  | C) | Dipeptide | D) | None of these |

|  |  |  |
| --- | --- | --- |
| 6. | The poisons, antibodies and anti-metabolites are examples of |  |
|  | A) | Coenzymes | B) | Prosthetic groups |
|  | C) | Activators | D) | Inhibitors |

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| --- | --- | --- |
| 7. | The soluble part of the cytoplasm is called |  |
|  | A) | Cytosol | B) | Suspension |

C) Collide D) True solution

|  |  |
| --- | --- |
| 8. | The flattened vesicles in chloroplasts that arrange themselves to form Grana and intergrana are called |
|  | A) | Thylakoids | B) | Grana |
|  | C) | Stroma | D) | Cisternae |

|  |  |
| --- | --- |
| 9. | The assembly and disassembly of the spindle structure during mitosis is the role of |
|  | A) | Microtubules | B) | Microfilaments |
|  | C) | Intermediate filaments | D) | All these |

|  |  |  |
| --- | --- | --- |
| 10 | Which of the following is considered self – replicating organelle? |  |
|  | A) | Ribosomes | B) | Lysosomes |
|  | C) | Mitochondria | D) | Leucoplasts |

|  |  |
| --- | --- |
| 11 | A Bacteriophages reproduces by using the metabolic machinery of bacteria cell, i, e chromosomes and |
|  | A) | Mitochondria | B) | Cell membrane |
|  | C) | Ribosomes | D) | Golgi bodies |

|  |  |  |
| --- | --- | --- |
| 12 | Cell wall is absent in one of the following bacteria. |  |
|  | A) | Escherichia coli | B) | Mycoplasma |
|  | C) | Pseudomonas | D) | Spirochete |

|  |  |  |  |
| --- | --- | --- | --- |
| 13 | Bacteria lack |  |  |
|  | A) | Mitosis | B) | Cell division |
|  | C) | Traditional sexual reproduction | D) | All these |

|  |  |  |
| --- | --- | --- |
| 14 | Trypansoma is transmitted by the bite of infected |  |
|  | A) | House fly | B) | Mosquito |
|  | C) | Tsetse fly | D) | All these |

|  |  |
| --- | --- |
| 15 | Fungal hyphae that are in the form of an elongated multinucleate large cell are called |
|  | A) | Septate | B) | Aseptate |
|  | C) | Coenocytic | D) | Multinucleate |

16 An ascus is to ascomycetes as is a to basidiomycetes

|  |  |  |  |
| --- | --- | --- | --- |
| A) | Basidiospore | B) | Basidicarp |
| C) | Basidium | D) | Haustorium |

|  |  |  |  |
| --- | --- | --- | --- |
| 17 | The loose smut of wheat is caused by |  |  |
|  | A) | Puccinia | B) | Ustilago |
|  | C) | Fusarium | D) | Morchella |

|  |  |
| --- | --- |
| 18 | A small outgrowth present on the upper isde of leaves of leaves of sporophylls near the base in selaginella is |
|  | A) | Ligule | B) | Prophyll |
|  | C) | Microphyll | D) | Megaphyll |

|  |  |
| --- | --- |
| 19 | When the frond is immature and young it is coiled. This pattern of development is called circinate |
|  | A) | Venation | B) | Vernation |
|  | C) | Phyllotaxis | D) | Aestivation |

|  |  |  |
| --- | --- | --- |
| 20 | Double fertilization is characteristics of which of the following |  |
|  | A) | Thallophytes | B) | Embryophytes |
|  | C) | Spermatophytes | D) | Angiosperms |

|  |  |
| --- | --- |
| 21 | A gelatinous layer present between the body wall layers of the sponges is |
|  | A) | Mesenchyme | B) | Mesoderm |
|  | C) | Mesogloea | D) | Mesenchyma |

|  |  |  |
| --- | --- | --- |
| 22 | Which of the following is host for liver fluke? |  |
|  | A) | Snail | B) | Sheep |
|  | C) | Man | D) | All these |

|  |  |
| --- | --- |
| 23 | A group of ancient fish that modified their breathing system and developed lungs to adapt to terrestrial mode of life is |
|  | A) | Pisces | B) | Dipnoi |
|  | C) | Varanope | D) | Cotylsaurs |

|  |  |
| --- | --- |
| 24. | The group of mammal that form connecting link between reptiles an mammals is |
|  | A) | Prototheria | B) | Metatheria |
|  | C) | Eutheria | D) | None |

|  |  |
| --- | --- |
| 25 | Which of the following chlorophylls is most abundant and takes part directly, in the light reaction of photosynthesis? |
|  | A) | Chlorophylls a | B) | Chlorophylls b |
|  | C) | Chlorophylls c | D) | Bacteriochlorophyll |

|  |  |
| --- | --- |
| 26 | The process that uses membranes to couple redox reactions to ATP production is known as |
|  | A) | Photosystem | B) | Z – Scheme |
|  | C) | Chemosmosis | D) | Glycolysis |

|  |  |
| --- | --- |
| 27 | The products of light reactions ATP and NADPH are used in which of the following phases of Calvin cycle. |
|  | A) | Carbon fixation | B) | Reduction |
|  | C) | Regeneration of RuBP | D) | All these |

|  |  |
| --- | --- |
| 28 | Digestive system in man is associated with which of the following glands. |
|  | A) | Salivary glands | B) | Liver |
|  | C) | Pancreas | D) | All these |

|  |  |
| --- | --- |
| 29 | A blind sac that project from the large intestine between ileum and colon is |
|  | A) | Caecum | B) | Jejunum |
|  | C) | Rectum | D) | Appendix |

|  |  |  |
| --- | --- | --- |
| 30 | The glycoiate produced during photorespiration enters |  |
|  | A) | Mitochondria | B) | Ribosomes |
|  | C) | Peroxisomes | D) | Glyoxysomes |

|  |  |
| --- | --- |
| 31 | The pulmonary disorder associated with breakdown of alveoli is referred to as |
|  | A) | Cancer | B) | Tuberculosis |
|  | C) | Asthma | D) | Emphysema |

|  |  |
| --- | --- |
| 32 | One of the following is considered to act as multisensory hydraulic valves and respond to environment stimuli. |
|  | A) | Stomata | B) | Guard cells |
|  | C) | Lenticels | D) | Hydathodes |

|  |  |  |
| --- | --- | --- |
| 33 | In embryonic life blood cells are formed in the |  |
|  | A) | Bone marrow | B) | Liver |

C) Spleen D) Liver and spleen

|  |  |
| --- | --- |
| 34 | One of the following phenomenon is responsible for the loss of liquid water through water secreting glands orHydathodes |
|  | A) | Bleeding | B) | Gutlation |
|  | C) | Transportation | D) | Imbibition |

|  |  |
| --- | --- |
| 35 | Which of the following type of cells are produced by the spleen thymus tonsils and adenoids |
|  | A) | Platelets | B) | Agraulocytes |
|  | C) | Erythrocytes | D) | Lymphocytes |

|  |  |
| --- | --- |
| 36 | The elimination of wasteful metabolites, mainly of the nitrogenous nature is called |
|  | A) | Osmoregulation | B) | Excretion |
|  | C) | Pyrexia | D) | Regulation strategies |

|  |  |
| --- | --- |
| 37 | The excretory structures in animal kingdom that are associated with digestive tract are |
|  | A) | Nephridia | B) | Malpighian tubules |
|  | C) | Flame cells | D) | Nephrons |

|  |  |
| --- | --- |
| 38 | Bats use one of the following for evaporative cooling in warm temperatures |
|  | A) | Sweet | B) | Saliva |
|  | C) | Urine | D) | Saliva and urine |

|  |  |  |  |
| --- | --- | --- | --- |
| 39 | Nutation is because of |  |  |
|  | A) | Growth on opposite side of contact | B) | Alternate changes in growth |
|  | C) | Loss of turgor in the cells of pulvinus | D) | Movement of K ions from the cells of pulvinus |

|  |  |  |  |
| --- | --- | --- | --- |
| 40 | Epinasty is because of |  |  |
|  | A) | Auxins | B) | Gibberellins |
|  | C) | Abcissic acid | D) | Ethylene |

# þÿþÿþÿCHEMISTRY:

***Directions:*** *For each question below you are given four choices. SELECT ANY ONE THAT IS MOST APPROPRIATE ANSWER*

## ALL ANSWER MUST BE GIVEN ON THE ANSWER SHEET.

*YOUR ANSWERS MUST BE INDICATED BY LETTERS (A, B, C, D) AND NOT BY THE WORDS THEMSELVES.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1. | Spodumene is the mineral of |  |  |  |  |  |
|  | (a) | Lithium | (b) | Sodium | (c) | Potassium | (d) | None |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 2. | Indicate the most viscous liquids the following. |  |  |  |  |
|  | (a) | H2O | (b) | CH3OH | (c) | CH3CH2OCH2CH3 | (d) | CH3OCH3 |
| 3. | In which of the following processes nitrogen is reduced? | þÿ |  |  |
|  | (a) | NO2 NO3 | (b) | NO2 NO2 | (c) | NO2 NO3 | (d) | +NH4 N2 |

|  |  |  |  |
| --- | --- | --- | --- |
| 4. | Which is not the mineral of Silicon |  |  |
|  | (a) | Analcite | (b) | Asbestos |
|  | (c) | Dolomite | (d) | Zircon |

|  |  |
| --- | --- |
| 5. | Substance that affects the rate of reaction but remains unaltered at the end of the reaction is called |
|  | (a) | Catalyst | (b) | Acid | (c) | Base | (d) | None of the above |

|  |  |  |  |
| --- | --- | --- | --- |
| 6. | If one mole of solute is dissolved in one liter of solution, the solution is called |  |  |
|  | (a) | None of the following | (b) | One molal | (c) | One molar | (d) | One normal |

|  |  |
| --- | --- |
| 7. | If one gram equivalent of a solute is dissolved in one liter of solution, the solution is called |
|  | (a) | One normal | (b) | One molal | (c) | One molar | (d) | None of the above |

|  |  |
| --- | --- |
| 8. | At constant temperature, volume of a given mass of a gas is inversely proportional to pressure exertedon it is called |
|  | (a) | Coulomb’s Law | (b) | Boyle’s Law | (c) | General Gas Law | (d) | Charles Law |

|  |  |
| --- | --- |
| 10. | The number of atoms or molecules whose concentration determine the rate of reaction is called |
|  | (a) | Molecularity | (b) | Rate of reaction | (c) | Order of reaction | (d) | None of the above |

|  |  |  |  |
| --- | --- | --- | --- |
| 11. | Electrolytes which ionize to a very small extent in a solution are called |  |  |
|  | (a) | Neutral | (b) | Weak electrolytes | (c) | Strong electolytes | (d) | None of the above |
| 12. | The change of concentration of reactants or products is called, |  |  |
|  | (a) | Order of reaction | (b) | Rate of reaction | (c) | Molecularity | (d) | None of the above |

|  |  |  |
| --- | --- | --- |
| 13. | Reactions which proceed in the forward direction and go to completion are called |  |
|  | (a) | Irreversible reaction | (b) | Equilibrium reaction | (c) | Reversible reaction | (d) | None of the above |

|  |  |
| --- | --- |
| 14. | The substance through which electricity cannot flow in molten state or solution form is called, |
|  | (a) | Molecularity | (b) | Conductor | (c) | Electrolyte | (d) | Non electrolyte |

|  |  |
| --- | --- |
| 15. | The law which states, “The amount of heat evolved or absorbed in a process in the same whether theprocess takes place in one or several steps is called |
|  | (a) | Newton’s law | (b) | First law of thermodynamics |
|  | (c) | Hess’s law | (d) | Law of conservation of energy |

|  |  |
| --- | --- |
| 16. | The amount of solute dissolved in 100g of solvent to form saturated solution at a given temperature iscalled, |
|  | (a) | Dissolution | (b) | Solubility | (c) | Solution | (d) | None of the above |

|  |  |
| --- | --- |
| 17. | The theory which states that a molecule is a collection of positive nuclei surrounded by electronsdistributed in bonding and antibonding molecular obrital of different energies is called, |
|  | (a) | None of the following | (b) | V.B theory | (c) | VSEPR theory | (d) | M.O. theory |

|  |  |  |
| --- | --- | --- |
| 18. | When a weak electrolyte is dissolved in water only a small amount o molecules is |  |
|  | (a) | Remains constant | (b) | Ionized | (c) | Deionized | (d) | Increases |

|  |  |
| --- | --- |
| 19. | The mixture whose constitutes are 50% hydrogen, 35% methane and 8% carbon mono-oxide is |
|  | (a) | Coal gas | (b) | Coultar | (c) | Coke | (d) | None of the above |

|  |  |  |
| --- | --- | --- |
| 20. | In common ion effect the degree of ionization is suppressed by the addition of |  |
|  | (a) | A compound | (b) | Another electrolyte | (c) | An element | (d) | None of the above |

|  |  |  |
| --- | --- | --- |
| 21. | The reaction in which heat is absorbed from the surrounding to the system is called |  |
|  | (a) | Endothermic reaction | (b) | Fast reaction | (c) | Slow reaction | (d) | Exothermic reaction |
| 22. | The process in which solvent particles surround solute particles is called, |  |  |
|  | (a) | Hydration | (b) | Hydrolysis | (c) | Saturation | (d) | Salvation |

|  |  |  |  |
| --- | --- | --- | --- |
| 23. | If one mole of solute dissolved in one Kg of solvent, the solution is called |  |  |
|  | (a) | One normal | (b) | *One molar* | (c) | One molar | (d) | None of the above |

|  |  |  |
| --- | --- | --- |
| 24. | Equilibrium involving reactants and products in more than one phase is called |  |
|  | (a) | Heterogeneous | (b) | Hemogenouss | (c) | Dynamic | (d) | None of the above |

|  |  |  |  |
| --- | --- | --- | --- |
| 25. | Two double bonds are present between the atoms of the molecule |  |  |
|  | (a) | NH3 | (b) | H2O | (c) | CO2 | (d) | H2SO4 |

|  |  |  |
| --- | --- | --- |
| 26. | A change in which chemical composition of a substance does not change is called |  |
|  | (a) | Change in shape | (b) | Physical change | (c) | Chemical change | (d) | None of the above |

|  |  |
| --- | --- |
| 27. | The process in which the electrolytes and molecules are split up into positively and negatively chargeions is called, |
|  | (a) | Electrolysis | (b) | Ionization | (c) | Deionization | (d) | None of the above |

|  |  |
| --- | --- |
| 28. | The average relative mass of one atom of an element compared with atomic mass of one atom of carbontaken as 12 is called |
|  | (a) | Atomic mass | (b) | Molecular mass | (c) | Relative mass | (d) | Gram-molecular mass |

|  |  |  |  |
| --- | --- | --- | --- |
| 29. | Symbolic representation of a molecule of substance is called: |  |  |
|  | (a) | Symbol | (b) | Formula | (c) | Equation | (d) | None of the above |

|  |  |
| --- | --- |
| 30. | A substance in which all atoms are chemically identical having same atomic number is called: |
|  | (a) | Element | (b) | Compound | (c) | Matter | (d) | Mixture |

# PHYSICS:

***Directions:*** *For each question below you are given four choices. SELECT ANY ONE THAT IS MOST APPROPRIATE ANSWER****ALL ANSWER MUST BE GIVEN ON THE ANSWER SHEET.***

*YOUR ANSWERS MUST BE INDICATED BY LETTERS (A, B, C, D) AND NOT BY THE WORDS THEMSELVES.*

|  |  |
| --- | --- |
| 1. | Einstein explained the photo-electric effect making the following assumption as a basis that, |
|  | (a) | The mass of the electrons increases | (b) | Light consists the photons or quanta |
|  | (c) | The energy of light increases with speed | (d) | The photo-electrons are identical with atomic electrons |

|  |  |  |  |
| --- | --- | --- | --- |
| 2. | A simple arrangement by means of which e.m.f,s. are compared is known |  |  |
|  | (a) | Voltmeter | (b) | Potentiometer | (c) | Ammeter | (d) | None of the above |

|  |  |
| --- | --- |
| 4. | The physics underlying the operation of a refrigerator most closely resembles the physics underlying, |
|  | (a) | The freezing of water | (b) | The melting of ice | (c) | The evaporation of water | (d) | A heat engine |
| 5.  | Let a certain body of mass ‘m’ placed on a horizontal surface move down the inclined plane then downward component of weight is |
|  | (a) | .mgCosθ | (b) | .mgSinθ | (c) | .mg Tanθ | (d) | None |

|  |  |
| --- | --- |
| 6. | The plane faces of two identical plano convex lens, each having focal length 40 cm are pressed againsteach other to form a usual convex lens. The distance from this lens at which an object must be placed to obtain a real, inverted image with magnification one is. |
|  | (a) | 40 cm | (b) | 80 cm | (c) | 20 cm | (d) | 60 cm |

|  |  |  |  |
| --- | --- | --- | --- |
| 7. | The law which gives definition of force is |  |  |
|  | (a) | Newton’s law of gravitation | (b) | Third law of motion |
|  | (c) | Second law of motion | (d) | First law of motion |

|  |  |  |  |
| --- | --- | --- | --- |
| 8. | Hygrometer is an instrument used for measuring |  |  |
|  | (a) | The compression of water vapour with temperature | (b) | The amount of water vapour in the atmosphere |
|  | (c) | Specific gravity of air | (d) | The density of air |

|  |  |  |
| --- | --- | --- |
| 9. | An inertial frame of reference is one whose: |  |
|  | (a) | Acceleration is zero | (b) | Velocity is changing with time |
|  | (c) | Acceleration is uniform | (d) | Inertia is not zero |
| 10. | A moving car whose engine is switched off. comes to rest after some time due to: |  |
|  | (a) | Inertia | (b) | Its mass | (c) | Friction | (d) | Earth’s gravitation |

|  |  |
| --- | --- |
| 11. |  |
| (a) | When two bodies separate instantaneously after collision, the collision is said to be perfectlyelastic. |
| (b) | When to bodies separate instantaneously after collision, the collision is said to be perfectly inelastic |

|  |  |  |  |
| --- | --- | --- | --- |
| 12. | According to the second law of motion, acceleration is proportional to: |  |  |
|  | (a) | Force | (b) | Time | (c) | Mass | (d) | Distance |

|  |  |
| --- | --- |
| 14. | When the object is placed at 2f of convex lens then the image formed behind the lens will be |
|  | A) | At the focus | B) | At 2f | C) | Beyond 2f | D) | Between f and 2f |

|  |  |
| --- | --- |
| 15. | When the object is placed at principal focus of a convex lens then the image is formed at |
|  | A) | Same distance | B) | Infinity | C) | Same side of lens | D) | Centre ofcurvature |

**ENGLISH:**

***Directions:*** *For each question below you are given choices. SELECT ANY ONE THAT IS MOST APPROPRIATE ANSWER*

# SENTENCE COMPLETION

**Directions for Q 1 - 3**

Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath in sentence are five lettered words or sets of words. Choose the word or set of words that best fits the meaning of the sentence as a whole.

|  |  |
| --- | --- |
| 1. | Miss Watson termed Hock’s behavior because in her opinion noting could excuse his deliberate disregard of her commands. |
|  | A. | devious | B. | intolerant |
|  | C. | Irrevocable | D. | indefensible |
|  | E. | Boisterous |  |  |

|  |  |
| --- | --- |
| 2. | Either the surfing at Maui is \_, or I went there on an off day. |
|  | A. | Consistent | B. | Thrilling |
|  | C. | Invigorating | D. | Overrated |
|  | E. | Scenic |  |  |
| 3. | Your remarks spoil the effect of your speech; try not to stray from your subject. |
|  | A. | innocuous | B. | Digressive |
|  | C. | Derogatory | D. | Persistent |
|  | E. | Enigmatic |  |  |

# ANALOGIES

**Direction:** Each question below consists of a related pairs of words or phrases, followed by five lettered pairs of words or phrases, Select the lettered pair that best expresses a relationship similar to that expressed in the original pair.

1. TELLER : BANK ::
	1. Artist : museum
	2. Cashier : check
	3. Waiter : restaurant
	4. Borrower : loan
	5. Mourner : funeral
2. INNING : BASEBALL ::
	1. round : boxing
	2. puck : hockey
	3. touchdown : football
	4. serve : tennis
	5. outing : hiking
3. DEGREE : TEMPERATURE ::
	1. ounce : weight
	2. fathom : volume
	3. mass : energy
	4. time : length
	5. light : heat
4. PICK : GUITAR ::
	1. peg : ukelele
	2. string : banjo
	3. pipe : organ
	4. bow : violin
	5. head : tambourine

# ANTONYM

**Direction:** In each of the following antonym questions, a word printed in capital letters precedes five lettered words or phrases. From these five lettered words or phrases, pick the one most nearly opposite in meaning to the capitalized word.

1. NERVOUS:

(A) Courageous (B) Puzzle (C) Bold (D) Trainee

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 9. | NOTORIOUS:(A) Renowned |  (B) | Invincible |  (C) | Inactive |  (D) | Fashionable |
| 10. | NOCTURNAL:(A) Patrolling |  (B) | Daily |  (C) | Harsh |  (D) | Marauding |
| 11. | OBDURATE:(A) Fleeting  |  (B) | Finite | (C) | Yielding | (D) | Permanent |

# READING COMPREHENSION

**Direction:** Please read the passage below and answer the questions on the basis of what is stated or implied.

**Passage:**

To be happy and really safe, one ought to have at least two or three hobbies and they must all be real. It is no use starting late in life to say “I will take an interest in this or that”. A man may acquire great knowledge of topics unconnected with his daily work and yet hardly get any benefit or relief.

## QUESTIONS

12. The writer argues that for real happiness

|  |  |  |  |
| --- | --- | --- | --- |
| A)C) | More than one hobbies are preferableHobbies are quite important | B)D) | Two or three hobbies are essentialHobbies should be interesting |
| The phrase ‘ought to’ in the first sentence suggests |
| A) | Liking | B) | Likelihood |
| C) | Compulsion | D) | Preference |
| The words ‘this or that’ in the second sentence refer to |
| A) | Hobbies | B) | Topics |
| C) | Daily work | D) | None of the above |
| Select the choice closest in meaning to the word ‘hardly’ in the last sentence |
| A) | Rarely | B) | Never |
| C) | Infrequently | D) | Scarcely |

13.

14.

15.