

2017

SC

PROMOTION EXAMINATION 2017

CHEMISTRY (Theory)
Class - XI science

Time allowed: 3 hours (+15 minutes reading time)

Maximum Marks: 70

General Instructions:

- All the questions are compulsory.
- There are **26** questions in total.
- Questions **1 to 5** are very short answer type questions and carry **one** mark each.
- Questions **6 to 10** carry **two** marks each.
- Questions **11 to 22** carry **three** marks each.
- Questions **23** is value based question carrying **four** marks.
- Questions **24 to 26** carry **five** marks each.
- There is no overall choice. However, an internal choice has been provided in one question of two marks, one question of three marks and all three questions in five marks each. You have to attempt only one of the choices in such questions.
- Use of calculators is **not** permitted. However, you may use log tables if necessary.

- State the law of Multiple Proportion.
- If the critical temperature for carbon dioxide and methane are 31.1°C and -81.9°C respectively, then which of these has strong intermolecular forces? Give reason.
- Which of these contain the largest number of atoms 1.0 g Li(s) and 1g Na(s)?
- Predict the shape of the NH_3 molecule according to VSEPR theory.
- Give reason: "Metallic hydrides are used for storing hydrogen".
- Convert:
 - Chloroethane to ethylene.
 - Chloroethane to butane.
- Ramesh forgot to add the reaction mixture to the round bottomed flask at 27°C but instead he placed the flask on the flame. But after sometime, he realized his mistake and used pyrometer and found the temperature of the flask which was 477°C . What fraction of air would have been expelled out?
- State the difference between classical smog and photochemical smog.
- Give the structure of B_2H_6 or Boric acid.
 - Why is the second ionization enthalpy of Mg lower than Na?
- Give any three factors favourable for the formation of ionic bond.

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- State the law of Multiple Proportion.
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- Which of these contain the largest number of atoms 1.0 g Li(s) and 1g Na(s)?
- Predict the shape of the NH_3 molecule according to VSEPR theory.
- Give reason: "Metallic hydrides are used for storing hydrogen".
- Convert:
 - Chloroethane to ethlene.
 - Chloroethane to butane.
- Ramesh forgot to add the reaction mixture to the round bottomed flask at 27°C but instead he placed the flask on the flame. But after sometime, he realized his mistake and used pyrometer and found the temperature of the flask which was 477°C . What fraction of air would have been expelled out?
- State the difference between classical smog and photochemical smog.
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11.

- i. Which of the two is more stable H_2^+ or H_2^- and why?
- ii. All bonds in PCl_5 are not equal. Explain.
- iii. Which of the two is more ionic - $NaCl$ or NaI and why?

12. Explain the following terms with an example each:

- i) Open system
- ii) Isolated system
- iii) Closed system

13. Draw the structure of the following IUPAC compounds:

- a) 2,8-Dimethyl-3, 6-decadiene
- b) 4-Ethyl-2,6-dimethyl-dec-4-ene
- c) 1,3,5,7 Octatetraene
- d) 4-Nitroso-N-dimethylbenzenamine
- e) Benzene 1,4-dicarboxylic acid
- f) 1-Phenylpropanone

14. Answer any two

- i) Calculate the percentage of C and H in 0.2475 g of an organic compound gave on combustion 0.4950 g of carbon dioxide and 0.2025 g of water.
- ii) What will happen during Lassaigne's test for nitrogen if the compound also contains sulphur?
- iii) Explain fractional distillation or steam distillation giving its principle.

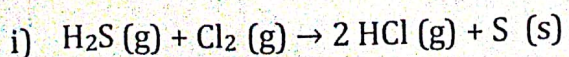
15. If water vapour is assumed to be a perfect gas, molar enthalpy change for vapourisation of 1 mol of water at 1 bar and $100^\circ C$ is $41 kJ mol^{-1}$. Calculate the internal energy change, when

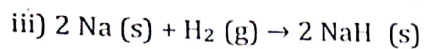
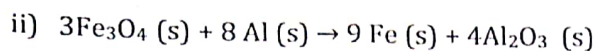
- i) 1 mol of water is vaporised at 1 bar pressure and $100^\circ C$
- ii) 1 mol of water is converted into ice.

16. Explain:

- i. Boron is unable to form BF_6^{3-} ion.
- ii. Compounds of Silicon can undergo hydrolysis . e.g. : $SiCl_4$.
- iii. Conc. HNO_3 can be stored in aluminium container.

17. Identify the species undergoing oxidation and reduction in the reactions given below.





18. Give the drawbacks of Bohr's atomic model and Hisenberg's uncertainty principle.

19. Define the following terms:

- i. Functional groups
- ii. Homologous series

Or

Predict about the formation of M^{3+} ion in solution and compare the electropositive character of the two metals given. The standard electrode potential values, E^0 for Al^{3+}/Al are -1.66 V and that of Tl^{3+}/Tl is $+1.26 \text{ V}$.

20. Give reasons: (any three)

- a) HCl is predominantly covalent in gaseous state.
- b) KHF_2 exists while KCl_2 does not.
- c) Sigma bond is stronger than the pi bond.
- d) NaCl gives white precipitate with silver nitrate solution.

21. Define:

- i. Lattice enthalpy
- ii. Bond length
- iii. Bond angle.

22.

- i. Name the class of hydrides to which H_2O and NaH belong.
- ii. What do you understand by the term hydride gap?
- iii. Give the reaction of H_2O_2 with PbS or Fe^{2+} in acidic medium.

23. Dry cleaners use tetrachloroethane for the purpose of drycleaning. They were advised to use liquefied carbon dioxide with suitable detergent as an alternative solvent.

Answer the following questions

- (i) What type of harm to the environment can be prevented by avoiding the use of tetrachloroethane?
- (ii) Will the use of liquefied carbon dioxide and detergent be completely safe from the point of view of pollution. Comment.

OR

- i). What type of a system is constituted by hot coffee placed in a flask ?
 ii). The enthalpy of vapourisation of 1 mole i.e. 18g of water is 40.79KJ/mol.
 How much water as sweat should be produced during exercise to burn off 203.95 KJ extra calories ?

24. i). With an example explain Le Chaterlier's principle or Law of mass action.
 ii). For the reaction $N_{2(g)} + 3H_{2(g)}$ at equilibrium with $2NH_{3(g)}$, the value of Kp is 3.6×10^{-2} at 500K. Calculate the value of Kc.
 OR
 ii). How will you calculate the pH of 0.001M NaOH.

25. i). How is Hess's law useful also give it's statement.
 ii). Find the kinetic energy of the photoelectrons emitted if a metal has threshold frequency $= 7.0 \times 10^{14} \text{ S}^{-1}$ and incident frequency $= 10.0 \times 10^{14}$.
 OR
 i). Calculate the standard enthalpy of formation of $C_2H_4(g)$ given :
 $C_2H_4(g) + 3O_2(g) \rightarrow 2CO_2(g) + 2H_2O$ Enthalpy of reaction = -1323 KJ
 Standard enthalpy of formation of $CO_2(g)$ = -393.5KJ/mol; of $H_2O(g)$ = -249 KJ/Mol
 ii). Give the resonating structures of CO_3^{2-} or C_6H_5OH phenol.

26. a) In which C-C bond of $CH_3CH_2CH_2Br$, the inductive effect is expected to be least?
 b) Which of the following compound shows geometrical isomerism?
 i. Pent-1-ene
 ii. Pent-2-ene
 iii. 2-Methylbut-2-ene
 c) What type of isomerism is present in the following pairs?
 i) $CH_3 - CH_2 - CH_2 - OH$ and $CH_3 - CH(OH) - CH_3$
 ii) $CH_3 - CH_2 - CO - CH_2 - CH_3$ and $CH_3 - CO - CH_2 - CH_2 - CH_3$
 iii) $CH_3 - CH_2 - OH$ and $CH_3 - O - CH_3$

Or

- a) How will you convert ethanoic acid into benzene?
 b) "Branched chain hydrocarbons have lower boiling point than straight chain hydrocarbon".
 Why?
 c) Explain how nucleophiles and electrophiles are generated by heterolysis.

-
1. What is the angle between the vectors $(i + j)$ and $(i - j)$
 2. What happens to coefficient of friction, when weight of the body is doubled ?
 3. If the linear momentum of a body increases by 20%, what will be the % increase in the Kinetic Energy.
 4. Two bodies of masses 1kg & 2 kg are located at $(1,2)$ m and $(-1,3)$ m respectively . Calculate the coordinates of the centre of mass.
 5. Why does the cotton wick in an oil filled lamp keep on burning ?
 6. A gas compressed to 50% of its volume in two ways (i) Adiabatically (ii) Isothermally
In which of these cases is the increase in pressure more & why ?
 7. Force & density are related as $F = (\alpha / (\beta + \sqrt{d} \ h))$. what are the dimension of α and β
 8. The above two figures represent two different modes of vibration of a standing wave in an open pipe. Identify the frequencies corresponding to both the modes. Write down their expression and find their ratio.

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10. A cyclist goes round a circular track of 440 metres length in 20 sec. Find the angle that the cycle makes with the vertical.
11. An man weighing 50 kgf stands on a weighing machine inside a lift. The lift starts to ascend with acceleration of 2.2ms^{-2} . What is the reading of the machine.
12. A solid cylinder of mass 20kg rotates about its axis with constant angular speed 100rad/sec . The radius of the cylinder is 0.25m. What is the kinetic Energy associated with the rotation of the cylinder? What is the magnitude of the angular momentum of the cylinder
13. Derive an expression for the time period of oscillation of a vertically loaded spring
14. Why is C_p greater than C_v ? Derive a relation between C_p & C_v
- OR
- What is an isothermal process? Which equation is followed during the process? Derive an expression for the work done during the process.
15. $Y = 7.5 \sin (0.005x + 12t + \pi/4)$ where y is in cm and t is in seconds.
Find (i) Amplitude & initial phase (ii) Frequency (iii) Velocity of the wave .
16. Write an expression for the moment of inertia of a circular disc of mass M and Radius R about an axis passing through its centre and perpendicular to its plane .Using appropriate theorems find the moment of inertia:
(i) about a tangent perpendicular to its plane (ii) about a tangent in its own plane
State the theorem used.
17. Give Laplace's formula for velocity of sound. Discuss the effect of the following factors on velocity of sound (i) Temperature (ii) Pressure
18. Derive an expression for the total energy of an artificial satellite circling round the earth in an orbit of radius r .
19. What is the phenomenon of capillarity? Derive an expression for the rise of liquid in capillary tube.
What will happen if the length of the capillary tube is smaller than the height to which the liquid rises.
20. Prove the following
a. For two angles of projection θ & $(90-\theta)$ with same velocity
(i) Range is same (ii) Maximum height are in the ratio $\tan^2\theta : 1$
b. If the range and maximum height are equal the angle of projection is $\tan^{-1} 4$
21. Starting from $PV = \frac{1}{3} mnv^2$ where the symbols have their usual meanings prove
(i) Avogadro's hypothesis (ii) Graham's law of diffusion
22. The x & y co-ordinates of a particle at any instant of time is given by $x = 7t + 4t^2$ and $y = 5t^2$.
Where x & y are in meters and t in seconds. Find the acceleration of the particle at $t = 2 \text{sec}$.
23. Having found his mother suffering from fever Venkat took her to the doctor for treatment. While checking the status, the doctor used a thermometer to know the temperature of the body. He kept the thermometer in the mouth of the patient and noted the reading as 102°F . Doctor gave the necessary medicines. After coming home, Venkat asked his mother, who is a science teacher, why mercury is used in a thermometer when there are so many liquids. Then his mother

explained the reason. (a) Comment upon the values of the mother. (b) A newly designed thermometer has its lower fixed point and upper fixed point marked at 5° and 95° respectively. Compute the temperature on this scale corresponding to 50°C

24. Draw the P- V diagram of Carnot's cycle. Write down the expression for work done in each process. Derive an expression for the efficiency of the cycle.

25. What is Doppler's Effect? Derive an expression for the apparent frequency when the source of sound is approaching a stationary Observer.

A train stands on a platform blowing a whistle of frequency 400Hz in still air

(i) What is the frequency of the whistle heard by a man moving towards the engine at 10ms^{-1} ? (Velocity of sound in air = 340m/s)

(ii) What is the speed of sound in the above case?

(iii) What is the wavelength of sound received by the running man?

26. Derive an expression for the terminal velocity of a spherical body when dropped in a long column of liquid of lower density.

Find the terminal velocity of a steel ball 2mm in diameter falling through glycerine. Relative density of steel = 8 , relative density of glycerine = 1.3gm/cc and viscosity of glycerine = 8.3poise .

OR

State and Prove Bernoulli's Theorem.

The pressure difference between two points along a horizontal pipe through which water is flowing is 1.4 cm of Hg . If due to non uniform cross-section, the speed of flow of water at the point of greater cross-section is 60cm/sec . Calculate the speed at the other point.

R.N. 30 (exp)

Room $\bar{X} \Delta$ Class $\bar{X} I A$:- 21-~~30~~ 29.
21-29 = (9)

11 A 21-30

11 Δ - 17 - 24

Promotion Examination - 2017
Class - XI A, B, C & D
Mathematics

Class $\bar{X} I \Delta$:- 17-24

18 - (1)

Total
Max. Marks : 100

(10)

Time : 3:00 Hrs { + 15 mins reading time }

General Instructions:

- i). The question paper consists of 29 questions divided into four sections A, B, C and D.
Section A comprises of 4 questions of 1 mark each.
Section B comprises of 8 Questions of 2 marks each.
Section C comprises of 11 Questions of 4 marks each.
Section D comprises of 6 Questions of 6 marks each.
- ii). All questions are compulsory, in some questions internal choice is given.
- iii). Try to attempt the question in serial order.
- iv). Use of calculators is not permitted

Section A

[Question number 1 to 4 carry 1 mark each]

1. Let $f(x) = x^2$ and $g(x) = 2x + 1$ be two real functions, find $(f \cdot g)(x)$.
2. Express $\frac{5+i\sqrt{2}}{1-i\sqrt{2}}$ in the form $a + ib$.
3. How many two digit even numbers can be formed from the digits 1, 2, 3, 4, 5 if the digits can be repeated ?
4. Find the distance between the points $P(1, -3, 4)$ and $Q(-4, 1, 2)$.

10. Find the equations of the lines parallel to axes and passing through $(-2, 3)$.

11. Evaluate : $\lim_{x \rightarrow 0} \frac{\sin ax + bx}{ax + \sin bx}$, $a, b, a + b \neq 0$.

12. A die is thrown. Describe the following events :

A : an even number greater than 4

B : a number not less than 3.

Also find $A \cap B'$.

Section C

[Question number 13 to 23 carry 4 marks each]

13. In a group of 65 people, 40 like cricket, 10 like both cricket and tennis. How many like tennis only and not cricket? How many like tennis?

14. Let $A = \{1, 2, \dots, 14\}$. Define a relation R from A to A by

$R = \{(x, y) : 3x - y = 0, \text{ where } x, y \in A\}$. Write its domain, co-domain and range.

OR

Define a relation R on the set N of natural numbers by

$R = \{(x, y) : y = x + 5, x \text{ is natural number less than } 4; x, y \in A\}$. Depict this relationship using roaster form. Write down the domain and range.

15. Solve : $\sin 2x - \sin 4x + \sin 6x = 0$.

16. Using the principle of mathematical induction for all $n \in \mathbb{N}$, prove that

$$\left(1 + \frac{3}{1}\right)\left(1 + \frac{5}{4}\right)\left(1 + \frac{7}{9}\right) \dots \left(1 + \frac{(2n+1)}{n^2}\right) = (n+1)^2$$

17. A group consists of 4 girls and 7 boys. In how many ways can a team of 5 members be selected if the team has atleast one boy and one girl?

18. Using binomial theorem, prove that $6^n - 5n$ always leaves remainder 1 when divided by 25.

OR

Find the 13th term in the expansion of $\left(9x - \frac{1}{3\sqrt{x}}\right)^{18}$, where $x \neq 0$.

19. If $\frac{a^n + b^n}{a^{n-1} + b^{n-1}}$ is the A.M between a and b, then find the value of n.

20. Two lines passing through the point $(2, 3)$ intersect each other at an angle 60° . If slope of one line is 2, find the equation of the other line.
21. Find the equation of the ellipse, with major axis along the x-axis and passing through the points $(4, 3)$ and $(-1, 4)$.
22. Evaluate $\lim_{x \rightarrow 0} f(x)$, where $f(x) = \begin{cases} \frac{|x|}{x}, & x \neq 0 \\ 0, & x = 0 \end{cases}$.

OR

If $f(x) = \begin{cases} |x|+1, & x < 0 \\ 0, & x = 0 \\ |x|-1, & x > 0 \end{cases}$, for what values of a does $\lim_{x \rightarrow a} f(x)$ exist?

23. One card is drawn from a well shuffled deck of 52 cards. If each outcome is equally likely, calculate the probability that the card will be a
- a) a diamond b) not an ace c) a black card d) not a diamond.

28. Calculate mean, variance and standard deviation for the following distribution

Classes	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90	90 - 100
Frequency	3	7	12	15	8	3	2

OR

The mean of 5 observations is 4.4 and their variance is 8.24. If three of the observations are 1, 2 and 6 find the other two observations.

29. Two students Anil and Ashima appeared in an examination. The probability that Anil will qualify the examination is 0.05 and Ashima will qualify the examination is 0.10. The probability that both will qualify the examination is 0.02. Find the probability that
- Both Anil and Ashima will not qualify the examination.
 - At least one of them will not qualify the examination and
 - Only one of them will qualify the examination.

Promotion Examination – 2017

ENGLISH

CLASS – XI ABCD

Time: 3.00Hrs (+ 15 Mins. Reading Time)

Max. Marks – 80

General Instructions

1. First fifteen minutes are for reading the question paper
2. The question paper has:-
 - Section – A – Reading Skills 20 marks
 - Section – B – Writing Skills & Grammar 30 marks
 - Section – C – Literature & Long Reading Text 30 marks
3. Read the instructions carefully; do not exceed the word limit.
4. Follow the sequence of the question paper

Section A (Reading – 20 marks)

1. Read the passage below:

A few years ago an old friend gave me a horseshoe. "Nail it above a wooden door and good luck will smile on you." I was told. If you think that's an old little superstition, consider the numerous other beliefs which have a great following in our country. There are people who prefer to place their faith in the magical powers of amulets, charm bracelets, talismans, locketts and mascots. They are said to work only if they are given as gifts. Don't ask me why because it's beyond my comprehension.

It's easy to mock at all this because such strange beliefs are without any logic and reason. However, even very reasonable people like me still keep our fingers crossed, toss coins into the Bhakra canal from the car window while travelling, wish each other good luck and throw rice at the bride and groom.

Some theories are truly funny. What are to make of claims that it's lucky to sneeze three times in a row, count the spots on the ladybird and look at the moon while holding silver coins in your right hand?

Artists, it seems, are particularly superstitious. If an actor's shoes squeak when he makes an entrance on the stage, the show will be a hit. Stars in the world of sport have their own charms. Sachin Tendulkar always ties his left pad first, Wimbledon champ Pat Cash carried a note from his grandmother while playing and Michael Jordan wore his old college basketball shorts because "I feel confident as that's where it all started for me". Business has its own sets of beliefs and rituals. The Ambanis consult an astrologer before starting a new venture and the Modis move forward only after getting the green signal from the Pundits.

Leave alone Indians, even the average westerners have started taking interest in 'vastu' and feng-shui. All kinds of strange ideas have captured their imagination.

Like moving your desk into an auspicious position and create a 'wealth bowl' – one filled to the brim with semiprecious stones, crystals and cash wrapped in a red paper.

It could be argued that force of such beliefs can create its own magic. I have always found that more orthodox methods work best. Luck is all about recognizing opportunities and making the most of them. Life without chance would be dull, but chance favours the mind that is prepared.

Indeed, these beliefs are alien to me. However, I have been to wear two precious stones on the fingers of my right hand by my educated wife, I dare not do away with them, fearful of the commotion that may engulf my sweet home. And the horseshoe is still in place. Good luck!

Answer the following questions by choosing the most appropriate option from the given ones

(4 marks)

- a) Artists.....
- (i) Are god fearing
 - (ii) Superstitious
 - (iii) Don't believe in god
 - (iv) None of the above
- b) Westerners have also initiated using.....
- (i) Vastu
 - (ii) Feng-shui
 - (iii) Both (i) and (ii)
 - (iv) All of the above
- c) Superstitious beliefs do not have.....
- (i) Logic
 - (ii) Reason
 - (iii) God's permission
 - (iv) Both (i) and (ii)
- d) Sachin Tendulkar always ties his.....
- (i) Left pad first
 - (ii) Right pad first
 - (iii) Both pads equally
 - (iv) Both (i) and (ii)

Answer the following questions briefly:

- e) What is beyond the author's comprehension? 2
- f) How does the author define 'luck'? 2
- g) Why has the author referred to his wife as being educated? 1
- h) What do you understand by 'beyond my comprehension'? 1
- i) Prove that the author is also superstitious. 1

Find words/phrases from the passage which mean the same as the following:

- j) (i) an irrational belief (P.1) (ii) understanding (P.1) 1

2. Read the passage carefully and answer the questions that follow:

To date, happiness has defied definition. Most people tend to equate happiness with fun, good living and plenty of money. If happiness were synonymous with all this, rich people with all their luxuries and countless parties would be perpetually happy.

But in actual fact, they are, frequently, acutely unhappy, despite their riches and ability to indulge in fun activities at will. Fun is what we experience during an act; happiness is that intangible something we experience after an act. We may have fun watching movies, going shopping, meeting friends; these are all fun activities that afford us fleeting moments of relaxation and enjoyment. Happiness, on the other hand, is a much stronger, deeper and more abiding emotion.

If we perceive happiness as the ultimate goal, we must also devise a way to reach that goal. The way to happiness is not a smooth, broad highway along which we can cruise at a comfortable speed. It is a path through rocky and rugged terrain and the going can become very tough at times. At these times we have to roll up our sleeves and with pitchfork and shovel make our way onwards. This pursuit of happiness lasts a lifetime. Great happiness is earned only by great effort and effort not in spurts but diligent, constant effort.

In this connection we are confronted with another fallacy, that fun and pleasure mean happiness and thus pain, its corollary, must be synonymous with unhappiness. But in fact the truth is quite different. Things that bring us happiness, more often than not, involve some amount of pain.

It is because of misconception that people avoid the very endeavour that is the source of true happiness. Difficult endeavours such as raising children, establishing deeper relationships with loved ones, trying to do something worthwhile in life hold the promise of a world of happiness.

A secret ingredient of happiness is contentment. Contentment here does not mean apathy or lack of ambition, just as commitment does not mean curtailment of freedom. Commitment teaches us to give so that we may receive and contentment helps us to cherish the gifts we have received. These things are worth a try even if they don't promise access to the pinnacle of success. Success, after all, has been described as getting what one wants, whereas happiness is liking what one gets.

Questions:

- (a) On the basis of your reading of the above passage make notes on it, using headings and sub-headings. Also use recognizable abbreviations, wherever necessary (maximum 4).
Supply an appropriate title to it. 5 marks
- (b) Write a summary of the above passage in about 80-100 words. 3 marks

Section B – Writing & Grammar – 30 marks

3. You want to sell your motor-bike which you have been using for five years. Since, you have decided to buy a car. Write an advertisement in not more than 50 words, to be published under the classified column of a local newspaper. Insert in all the necessary details. (4 marks)

OR

You recently experienced an increase in the number of late-comers who not only violate discipline but also disrupt smooth functioning of the school. As Rajan Hans, Head Boy of Maharana Pratap Public School, Udaipur, write a notice in about 50 words for the school notice-board directing all the students to come to school on time. Also specify the action that will be taken against habitual late-comers.

4. You are Rama residing at 75 A, Nehru Nagar, Bhopal. An open and well maintained park meant for the residents and children of your area will soon be converted into a shopping complex. Write a letter to the Commissioner of Municipal Corporation, Bhopal requesting him not to disturb the park which is the only open space in your area. Also suggest an alternate space for the shopping complex away from the residential area, giving suitable reasons. (6 marks)

OR

You are Anand/Anita of 14, Model Town Delhi. You have seen an advertisement in 'The Hindu' for the post of Chief Chef in a 5 star hotel. Apply for the job with complete bio-data. Write in 150-200 words.

5. The Prime Minister's campaign, 'Swach Bharat' has become popular throughout India. Inspired by this, you, the Principal of a reputed school decide to address the students on "The Value of Cleanliness. Write your speech in 150-200 words. (10 marks)

OR

Being the top scorer of the IIT Entrance Examination, you have been invited to witness the Republic Day Parade from the President of India's Enclosure. Narrate your experience in 150-200 words for publication in your college magazine. You are Preet / Proneeta.

6. The following passage has not been edited. There is one error in each line. Write the incorrect word and the correction in your answer sheet as given below, against the correct blank number. (1X4 = 4)

	Incorrect	Correct
a). In today's world that is easy to	-----	-----
b). grow up with inculcating reading	-----	-----
c). habits. There is so many television	-----	-----
d). programmes, computer games or the	-----	-----
e). play station to keep me busy	-----	-----
f). for, those not only serve as	-----	-----
g). entertainment gadgets and are	-----	-----
h). educational two at the same time	-----	-----

7. Rearrange the following words/phrases into meaningful sentences:

(1X2= 2)

a). The/on/forests/the/industry/oil/depends

b). do/get/the forests/from/what/we/products?

8. Read the conversation given below and complete the following passage by filling in the blank places appropriately. Do not add any new information.

(4 marks)

Seema: Are you going to attend Deepti's marriage?

Preeti: I have an interview tomorrow so I'll not be able to go.

Seema: The function is at 12 O'clock.

Preeti: Then, may be I can come after the interview.

Seema: That is a good idea.

Seema asked Preeti whether (a)_____ Deepti's marriage. Preeti replied that (b)_____ so (c)_____ Seema said that the function was at 12 O'clock. Preeti hoped that she (d)_____ which Seema thought was a good idea.

Section C – Literature and Long Reading Text – 30 marks

(3 marks)

9. Read the extract carefully and answer the questions:

Silence surrounds us. I would have
Him prodigal, returning to
His father's house, the home he knew,
Rather than see him make and move
His world. I would forgive him too,
Shaping from sorrow a new love.

- a). Who are 'I' and 'he' in the above lines?
- b). What do you mean by 'prodigal son'?
- c). What does father prefer?

10. Answer any three of the following questions (30-40 words each)

(3X3 = 9)

- a). Who was Mrs. Dorling? What kind of a friend was she to Mrs. S?
- b). What are the two reasons which annoyed Dorris Pearson?
- c). Who gave Taplow extra work on the last day? Why?
- d). The history teacher seemed to hold a grudge against poor Einstein. Comment.

11. Answer any one of the questions in about 150 words:

Markus Natten though showing disapproval regarding the behaviour of adults, also raises a very important point, that of independent thinking and individuality. Do you agree that independent thinking and individuality make us what we are? Elaborate in the context of the poem 'Childhood'.

(6 marks)

OR

How did the city come to be known as "Melon City"? What incidents led to its name?

Long Reading Text Novel

12. Who purchased Canterville Chase and from whom? Which significant information does he get from the native residents of the place and the owner of the house? (6 marks)
13. Describe the funeral of Sir Simon? (6 marks)

- निर्देश :-
- 1 इस प्रश्नपत्र में तीन खंड हैं क,ख,ग।
 - 2 तीनों खंडों के प्रश्नों के उत्तर देना अनिवार्य है।
 - 3 यथा संभव प्रत्येक खंड का उत्तर क्रमशः दीजिए।

खण्ड 'क'

- प्र.1 निम्नलिखित गद्यांश तथा उन पर आधारित प्रश्नोत्तर ध्यानपूर्वक पढ़िए व उनके उचित उत्तर दीजिए:- 10

विद्वानों का यह कथन बहुत ठीक है कि विनम्रता के बिना स्वतंत्रता का कोई अर्थ नहीं। इस बात को सब लोग मानते हैं कि आत्मसंस्कार के लिए थोड़ी-बहुत मानसिक स्वतंत्रता परमावश्यक है—चाहे उस स्वतंत्रता में अभिमान और नम्रता दोनों का मेल हो चाहे वह नम्रता ही से उत्पन्न हो। यह बात तो निश्चित है कि जो मनुष्य मर्यादापूर्वक जीवन व्यतीत करना चाहता है उसके लिए वह गुण अनिवार्य है, जिससे आत्मनिर्भरता आती है और जिससे अपने पैरों के बल खड़ा होना आता है। युवा को यह सदा स्मरण रखना चाहिए कि वह बहुत कम बातें जानता है, अपने ही आदर्श से वह बहुत नीचे है और उसकी आकांक्षाएँ उसकी योग्यता से कहीं बढ़ी हुई हैं। उसे इस बात का ध्यान रखना चाहिए कि वह अपने बड़ों का सम्मान करे, छोटों और बराबर वालों से कोमलता का व्यवहार करे, ये बातें आत्ममर्यादा के लिए आवश्यक हैं। यह सारा संसार, जो कुछ हम हैं और जो कुछ हमारा है—हमारा शरीर, हमारी आत्मा, हमारे भोग, हमारे घर और बाहर की दशा, हमारे बहुत से अवगुण और थोड़े गुण सब इसी बात की आवश्यकता प्रकट करते हैं कि हमें अपनी आत्मा को नम्र रखना चाहिए। नम्रता से मेरा अभिप्राय दबूपन से नहीं है जिसके कारण मनुष्य दूसरों का मुँह ताकता है जिससे उसका संकल्प क्षीण और उसकी प्रज्ञा मंद हो जाती है; जिसके कारण आगे बढ़ने के समय भी पीछे रहता है और अवसर पड़ने पर चट-पट किसी बात का निर्णय नहीं कर सकता। मनुष्य का बेड़ा उसके अपने ही हाथ में है, उसे वह चाहे जिधर ले जाए। सच्ची आत्मा वही जो प्रत्येक दशा में प्रत्येक स्थिति के बीच अपनी राह आप निकालती है।

- प्र. (क) विनम्रता और स्वतंत्रता का परस्पर क्या संबंध है?
 (ख) मर्यादापूर्वक जीवन जीने के लिए किन गुणों की आवश्यकता है?
 (ग) नम्रता और दबूपन में क्या अंतर है?
 (घ) गद्यांश में युवाओं को किस सच्चाई से परिचित कराया गया है?
 (ङ) 'परमावश्यक' और 'प्रत्येक' का संधि-विच्छेद कीजिए।
 (च) गद्यांश का उपयुक्त शीर्षक लिखिए।

- प्र.2 निम्नलिखित काव्यांश को पढ़कर प्रश्नों के उत्तर दीजिए—

5

अपने नहीं अभाव मिटा पाया जीवन भर
 पर औरों के सभी अभाव मिटा सकता हूँ।
 तूफानों-भूचालों की भयप्रद छाया में,
 मैं ही एक अकेला हूँ जो गा सकता हूँ।
 मेरे 'मैं' की संज्ञा भी इतनी व्यापक है,
 इसमें मुझ-से अगणित प्राणी आ जाते हैं।
 मुझको अपने पर अदम्य विश्वास रहा है।
 मैं खंडहर को फिर से महल बना सकता हूँ।
 जब-जब भी मैंने खंडहर आवाद किए हैं,

प्रलय—मेघ भूचाल देख मुझको शरमाए।
मैं मजदूर मुझे देवों की बस्ती से क्या
मैंने अगणित बार धरा पर स्वर्ग बनाए।

- प्र. (क) उपर्युक्त काव्य—पंक्तियों में किसका महत्त्व प्रतिपादित किया जाता है ?
(ख) स्वर्ग के प्रति मजदूर की विरक्ति का क्या कारण है ?
(ग) किन कठिन परिस्थितियों में भी मजदूर ने अपनी निर्भयता प्रकट की है ?
(घ) मेरे 'मैं' की संज्ञा भी इतनी व्यापक है,
इसमें मुझे—से अगणित प्राणी आ जाते हैं।
उपर्युक्त पंक्तियों का भाव स्पष्ट करके लिखिए।
(ङ.) अपनी शक्ति और क्षमता के प्रति उसने क्या कहकर अपना आत्म—विश्वास प्रकट किया है?

अथवा

मनमोहनी प्रकृति की जो गोद में बसा है।
सुख स्वर्ग — सा जहाँ है, वह देश कौन—सा है।।
जिसके चरण निरंतर रत्नेश धो रहा है।
जिसका मुकुट हिमालय , वह देश कौन— सा है।।
नदियाँ जहाँ सुधा की धारा बहा रही हैं।
सींचा हुआ सलोना, वह देश कौन—सा है।।
जिसके बड़े रसीले, फल, कंद, नाज, मेवे।
सब अंग में सजे हैं, वह देश कौन—सा है।।
जिसके सुगंध वाले, सुंदर प्रसून प्यारे ।
दिन—रात हँस रहे हैं, वह देश कौन—सा है।।
मैदान , गिरी , वनों में हरियालियाँ महकतीं।
आनंदमय जहाँ है, वह देश कौन—सा है।।
जिसकी अनंत वन से धरती भरी पड़ी है।
संसार का शिरोमणि, वह देश कौन—सा है।।
सबसे प्रथम जगत में जो सभ्य था यशस्वी ।
जगदीश का दुलारा, वह देश कौन—सा है।।

- प्र. (क) मनमोहिनी प्रकृति की गोद में कौन—सा देश बसा हुआ है और वहाँ कौन—सा सुख प्राप्त होता है ?
“ (ख) भारत की नदियों की क्या विशेषता है?
(ग) भारत के फूलों का स्वरूप कैसा है?
(घ) जगदीश का दुलारा देश भारत संसार का शिरोमणि कैसे है?
(ङ.) काव्यांश का सार्थक एवं उपयुक्त शीर्षक लिखिए ।

खण्ड—'ख'

- प्र.3 हिन्दी अध्यापक — पद हेतु राजकीय वरिष्ठ माध्यमिक विद्यालय, दिल्ली प्रशासन को एक आवेदन पत्र लिखिए। आप मनोहर गुप्ता , सी/432 रोहिणी सैक्टर—7 के निवासी हैं। 5

अथवा

किसी दैनिक पत्र के संपादक के नाम एक पत्र लिखिए जिसमें अपने इलाके में फैली हुई गंदगी का उल्लेख किया गया हो।

प्र.4 किसी एक विषय पर 250 शब्दों में निबंध लिखिए—

10

- (1) नोटबंदी देश के हित में कारगर
- (2) रियो ओलंपिक 2016 में भारत का प्रदर्शन
- (3) मोबाइल फोन वरदान या अभिशाप
- (4) स्वस्थ जीवन: सुखद जीवन

प्र.5 निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए —

5

- (क) जनसंचार के प्रचलित माध्यमों में सबसे पुराना माध्यम क्या है ?
- (ख) समाचार-लेखन के 'छह ककार' कौन-से हैं ?
- (ग) खोजी पत्रकारिता का क्या आशय है ?
- (घ) बीट रिपोर्टिंग किसे कहते हैं ?
- (ङ.) उल्टा पिरामिड शैली में सर्वाधिक महत्वपूर्ण बात को कहाँ स्थान दिया जाता है ?

प्र.6 'गुम होता बचपन' पर फीचर लिखिए —

5

अथवा

योग के प्रति बढ़ती रुचि पर एक आलेख लिखिए ।

खण्ड — 'ग'

प्र.7 निम्नलिखित काव्यांश को ध्यानपूर्वक पढ़कर पूछे गए प्रश्नों के उत्तर दीजिए—:

8

और माँ बिन-पढ़ी मेरी ,	पिता जी जिनको बुढ़ापा,
दुःख में वह गढ़ी मेरी	एक क्षण भी नहीं व्यापा,
माँ कि जिसकी गोद में सिर,	जो अभी भी दौड़ जाएँ,
रख लिया तो दुख नहीं फिर,	जो अभी भी खिलखिलाएँ,
माँ कि जिसकी स्नेह-धारा,	मौत के आगे न हिचकें,
का यहाँ तक भी पसारा,	शेर के आगे न बिचकें ,
उसे लिखना नहीं आता,	बोल में बादल गरजता,
जो कि उसका पत्र पाता।	काम में झंझा लरजता,

- (1) माँ के बारे में कवि क्या बताता है ?
- (2) कवि को माँ का पत्र क्यों नहीं मिल पाता ?
- (3) कवि के पिता की चार विशेषताएँ बताइए।
- (4) 'पिता जी को बुढ़ापा नहीं व्यापा'—आशय स्पष्ट करें।

अथवा

खैर, पैर की जूती, जोरू
न सही एक , दूसरी आती
पर जवान लड़के की सुध कर
साँप लोटते, फटती छाती।

पिछले सुख की स्मृति आँखों में
क्षण भर एक चमक है लाती ,
तुरत शून्य में गड़ वह चितवन
तीखी नोक सदृश बन जाती।

- (1) पैर की जूती किसे कहा गया है? इससे क्या सिद्ध होता है?
- (2) किसान के मन में सर्वाधिक दुख किसका है?
- (3) किसान की आँखों में चमक आने का कारण बताइए।
- (4) वास्तविकता का आभास होने पर किसान को कैसा अनुभव होता है ?

प्र.8 निम्नलिखित काव्यांश को ध्यानपूर्वक पढ़कर पूछे गए प्रश्नों के उत्तर दीजिए।

6

अधकार की गुहा सरीखी
उन आँखों से डरता है मन,
भरा दूर तक उनमें दारुण
दैन्य दुख का नीरव रोदन!

वह स्वाधीन किसान रहा,
अभिमान भरा आँखों में इसका,
छोड़ उसे मँझधार आज
संसार कगार सदृश वह खिसका!

- प्र. (1) भाव-सौंदर्य स्पष्ट करें।
(2) शिल्प-सौंदर्य पर प्रकाश डालिए।

अथवा

रत्नाकर गर्जन करता है, मलयानिल बहता है।
हरदम यह हौसला हृदय में प्रिये! भरा रहता है।
इस विशाल, विस्तृत, महिमामय रत्नाकर के घर के-
कोने-कोने में लहरों पर बैठ फिरुँ जी भर के ॥

- प्र. (1) भाव - सौंदर्य स्पष्ट करें।
(2) काव्यांश का शिल्प-सौंदर्य बताइए।

प्र.9 निम्नलिखित प्रश्नों में से किन्ही तीन प्रश्नों के उत्तर दीजिए-

6

- क 'आओ मिलकर बचाएँ' कविता के आधार पर माटी रंग प्रयोग करते हुए किस बात की ओर संकेत किया गया है ?
ख सबसे खतरनाक कविता में कवि ने किस आशय से मेहनत की लूट, पुलिस की मार गदारी - लोभ को सबसे खतरनाक नहीं माना ?
ग 'अक्कमहादेवी' की कविता के आधार पर बताइए कि ईश्वर के लिए किस दृष्टांत का प्रयोग किया गया है। ईश्वर और उसके साम्य का आधार बताइए।
घ कबीर ने अपने को दीवाना क्यों कहा है ?

प्र.10 निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़कर पूछे गए प्रश्नों के उत्तर दीजिए।

6

"यह हम नहीं कर सकते।" सेक्रेटरी ने कहा, "और जो हम कर सकते थे, वह हमने कर दिया है, बल्कि हम तो यहाँ तक कर सकते हैं कि अगर तुम मर जाओ, तो तुम्हारी वीवी को वजीफा दे सकते हैं, अगर तुम दरखास्त दो, तो हम वह भी कर सकते हैं।"
" मैं अभी जीवित हूँ। " कवि रुक-रुककर बोला, "मुझे जिंदा रखो। "

" मुसीबत यह है, " सरकारी साहित्य अकादमी का सेक्रेटरी हाथ मलते हुए बोला, "हमारा विभाग सिर्फ कल्वर से संबंधित है। पेड़ काटने का मामला कलम-दवात से नहीं, आरी - कुल्हाड़ी से संबंधित है। उसके लिए हमने फॉरेस्ट डिपार्टमेंट को लिख दिया है और अर्जेंट लिखा है। "

- (क) इस गद्यांश के मूल पाठ तथा लेखक का नाम लिखिए।
(ख) सेक्रेटरी के उत्तर पर अपनी प्रतिक्रिया दीजिए।
(ग) लेखक इसमें क्या व्यंग्य करता है?

अथवा

भले ही 1947 और 1948 में महत्वपूर्ण घटनाएँ घटी हों, मेरे लिए वे कठिन बरस थे। पहले तो कल्याण वाले घर में मेरे पास रहते मेरी माँ का देहांत हो गया। पिता जी मेरे पास ही थे। वे मंडला लौट गए। मई 1948 में वे नहीं रहे। विभाजन की त्रासदी के बावजूद भारत स्वतंत्र था। उत्साह था, उदासी भी थी। जीवन पर अचानक जिम्मेदारियों का बोझ आ पड़ा। हम युवा थे। मैं पच्चीस बरस का था; लेखकों, कवियों, चित्रकारों की संगत थी। हमें लगता था कि हम पहाड़ हिला सकते हैं और सभी अपने-अपने क्षेत्रों में अपने माध्यम में सामर्थ्य भर-बढ़िया काम करने में जुट गए। देश का विभाजन, महात्मा गाँधी की हत्या क्रूर घटनाएँ थीं। व्यक्तिगत स्तर पर, मेरे माता-पिता की मृत्यु भी ऐसी ही क्रूर घटना थी। हमें इन क्रूर अनुभवों को आत्मसात करना था। हम उससे उबर काम जुट गए।

- (क) 1947 और 1948 की किन महत्वपूर्ण घटनाओं पर प्रकाश डाला गया है ?
 (ख) लेखक के साथ व्यक्तिगत रूप से कौन-सी दुखद घटनाएँ घटीं ?
 (ग) युवा लेखकों, कवियों और चित्रकारों को क्या अनुभव होता था ?

प्र.11 निम्नलिखित प्रश्नों में से किन्हीं तीन प्रश्नों के उत्तर दीजिए।

9

- (क) दुनिया के बारे में किसानों को बताना नेहरू जी के लिए क्यों आसान था ?
 (ख) रज़ा ने अकोला में ड्राइंग अध्यापक की नौकरी की पेशकश क्यों नहीं स्वीकार की ?
 (ग) स्त्री के चरित्र की बनी बनाई धारणा से रजनी का चेहरा किन मायनों में अलग है ?
 (घ) कर्जन को इस्तीफा क्यों देना पड़ गया ?

प्र.12 'आलो-आँधरि' रचना बेबी की व्यक्तिगत समस्याओं के साथ-साथ कई सामाजिक मुद्दों को समेटे है। किन्हीं दो मुख्य समस्याओं पर अपने विचार प्रकट कीजिए।

5

अथवा

राजस्थान के रेत की विशेषता बताते हुए कुँई से पानी कैसे निकाला जाता है बताइए।

प्र.13 निम्नलिखित में से किन्हीं दो प्रश्नों के उत्तर दीजिए -

10

- (क) लता मंगेशकर ने किस तरह के गीत गाए हैं ? पाठ के आधार पर स्पष्ट करें।
 (ख) 'आलो-आँधरि' पाठ से घरों में काम करने वालों के जीवन की जटिलताओं का पता चलता है। घरेलू नौकरों को और किन समस्याओं का सामना करना पड़ता है ? इस पर विचार करिए।
 (ग) कुँई की खुदाई के समय ऊपर जमीन पर खड़े लोग क्या करते हैं ?

Q.1:-List the header files if required for the following: [5]

Copy the terms in one column and your response in second column

- a. Strcmp() (b) Randomize() (c) sizeof() (d) itoa()
- e. tolower()

Q.2:-State whether the following statements are TRUE or FALSE:- [5]

- a. Two functions with the same name can be declared in a single program.
- b. A function can be declared in a structure.
- c. The scope resolution operator can also be used with local variables.
- d. while() is an entry controlled loop.
- e. All global variables must be declared inside the main function.

Q.3:-Fill in the blanks:-*(copy each statement)* [5]

- a. Two functions with same name can be declared under the method called.....
- a. The function atoi() is located in header file
- b. If char x[]="You are the best";then NULL is found at position.
- c. A function cannot return a value.
- e. Variables declared outside the main() function are called.....

Q.4:-what name will you give to:- [5]

- a. The different variables sharing the same memory location.
- b. Two or more functions declared with same name in a program.
- c. A user defined function declared outside main().
- d. The process of interchanging values between two variable.
- e. Repeating a process a desired number of times.

[5]

Q.5:-Write one difference for each of the following

(Answer in column format strictly)

- call by value and call by reference.
- randomize() and random().
- local and a global function.
- strcat() and strcpy().
- inbuilt functions and user defined functions

[15]

Q.6:-Answer the following:-

- What is sizeof(). Why is it used. What type of value is returned by it? Differentiate between strlen() and sizeof().
- Declare a structure named *item* to hold item related information like Name of Item, Quantity, Company, Cost in rupees. Your definition should also declare two variables Indian and Foreign of the same type. You may choose suitable variable names of each field and their data types wherever required.
- Write two advantages of using functions in a program? What type of functions can be present in a C++ program.
- What is function overloading. Write two associated precautions.
- With respect to iteration answer the following. (1-2 sentence each)
 - What is the purpose of while and do-while statement?
 - What is the minimum number of times while and do-while will be executed?
 - Write a precaution common to while and do-while statement.

Q.7:-Study the following programs and answer the question given below each program.

Non-inclusion of header files may not be treated as error. In case you find something wrong in any program, explain the error briefly.

Do not copy any part of both the programs given below

PROGRAM 7 (a)

```
void main()
{
    clrscr();
    int fun(int,int);
    int x , y = -25 , z = -75;
    x = fun(y,z);
    y = fun(z,x);
    z = fun(x,y);
    cout<<x<<" "<<y<<" "<<z;
    getch();
}

int fun(int a,int b)
{
    int sum=0;
    a=a+b;
    b=b-a;
    a=b+a;
    sum=a+b;
    return sum;
}
```

[5]

PROGRAM 7(b)

[5]

```
void main()
{
    int n[4][4]={16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1};
    int i,j;
    clrscr();
    for(i=0;i<=3;i++)
    {
        for(j=3;j>=i;j--)
        {
            cout<<n[i][j]<<"\t";
        }
        cout<<"\n";
    }
    getch();
}
```

Write the output of both of the programs numbered 7(a) and 7(b).

PROGRAMMING SECTION (10 marks each)

Variables highlighted in the questions should be used in your programs. Additional variables may be taken as per choice.

Q.8 Array (acc) has to holds 20 transactions made by a customer during a particular year in the form of debit or credit. The debit is represented by 0 (zero) and credit by 1 along with the amount as shown below for two transactions.

acc [40] = { 4155 , 0 , 6545 , 1 , } ;

which mean Rs.4155 were debited and Rs.6545 credited

Develop the program which declares the array and also two functions named db() and cr () to accumulate separately the amount debited and credited. At the end the total amount debited /credited should be displayed. Store the data directly as per your choice and it should be shown on the answer sheet. (full data)

Your program should also make a provision in case of any negative value is found in the array, the program should terminate with a message. SIR kindly verify the data.

Q.9 Write a program to create a structure [stu] with the following fields Name [nam] , Roll Number [rn] , Marks [mks] of five subjects. Also create a function [check] to receive the structured data of ten students and it should display full details of the students who failed in more than 1 subject.

Note :- YOUR PROGRAM SHOULD WORK UNDER THE FOLLOWING CONDITIONS.

- All marks should be in the range of 10 to 95.
- Failure in any subject is below 40 marks.
- Name and Roll No. should be accepted from the user.
- The output should be complete in all respects.
- Subject names may be taken on choice. Eg. Mks[0] is ENGLISH , Mks[1] Hindi..

ALL THE BEST. YOU ARE THE BEST

Promotion Examination 2017
Physical Education
Class – XI

Time: 3 Hrs (+15 Mins Reading Time)

M.M. : 70

General Instructions :-

1. All questions are compulsory.
2. Answer to questions carrying 1 mark should be approximately 20-30 words each.
3. Answer to questions carrying 3 mark should be approximately 80-90 words each.
4. Answer to questions carrying 5 mark should be approximately 150-200 words each.

Section A (11 x 1 mark =11)

- Q.1 Define physical education.
- Q.2 Define physical fitness.
- Q.3 Mention the sports awards recognised by Indian government.
- Q.4 Meaning of the word "YUJ"
- Q.5 Mention the doping substance.
- Q.6 Give the essential elements of positive sports environment.
- Q.7 Define test and measurement.
- Q.8 List down six bones of the body.
- Q.9 What is lever ? Mention its types.
- Q.10 What are the adolescence problems ?.
- Q.11 What do you mean by warming up ?.

Section B (8 x 3marks = 24)

- Q.1 Explain the concept of integrated physical education and principles.
- Q.2 Components of positive lifestyle.
- Q.3 What are the functions of IOA ?.
- Q.4 Explain the therapeutic effects of any four asanas.
- Q.5 Discuss doping test procedures.
- Q.6 Explain the Importance of test and measurements in sports.
- Q.7 Classify muscles and their functions.
- Q.8 Define motion. Explain the types with examples.

Section C (7 x 5marks = 35)

- Q.1 What do you mean by physical fitness ? Mention the components of physical fitness.
- Q.2 Explain Olympic flag, Olympic motto and objectives of Olympic games.
- Q.3 Define Doping. What are the substance used in Doping ?
- Q.4 Explain the sheldons samato typing.
- Q.5 Define anatomy and physiology. Highlight the importance of these subjects.
- Q.6 Discuss the adolescence needs, problems and management of adolescence.
- Q.7 What is warming up ? How is it performed ? Give its importance.

ANNUAL PROMOTIONAL EXAMINATION

CLASS XI 2014

BIOLOGY

Time: 3hrs + 15 mins.

Max. Marks 70.

GENERAL INSTRUCTIONS:

1. All questions are compulsory.
2. Draw neat diagrams wherever required.
3. Section E comprises of OTBA questions.

SECTION A

(1 mark each)

1. What is tetany?
2. What is blood plasma without the clotting factors called as?
3. Name the point on the retina where visual acuity is the greatest?
4. What is guttation?

SECTION B

GENERAL INSTRUCTIONS:

1. All questions are compulsory.
2. Draw neat diagrams wherever required.
3. Section E comprises of OTBA questions.

SECTION A

(1 mark each)

1. What is tetany?
2. What is blood plasma without the clotting factors called as?
3. Name the point on the retina where visual acuity is the greatest?
4. What is guttation?

SECTION B

(2 marks each)

5. Draw a diagram to show the longitudinal section of the kidney and label the following:
 - a - renal pelvis
 - b - columns of Bertini
 - c - major calyx
 - d - medullary pyramid.

molecule.

7. Differentiate between
- imbibition and diffusion.
 - Apoplast and symplast pathways of movement of water in plants.

8. The chromosome no. of onion is 14. How many chromosomes will an onion cell have at G₁ phase, after the S phase and after the M phase? What will be the DNA content of the cell after the S phase.

9. Draw the structure of the dicotyledenous seed and explain it.

SECTION C

(3 marks each)

10. Draw and name one of each of the following:
- Root modification for storage.
 - Stem modification for protection.
 - Leaf modification for support.
11. Write the action of the enzymes of succus entericus on the end products of digestion to form simple absorbable molecules. (write equations also).
12. Write the chain of reactions that lead to the formation of 2 molecule of pyruvic acid from a molecule of glucose.

13. Draw a diagrammatical representation of the nitrogen cycle showing relationship between the three main nitrogen pools - atmosphere, soil and biomass.

14. Explain the 'Z' scheme of light reaction.

15. Explain the mechanism of breathing.

16. Draw (only) a labelled diagram to represent an actin filament and a myosin monomer.

17. What is the renin-angiotensin mechanism? Explain.

18. a. Explain the complex cell envelope of prokaryotic cell.

b. What is the difference between Gram positive and Gram negative bacteria.

19. Explain the position and function of the pacemaker and the pacesetter in a human heart.

OR

Draw a well labelled diagram of the human eye.

20. Draw a diagrammatic representation of the
1. amino acid - serine.
2. nucleotide - adenylic acid.

21. Explain photoperiodism and vernalisation.

SECTION D

(5 marks each)

22. Explain the mechanism of muscle contraction.

OR

a. Name two hormones released by the adenohypophysis and neurohypophysis each.

b. Name the hormones of 'fight and flight'. What are their functions?

c. What is corpus luteum? Which hormone does it release? What is its function?

24. Explain the major pathways of

a. anaerobic respiration.

b. What is the compensation point?

c. Write the summary equation for the citric acid cycle.

OR

a. Why is photorespiration a wasted process in C_4 plants?

b. What happens in carboxylation during Calvin's cycle.

SECTION E

(OTBA, 5 marks each)

25. Why do you think the general public is unwilling to be an organ donor?

26a. Write down the past five years (2012 to 2016) themes of the World Health Day.

b. List 5 main causes of Type 2 Diabetes.