GARRISON CADET COLLEGE KOHAT
ENTRY TEST FOR CLASS -11 (2017)

Time: 1Hr   **BIOLOGY MODEL PAPER**   Marks: 50

TIME: 15Min   **SECTION - A**   MARKS: 15

1. The fourth whorl of flower is Gynoecium, the female part, and its units are called _____.
   a) Anthers   b) Stamens   c) Caspels   d) Ovules

2. One end of muscle is attached with a moveable bone and is called the _____.
   a) Flexor   b) Insertion   c) Extensor   d) Origin

3. _____ is due to degeneration in the cartilage present at joints or due to decreased lubricant production at joints.
   a) Osteo-arthritis   b) Rheumatoid arthritis   c) Gouty Arthritis   d) Osteoporosis

4. _____ glands are ductless and releases their secretions (Hormones) directly into blood stream.
   a) Exocrine   b) Endocrine   c) Heterocrine   d) Epithelial

5. The _____ is made of three ducts and wraps itself into a coiled tube.
   a) Vestibule   b) Cochlea   c) Tympanum   d) Eustachian tube

6. _____ assists medulla in controlling breathing and it serves as a connection between cerebellum and spinal cord.
   a) Thalamus   b) Hypothalamus   c) Cerebellum   d) Pons

7. The chest wall is made up of 12 pairs of ribs and the rib muscles called _____ muscles.
   a) Trapezius   b) Inter coastal   c) Tendons   d) Antagonistic

8. Double fertilization in plants means;
   a) Fusion of two sperms with two egg cells
   b) Fusion of two sperms with a single egg cell
   c) Fusion of one sperms with egg cell and other sperm with fusion nucleus
   d) Fusion of tube nucleus with fusion nucleus and sperms with egg cell

9. DNA wraps around his tone proteins and forms round structures, called_____.
   a) Chromatin   b) Nucleotides   c) Nucleosomes   d) Chromosomes

10. At one end of hilum, there is _____. This is the same opening through which the pollen tube entered ovule.
    a) Microphyle   b) Testa   c) Integuments   d) Epicotyl

11. An organism's expressed physical triat, such as seed colour or pod shape, is called its;
    a) Physical type   b) Genotype   c) Karyotype   d) Phenotype

12. Organisms in the ecosystem that are responsible for the recycling of plants and animals – wastes are:
    a) Producers   b) Consumers   c) Competitors   d) Decomposers

13. The adrenal cortex secretes many hormones called _____ which maintain the balance of salts and water in blood.
    a) Parathormone   b) Oxytocin   c) Calcitonin   d) Corticosteroids

14. _____ means the cleaning of blood by artificial ways.
    a) Excr5etion   b) Dialysis   c) Lithotripsy   d) Osmoregulation

15. _____ live in sea waters and are adapted to salty environments.
    a) Xerophytes   b) Halophytes   c) Hydrophytes   d) Heliophytes

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BIOLOGY MODEL PAPER

Time:45 min   SECTION - B   Marks: 35

Note: Briefly describe the following questions. Illustrate your answer with neat and labeled diagram where ever necessary.

1. Differentiate between pharmaceutical drugs and addictive drugs?
2. a) Trace the path of air from the nasal cavity to the alveoli. (names only)
   b) Define Genotype and phenotype.
3. How does the tobacco smoke damage the respiratory system (consequences of smoking).
4. Describe Mendel's law of segregation.
5. Write a brief note on symbiosis and predation?
6. What is the importance of biotechnology?
7. Describe Axial skeleton.

CLASS: 11_____   PAPER: CHEMISTRY

T.TIME:1Hr KIT NO:_____   NAME:_____   T.Marks:50

TIME: 20Min	SECTION - A	MARKS: 15

Note:-   **Section A is compulsory. It should be completed in the first 20 minutes and handed over to the superintendent, Deleting / overwriting is not allowed. Do not use lead pencil.**

QNo.1:-   Circle the correct option. i.e. A/B/C/D. Each part carries one mark.

i)   The unit of Kc for the following system is;
$PCl_5 \rightleftharpoons PCl_3 + Cl_2$ _____ .
A) $mole^2 / L^2$ B) $L / mole$ C) $mole / L^2$ D) $mole / L$

ii)   Lemon juice , cola drinks and apple contains_____
A) Base   B) Acid   C) Buffer solution   D) Salt

iii)   Which one of the following is a Lewis base
A) NH_3 B) BF_3 C) H^+ D) $AlCl_3$

iv)   Which of the following is a heterocyclic compound
A) Pyridine   B) Benzene   C) Naphthalene   D) Butane

v)   General formula of alkyl radical is
A) $Cn H_{2n+2}$ B) $Cn H_{2n+1}$ C) $Cn H_{2n-2}$ D) $Cn H_{2n}$

vi)   Dehydration of ethyl alcohol with conc. H_2SO_4 result in the formation of
A) Ethane   B) Methane   C) Acetylene   D) Ethene

vii)   Select the unsaturated hydrocarbons
A) C_3H_8 B) C_4H_8 C) C_5H_{12} D) C_9H_{20}

viii)   Oligosaccharides have _____ taste.
A) Sweet   B) Bitter   C) Sour   D) None of them

ix)   Which one of the following vitamins is water soluble?
A) Vitamins A   B) Vitamins C   C) Vitamins D   D) Vitamins E

x)   Which one of the following is not a greenhouse effect?
A) Increasing atmospheric temperature   B) Increasing food chain
B) Increasing flood risks   D) Increasing sea level

xi)   Beyond stratosphere lies
A) Thermosphere   B) Mesosphere   C) Troposphere   D) Atmosphere

xii)   The density of water is maximum at
A) $0 C^0$ B) $4 C^0$ C) $100 C^0$ D) $-4 C^0$

xiii)   Temporary hardness of water is because of:
A) $Ca (HCO_3)_2$ B) $CaCO_3$ C) $MgCO_3$ D) $MgSO_4$

xiv)   Matte is a mixture of
A) FeS and CuS   B) Cu_2S and FeS   C) CuO and FeO   D) CuS and FeO

xv)   Which one of the following is not a fraction of petroleum?
A) Kerosene   B) Diesel oil   C) Alcohol   D) Petrol

Time:40 minutes	SECTION – B	Marks: 35

QNo.2:-   **Attempt all parts. Each part carries equal marks.**   **(7 x 5)**

1) Give chemical equations for the
   a) Reaction of the slaked lime with alum
   b) Carbonated rain water with lime stone
   c) Ca^{+2} ions interact with sodium zeolite

2) Define global warming. List some effects of global warming.

3) What are lipids? In what why fats and oils are different?

4) What are enzymes? Give their commercial important.

5) How can you convert?
   a) Ethene into ethane
   b) Methane into carbon tetrachloride
   c) Ethene into glycol
   d) Ethyl chloride into ethane
   e) Ethyl bromide into ethane

6) Classify the organic compounds on the basis of functional groups and give examples.

7) Explain why
   a) BF_3 acts as Lewis acid.
   b) Some compounds have carbon in them but they are not organic compounds.

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ENTRY TEST MODEL PAPER – 2017

PAPER: PHYSICS 11th

T.TIME:3Hrs   KIT NO: _____ NAME: _____   T.Marks:100

TIME: 15Min	SECTION - A	MARKS: 15

QNo.1   Encircle the correct option. Cutting, Erasing and over writing is not allowed.

i. If suspended mass of simple pendulum is doubled, the period:

   (A) Increased by 2 times   **(B)** Increased by $\sqrt{2}$ times

   (C) Remain same   **(D)** Decreases by $\sqrt{2}$ times

ii. Ripple tank is used to study the characteristics of:

   (A) Longitudinal waves   **(B)** Transverse waves

   (C) Electromagnetic waves   **(D)** None of these

iii. The intensity of the loudest sound which can be heard without pain is:

   (A) $10^{-12} Wm^{-2}$ **(B)** $1\ Wm^{-2}$ **(C)** $10^{-10}\ Wm^{-2}$ **(D)** $10^{-6}\ Wm^{-2}$

iv. The refractive index of water is.

   (A) 1.03   **(B)** 1.33   **(C)** 1.54   **(D)** 1.4

v. Imaged formed by a camera is:

   (A) real, inverted and diminished   **(B)** Virtual, upright and diminished

   (C) Virtual, upright and magnified   **(D)** real, inverted and magnified

vi. If separation between two oppositely charged object is doubled, the force of attraction between them:

   (A) increased by 2 times   **(B)** decreases by 2 times

   (C) decreased by 4 times   **(D)** increased by 4 times

vii. SI unit of emf.

   (A) JC^{-1} **(B)** V   **(C)** Ω **(D)** both A & B

viii. What is the power rating of a lamp connected to a 15v source when it carries 3A?

   (A) 4.8W   **(B)** 60W   **(C)** 135W   **(D)** 45W

ix. Ac generator works on the principle of:

   (A) Ampere's law **(B)** Coulomb's law **(C)** Faraday's law   **(D)** Ohm's law

x. The presence of a magnetic field can be detected by:

   (A) Small mass **(B)** Stationary positive charge

   (C) 7Stationary negative charge   **(D)** Magnetic compass

xi. The output of NOR gate is '1' when:

   (A) Both A & B are '0'   **(B)** A is '1' & B is '0'

   (C) A is '0' and B is '1'   **(D)** All of these

xii. The process by which electrons are emitted by a hot metal surface is known as:

   (A) Boiling   **(B)** Evaporation

   (C) Conduction   **(D)** Thermionic emission

xiii. What does the term e-mail stand for?

   (A) Emergency mail   **(B)** Electronic mail

   (C) Extra mail   **(D)** External mail

xiv. 1MB = _____ KB.

   (A) 10^6 **(B)** 10^{-3} **(C)** 10^3 **(D)** 10^{24}

xv. During fission of 1kg of uranium -235_____energy is released:

   (A) $67\times10^{10}j$ **(B)** 67×10^8j **(C)** 67×10^8j **(D)** 67×10^9j

GARRISON CADET COLLEGE KOHAT
ENTRY TEST MODEL PAPER – 2017
PAPER: PHYSICS - 11th

Time:45 min   SECTION - B   Marks: 35

Note: **Briefly describe the following questions. Illustrate your answer with neat and labeled diagram where ever necessary.**

Q.2   Explain the phenomenon of Fission reaction.

Q.3   What is CRO? Briefly describe its components and function.

Q.4   Explain the construction and working of a transformer.

Q.5   An electric bulb is marked 220V, 100W. Find the resistance of the filament of the bulb. If the bulb is used 5 hours daily, find the energy in kwh consumed by bulb in one month.

Q.6   Describe two applications of electrostatic in daily life.

Q.7   A ray of light from air is incident on a liquid surface at an angle of incidence 35°. Calculate the angle of refraction if refractive index of liquid is 1.25. Also calculate the critical angle between liquid –air interface.

Q.8   Define the following terms.

i. Damped oscillation   ii. Quality of sound   iii. Pitch of sound

iv. SHM   v. Troughs

GARRISON CADET COLLEGE KOHAT

Entrance Examination – 2017

Roll No _____ Name _____ F/Name _____ Centre _____

Model Paper: Maths   **Class: 11th**

Time: 20 Min   **Section – A**   **Marks: 15**

Q.No.1: Encircle the correct option i.e. (A, B, C and D). Each part carries equal mark.

i. An equation of the type $4 \cdot 2^{2x} - 10 \cdot 2^{x} + 4 = 0$, is a/an _____ equation.
   (a) Quadratic   (b) Reciprocal   (c) Polynomial   (d) Exponential

ii. $10(x^2 + 1 \div x^2) - 63(x - 1 \div x) + 52 = 0$ is _____ equation
   (a) Exponential   (b) Radiacal   (c) Reciprocal   (d) None of these

iii. $(1 + w)(1 + w^2)(1 + w^4)(1 + w^8) =$ _____
   (a) 1   (b) - 1   (c) w   (d) w^2

iv. Each of the complex cube roots of unity is _____ of the other
   (a) Reciprocal   (b) Square   (c) Conjugate   (d) All of them

v. The third proportion of a and b is _____
   (a) ab   (b) $a \div b$ (c) $b^2 \div a$ (d) $a^2 \div b$

vi. The partial fraction of $x^2 + 3x + 1 \div (x^2 + 3)(x - 1)$ are of the form _____
   (a) $a \div x^2 + 3$
   (b) $a \div x^2 + 3 + bx + C \div x - 1$
   (c) $ax \div x^2 + 3 + b \div x - 1$
   (d) $ax + b + 3 \div x^2 + 3 + C \div x - 1$

vii. If A = {1, 2, 3}, B = {4, 5} and R = {(1, 4),(2, 5),(3, 4)}, then R is _____
   (a) one-one function from A to b   (b) An unto function from A to B
   (c) An into function from A to B   (d) Bijective function from A to B

viii. If A ⊆ B, then A ∩ B is equal to _____
   (a) A   (b) B   (c) ∅   (d) None of these

ix. In a set of date 41, 43, 57, 47, 59, 52, 51 median is _____
   (a) 47   (b) 59   (c) 52   (d) 51

x. $\operatorname{Cosec}(\pi \div 3) =$ _____
   (a) $\sqrt{3} \div 2$ (b) $1 \div \sqrt{2}$ (c) $2 \div \sqrt{3}$ (d) 2

xi. If $\sin\theta < 0$ and $\cos\theta > 0$ then θ lies in _____ quadrant.
   (a) 1st (b) 2nd (c) 3rd (d) 4th

xii. Two arcs of two circles are congruent if _____
   (a) The circles are congruent   (b) The corresponding central angles are congruent
   (c) Both (a) and (b) are satisfied   (d) None of these

xiii. The angle in a major are of a circle is _____
   (a) Less than 45^0 (b) Less than 90^0
   (c) Greater than 90^0 but less 135   (d) Greater than 135^0

xiv. The variance of the grouped data is given by the formula _____
   (a) $\Sigma(fx)^2 \div \Sigma f - (\Sigma fx \div \Sigma f)^2$ (b) $\Sigma fx^2 \div \Sigma f - (\Sigma fx \div \Sigma f)^2$
   (c) $\Sigma f^2 x \div \Sigma f - (\Sigma fx \div \Sigma f)^2$ (d) $\Sigma f^2 x^2 \div \Sigma f - (\Sigma fx \div \Sigma f)^2$

xv. $1 \div x^2 - 1 =$ _____
   (a) $1 \div x + 1 - 1 \div x - 1$ (b) $1 \div 2(x + 1) - 1 \div 2(x - 1)$
   (c) $1 \div 2(x - 1) - 1 \div 2(x + 1)$ (d) $2 \div x - 1 - 1 \div 2(x + 1)$

Time: 40 Min   **Section – B**   **Marks: 35**

Note: **Attempt all questions. All questions carry equal marks.**

Q.No.2:   Derive quadratic formula.

Q.No.3:   Find the value of k if the roots of $x^2 - 7x + k = 0$ differ by unity.

Q.No.4:   Solve the equation
          $\sqrt{x^2 + a^2} + \sqrt{x^2 - a^2} + \sqrt{x^2 - a^2} - \sqrt{x^2 - a^2} = 1 \div 3$

Q.No.5:   Resolve $1 \div (x - 1)^2 (x - 2)$ into partial fractions.

Q.No.6:   Find the geometric mean of the observations 2, 4, 8 using logarithmic formula.

Q.No.7:   Prove that $\sec^2\theta + \tan^2\theta = 1 + \sin^2\theta + 1 - \sin^2\theta$

Q.No.8:   Prove that two tangents drawn to a circle from a point outside it, are equal in length.

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ENTRY TEST FOR CLASS -11 (2017)

Time: 1Hr   ENGLISH MODEL PAPER   Marks: 50

Q.1   Write an Essay of about 200 words on any one of the following topics.   (16)

Q.2   Do as directed (syntax, structure etc).   (10)

Q.3   Change the narration of the given sentences.   (07)

Q.4   Change the voice of the given sentences.   (07)

Q.5   Translate any five of the given sentences.   (10)