KATHMANDU

# DON BOSCO COLLEGE

Pre-board Examination - 2059

**Class: XI** **Subject: Physics (A)** **F.M: 75**
**Time: 3 Hrs** **P.M: 30**

*(Answers to the numerical problems should be in SI units.)*

## *Group A*

1. *Answer in brief, any four questions*: (4×2)
   a. Can an object have eastward velocity while experiencing a westward acceleration?
   b. It is difficult to catch a cricket ball as compared to tennis ball moving with same velocity, why?
   c. A solid tied at one end of a string is revolved in vertical circle. Where would the tension be maximum?
   d. Explain why the moon has no atmosphere.
   e. A man is sitting on a boat which is floating on a pond. If he drinks some water from the pond, will the level of water in the pond decrease?
   f. It is easy to open or close a door by applying force at the free end rather than the other regions, why?

2. a. What do you mean by centripetal force? Derive an expression for it. (5)

   ***Or***

   Define escape velocity. Show that the square of the velocity of escape of a body from the earth's surface is equal to the product of the diameter of the earth and acceleration due to gravity. (5)

   b. A simple pendulum has a period of 4.2 seconds. When the pendulum is shortened by 1 m, the period becomes 3.7 seconds. From these measurements, calculate the acceleration of free fall 'g' and the original length 'l' of the pendulum. (4)

3. a. Define simple harmonic motion. Show that the vertical oscillations of a mass suspended by a light helical spring are simple harmonic and hence determine the time period. (4)
   b. A solid weighs 237.5 gm in air and 12.5 gm when totally immersed in a liquid of density 0.9 $gm/cm^3$. Calculate (i) the density of the solid, (ii) the density of a liquid in which the solid would float with one-fifth of its volume exposed above the liquid surface. (4)

## *Group B*

4. *Answer in brief, any two questions*: (2×2)
   a. Is it possible to heat body without raising the temperature?
   b. Why are dews formed during early mornings?
   c. You feel warm on cloudy nights compared to clear nights, why?

5. a. Define cubical expansivity. Explain the Dulong and Petit's method of determining the real cubical expansivity of a liquid. (5)

   ***Or***

   Explain Searle's method of determining the thermal conductivity of a metallic solid. (5)
   b. Assuming that the density of nitrogen at STP is 1.251 $kg/m^3$, find the RMS speed of nitrogen molecules at $127^0C$. (4)

## ***Group C***

6. *Answer in brief, any two questions*: (2×2)
   a. Why do stars twinkle, but not the planets?
   b. Do you expect changes in the focal lengths of concave mirror and convex lens when they are immersed in water?
   c. The Sun appears reddish during sunrise and sunset, why?

7. a. Derive an expression for determining the power of two thin lenses in contact. (4)

***Or***

Obtain the condition for obtaining deviation without dispersion in a prism combination. Also calculate the net deviation produced by such combination. (4)

   b. A glass prism of angle $72^0$ and index of refraction 1.66 is immersed in a liquid of refractive index 1.33. What is the angle of minimum deviation for a parallel beam of light passing through the prism? (4)

## ***Group D***

8. *Answer in brief, any two questions*: (2×2)
   a. Repulsion is the sure test for determining the nature of charge. Justify the statement.
   b. An iron piece, buried for a long time underground, facing north south gets magnetized. Why?
   c. When the horizontal and vertical magnetic components of the earth's magnetic field are equal at a certain location, what is the angle of dip there?

9. a. What do you mean by equipotential surface? Derive an expression for the electrostatic potential at a point due to a charge. (5)

***Or***

Define the capacitance of a capacitor. Derive an expression for the equivalent capacitance of capacitors when they are connected in series. (5)

   b. A bar magnet of effective length 10 cm and pole strength 10 Am is placed with its north pole pointing geographic north along the magnetic meridian at a location. The horizontal intensity of the earth's magnetic field at the location is 0.4 oersted. Determine the location of the neutral point (Given $\mu_0 = 4p \times 10^{-7}$ H/m). (4)

## ***Group E***

10. *Answer in brief, any two questions*: (2×2)
   a. An electric bulb lights instantly when switched on although the drift velocity of electrons is very small, why?
   b. Why is heat produced in a current carrying conductor?
   c. Why is the conductivity of an electrolyte low compared to that of a metal?

11. a. Give the principle of the potentiometer. How is the internal resistance of a cell determined by using it? (4)

***Or***

Explain Seebeck effect. How does the thermoelectric emf vary with temperature? What do you mean by the neutral temperature and the temperature of inversion? (4)

   b. A copper wire is stretched by 2%. Find the percentage change in its resistance. (4)

**Best of Luck**

*KATHMANDU*

# *DON BOSCO COLLEGE*

Pre-board Examination - 2059

**Class: XI** **Subject: Physics (B)** **F.M: 75**
**Time: 3 Hrs** **P.M: 30**

*(Answers to the numerical problems should be in SI units.)*

## *Group A*

1. *Answer in brief, any four questions*: (4×2)
   a. When a balloon filled with air and its mouth downward is released, it moves upwards, why?
   b. It is easier to pull than to push a lawn roller, why?
   c. Explain why is the earth flattened at the top?
   d. The space rockets are launched from west to east, why?
   e. If a pendulum clock is taken to the moon, will it gain or lose time?
   f. What will happen to the level of water when a piece of ice floating in water melts completely?

2. a. State the principle of conservation of energy and prove it for bodies falling freely under gravity. (4)

   ***Or***

   Define gravitational potential at a point. Derive an expression for it. (4)

   b. A particle rests on a horizontal platform, which is moving vertically in SHM with amplitude of 10 cm. Above a certain frequency, the thrust between the particle and the platform would become zero at point in the motion. What is this frequency? At what point in the motion does the thrust become zero at this frequency? (4)

3. a. Define simple harmonic motion. For small amplitude of vibration, show that motion of a simple pendulum is simple harmonic. Also find the time period. (4)
   b. An iceberg of volume 2060 cc and density 0.918 g/cc floats in water of density 1.03 g/cc. What portion of iceberg will be above the water surface? (4)

## *Group B*

4. *Answer in brief, any two questions:* (2×2)
   a. Why does steam at 100°C give more severe burn than water at the same temperature?
   b. Explain why are dews formed on clear nights but not cloudy nights?
   c. A new quilt is warmer than an old one, why?

5. a. How would you correct the reading of a barometer for the expansion of Mercury and the scale? (5)

   **Or**

   What is triple point? Explain with a phase diagram. (5)

   b. Calculate the pressure in mm of mercury exerted by hydrogen gas if the number of molecules per $cm^3$ is $6.80\times10^{15}$ and root mean square speed of the molecules is $1.9\times10^3$ m/s. [Given: Avogadro's constant = $6.02\times10^{23}$ $mol^{-1}$, Relative mass of hydrogen = 2.02.] (4)

## *Group C*

6. *Answer in brief, any two questions:* (2×2)
   a. The sun is less bright in the morning and evening as compared to noon although its distance from the observer is almost the same, why?
   b. Why does diamond sparkle with great brilliancy?

c. What will happen if a lens is immersed in a liquid whose absolute refractive index is equal to that of the lens?

7. a. Derive lens maker's formula. (5)

***Or***

Obtain a condition for dispersion without deviation in a prism combination. Also calculate net angular dispersion produced by such a combination. (5)

b. A certain prism is found to produce a minimum deviation of 51° 0', while it produces a deviation of 62°48' for two values of the angle of incidence, namely 40°6' and 82°42'respectively. Determine the refracting angle of prism, the angle of incidence at minimum deviation and the refractive index of the material of the prism. (4)

## ***Group D***

8. *Answer in brief, any two questions:* (2×2)
   a. Can two like charges attract each other?
   b. How can you determine which one is stronger if you are given two magnets of same size and mass using the vibration magnetometer?
   c. Why is it easier to demagnetize soft iron compared to steel?

9. a. What do you mean by electric lines of force? Derive an expression for the electrostatic potential difference between two points due to a charge. (5)

***Or***

Define the capacitance of a capacitor. Derive an expression for the equivalent capacitance of capacitors when they are connected in parallel. (5)

b. A bar magnet whose effective length is 10 cm and pole strength 20 Am laid horizontally with its axis along the magnetic meridian and the S-pole pointing north. A small compass needle when placed at 15 cm north of S-pole is found to set itself in any direction. Find the value of horizontal components of earth magnetic field. ($\mu_o = 4p \times 10^{-7}$ H/m) (4)

## ***Group E***

10. *Answer in brief, any two questions:* (2×2)
    a. The thermal speeds of the free electrons in a conductor are quite large. Then, why don't they escape from the surface of the conductor?
    b. Why do we prefer a potentiometer to measure the emf of a cell rather than a voltmeter?
    c. How is the conduction of electric current through metal and through electrolyte different from each other?

11. a. What is a Wheatstone bridge? Obtain the balance condition for Wheatstone bridge using Kirchhoff's law. (4)

***Or***

State Faraday's laws of Electrolysis and how the second law of electrolysis can be verified experimentally. (4)

b. A 12 V, 24 W tungsten filament bulb is supplied with current from 'n' cells connected in series. Each cell has emf of 1.5 V and internal resistance 0.25 O. What is the value of 'n' in order that the bulb runs at its rated power? (4)

**Best of Luck**

KATHMANDU

# DON BOSCO COLLEGE

## Pre-Board Exam - 2059

## Stream: Science

**Class: XI** **F. M.: 100**

**Subject: Mathematics (B)** **Time: 3Hrs.** **P. M.: 40**

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## GROUP – A

***Attempt all the questions*** ***[18x2 = 36]***

1. (a) If A = {a, e, i}; B = {e, u}; U = {a, e, i, o, u} find $\overline{A \cup B}$ and $\overline{A \cap B}$.

   (b) $(\log a)^2 - (\log b)^2 = \log (ab) . \log \left(\frac{a}{b}\right)$

   (c) Prove that $r_1 r_2 + r r_3 = ab$

2. (a) Find the value of $\tan^{-1}3 + \tan^{-1}\frac{1}{3}$

   (b) Find the acute angle between the lines $x - 3y - 6$ and $y = 2x+5$.

   (c) Does the equation $x^2+xy+y^2 = 0$ represent a pair of real lines? If not why?

3. (a) Let $A = \begin{pmatrix} 1 & 3 \\ 2 & 4 \end{pmatrix}$ and $B = \begin{pmatrix} 5 & 7 \\ 6 & 8 \end{pmatrix}$ then prove $AB \neq BA$

   (b) Solve by Cramer's rule: $-x + y = 9$; $x - 3y = 5$

   (c) Graph the half plane given by: $y - x \geq 1$.

4. (a) If $z = 3+4i$ and $w = 2-i$ find $|zw|$ and $\left|\frac{z}{w}\right|$

   (b) For what value of p will the equation $5x^2-px+45 = 0$ have equal roots?

   (c) Find the partial fractions of $\frac{5x+7}{(x+1)(x+2)}$

5. (a) Evaluate : $\lim_{x \to \infty} \left(\sqrt{x} - \sqrt{x-3}\right)$

   (b) Define direction cosines of a line. Find direction cosines of a line which is equally inclined to the co-ordinate axes.

   (c) Find $\frac{dy}{dx}$ of $y = e^{ax} \cos (\log x)$.

6. (a) Determine the limit of $f(x) = \begin{cases} 2-x^2, & for\ x \leq 2 \\ x-4, & for\ x > 2 \end{cases}$ at $x$ } = 2, if it exits.

   (b) Integrate: $\int \log x \, dx$.

   (c) Integrate: $\int \left(\sqrt{x} - \frac{1}{\sqrt{x}}\right) dx$

## GROUP - B

***Attempt all the questions.*** ***[8x8 = 64]***

7. (a) Define the union and the intersection of two sets. If A and B are subsets of a universal set U, prove $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$

   (b) Let $f : R \to R$ and $g : R \to R$ be defined by $f(x) = x^2 + 1$; $g(x) = x^5$ find: $f^{-1}$ ; (gof) (x) and (fog) (x)

8. (a) If $\sin^{-1} x + \sin^{-1} y + \sin^{-1} z = p$ , prove that $x\sqrt{1-x^2} + y\sqrt{1-y^2} + z\sqrt{1-z^2} = 2xyz$

   Or

   Define general values and find general values of $\sec x \tan x = \sqrt{2}$

(b) If $a^4 + b^4 + c^4 = 2c^2 (a^2+b^2)$ prove that $\angle C = 45^0$ or $135^0$.

Or

If three sides of a triangle are in the ratio $2 : \sqrt{6} : \sqrt{3}+1$, find the angles.

9. (a) If p and q be the length of perpendicular from origin upon the straight lines whose equations are x sec $q$ + y cosec$q$ = a and x cos $q$ - y sin $q$ = a cos $2q$, prove that $4p^2+q^2 = a^2$.

(b) Prove that the straight lines joining the origin to the point of intersections of the line $\frac{x}{a}+\frac{y}{b}=1$ and the curve $x^2+y^2 = c^2$ are at right angles if $\frac{1}{a^2}+\frac{1}{b^2}=\frac{2}{c^2}$.

10. (a) Evaluate: $\begin{vmatrix} 1+x & 1 & 1 \\ 1 & 1+y & 1 \\ 1 & 1 & 1+z \end{vmatrix}$

(b) Solve by row equivalent matrix method: x+z = 1; z+2y = 2; 5x-9y = -3

***Or***

Solve by using inverse matrix method: x - y = 2; 2x + 3y = 9

11. (a) State De-Moivre's theorem. Use it to solve $z^3 = 1$.

(b) If the roots of the equation $lx^2+nx + n = 0$ be in the ratio $p:q$, find the value of $\sqrt{\frac{p}{q}}+\sqrt{\frac{q}{p}}$

12. (a) Resolve into partial fractions $\frac{x^2}{(x+2)(x^2+3)}$

(b) Prove geometrically $\lim_{q \to 0} \frac{Sinq}{q}=1$

*Or*

When does a function f(x) become continuous at x = a? Is the function f(x) defined by

$$f(x) = \begin{cases} 3+2x, & -\frac{3}{2} \le x < 0 \\ 3-2x, & 0 \le x < \frac{3}{2} \\ -3-2x, & x \ge \frac{3}{2} \end{cases}$$

continuous at $x = \frac{3}{2}$?

13. (a) Find from first principles the derivative of $\frac{1}{\sqrt{3-2x}}$

***Or***

Determine where the graph is concave upwards or concave downwards for $f(x) = x^4 - 8x^3 + 18x^2 - 24$. Also find the points of inflection.

(b) Evaluate: $\int \frac{dx}{\sqrt{a^2+x^2}}$

Or

Find the area of the circle $x^2+y^2 = 16$.

14. (a) Show that the angle between two diagonals of a cube is $\cos^{-1}\left(\frac{1}{3}\right)$.

Or

Find the ratio in which the yz-plane divides the line joining (4,6,7) and (-1,2,5). Also find the coordinates of the point on the yz plane.

(b) Maximize and minimize the function F(x,y) = 9x+7y subject to constraints: $x+2y \le 7$; $x-y \le 4$; $x \ge 0$; $y \ge 0$

***Best of Luck***

KATHMANDU

# DON BOSCO COLLEGE

**Pre-Board Exam - 2059**

**Stream: Science**

**Class: XI** **F. M.: 75**
**Subject: Computer Science** **P. M.: 30**

## GROUP –A

***Attempt any two of following questions:***

***[Long Answers]*** ***[2x12.5=25]***

1 What are the purposes of an Operating System (OS). What are the reasons for development of an OS? Classify any four types of OS on the basic of the operation method. [2.5+5+5]

2 Define the term of algorithm and flowchart and its types. Distinguish between multiprocessing and batch processing operating system. Write algorithm and flow chart for given statement;

In Don Bosco 10+2 College scholarships are given on the following basis:
Obtained Mark greater than equal to 80 & less than equal to 100, then 40% scholarship.
Obtained Mark greater than equal to 70 & less than 80, then 30% scholarship.
Obtained Mark greater than equal to 60 & less than 70, then 20% scholarship.
Obtained Mark less than 60, then no scholarship (nil). [2.5+5+5]

3 Write the steps involved in System Development Life Cycle (SDLC). What are the main jobs of system analyst as in software development process? [2.5+5+5]

## GROUP –B

***Attempt all questions:*** ***[10x5=50]***

4 Write the merit and demerit of generations of computer.
5 What are the factors affecting processing speed of a digital computer?
6 Convert the following numbers according to the given instruction:
a) $FAF_{16} = (?)_8$ b) $(755.99)_{10}$ to binary equivalent.
7 Construct the truth tables of the NOR, X-NOR (Exclusive-NOR) and its function with symbol.
8 Describe operation and function of hard disk in computer?
9 Define the term Arrays, Strings, Records, Lists and Trees?
10 Write the component used in E-R diagram? Explain the types of relationships with appropriate examples.
11 Write the features and applications of MS Power point application software.
12 Write the short notes on: a) Decision tree b) Interrupt.
13 Write the purpose of Networking and describe the any three types of network topologies.

Best of Luck

KATHMANDU

# DON BOSCO COLLEGE

**Pre-Board Exam - 2059**

## Stream: Science

**Class: XI** **F. M.: 75**
**Subject: Computer Science** **P. M.: 30**

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## GROUP –A

***Attempt any two of following questions:***

***[Long Answers]*** ***[2x12.5=25]***

14 What are the purposes of an Operating System (OS). What are the reasons for development of an OS? Classify any four types of OS on the basic of the operation method. [2.5+5+5]

15 Define the term of algorithm and flowchart and its types. Distinguish between multiprocessing and batch processing operating system. Write algorithm and flow chart for given statement;

In Don Bosco 10+2 College scholarships are given on the following basis:
Mark greater than equal to 90 & less than equal to 100, then 40% scholarship is given.
Mark greater than equal to 70 & less than 90, then 30% scholarship is given.
Mark greater than equal to 60 & less than 70, then 20% scholarship is given.
Mark less than 60, then no scholarship (nil). [2.5+5+5]

16 Write the steps involved in System Development Life Cycle (SDLC). What are the main jobs of system analyst as in software development process? [2.5+5+5]

## GROUP –B

***Attempt all questions:*** ***[10x5=50]***

17 Write the merit and demerit of generations of computer.

18 What are the factors affecting processing speed of a digital computer?

19 Convert the following numbers according to the given instruction:
a) $FAF_{16} = (?)_8$ b) $(755.99)_{10}$ to binary equivalent.

20 Construct the truth tables of the NOR, X-NOR (Exclusive-NOR) and its function with symbol.

21 Describe operation and function of hard disk in computer?

22 Define the term Arrays, Strings, Records, Lists and Trees?

23 Write the component used in E-R diagram? Explain the types of relationships with appropriate examples.

24 Write the features and applications of MS Power point application software.

25 Write the short notes on: a) Decision tree b) Interrupt.

26 Write the purpose of Networking and describe the any three types of network topologies.

Best of Luck

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# DON BOSCO COLLEGE

**Pre-Board Exam - 2059**

## Stream: Science

**Class: XI** **F. M.: 75**
**Subject: Biology (A)** **P. M.: 30**

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*Attempt all questions:* *[1x15=15]*

***Q.No. 1 Answer the following questions short.***

a. Write the function of mesosomes in bacteria.
b. Which are the muscles responsible for buccal respiration?
c. Why does malaria patient show malaria symptom in every 48 hours?
d. What is metamorphic segmentation?
e. What is coacervate?
f. How is earth originated?
g. How is the AV value provided with the thread like chorda tendinae?
h. What is the function of typhlosole?
i. Give any one example of zygomorphic flower.
j. Why is Noctoc placed in Kingdom Monera?
k. What is cellular totipotency?
l. Why is pinus placed in Gymnosperm?
m. Who coined the term nucleus?
n. What is the chief pigment in Rhodophyceae?
o. How does alagae differ from fungi?

***Q.No.2 Answer the following questions:*** ***[3x10=30]***

a. Differentiate between natural & artificial system of classification?
b. Draw well labeled diagram of L.S. of Moss capsule.
c. Discuss protein as a biomolecule.
d. Write in short the structure & function of Mitochondria.
e. Write the identifying characters of family Poaceae.
f. Why is fish called primary aquatic animal explain?
g. Enumerate the importance of earthworm in agriculture.
h. Explain briefly erythrocytic schizogony in Plasmodium.
i. Write important characteristic feature of Cro-magnon man.
j. Illustrate Miller & Urey's experiment.

Q.No.3 Discuss the ventilation of lungs in frog. [7]

Or

Give an account of the digestive system of earthworm.

Q. NO.4 Define Conjugation. Describe the process of conjugation in Paramecium & mention two important significances.

Q.NO.5 Describe the diagnostic characters of family Solanaceac with floral formula & floral diagram. Write the four economically important plant of this family. [7]

Or

What is alteration of generation? Explain it with reference to the life cycle of Dryopteris (Fern).

Q.No.6 What is ecosystem? Describe Pond ecosystem as an example of aquatic ecosystem. [8]

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# DON BOSCO COLLEGE

**Pre-Board Exam - 2059**

## Stream: Science

**Class: XI** **F. M.: 75**
**Subject: Biology (B)** **P. M.: 30**

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*Attempt all questions:* *[1x15=15]*

***Q.No. 1 Answer the following questions short.***

a. Mention the role of pace maker.
b. What are calciferous glands?
c. Write is the role of contractile vacuole in Paramecium.
d. What is the first sign of life-based on theory of origin of life.
e. What are the types of teeth found in frog?
f. Write two important characteristic features of Phylum-Platyhelminthes.
g. What is co-acervate?
h. Write the components of Nucleotide.
i. What is tropic level?
j. Write the shape of Chloroplast found in Spirogyra.
k. Who gave five-kingdom system of classification?
l. Which species of yeast is used in Alcoholic Fermentation?
m. What is the chief pigment in Rhodophyceae?
n. Write the function of mesosomes in bacteria.
o. How do algae differ from fungi?

Q.No.2 Answer the following questions: [3x10=30]

a. Justify" fossil provides an incomplete evidence of organic evolution."
b. Draw well labeled diagram of L.S. of Moss capsule.
c. Write in short the structure & function of Mitochondria
d. Define succession & write different steps involved in the process of succession.
e. What are the changes that occur during metaphase of Mitosis.
f. Describe the important features of Java man & Peking man.
g. Differentiate between Prokaryotic & Eukaryotic cell.
h. Explain briefly erythrocytic schizogony in Plasmodium.
i. Explain why is fish called Primary aquatic animal.
j. Illustrate Miller & Urey's experiment.

Q.No.3 Describe the male reproduction organs of earthworm. [7]

Or

Describe the internal structure of heart of Frog.

Q. NO.4 Define Conjugation. Describe the process of conjugation in Paramecium & mention two important significances. [8]

Q.NO.5 What is ecosystem? Describe Pond ecosystem as an example of aquatic ecosystem. [7]

Q.No.6 Describe the diagnostic characters of family Cruciferae with floral formula & floral diagram. Write the four economically important plant of this family. [8]

Or

What is alteration of generation? Explain it with reference to the life cycle of Dryopteris (Fern).

KATHMANDU
# DON BOSCO COLLEGE

**Stream : Science** **Time : 3 hrs.**
**Class : XI** **F.M. : 100**
**Subject : C. English (A)** **P.M: 40**

***Answer these questions using your own words as far as possible.***

***1. Read the following dictionary entry and answer the questions about it.*** **[3]**

**migraine**/'mi:greIn; 'maig-; *Ame* 'maig-/ *noun* [u,c] a very severe type of headache which often makes a person feel sick and have difficulty in seeing: *severe migraine –I am getting a migraine.*

a. i. What do *u* and *c* mean?
ii. In the above dictionary entry, what is the headword?
iii. What is the main feature of migraine headache?

2. In which quarter of the dictionary will you find the following words? [3]
a. recurring b. nightmare c. vanity d. cucumber e.soul f. task

**3. Make sentences of the given words.** **[4]**
affect, effect, loose, lose, principal, principle, practise, practice

4. Write a dialogue between two friends who are talking about the wedding in Nepal. [5]

**5. Answer any two of the following questions:** **[10x2=20]**

i. According to the author what will happen when fuel will run out? (The Nightmare Life Without Fuel)
ii. "Helen Turrell is ashamed that Michael is her son". Do you agree with this statement? Discuss (The Gardener)
iii. Narrate the story of 'The Loving Mother'.

**6. Answer three of the following questions:** **[3X5=15]**

I. How does the writer prove that he's a six million dollar man? (The Six Million Dollar Man)
II. Why does the Malini ask for her own banishment from the palace? (Malini)
III. What changes does the poet notice when he returns to the poplar field after a long time?
IV. Describe the old man who visited Kim's dream every night? (The Recurring Dream)
V. What is ironical about the poem "On The Vanity of Earthly Greatness".

**7. Read the following passage and answer the questions below.** **[5x2]**

You know you have to read "between the lines" to get the most out of anything .I want to persuade you to do something equally important in the course of your reading .I want to persuade you to "write between the lines " .Unless you do , you are not likely to do the most efficient kind of reading.

I contend, quite bluntly, that marking up a book is not likely to do the most efficient kind of reading. You should not mark up a book, which isn't your's. Librarians (or your friends ) who lend you books expect you to keep them clean, and you should .If decide that I am right about the usefulness of marking books, you will have to but them. Most of the world's great books are available today, in reprint editions...

Why is marking up book indispensable to reading? First, it keeps you awake. (And I don't mean merely conscious; is thinking, and thinking tends to express itself in words, spoken or written .The marked book is usually the thought - through book. Finally, writing helps you remember the thoughts you had, or the thoughts the author expressed...

But , you may ask , why is writing necessary ? Well, the physical act of writing, with your won hand, brings word and sentences more sharply before your mind and preserve them better in your memory. To set down your reaction to important words and sentences you have read , and the questions they have raised in your mind , is to preserve those reactions and sharpen those questions.

*Questions:*

a- What are the two techniques required in the most efficient kind of reading?
b- What is the writer's idea about marking up a book and whose books should be marked?
c- Why is writing marking up on the books necessary?

**8. Write sentences saying using *When* and *While alternatively*. [5]**

*i.* *walk in the park/meet an old friend.*
*ii.* *find a £ 10/do the washing*
*iii.* *hear the news/have dinner*
*iv.* *read magazine /fall asleep*
**v.** *get on the boat/be arrested*

**9. Complete these requests and suggestions using appropriate verbs. [5]**

*i.* *Your handwriting is terrible. Can't you **write a bit more neatly**?*
*ii.* *You hardly ever telephone. Can't you_____?*
*iii.* *I'm not deaf you know. Would you mind_____?*
*iv.* *Sorry, I'm a bit deaf. Would you_____?*
*v.* *I/m not tired of walking yet. Let's _____?*
vi. *Hey! You nearly hit that car! For goodness sake_____?*

**10. Answer the following questions in three different ways as in the example. [5]**

***Why did he buy a computer?***

a. *Because* he'd seen one at a friend's house and liked it.
b. *In order to* learn computer programming.
c. *So that* he could play video games at home.

i. Why did he decide to go aboard?
ii. Why do the Johnson go to Spanish classes?
iii. Why did your sister sell her television?
iv. Why did they pull down that old block of flats?
v. Why did they practice the problem of Meaning into words?

***11. Give three different reasons for these pieces of advice. Number one is done for you. [5]***

You'd better drive slowly.

Ans:

a. *incase* the road is icy.
b. *because otherwise* you *might* have an accident.
c. *So that* you don't skid.

i. You'd better have a good breakfast.
ii. You'd better leave your money with me.
iii. You'd better give me your telephone number.
iv. You'd better control your 16-yeat-old daughter.
v. You'd better take a cheque.

***12. Make two requests for each of these situations. [5]***

You are thirsty.

a. Do you think you could get me a beer?
b. Would it be all right if I made a cup of coffee?

i. You've missed the last bus house.
ii. You've poured coffee on your shirt.
iii. You're bored.
iv. Your car won't start.
vi It's time for the news on radio.

13. Write a newspaper article on 'Ceasefire'. [5]
14. Write an essay on any one. [10]

i. Music, Fashion and Youth Culture.
***ii.*** Environmental Morality

**Best of Luck**

KATHMANDU
DON BOSCO COLLEGE

**Stream : Science** **Time : 3 hrs.**
**Class : XI** **F.M. : 100**
**Subject : C. English (A)** **P.M: 40**

***Attempt all questions:***

1. A: Read the following dictionary entry and answer the questions about it. [3]

Exuberant/**ig'zju:b?r?nt; US. 'zu: / adj. I.(esp. of people and their behaviour) filled with or showing great happiness and excitement; very lively and cheerful: All evening she was witty and exuberant. # an exuberant comic style. # an exuberant imagination. 2. (of plants, etc) growing vigorously : exuberant foliage.**

exuberance | -**?**rns | n [Ul: we can excuse his behaviour as youthful exuberance. exuberantly adv.

**Questions: -**

a) What are the adverb and noun forms of the headword?
b) How many syllables does the headword have?
c) Make a sentence of your own using the headword when it means 'very lively and cheerful'.

B: Arrange the following words in the correct alphabetical order. [2]
*Assist, Assign, Assemble, Assure, Assert, Assistance.*

**2. A: Give the meaning of the following words. [2]**
*i. Dictionary ii. Idiom iii. Reincarnation iv. Phrasal Verb*

B: Fill in the blanks with appropriate prepositions. [3]

I would like to apply _____the post _____ reporter advertised _____the Kathmandu Post of January 15,2003

**3. Compose a dialogue between two college students talking about a very popular film they recently watched. (in about 60 words.) [5]**

**4. Answer any <u>two</u> of the following questions: Write approximately 150 words for each. [20]**

a. Discuss " The Recurring Dream" as a supernatural story.
b. Define slip of tongue, spoonerism, blooperism and mistranslation. Refer to examples as well to clear your answer.( "Oops! How is that Again)"
c. Describe Helen Turrell and the love she has made to Michael Turrell. Is her love motherly or not?

**5. Answer <u>any three</u> of the following questions: [15]**

a) How did Nick come to reconcile his mind about his relationship with Marjorie? (Three Day Blow)
b) What do you mean by many things fell that year? (Look at a Teacup)
c) What are Barbara Holland's opinions on single and multiple children? (Speaking of Children).
d) What is the main theme of the poem "My Heart Leaps up..."? What is the significance of the use of three tenses in the poem?

***6. Read the following passage carefully and answer the question that follow: [10]***

Ernest Hemingway began his writing career as an ambitious young American in a newspaper in Paris after the first World War. His early books, including The Sun Also Rises, were published in Europe before they were released in the United Sates.

Hemingway always wrote from experience rather than from imagination. In Farewell to Arms, published in 1929, he recounted his adventures as an ambulance driver in Italy during the war. In For Whom the Bell Tolls, published in 1940, he retold his memories of the Spanish Civil War.

Perhaps more than any other twentieth century American writer, he was responsible for creating a style of literature. Hemingway style was hard, economical, and powerful. It lured the reader into using imagination in order to fill in the details.
In 1992, Hemingway published An Old Man and the Sea, a short, compelling tale of an old fisherman's struggle to haul in a giant marlin that he had caught in the Gulf of Mexico. Some critics interpreted it as the allegory of man's struggle against old age: interpreted it as man against the forces of nature. This book was the climax of Hemingway's career. Two years later he was awarded the Nobel Prize for literature.

Questions

1. Describe Hemingway's early career and writing.
2. What was the general subject matter for Hemingway's fiction?
3. Why did the reader need to be active while reading his novel?
4. Which one was his most important work? How?
5. According to the passage, what kind of writer is Hemingway?

**7. Answer *any one* of the following questions: (write about 150 words for each)**

**a) A friend of yours has passed class XI from HSEB. Write a letter to him/her to do better in class XII.**

**b) Write an essay describing your country. (Include historical, geographical, political, religious and cultural background)**

**8. Rewrite these sentences using the words in brackets, so that they mean the same.**

a) Perhaps I won't meet him again tonight. (I think)
b) He didn't use to go the theatre very much, but now, he often goes. (than)
c) I love people taking my photographs. (having)
d) I was having breakfast when I heard the news. (while)
e) He likes spending money more than he likes earning money. (he prefers)

**9. Explain the meaning of the following newspaper headlines in complete sentences.**

a. Boeing 747 hijacked over Atlantic.
b. 350 arrested in anti-nuclear demonstrations.
c. Tomatoes thrown at minister during speech.
d. Man with bombs arrested at Heathrow.
e. Ambassador's son kidnapped on way to school.

**10. Make appropriate requests and offers. Use a different expression each time. [5]**

a) Ask a friend to give you a newspaper.
b) Ask a stranger to help you carry your luggage.
c) Offer your friend a lift in your car.
d) Offer your teacher a cup of coffee.
e) Ask your landlady for permission to give a party in her house.

11. Peter is unemployed. From the notes below, write sentences saying what he has been doing, what he has done, and what he did. [5]

e.g. a) peter | try | find | job- Ans: Peter has been trying to find a job.
b) He |look | advertisements | newspapers | and | so far |he| apply for|six jobs.
c) But | he | not | receive | any replies | yet.
d) He| also | visit | local factories | over | past few days.
e) Yesterday | he | have | interviewed | at| shoe factory | but | he | not | be offered job.
f) Now | he | decide | put | advertisement| in | newspaper | himself.

***12. Make two requests for each of these situations.*** ***[5]***

i. You are thirsty. a. Do you think you could get me a beer?
b. Would it be all right if I made a cup of coffee?
v. You've missed the last bus house.
vi. You've poured coffee on your shirt.
vii. You're bored.
viii. Your car won't start.
vi It's time for the news on radio.

***13. Write a newspaper article on 'Ceasefire'.*** ***[5]***

**KATHMANDU**

# *DON BOSCO COLLEGE*

## Pre-Board Exam - 2059

**Stream: Science** **F. M.: 75**
**Class : XI** P. M.: 27
**Subject: Chemistry (A)** **Time: 3hrs.**

***Attempt any fifteen questions:*** ***[15x2=30]***

1. How many electrons are there in 1.6 gm of methane?
2. 0.54 gm of a divalent element was oxidized and oxide was found to be 0.9gm. Calculate the atomic weight of the element.
3. Aerated water bottles are kept under water during summer. why?
4. At what temperature will a given volume of a gas of $O^0c$ double its volume, pressure remaining constant?
5. Write down the quantum designations of all electrons in 2S-Sub shell.
6. Give the various resonating structures of $NO^-_3$ or $SO_3$.
7. What is meant by periodicity in the properties of the elements? What is the cause of periodicity?
8. Determine the oxidation number of underlined elements:
   a. $K_2\underline{Mn}O_4$ b. $Na_2\underline{S}_2O_3$
9. What is the effect of pressure and temperature on the reaction:
   $A_{(g)} + B_{(s)} \Leftrightarrow C_{(g)}\ \Delta H = -Ve$
10. Give two distinctive differences on bleaching action of $SO_2$ and $Cl_2$.
11. $NH_3$ has higher boiling point than $PH_3$. Why?
12. Ozone is more reactive than oxygen at room temperature. Why?
13. Explain why dil. $H_2SO_4$ is not used to prepare $CO_2$ gas from $CaCO_3$ in laboratory?
14. What happens when hydrogen peroxide is treated on acidified $KMno_4$ solution?
15. Write down the formulae of dolomite and carnallite.
16. Why are silver ornaments get blackened when exposed to air for long time?
17. What happens when a piece of sodium is exposed to air for long time?
18. Which gas is formed when water is added on calcium carbide? What happens when the same gas is passed into alkaline $KMnO_4$ solution?
19. What is the product of acetylene and ammoniacal $Cu_2Cl_2$ solution?
20. Give the structure of the following compounds:
    a. 2-butanoic acid
    b. 4-chloro-2-pentyne.

***Attempt any five questions:*** ***[5x5=25]***

21. What are the basic assumptions of Bohr's atomic model?
22. What do you mean by colligative properties? Calculate the boiling point of a solution containing 0.456gm of camphor (molar mass=152) dissolved in 34.4gm of acetone. Boiling point of acetone is $56.3^oC$, $K_b=1.721\ km^{-1}$.
23. What do you mean by the term ionization potential? How does it vary along the period and down to the group?
24. How is sodium metal extracted from Down's process? Why is carbon reduction process not used in the reduction of sodium salt to sodium metal?
25. How is HCl gas prepared in the laboratory? How do you prepare HCl solution from the gas?
26. How $HNO_3$ is manufactured by ostwald's process? Give a neat & labeled diagram & principle involved. What happens conc. $HNO_3$ is heated with iodine.
27. Describe the lab method for the preparation of ethylene gas. How does it react with alkaline $KMnO_4$ solution?

***Attempt any <u>two</u> questions:*** ***[10x2=20]***

28. a. State & illustrate the law of reciprocal proportion. Why is it also called as the law of equivalent proportion?
    b. $CO_2$ contains 27.27% of C, $CS_2$ contains 15.97% of C and $SO_2$ contains 50% of S, which law will the given data illustrate?
29. Write down the principle involved, neat and labeled diagram for the manufacture of sulphuric acid by contact process. Give two reactions which show conc-$H_2SO_4$ acts as dehydrating agent.
30. How is blister copper extracted from its sulphide ore? Why is aqueous solution of $CuSO_4$ is acidic in nature?
31. Write short notes on (any **<u>two</u>**):
    a. Law of mass action.
    b. Hydrogen bond.
    c. Markovnikov's rule.
    d. Isomerism.