DEEP PUBLIC SCHOOL

CLASS 12- English- Holiday Homework

NOTEMAKING

How to make notes?

One needs to follow a few simple rules:

1. First, read the passage carefully.
2. Have a heading which indicates the main idea behind the passage.
3. Subheading: A heading is often divided into various parts. Subheadings are used to indicate that.
4. Each subheading involves points and not lengthy passages.
5. Use abbreviations and bullet points to make the sentences clear and easy to read.

SAMPLE

Read the following passage and answer the questions that follow:

1. Occasional self-medication has always been part of normal living. The making and selling of drugs has a long history and is closely linked, like medical practice itself, with belief in magic. Only during the last hundred years or so has the development of scientific techniques made diagnosis possible. The doctor is now able to follow up the correct diagnosis of manyillnesses-with specific treatments of their cause. In many other illnesses of which the causes remain unknown, he is still limited, like the unqualified prescriber, to the treatment of symptoms. The doctor is trained to decidewhen to treat symptoms only and when to attack the cause. This is the essential difference between medical prescribing and self-medication.
2. The advance of technology has brought about much progress in some fields of medicine,including the development of scientific drug therapy. In many countries, public health organization is improving and peoples' nutritional standards have risen. Parallel with such beneficial trends is two which have an adverse effect. One is the use of high-pressure advertising by the pharmaceutical industry which has tended to influence both patients and doctors and has lead to the overuse of drugs generally. The other is the emergence of sedentary society with its faulty ways of living: lack of exercise, overeating, unsuitable eating, insufficient sleep, excessive smoking, and drinking. People with disorders arising from faulty habits such as these, as well as from unhappy human relationships, often resort to self-medication. Advertisers go to great lengths to catch this market.

3. Clever advertising aimed at chronic sufferers; who will try anything because doctors have not been able to cure them; can induce faith in a medicine, particularly if it is steeply priced. Advertisements are also aimed at people suffering from mild complaints such as simple colds and coughs which advertisements claim will clear up within a short time due to the intake of a medicinal product.
4. These are the main reasons why laxatives, indigestion-remedies, painkillers, cough – mixtures, tonics, vitamins and iron tablets, nose drops, ointments and many other preparations are found in quantity in many households. It is doubtful whether taking these things even improves a person's health or it simply makes it worse. Worse, because the preparation may contain unsuitable ingredients making a person dependent on them. They may also cause poisoning and worst of all the symptoms of an underlying problem may be masked and therefore medical help may be sought. Self-diagnosis is a greater danger than self-medication.

Self Medication- A Growing Trend

1. **Self Medication and Medical Prescription**
   - 1.1 Occasionally practiced in past
   - 1.2 Medical diagnosis
     - 1.2.1recent-100 yrs.[1] approx.[2]
   - 1.3 Difference between
     - 1.3.1 prescribed medicine and self-medication
   - 1.4Doc.[3] : trained
     - 1.4.1knows when to treat
     - 1.4.2symptoms
     - 1.4.3causes.
   - 1.5 Indiv.[4] doing self medication
     - 1.5.1 ignorant abt.[5] above.

2. Benefits and Effects

2.1 Improvement
- 2.1.1 in medicines
- 2.1.2 public health system
- 2. 1.3 nutritional stds.[6]

2.2 Sedentary society
- 2.2.1 lack of exercise
- 2.2.3 overeating
- 2.2.4 unsuitable eating
  - 2.2.4.1excessive smoking and drinking.

2.3 Self Medication
- 2.3.1Ppl.[7] with lifestyle disorders
  - 2.3.1.1 relationship prblms[8] target of advertisers.

3. Types of Self Medication & Effects

3.1 Laxatives

3.1.1indigestion-remedies
3.1.2 painkillers
3.1.3cough –mixtures, tonics,
3.2vitamins and iron tablets
3.2.1nose drops
3.2.2ointments etc
3.3 Can worsen prblm
3.3.1. Unsuitable ingredients
3.3.2 Medicine may mask real cause
MAIN HEADINGS-MIN-4
SUBHEADINGS-2-3
SUB-SUB HEADINGS-2

Key To Abbreviations

S.NO	KEYWORD	ABBREVIATION
1	YEARS	YRS.
2	APPROXIMATELY	APPROX.
3	DOCTOR	DOC.
4	INDIVIDUAL	INDIVI.

MINIMUM-4

MAXIMUM-6

SUMMARY
Advancements in diagnostic techniques and improvement in medicines and public health systems are accompanied by harmful effects. Technological advancement promotes a sedentary lifestyle with lack of exercise, overeating, eating wrong foods, insufficient sleep, excessive drinking and smoking. This leads to a rise in disorders, self-medication and relationship problems. Further advertising promotes self medication when doctors cannot find cures. Easy cough, cold indigestion medicines promising quick recovery attract consumers. However self medication might mask the real problem and unsuitable ingredients might harm.

Practice Questions

Q1 Read the following passage carefully and answer the questions that follow. (12)
When an atma first takes birth, it has only sattvic qualities. But due to its actions on this earth, it acquires rajasic and tamasic qualities. So acting in the right manner is important. When a person performs actions, he must do so with sattvika tyaga. This means that he must not think of himself as the doer or think of the action as his. He ' must think of the actions as those of the Supreme One. He must not lay claim to any fruits of the actions. He must realise that the fruits of the actions are not his and it is the Lord's grace that gives results for his actions. A person should not perform his duties with a view to gaining something. Likewise, worship too should not be for a purpose. A person who has rajasic qualities while doing his duty, lacks this attitude towards actions. The one with tamasic qualities fails to perform his duties.
Doing prescribed actions is sattvika karma. Doing one's duties with sattvika tyaga is to do sattvika karma. Rajasic karma is that which is done for a purpose and without sattvika tyaga. Tamasic karma is that which is done as one pleases, actions done at the wrong place, at the wrong time and in a way that harms oneself and others and doing what the Sastras forbid. The Lord spells out clearly in the Gita what one gets^Hadoine sottvikn karma. One gains control over the mind; one begins to think of His name constantly; one likes only His mantras; one gives up undesirable traits like anger, jealousy etc.
A person who does actions with sattvika tyaga acquires parabhakti—i.e. awareness about the atma. In the next stage he gets parajnana—i.e. that a vision of the Supreme One. The last stage is Paramabhakti, which means that vision of the Supreme One becomes a lasting vision. Having said all this, the lord talks about Saranagati (total surrender) as a means to reach Him. Saranagati is the simplest way to reach Him.
(a) On the basis of your reading of the above passage, answer the following questions by choosing the correct option. (1×6 = 6)
(i)How can one acquire parabhakW?
(a)by being aware of the surroundings
(b)by doing yoga
(c)by parajnana
(d)by doing actions with sattvika tyaga
(ii)What is meant by sattvika tyaga?
(a)One is born with sattvic qualities
(b)Actions performed are those of the Supreme One
(c)Doing actions not considering it as his
(d)Both b and c
(iii)Who fails to perform his duties with the right attitude?
(a)One with tamasic qualities (b) One with rajasic qualities
(c)One with sattvic qualities (d) None of these
(iv)What could be a suitable title for the passage out of the following?
(a)The Right Karma
(b)The Gita's teaching
(c)Way to Supreme God
(d)Actions speaks louder than character
(v)What is the order of the three stages being described in fourth paragraph?
(a)parajnana, parabhakti, parambhakti

(b)parambhakti, parabhakti, parajnana
(c)parabhakti, parajnana, parambhakti
(d)parabhakti, parajnana, saranagati
(vi)What is the correct interpretation of the word paragraph?
(a) try (b) intention (c) design (d)end

(b)On the basis of your reading of the given passage,answer the following questions briefly.(1×6 = 6)

(i) What is the right and simplest way to reach Him?
(ii)Why do the Sastras forbid Tamasic Karma?
(iii)What does one get by doing sattvika karma?
(iv)The word in the third paragraph which is a synonym of 'unacceptable' is……
(v)The word……. from the passage is a synonym of 'submission'.
(vi)The phrase in the first paragraph which is the opposite of 'deny' is ……

Q2 Read the following passage carefully : (10)

Michael Schumacher born 3 January 1969,is a retired German Formula One racing driver. A seven-time World Champion and widely regarded as one of the greatest F1 drivers of all time, he holds many of Formula One's driver records, including most championships, race victories, fastest laps, pole positions, points scored and most races won in a single season – 13 in 2004. In 2002 he became the only driver in Formula One history to finish in the top three in every race of a season and then also broke the record for most consecutive podium finishes. According to the official Formula One website he is "statistically the greatest driver the sport has ever seen". A poll of 217 Formula One drivers conducted by the British magazine Autosport in 2009 named Schumacher the second-greatest F1 driver of all time, behind Ayrton Senna.

Schumacher was born in Hürth, North Rhine-Westphalia to Rolf Schumacher, a bricklayer, and his wife Elisabeth. When Schumacher was four, his father modified his pedal kart by adding a small motorcycle engine. When Schumacher crashed it into a lamp post in Kerpen, his parents took him to the karting track at Kerpen-Horrem, where he became the youngest member of the karting club. His father soon built him a kart from discarded parts and at the age of six Schumacher won his first club championship.

Regulations in Germany require a driver to be at least 14 years old to obtain a kart license. To get around this, Schumacher obtained a license in Luxembourg at the age of 12. In 1983, he obtained his German license, a year after he won the German Junior Kart Championship. From 1984 on, Schumacher won many German and European kart championships. He joined Eurokart dealer Adolf Neubert in 1985 and by 1987 he was the German and European kart champion, then he quit school and began working as a mechanic. In 1988 he made his first step into single-seat car racing by participating in the German Formula Ford and Formula König series, winning the latter. In 1989, Schumacher signed with Willi Weber's WTS Formula Three team and competed in the German Formula 3 series, winning the title in 1990. He won also the Macau Grand Prix. At the end of 1990, along with his Formula 3 rivals Heinz-Harald Frentzen and Karl Wendlinger, he joined the Mercedes junior racing programme in theWorld Sports-Prototype Championship.

After one Mercedes-funded race for the Jordan Formula One team Schumacher signed as a driver for the Benetton Formula One team in 1991. After winning consecutive championships with Benetton in 1994/5, Schumacher moved to Ferrari in 1996 and won another five consecutive drivers' titles with them from 2000 to 2004. Schumacher retired from Formula One driving in 2006 staying with Ferrari as an advisor. Schumacher agreed to return for Ferrari part-way through 2009, as cover for the badly injured Felipe Massa, but was prevented by a neck injury. He later signed a three-year contract to drive for the new Mercedes GP team starting in 2010.

His career has not been without controversy, including being twice involved in collisions in the final race of a season that determined the outcome of the world championship, with Damon Hill in 1994 in Adelaide, and with Jacques Villeneuve in 1997 in Jerez. Off the track Schumacher is an ambassador for UNESCO and a spokesman for driver safety. He has been involved in numerous humanitarian efforts throughout his life and donated tens of millions of dollars to charity. Michael and his younger brother Ralf Schumacher are the only brothers to win races in Formula One, and they were the first brothers to finish 1st and 2nd in the same race, in Montreal in 2001. The two brothers repeated this achievement in four more races (the2001 French Grand Prix, the 2002 Brazilian Grand Prix, the 2003 Canadian Grand Prix and the 2004 Japanese Grand Prix).

a)On the basis of your reading of the above passage make notes on it, using recognizable abbreviations wherever necessary. Supply a suitable title.
(5)

b) Make a summary of the above passage in about 80 words.
(5)

Q3 Read the following passage carefully and answer the questions that follow. (8)
Scientists have suggested that smoking may be a factor for developing psychotic illnesses like schizophrenia.
The analysis by researchers from Kings College London, which was published in the Lancet Psychiatry journal, found that people who suffer from psychosis are three times more likely to smoke than the rest.
While this association is nothing new, little research has been conducted into whether smoking could actually be a causal factor for psychosis.
Analysing data from 61 studies, comprising 15000 smokers and 273000 non-smokers, conducted around the world between 1980 and 2014, the team found that 57%.of people first diagnosed with psychosis were smokers. The researchers also found that daily smokers developed psychotic illness around a year earlier than non-smokers. It has long been hypothesised that higher smoking rates among psymhosis sufferers could be explained by people seeking relief from boredom or distress or self-medicating against the symptoms or side-effects of antipsychotic medication. But if this were so, researchers ww:M expect smoking rates to increase only after people had developed psychosis.
However, the findings failed to prove its causation, with the researchers saying that some of the studies they looked at did not take into account possible confounding factors, such as whether smokers were also regular cannabis users, something psychotic illness is associated

with. Researchers suggested a possible explanation for the link could be smoking's impact on levels of the chemical dopamine in the brain, which also plays a role in psychotic illness. However, Dr James McCabe, clinical lecturer in psychosis studies at the King's Institute of Psychiatry, Psychology and Neuroscience (IoPPN) said smoking should be "taken seriously as a possible risk factor" for psychosis and not "dismissed as a consequence of the illness". Sir Robin Murray, professor of psychiatric research at the IoPPN said, "Excess dopamine is the best biological explanation we have for psychotic illnesses such as schizophrenia. It is possible that nicotine exposure, by increasing the release of dopamine, causes psychosis to develop".

(a) On the basis of your reading of the above passage make notes on it using headings and sub-headings. Use recognisable abbreviations wherever necessary (minimum 4). Supply a suitable title to it. (5)

(b) Write a summary of the above passage in about 80-100 words. (3)

Q4 Read the following passage carefully and answer the questions that follow.(12)

Travel is a bug that was in me when I was born, probably inherited from my father. In 24 years of travelling widely through India, I have been most fascinated by those little islands that dot the Bay of Bengal off the East Coast of India. Yes, I am talking about the Andaman Islands. Andamans somehow seemed almost sinister, with images of being haunted, bleak and scary, until my parents actually returned from a trip to Port Blair and told us about these serene islands. We immediately awaited the first opportunity to take a break and check them out. Finally, the D-Day came and we were all ready. We boarded the aircraft and to our surprise found that there were several empty seats. On enquiry, we learnt that all supplies to the Andamans including newspaper and meat go from the mainland and so there is always more cargo and less people.

Port Blair airport is a small, old airport that was constructed in 1947. On my way to the hotel I noticed that there are none of the usual autorickshaws that noisily wend their way through most Indian towns. There was only one traffic signal in the entire town and the roads were more ups-and-downs than level. This was all surprising for a person like me who has lived in the coastal towns of Chennai and Mumbai.

The colour of the sea was an unpolluted blue, a colour that I had not seen in any of the beaches in India. It was calm and beautiful. I was thrilled with the fact that we were going to spend 10 entire days there. All we had to do was sit in the open restaurant, look at the sea, enjoy the cool breeze and feel good.

The Andaman Islands are a group of several islands, so most of our sightseeing was by boats. There are a total of more than 356 islands there. Even the oldest boatman, Rathnam, had seen only 200 of them. I figured that 10 days was surely not enough to get a full picture of this place, so I started to store every sight, every sound and every smell. The sound and light show at the jail sent a shiver down my spine. (This trip was before the movie 'Kalapani' was released). The realisation that those who fought for our Independence had lived, struggled, suffered and even died here left an impact.

(a) On the basis of your reading of the above passage, answer the following questions by choosing the correct option.(1×6=6)

(i) What kind of a passage is this?

(a) Fiction

(b) Travelogue

(c) Persuasive
(d) Biography
(ii) Why was the author interested in taking a trip to Andaman Islands?
(a) It had a haunted, bleak and scary image.
(b) As his parents had recently taken a trip there.
(c) He loved travelling.
(d) He was largely fascinated by what his parents told him about the islands.
(iii) Why was the author surprised when he reached Port Blair?
(a) The airport was very small.
(b) There was only one traffic signal in the entire town.
(c) Living in a busy city, he had never expected such a town.
(d) None of the above.
(iv) What is the meaning of the phrase 'sent a shiver down my spine'?
(a) Feel very frightened
(b) Feel very excited
(c) Feel very relaxed
(d) None of these
(v) The synonyms of 'sinister' in the second paragraph is……
(a) threatening
(b) left side
(c) benign
(d) good
(vi) One thing that left a major impact on the author was……
(a)the serenity of the place
(b) the wholesome experience
(c) vastness of the islands
(d) the realisation that freedom fighters had lived, struggled and died there

(b) On the basis of your reading of the passage, answer the following questions briefly.(1×6=6)

(i) Why were there several empty seats in the aircraft?
(ii) What was unusual about Port Blair?
(iii) How did the author describe the beaches?
(iv) What was most of their sightseeing by boats?
(v) The word…….. in the passage means 'provisions'.
(vi) The word in the passage which is an antonym of 'contaminated' is……

CLASSIFIED ADVERTISEMENTS

SAMPLE FORMATS-

TOURS AND TRAVELS

Trivago offers packages to shimla, kullu - manali, jammu & kashmir at very reasonable price, free sight seeing, free pick and drop, stay at 3 star hotel, free car parking space, with many more attractive offers, for more details call 1800 1 4 0 2 3 4 5

CHANGE OF NAME

I Parveen Yadav S/o Mr. Ram Kishor Yadav R/o Sector-3, Rewari, want to change my name from Parveen to Praveen due to some astrological reasons, I shall be called by this name in future. Besides, all the correspondence and communication should be done with the same name.

PARVEEN

BRIDE WANTED

Alliance invited from a slim, beautiful. mealy-mouthed, considerate and homely girl, should be working for a tall, dark, handsome boy, working abroad, Punjabi, Non-manglik boy, well settled income in six figures father retired from Indian army, mother a home maker, no dowry, early marriage, interested match makers may contact at numbers given below. 999xxxxxx, 988xxxxxx or e-mail: xyz@gmail.com

FOR SALE

Maruti Suzuki Zen is available for sale, 900 Cc, New Tyres, Scratch less body, insured with all required documents, inbuilt music system, run 15000 kms, single handed, mint condition for Rs. 1 lac only, interested buyers may contact Mr. Ravi @ 92xxxxxx 0r meet personally after 5 o'clock in the evening.

GROOM WANTED

Alliance invited from a tall, dark, handsome, Punjabi, Non-manglik boy, should be well settled income in at least six figures, for a slim, beautiful. mealy-mouthed, considerate and homely girl, her father retired from Indian army, mother a home maker, no dowry, early marriage, interested match makers may contact at numbers given below. 999xxxxxxx, 988xxxxxx or e-mail: xyz@gmail.com

MISSING

My grandmother, a middle-aged woman, has criss-cross of wrinkles on face, short in stature, dark complexion, walks with a stick, stammers while talking, wearing blue slippers and green saree, has a scar on forehead, has been missing since 15.3.2018, from Model Town, Rewari (Hr.) Please contact your nearest police station if found or contact at: 923xxxxxxx, 945xxxxxxx or 987xxxxxxx Founder will be rewarded with Rs. 5 lacs

LOST AND FOUND

Lost my American Tourister Bag while travelling to Jaipur, black coloured bag, contains Driving licence, PAN card, Rs. 3000 cash, head phones and many other important things, if found please contact Mr. Ravi (987xxxxxxx) or submit it to your nearest police station.

FOUNDER WILL BE REWARDED WITH RS. 5000

OPENING

Dominos opens its 357th outlet in Rewari (Hr.), fully air conditioned, well-trained staff, space for kitty and birthday parties, all kinds of pizzas available, veg. and non-veg. pizzas, garlic bread sticks, choco lava cake, Italian pizzas, soft drinks and many other beverages, free home delivery, for more details rush to SCO-14, Brass Market, Rewari (Hr.) or call at 999xxxxxxx and 897xxxxxxx Visit now to avail attractive offers of your city.

SITUATION VACANT

Delhi Public School, Panipat requires PGTs, TGTs, PRTs for it upcoming session 2018-19, candidates should have good command on the subject, excellent communication skills, pleasing personality, sanguine approach to teach students, essential qualification required for the post, walk-in-interview on 17th April at 317-R, Model Town, Panipat (Haryana) -123456
Contact : 999xxxxxxx, 932xxxxxxx, 983xxxxxxx

TO LET

A four **BHK** flat, area 1960 sq. ft. second floor, marble flooring, attached washrooms, 24x7 water and electricity, round the clock security, Badminton Court, Swimming Pool, Party Hall, Ample parking space, located at Sector-26, Opposite S.S. Petrol Pump, near main market, interested families may contact : 999xxxxxx or 899xxxxxx, e-mail :xyz@gmail.com.

SITUATION WANTED

Looking for a job in one of the private schools, did Post Graduation from IGU (Indira Gandhi University) have 5 years experience, excellent communication skills, pleasing personality, salary negotiable, available for interview on any working day, interested schools may contact at : 999xxxxxxx (Ravi Sharma) **Ready for demonstration on any of the days.**

PRACTICE QUESTIONS

1 You propose to sell your flat as you are going abroad. Draft an advertisement for it to be published in Daily Times under classified columns.

2. You own an independent house in west Delhi and you want to sell it. Draft a suitable advertisement to be published in a local daily, giving details about the exact location, number of rooms, the facilities and the expected price.

3.. You want to sell your blue coloured Maruti 800 car. Draft an advertisement for the classified columns of the Times of India giving particulars of models, mileage and the expected price. You may add other details too.

4. You want to buy a new car and hence want to sell your 4 year old motorcycle first Draft a 'For sale' advertisement to be put up at the notice board of the community centre giving necessary details.

5. Your family is moving out of Delhi since your father has been transferred. You want to sell a number of household items at a reasonable rate. Draft an advertisement for this purpose to be put up outside the RWA's office specifying the items and giving necessary details.

6. You want to sell off some of the electronic items that are in use at your home. Draft an advertisement to be published in your colony's news letter with details about their brand, condition and the expected price.

7.. You are Zaheer Khan of 22, Sports Lane, Delhi. You wish to give on rent the Ist floor of your newly constructed house. Draft an add to be published in the 'To let' classified columns of 'The Indian Times." 50 words

8. You want to purchase an independent house in a posh area. Draft a suitable advertisement under classified columns 'FOR PURCHASE' giving your requirements and capacity to pay.

9. You are Mayank/ Mona of G.K.I. Your pet dog is missing since July 13, 2009. Draft an advertisement for the 'missing' column of a news paper giving details about the breed of the dog, name, sex, mark of identification etc. and also offer an award.

10. Your nephew, a kid of 5 years has got lost, giving full details of the missing kid, draft an advertisement for a local newspaper.

11. A retired army officer is looking for a suitable match for his smart, convent educated daughter. Write out a matrimonial advertisement for publication in newspaper.

12. A highly placed I.T. Professional settled in America seeks alliance with an exceptionally beautiful, educated, cultured, tall girl of Brahmin family. Write a suitable advertisement for the "Matrimonial" column of a national daily.

13. You have found a briefcase in the compartment of Rajdhani Express while travelling from Delhi to Mumbai. Draft an advertisement for the Hindustan Times under the classified column

14. You are the secretary in Herbal India Ltd.. Draft an advertisement for the situation vacant column for the post of Sales Executive in your company.

15. You are a psychiatrist and counsellor and have a ten years experience. Now you are looking for a better job in a public School. Draft an advertisement to be published in the newspaper.

16.You are C.A.. You are capable of handling accounts and managing finances.Write an advertisement seeking a job.

17. Indian Institute of Foreign Languages is starting courses in foreign languages. Write an advertisement giving description about the courses.

18. Sita Travels offers a package tour for Mauritius. Draft an advertisement.

19.. You are Dr. Madhu. You are looking for an independent house in Ghaziabad on a reasonable rent for your residence –cum –clinic. Draft an advertisement.Your phone no..

is 45355667.Q 1You are Varun/Vartini Kaushik; the Drama Instructor of Artrak Drama School. You are also a member of an amateur theatre troupe. Draft a notice to be put up on your school Notice board, telling the students about a new play that your amateur troupe is planning and asking them to apply for participation.

SPEAKING SKILLS

Q1 Prepare any two topics of your choice for speaking skills.

LITERATURE

Q1 Revise the lessons and poems done so far.

HOLIDAYS HOMEWORK CLASS XII CHEMISTRY

Q1. What is the maximum co-ordination no. of an atom in a hcp crystal lattice of an element?

Q2. How do the structures of Quatz and Quartz glass different from each other?

Q3. Calculate the packing efficiency for body centred cubic arrangement.

Q4. Ferric oxide crystallizes in a hcp array of oxide ions with two out of three octahedral voids occupied by ferric ions.Derive the formula of ferric oxide.

Q5. An element crystallizes in a body centred cubic arrangement with a cell edge of 288 pm.the density of the element is 72g/$cm^{3.}$ How many atoms are there in 208 g of the element.

Q6. Niobium crystallizes in body centred cubic structure. If its density is 8.55g/cm^3.Calculate atomic radius of niobium given its atomic mass 93 u.

Q7. Chromium crystallizes in body centred cubic lattice. The length of the unit celledge is found to be 287 pm.

Calculate the atomic radius.What would be its density in g/cm^3. (atomic mass of chromium is 51.996u).

Q8. Match the type of arrangement in column 1 with characteristic feature in column 2.

COLUMN 1 COLUMN 2

Cubic close packing	Occupy 74% of space
Hexagonal close packing	Occupy 68% of space
Body centred cubic	Have one atom per unit cell
Simplec cubic	Have more no. of atoms per unit cell than simple cubic arrangement

Also do NCERT questions and answers in your chemistry notebook till the topic of calculation of density of crystal.

DEEP PUBLIC SCHOOL

HOLIDAY HOMEWORK

SUBJECT-PHYSICS

CLASS-XII

UNIT -1 : ELECTROSTATICS

1. COULOMB'S LAW IN VECTOR FORM

2. ELECTRIC FIELD DUE TO A POINT CHARGE

3. ELECTRIC FIELD DUE TO A DIPOLE.

4. TORQUE ON A DIPOLE IN UNIFORM ELECTRIC FIELD

5. ELECTRIC FIELD DUE TO INFINITELY LONG STRAIGHT WIRE

6. ELECTRIC FIELD DUE TO UNIFORMLY CHARGED INFINITE PLANE SHEET

7. ELECTRIC FIELD DUE TO UNIFORMLY CHARGED THIN SPHERICAL SHELL.

8. GAUSS'S THEOREM PROOF.

9. ELECTRIC POTENTIAL DUE TO A POINT CHARGE

10. ELECTRIC POTENTIAL DUE TO A DIPOLE.

11. ELECTRIC POTENTIAL ENERGY OF A SYSTEM OF TWO POINT CHARGES.

12. ELECTRIC POTENTIAL ENERGY OF ELECTRIC DIPOLE IN AN ELECTROSTATIC DIPOLE.

13. CAPACITANCE OF A PARALLEL PLATE CAPACITOR.

14. CAPACITOR OF A PARALLEL PLATE CAPACITOR WITH DIELECTRIC SLAB BETWEEN THE PLATES.

15. ENERGY STORED IN A CAPACITOR.

NUMERICALS:

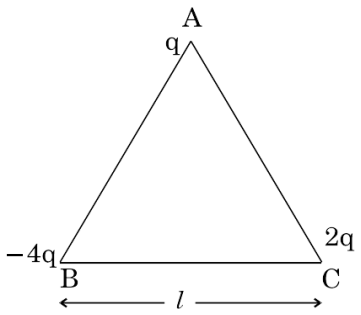
Four point charges Q, q, Q and q are placed at the corners of a square of side 'a' as shown in the figure.

Resultant electric force on a charge Q, and

potential energy of this system. (3)

OR

A *Three point charges q, – 4q and 2q are placed at the vertices of an equilateral triangle ABC of side 'l' as shown in the figure. Obtain the expression for the magnitude of the resultant electric force acting on the charge q.*



What is the force between two small charged spheres having charges of 2×10^{-7}C and 3×10^{-7} C placed 30 cm apart in the air?

The electrostatic force on a small sphere of charge 0.4 μC due to another small sphere of charge –0.8 μC in the air is 0.2 N.

(a) What is the distance between the two spheres?

(b) What is the force on the second sphere due to the first?

6. Two point charges q_A = 3 μC and q_B= –3 μC are located 20 cm apart in a vacuum.

(i) What is the electric field at the midpoint O of the line AB joining the two charges?

(ii) If a negative test charge of magnitude 1.5×10^{-9} C is placed at this point, what is the force experienced by the test charge?

7. An electric dipole with dipole moment 4×10^{-9} Cm is aligned at 30° with the direction of a uniform electric field of magnitude 5×10^{4} N/C. Calculate the magnitude of the torque acting on the dipole.

8. careful measurement of the electric field at the surface of a black box indicates that the net outward flux through the surface of the box is 8.0×10^{3} N m^{2} /C.

(a) What is the net charge inside the box?

(b) If the net outward flux through the surface of the box were zero, could you conclude that there were no charges inside the box? Why or Why not?

9. A point charge of 2.0 µC is at the centre of a cubic Gaussian surface 9.0 cm on edge. What is the net electric flux through the surface?

10. A uniformly charged conducting sphere of 2.4 m diameter has a surface charge density of 80.0 µC /m^{2}

(a) Find the charge on the sphere.

(b) What is the total electric flux leaving the surface of the sphere?

11. An infinite line charge produces a field of 9×10^{4} N/C at a distance of 2 cm. Calculate the linear charge density.

12. Two large, thin metal plates are parallel and close to each other. On their inner faces, the plates have surface charge densities of opposite signs and of magnitude 17.0×10^{-22} C /m^{2}

What is E :

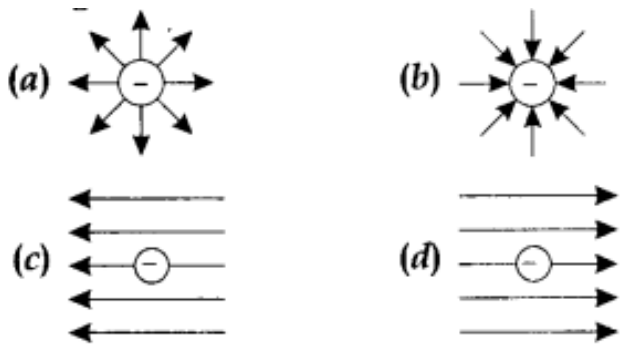
(a) In the outer region of the first plate,

(b) In the outer region of the second plate, and (c) between the plates?

CASE STUDY BASED QUESTIONS

Photocopiers work on the principle that 'opposites attract'. Toner is a powder that is used to create the printed text and images on paper. The powder is negatively charged, and so it is attracted to something positive – the paper. The drum, which is located in the heart of a photocopier, is positively charged using static electricity. An image of the master copy is transferred onto the drum using a laser. The light parts of the image (the white areas on a piece of paper) lose their charge so become more negative, and the black areas of the image (where the text is) remain positively charged.

Which of the following figures represent the electric field lines due to a single negative charge?



Consider a region inside which, there are various types of charges but the total charge is zero. At points outside the region
(a) the electric field is necessarily zero.
(b) the electric field is due to the dipole moment of the charge distribution only.
(c) the dominant electric field is inversely proportional to r^3, for large r (distance from origin).
(d) the work done to move a charged particle along a closed path, away from the region will not be zero.

If a body is negatively charged, then it has

(a) Excess of electrons

(b) Excess of protons

(c) Deficiency of electron

(d) Deficiency of neutrons

A charged particle is free to move in an electric field. It will travel

(a) Always along a line of force

(b) Along a line of force, if its initial velocity is zero

(c) Along a line of force, if it has some initial velocity in the direction of an acute angle with the line of force

(d) None of the above

Which of the following statements is incorrect?

I. The charge *q* on a body is always given by *q* = ne, where *n* is any integer, positive or negative.

II. By convention, the charge on an electron is taken to be negative.

III. The fact that electric charge is always an integral multiple of e is termed as quantisation of charge.

IV. The quatisation of charge was experimentally demonstrated by Newton in 1912.

(a) Only I

(b) Only II

(c) Only IV

(d) Only III

2. Lightning is an electric current. Within a thundercloud way up in the sky, many small bits of ice (frozen raindrops) bump into each other as they move around in the air. All of those collisions create an electric charge. After a while, the whole cloud fills up with electrical charges. The positive charges or protons form at the top of the cloud and the negative charges or electrons form at the bottom of the cloud. Since opposites attract, that causes a positive charge to build up on the ground beneath the cloud. The grounds electrical charge concentrates around anything that sticks up, such as mountains, people, or single trees. The charge coming up from these points eventually connects with a charge reaching down from the clouds and lightning strikes.

(i) Charge is the property associated with matter due to which it produces and experiences

(a) electric effects only

(b) magnetic effects only

(c) both electric and magnetic effects

(d) None of these

(ii) When some charge is transferred to ...*A*... it readily gets distributed over the entire surface of ... *A*... If some charge is put on ... *B*..., it stays at the same place. Here, A and B refer to

(a) Insulator , conductor

(b) Conductor , insulator

(c) Insulator, insulator

(d) Conductor, conductor

(iii) On charging by conduction, mass of a body may

(a) Increases

(b) Decreases

(c) Increase or decrease

(d) None of these

(iv) If one penetrates a uniformly charged spherical cloud, electric field strength

(a) decreases directly as the distance from the centre

(b) increases directly as the distance from the centre

(c) remains constant

(d) None of these

(v) The law, governing the force between electric charges in the cloud is known as

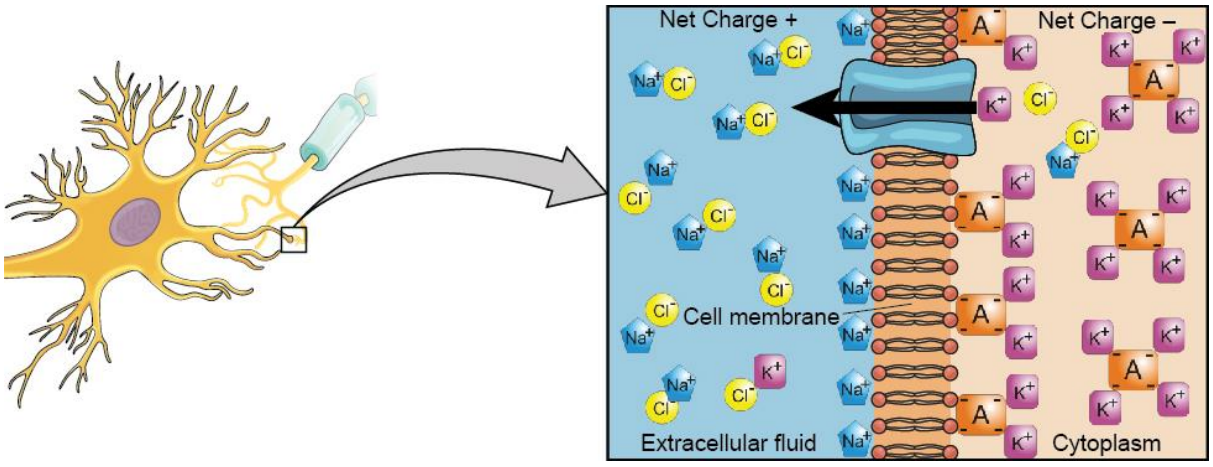
(a) Ampere's law

(b) Ohm's law

(c) Faraday's law

(d) Coulomb's law

Neurons maintain different concentrations of certain ions across their cell membranes. Imagine the case of a boat with a small leak below the water line. In order to keep the boat afloat, the small amount of water entering through the leak has to be pumped out, which maintains a lower water level relative to the open sea. Neurons do the same thing, but they pump out positively charged sodium ions. In addition, they pump in positively charged potassium ions. Thus there is a high concentration of sodium ions present outside the neuron, and a high concentration of potassium ions inside. Thus sodium channels allow sodium ions through the membrane while potassium channels allow potassium ions through.



(i) When neuron pump out and in the positive sodium and positive potassium ions respectively which property of charge is to be followed

(a) Quantisation of charge

(b) Additivity of charges

(c) Conservation of charges

(d) Associativity of charge

(ii) Coulomb's law is true for

(a) Atomic distances (= 10^{-11} m)

(b) Nuclear distances (= 10^{-15} m)

(c) Charged as well as uncharged particles

(d) All the distances

(iii) Electric lines of force about a positive sodium or potassium ions are

(a) Circular anticlockwise

(b) Circular clockwise

(c) Radial, inwards

(d) Radial , outwards

(iv Electric flux produced by positive Potassium ions indicates that electric lines are directed

(a) Outwards

(b) Inwards

(c) Either (a) or (b)

(d) None of these

(v) Electric flux over a surface of neuron in an electric field may be

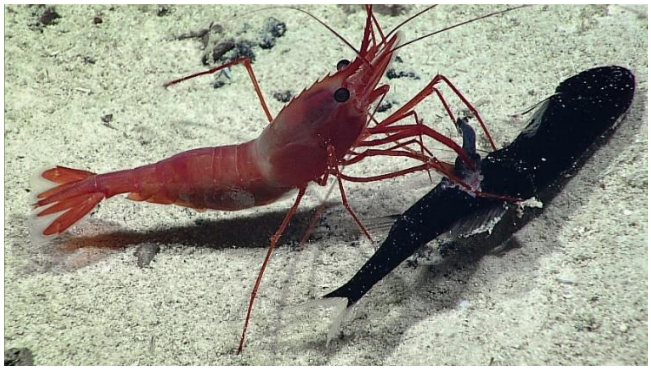
(a) Positive

(b) Negative

(c) Zero

(d) All of the above

4. Animals emit low frequency electric fields due to a process known as osmoregulation. This process allows the concentration of ions (charged atoms or molecules) to flow between the inside of our bodies and the outside. In order for our cells to stay intact, the flow of ions needs to be balanced. But balanced doesn't necessarily mean equal. The concentration of ions within a shrimp's body is much lower than that of the sea water it swims in. Their voltage, or potential difference generated between the two concentrations across "leaky" surfaces, can then be measured.



(i) The Gaussian surface for ions in the body of animals

(a) Can pass through a continuous charge distribution.

(b) Cannot pass through a continuous charge distribution.

(c) Can pass through any system of discrete charges.

(d) Can pass through a continuous charge distribution as well as any system of discrete charges.

(ii) Gauss's law is valid for

(a) Any closed surface

(b) Only regular close surfaces

(c) Any open surface

(d) Only irregular open surfaces

(iii) The electric field inside a shrimp's body of uniform charge density is

(a) Zero

(b) Constant different from zero

(c) Proportional to the distance from the curve

(d) None of the above

(iv) If a small piece of linear isotropic dielectric is swallowed by a shrimp and inside the body it is influenced by an electric field of strength E, then the polarization P is

(a) Independent of E

(b) Inversely proportional to E

(c) Directly proportional to $\sqrt{E}$

(d) Directly proportional to E

(v) Field due to multiple charges/ions inside Shrimp's body at a point is found by using

I. superposition principle.

II. Coulomb's law.

III. Law of conservation of charges.

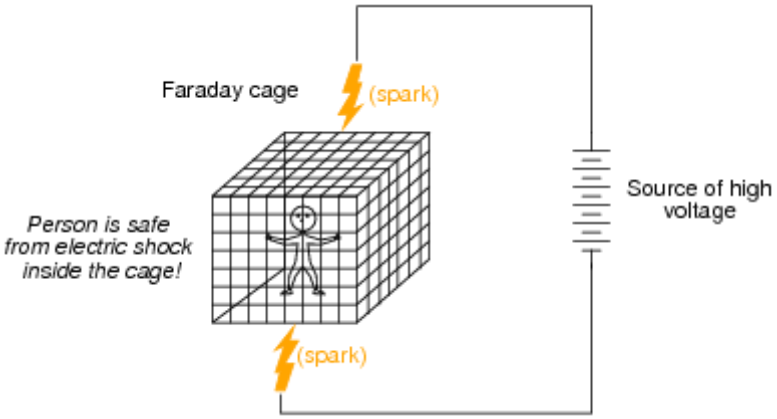
(a) I and II

(b) II and III

(c) I and III

(d) I, II and III

Faraday cages shield their contents from static electric fields. An electric field is a force field surrounding a charged particle, such as an electron or proton. These cages often look distinctly, well, cage like. Some are as simple as chain-link fences or ice pails. Others use a fine metallic mesh. Regardless of their exact appearance, all Faraday cages take electrostatic charges, or even certain types of electromagnetic radiation, and distribute them around the exterior of the cage.



(i). Which of the following material can be used to make a Faraday cage?

a) Plastic

b) Glass

c) Copper

d) Wood

(ii). Example of a real-world Faraday cage is

a) Car

b) Plastic box

c) Lightning rod

d) Metal rod

(iii). What is the electrical force inside a Faraday cage when it is struck by lightning?

a) The same as the lightning

b) Half that of the lightning

c) Zero

d) A quarter of the lightning

(iv). An isolated point charge +q is placed inside the Faraday cage. Its surface must have charge equal to-

a) Zero

b) +q

c) –q

d) +2q

(v). A point charge of 2C is placed at centre of Faraday cage in the shape of cube with surface of 9 cm edge. The number of electric field lines passing through the cube normally will be-

a) 1.9105 Nm2/C entering the surface

b) 1.9105 Nm2/C leaving the surface

c) 2.0105 Nm2/C leaving the surface

d) 2.0105 Nm2/C entering the surface

Summer

XII Class Holiday Homework

P.E Practical file work

(1) One game (volleyball)

All specifications (History, Skills, Court diagram terminologies, Measurment of court, and equipment Awardees.

(2) Awards

(a) Arjuna Award
(b) Rajiv Gandhi Khel ratan Award
(c) Dronacharya Award
(d) Dhayanchand Award
(Pics and specifications)

(3) yoga (refer ch-3)

10 Asanas [Pic and Specifications
4 Pranyam [Procedure, Merits, Demerits/Contradiction)

(4) 5 types of Disorders (refer ch-4)
(Characteristics, causes, cure)

(5) Postural Deformities (refer ch-5)
(specifications, causes, remedies, Pics)

(6) Test and Measurement in sports (ch-6)
Alpher Test, (Motor fitness test)
Harvard step test (cardio vascular test)
Rockport test
Rikli and Jones - Sr. Citizen fitness Test

(7) Classification of Sport Injuries (ch-7)
(Soft tissue injuries
Bone injuries
Joint injuries
(Pics and specifications)

(8) Types of Movement (ch-8)
All types of Movements
(Pics and specifications)

(9) BMI test of 10 Student
(Result)

(10) Athletics
400 track (on graph Papers)
Shotput
Long Jump
(Pics/diagram and specifications)

Deep Public School
Class XII
Computer Science
Summer Holiday Home Work
Session 2021-22

I. Project Work:

Students can explore the statistics on the corona virus pandemic for different counties across the world or gather data about Economy/ Health Sector/ Labour and Employment from **https://data.gov.in** (a platform for supporting initiative of Government of India) . They can then store data in .csv or excel file and use Python libraries/modules for analysis.

II. Do the following Programs.

Note:-Write the code of every program and it's output in a separate register.

1. Write a python program to calculate the length of a string.
2. Write a python program to find the factorial of a natural number.
3. Write a python program to find the sum of all elements of a list.
4. Write a python program to compute the nth Fibonacci number.
5. Write a program to accept values from a user in a tuple. Add a tuple to it and display its elements one by one. Also display its maximum and minimum value.
6. Write a Python program to input 'n' classes and names of their class teachers to store them in a dictionary and display the same. Also accept a particular class from the user and display the name of the class teacher of that class.
7. Write a program to store student names and their percentage in a dictionary and delete a particular student name from the dictionary. Also display the dictionary after deletion.
8. Write a Python program to input names of 'n' customers and their details like items bought, cost and phone number, etc., store them in a dictionary and display all the details.
9. Write a Python script to print a dictionary where the keys are numbers between 1 and 15 (both included) and the values are square of keys. Sample Dictionary {1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100, 11: 121, 12: 144, 13: 169, 14: 196, 15: 225}
10. Write a Python program to remove duplicate characters of a given string.

III. Explore and Make a neat presentation(PPT) on following topics:

1. Types of Networks. (PAN, LAN, MAN, WAN).
2. Networking Topologies (Bus, Star, Tree)

CBSE TEST PAPER-01

CLASS - XII MATHEMATICS

CH-01 Relation and function

1. A Relation R:A→A is said to be Reflexive if --------- for every a ∈ A where A is non empty set. [1]

2. A Relation R:A→A is said to be Symmetric if ---------- ∀ a,b,∈ A [1]

3. A Relation R:A→A is said to be Transitive if ---------- ∀ a,b,c ∈ A [1]

4. Define universal relation? Give example. [2]

5. What is trivial relation? [2]

6. Let T be the set of all triangles in a plane with R a relation in T given by [2]
R = {(T_1, T_2): T_1 is congruent to T_2}.
Show that R is an equivalence relation.

7. Show that the relation R in the set Z of integers given by [4]
R = {(a, b) : 2 divides a-b}. is equivalence relation.

8. Let L be the set of all lines in plane and R be the relation in L define if [4]
R = {(l_1, L_2): L_1 is ⊥ to L_2} .
Show that R is symmetric but neither reflexive nor transitive.

9. Check whether the relation R defined in the set {1, 2, 3, 4, 5, 6} as [4]
R = {(a, b): b = a+1} is reflexive, symmetric or transitive.

10. Let A = R – {3} and B = R – {1}. Consider the function $f : A \to B$ defined by
$f(x) = \left(\frac{x-2}{x-3}\right)$. Is f one-one and onto? Justify your answer. [6]

11. Let L be the set of all lines in xy plane and R be the relation in L define as [6]

R = {(L_1, L2): L_1 || L_2}
Show then R is on equivalence relation.
Find the set of all lines related to the line y=2x+4.

CBSE TEST PAPER-02
CLASS - XII MATHEMATICS

Relations and functions

1. Prove that the function f: R → R, given by f(x) = 2x, is one – one. [1]
2. Let S = {1, 2, 3} Determine whether the function f: S → S defined as below have inverse. [1]

   f = {(1, 2), (2, 1), (3, 1)}
3. Find gof f(x) = |x|, g(x) = |5x + 1| [1]
4. State whether the function is one – one, onto or bijective f: R → R defined by f(x) = 1+ x^2 [2]
5. Let f, g and h be function from R to R show that (f + g) oh = foh + goh [2]
6. If a * b = a + $3b^2$, then find 2 * 4 [2]
7. Show that the relation in the set R of real no. defined R = {(a, b) : a≤ b^3 }, is neither

   reflexive nor symmetric nor transitive. [4]
8. Let f: N → N be defined by f(x) = $\begin{Bmatrix} \frac{n+1}{2}, if\ n\ is\ odd\ for\ \text{all n} \in N \\ \frac{n}{2} if\ n\ is\ even \end{Bmatrix}$

   Examine whether the function f is onto, one – one or bijective [4]
9. Let A = N×N and * be the binary operation on A define by (a, b) * (c, d) = (a + c, b + d) [4]

   Show that * is commutative and associative.
10. Show that if f: $R-\left\{\frac{7}{5}\right\} \to R-\left\{\frac{3}{5}\right\}$ is defining by f(x) = $\frac{3x+4}{5x-7}$ and g: $R-\left\{\frac{3}{5}\right\} \to R-\left\{\frac{7}{5}\right\}$ is define by g(x) = $\frac{7x+4}{5x-3}$, then fog = I_A and gof = I_B when $A = R-\left\{\frac{3}{5}\right\}$, $B = R-\left\{\frac{7}{5}\right\}$; I_A (x) = x, for all x∈ A, I_B(x) = x, for all x∈ B are called identify function on set A and B respectively. [6]
11. Consider $f: R_+ \to [-5, \infty]$ given by $f(x) = 9x^2 + 6x - 5$. Show that f is invertible with $f^{-1}(y) = \left(\frac{\left(\sqrt{y+6}\right)-1}{3}\right)$. [6]

CBSE TEST PAPER-01

CLASS - XII MATHEMATICS

CH-02 Inverse Trigonometric Functions

1. Find the value of $\sin\left(\sin^{-1} a + \cos^{-1} a\right)$ [1]

2. Find the value of $\sin^{-1}\left(\sin\frac{3\pi}{5}\right)$ [1]

3. Find the value of $\tan^{-1}\sqrt{3} - \cot^{-1}(-\sqrt{3})$ [1]

4. Find the principal value of $\sin^{-1}\left(\frac{1}{\sqrt{2}}\right)$ [1]

5. $\tan^{-1}\left(\frac{x}{y}\right) - \tan^{-1}\left(\frac{x-y}{x+y}\right)$ evaluate [2]

6. Find the value of $\tan^{-1}(1) + \cos^{-1}\left(-\frac{1}{2}\right) + \sin^{-1}\left(-\frac{1}{2}\right)$ [4]

7. Show that $\sin^{-1}\frac{3}{5} - \sin^{-1}\frac{8}{17} = \cos^{-1}\frac{84}{85}$ [4]

8. Prove that $\tan^{-1} x + \tan^{-1}\frac{2x}{1-x^2} = \tan^{-1}\left(\frac{3x-x^3}{1-3x^2}\right)$ [4]

9. Prove that $\tan^{-1}\frac{1}{5} + \tan^{-1}\frac{1}{7} + \tan^{-1}\frac{1}{3} + \tan^{-1}\frac{1}{8} = \frac{\pi}{4}$ [6]

10. Simplify $\sin^{-1}\left(\frac{\sin x + \cos x}{\sqrt{2}}\right) or \cos^{-1}\left(\frac{3}{5}\cos x + \frac{4}{5}\sin x\right)$ [6]

CBSE TEST PAPER-02

CLASS - XII MATHEMATICS

CH-02 Inverse Trigonometric Functions

1. Find the principal value of $\cot^{-1}(-\frac{1}{\sqrt{3}})$. [1]

2. Find the value of $\cos^{-1}\left[\cos(\frac{13\pi}{6})\right]$. [1]

3. Find the value of $\sin\left[\frac{\pi}{3}-\sin^{-1}\left(\frac{-1}{2}\right)\right]$ [1]

4. Prove that $\cot^{-1}\left(\frac{ab+1}{a-b}\right)+\cot^{-1}\left(\frac{bc+1}{b-c}\right)+\cot^{-1}\left(\frac{ca+1}{c-a}\right)=0$. [1]

5. $\sin(\tan^{-1}x)=?$ [2]

6. Explore $\tan^{-1}\left(\frac{\cos x}{1-\sin x}\right)$ in the simplest form. [4]

7. Show that $\sin^{-1}\frac{12}{13}+\cos^{-1}\frac{4}{5}+\tan^{-1}\frac{63}{16}=\pi$. [4]

8. Prove that $\cot^{-1}\left(\frac{\sqrt{1+\sin x}+\sqrt{1-\sin x}}{\sqrt{1+\sin x}-\sqrt{1-\sin x}}\right)=\frac{x}{2}$ [4]

9. Write in simplest form that $\tan^{-1}\left(\frac{\sqrt{1+x^2}-1}{x}\right)$ [6]

10. Prove [6]

$$2\tan^{-1}\frac{1}{5}+\sec^{-1}\frac{5\sqrt{2}}{7}+2\tan^{-1}\frac{1}{8}=\frac{\pi}{4}$$

Or

Prove that $\cos^{-1}x=2\sin^{-1}\sqrt{\frac{1-x}{2}}=2\cos^{-1}\sqrt{\frac{1+x}{2}}$