ARMY BURN HALL COLLEGE FOR BOYS
Model Papers (Entry Test HSSC–I)

SUBJECT: ENGLISH

Time Allowed: 30 Minutes   **Maximum Marks: 20**

INSTRUCTIONS

- Write your Roll Number only on the top right corner.
- Do not write your name or any other information.
- Do not use lead pencil.
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ATTEMPT ALL QUESTIONS

SECTION–A (Marks 5)

Q. 1   **Fill in the blanks. Each blank carries 0.5 marks.**

(1)   Fire is a good servant <u>but a bad master</u>. The underlined part of sentence is

_____

(2)   A sentence with one independent and one or more subordinate clause is called

_____

(3)   The dog is very fierce. Noun Phrase in the sentence is _____

(4)   My niece reads well for a five years old. The word **well** is _____

(5)   If you had not lied to me before I would have believed you today. The sentence is

_____ conditional.

(6)   This class is like a three ring circus. The used figure of speech is _____

(7)   She is peaches and cream. The figure of speech is _____.

(8)   It _____ rain today (insert modal verb of possibility)

(9)   Rafique <u>always works</u> on Sundays. Always is Adverb of _____.

(10)   Daffodils is written by _____.

DO NOT WRITE ANYTHING HERE

SECTION–B (Marks 15)

Note: Attempt all questions.

Q. 2 Read the following passage carefully and answer the questions given at the end. **[5]**

The Blue Masjid <u>reflects</u> the architectural style of both the Ottoman Masjid and Byzantine Church. Hagia Sofia, a masjid, one of the <u>wonders</u> of the Muslim architecture, was also kept in view as a model. The Blue Masjid even today is considered to be <u>unmatched</u> in splendour, majesty and size. The masjid has a spacious forecourt surrounded by a continuous vaulted <u>arcade</u>.

Questions:

(a)   Write down the summary of the passage. Also suggest a title.   (2+1)

_____

_____

_____

(b)   Write down the meanings of any two underlined words.   (1)

_____

_____

(c)   Explain the architectural style of The Blue Masjid.   (1)

_____

_____

Q. 3 (a) **Do as directed.**   **[2.5]**

i.   _____ I ask you a few questions.
(insert modal verb of permission)

ii.   Ask a friend to lend you a pen. (underline infinitive verb)

iii.   Please bring me a glass of water. (change into command)

_____

_____

iv.   If he had worked hard, he _____(succeed)
(insert an appropriate form of verb)

v.   Teacher said to the students," Please, Sit down."
(change into indirect speech)

_____

_____

(b)   **Fill in the blanks to complete the process of planting trees.**   **[2.5]**

Use the passive voice form of the verbs.

When you start plantation, ensure the root ball is_____ (soak) through, as a dry root ball can reject water from the surrounding soil. A sea weed product is _____(add) to the water to help the tree avoid transplant shock and to improve root growth going forward. A hole is dug that's at least twice the size of the existing root ball of the tree. Depth is more important than width in most cases, so be sure to dig enough of a hole that the existing roots can be completely_____ (cover). Your soil should be improved to help the plant survive in the long-term. In clay soils, some gypsum is_____(add) to improve the soil structure and drainage. In all soils good fertilizer is_____(use) to help feed the plant.

Q. 4   Write an e-mail to your brother asking him about his board examination?   **[5]**

OR

Write a paragraph of about 50-80 words on **any** of the following topics.

(a)   Mass Communication.   (b)   Impacts of Media

_____

_____

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ARMY BURN HALL COLLEGE FOR BOYS
Model Papers (Entry Test HSSC–I)

SUBJECT: BIOLOGY

Time allowed: 30 Minutes   **Maximum Marks: 20**

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ATTEMPT ALL QUESTIONS

SECTION–A (Marks 5)

Q. 1   Fill in the blanks. Each blank carries 0.5 marks.

(1)   An artificial kidney is a device to remove nitrogenous waste products from the

blood through _____

(2)   Root hairs absorb water and minerals by _____ process.

(3)   In lungs gaseous exchange occurs in _____

(4)   Leaf has outermost epidermal layers which are covered with _____

(5)   The energy released during respiration is stored as _____ and is utilized to maintain the bodily functions.

(6)   In a multicellular system, control and coordination of various functions is

performed by _____ and _____ system.

(7)   _____ means increase in size, mass and number of cells.

(8)   Sum of all biochemical reactions are known as _____ reactions.

(9)   Genes always work in _____

(10)   In pea plants, the gene for darkness is _____ whereas that for tallness

is _____

DO NOT WRITE ANYTHING HERE

SECTION–B (Marks 15)

**Q. 2** **Give short answers of the following questions.** **(5×3 = 15)**

i. Visualize what safety factor is there in releasing the pepsin in its inactive form?

_____

_____

ii. Following table shows the names of three enzymes found in alimentary canal. Complete the Table by writing names of substrate and end-product for each enzyme.

Name of enzyme	Substrate	End-product
Protease		
Amylase		
Lipase		

iii. Differentiate between the cross sectional views of brain and spinal cord with reference to white and grey matter.

_____

_____

iv. The flow chart is showing anaerobic respiration.

$C_6H_{12}O_6$

A

2 Pyruvates
NADH

B → i

C → ii → iii

2 ATP
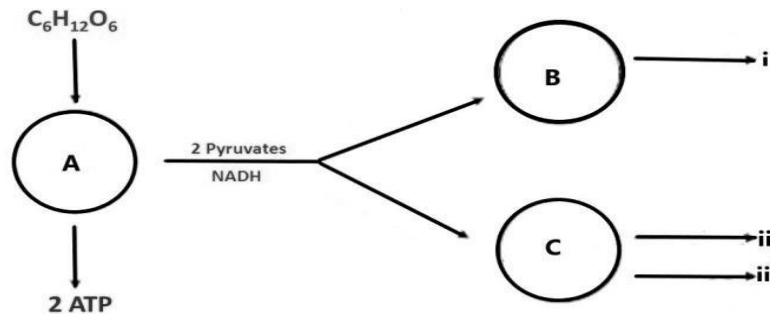
(a) Identify the processes A, B and C. (1.5)

_____

_____

(b) Mention the products (i), (ii) and (iii) produced by these processes. (1.5)

_____

_____

v. Keeping in view the working of vaccine, summarize how does corona vaccine produce immunity in human body.

_____

_____

_____

_____

ARMY BURN HALL COLLEGE FOR BOYS
Model Papers (Entry Test HSSC–I)

SUBJECT: CHEMISTRY

Time Allowed: 30 Minutes   **Maximum Marks: 20**

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ATTEMPT ALL QUESTIONS

SECTION–A (Marks 5)

Q. 1   Fill in the blanks. Each blank carries 0.5 marks.

(1)   Alkenes are also known as _____

(2)   The total number of shared electrons in a molecule of CO_2 are _____

(3)   _____ is the process in which speed of the particles decreases.

(4)   An example of heterocyclic compound is _____

(5)   _____ pollutant is not produced by the burning of fossil fuel.

(6)   Stem 'Prop' stands for _____ carbon atoms.

(7)   Period number of $^{31}_{15}P$ is _____

(8)   Marble buildings and statues are destroyed by acid rain due to the reaction of sulphuric acid with _____

(9)   _____is formed by joining two molecules of amino acids.
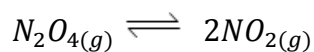
(10) F^- is an example of _____

DO NOT WRITE ANYTHING HERE

SECTION–B (Marks 15)

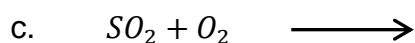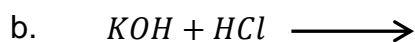**Q. 2** **Attempt all questions. Each question carries three marks.**   **(3×5 = 15)**
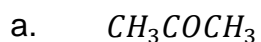
i.   Consider the following equilibrium reaction:

$$N_2O_{4(g)} \rightleftharpoons 2NO_{2(g)}$$

Write its K_C expression and also determine its unit?

_____

_____

_____

ii.   Complete and balance the following chemical reactions:

a. $N_2 + H_2$ $\longrightarrow$

b. $KOH + HCl$ $\longrightarrow$

c. $SO_2 + O_2$ $\longrightarrow$
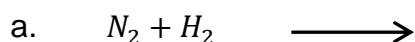
iii. Identify the functional group in the following compounds:

a. CH_3COCH_3 b. CH_3CH_2Cl c. CH_3CH_2OH

_____

_____

_____

iv.   Describe ion exchange method for removal of permanent hardness in water.

_____

_____

_____

v.   Concentration of an aqueous solution of potassium hydroxide is 1.0×10^{-3} mol/dm^3. What is its pH? Is this solution acidic, basic or neutral?

_____

_____

_____

_____

_____

ARMY BURN HALL COLLEGE FOR BOYS
Model Papers (Entry Test HSSC–I)
SUBJECT: MATHEMATICS

Time Allowed: 30 Minutes   **Maximum Marks: 20**

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ATTEMPT ALL QUESTIONS

SECTION–A (Marks 5)

Q. 1   Fill in the blanks. Each blank carries 0.5 marks.

(1) $log_b m + log_b n = $ _____

(2) $\dfrac{-5}{3} + \dfrac{7}{2} = $ _____

(3)   A fraction in which the degree of the numerator is greater or equal the degree of denominator is called _____

(4)   A function f: A $\longrightarrow$ B is called an _____ function if all distinct elements of A have a distinct images in B.

(5)   A function f: A $\longrightarrow$ B is called a_____ function if function f is one-one and onto.

(6)   If $x^2 - 5x + 6 = 0$ then $S.S = $ _____

(7)   Mode is defined as the most _____ occurring observation of the variable or data.

(8)   Area of a circular sector =_____

(9) $1 + cot^2 x = $ _____

(10)   Two tangents drawn to a circle from a point outside it, are equal in_____

DO NOT WRITE ANYTHING HERE

SECTION–B (Marks 15)

Note: Attempt all questions. Each question carries five marks.   (3×5 = 15)

Q. 2   Two sides of a rectangular field differ by 7 cm. By using Cramer's Rule deduce the dimensions of rectangular field if its perimeter is 134 cm.

Q. 3   If $x = 3 - \sqrt{10}$, interpret $x - \frac{1}{x}$.

Q. 4   Interpret the values of x. when $2x + 3 = \sqrt{3x + 7}$

Q. 5   If $Cosec x = \frac{13}{12}$ and $Sec x > 0$, calculate the remaining trigonometric functions.

Q. 6   A flagpole 18 m high casts a 7 m shadow. Calculate the angle of elevation of the sun.

ARMY BURN HALL COLLEGE FOR BOYS
Model Papers (Entry Test HSSC–I)
SUBJECT: PHYSICS

Time allowed: 30 Minutes   **Maximum Marks: 20**

INSTRUCTIONS

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ATTEMPT ALL QUESTIONS

SECTION–A (Marks 5)

Q. 1 **Fill in the blank. Each part carries 0.5 marks.**

(1)   The direction of the acceleration of a body moving along a circular path is always _____

(2)   When current carrying conductor is placed in a magnetic field in such a way that it is parallel to the field, then force acting on it is _____

(3)   If the thickness of a wall becomes doubled, what happens to its thermal conductivity _____

(4)   The output of a two-inputs A and B in a NOR gate is '1' when input A is _____ and input B is _____

(5)   The unit of specific resistance is _____

(6)   The process by which electrons are emitted by hot metal filament is called _____

(7)   The variation of focal length to form a sharp image on retina is called_____

(8)   The separation between two lines on the vernier scale is_____

(9)   A car is moving at a speed of 36 km h^{-1}. Its speed in ms^{-1} is _____

(10)   Electron-volt is the unit of _____

DO NOT WRITE ANYTHING HERE

SECTION–B (Marks 15)

Q. 2 **Give short answers of the following questions.**   **(5×3 = 15)**

i.   A cyclist completes half round of a circular track of radius 318 m in 1.5 minutes. Calculate its speed and velocity.

_____

_____

_____

ii.   Sketch a speed-time graph for a body moving with constant speed.

iii.   Why thermister doesn't obey Ohm's law?

_____

_____

_____

iv.   Will two wires carrying current in the same direction attract or repel each other? Give reason

_____

_____

_____

v.   If pitch of sound is decreased in air. What is the effect on wavelength and wave velocity?

_____

_____

_____