SATHYABAMA UNIVERSITY

FACULTY OF SCIENCE AND HUMANITIES

DEPARTMENT OF ENGLISH

SYLLABUS PLAN & STUDY MATERIALS B.E/B.Tech (2015–16)

ENGLISH FOR SCIENCE & TECHNOLOGY- SHS1101

UNIT-3

CONTENTS

UNIT-3

LISTENING AND NOTE TAKING

The main reason we take notes is to aid us later. Use them appropriately. Review your notes frequently; this can be extremely useful and by doing so, retention is greatly increased. The more you use your notes, the more familiar the material will become and the more information you will retain for future use.

General tips:

- Develop a personal form of abbreviations to allow you to take notes more quickly and allow you to include more information effectively.
- Skip lines to allow you to fill in more information later.
- Always date the materials
- Leave marginal room for notes when reviewing or from reading text.
- Re-write notes soon after the lecture for better retention.
- Paraphrase! – It is easier to study from your own ideas.
- Reading assignments will help you understand lectures better and give you a better indication of what notes are important to take.
- Use labels, categories, and separate chapters/concepts to organize your notes.
- Keep notes clear.
- Use separate notebooks for each class.
- Underline or star key points.
- Diagram relationships between information.

1.Listen to the Audio Script and take notes. Give a suitable title.

https://www.youtube.com/watch?v=c7g88IiIu5A

2.Listen to the conversation and take notes on the topic discussed .

https://www.youtube.com/watch?v=MZDarZKXv2M

3. **Listen to the audio and take notes on the topic discussed . Give a suitable title**

https://www.youtube.com/watch?v=mmXAqMQe0AI

ROLE-PLAY

Role Play is one of the best ways to simulate conversation and can be an excellent teaching tool if done properly. It is often helpful to teach beforehand phrases and vocabulary to be used in the context of the role play. Sometimes both roles (A and B) can be given; otherwise the role play can be open-ended with only Part A being used as a stimulus. In most role-playing exercises, each student takes the role of a person affected by an issue and studies the impacts of the issues on human life and/or the effects of human activities on the world around us from the perspective of that person. Role-playing is simultaneously interesting and useful to students because it emphasizes the "real-world" side of science. It challenges them to deal with complex problems with no single "right" answer and to use a variety of skills beyond those employed in a typical research project. In particular, role-playing presents the student a valuable opportunity to learn not just the course content, but other perspectives on it.

In role playing assignments, students take on the role of a character in a particular situation.
In scenario assignments, students react to a situation poses by the instructor.
In simulation assignments, students are immersed in "real world" environments where they manipulate variables, examine relationships, and make decisions.

Role play objectives

- A role play Game is an improvised story composed of chains of actions and reactions between players.
- You decide on your interaction with other players on the spot.
- In role plays you are not an actor on stage playing a prewritten story: your role play is live, unpredictable and living in the moment you create it.
- All players involved are equally responsible and allowed to drive the development,.
- Therefore all participants need to actively be involved.
- Be very clear about what you want people to get out of the role playing experience.
- Clear thinking and role play preparation result in clear outcomes.
- Don't put people through an assessment role play until you know they have reached a certain standard.
- Giving everyone the same level of challenge is more recommended for assessment.

Types of Role-Playing Exercises

a) Individual Role-Playing Exercises:

The challenge for these exercises is for the student to "get into character", to accept and work in the role that they've been assigned, especially if their character is very different from them. It is possible with

Stories: are much more fun than a typical research paper, especially when they deal with such topics.

Problem statement: includes a summary of the problem, and a plan of action for dealing with it.

Political position papers: combines social, economic, and scientific research.

Speeches: can later be followed with a debate.

Report on findings: usually scientific, but often focused on a political or economic objective

b) Interactive Role-Playing Exercises:

These are group projects that range from simple brainstorming exercises or scripted demonstrations to in-character debates or problem-solving exercises dealing with environmental or science topics. It is easier for students to get into character and stay there with help from their classmates, but keeping the debate friendly and productive can be challenging.

Practice-1

- Thank your partner for a gift he/she gave you on your birthday.
- It's getting hot and stuffy. Ask your partner to open the window.
- Invite your partner to go for outing this weekend.

Practice-2

A: Invite your partner to go dancing on Friday.
B: You do not like to dance. Politely refuse the invitation.

A: You bought some milk at B's grocery store. The milk is sour. Return it.
B: Offer to exchange the milk or compensate A in some way.

A: Your friend (B) borrowed your power saw and still hasn't returned it. Talk to him/her.
B: Make up an excuse and promise to return the saw at a later date.

Practice-3

Negotiate with a your partner (a salesperson) on an item such as a refrigerator, computer or large piece of furniture. Discuss things such as warranty, discount, return policy, etc.

Listen to the audio : Role play of a sales person

https://www.youtube.com/watch?v=VBZIRCypYIg

READING AND INTERPRETING VISUAL MATERIAL

Pictures/ Newspapers

Visual literacy is the ability to see, to understand, and ultimately to think, create, and communicate graphically. The viewer has to look at an image carefully, critically, and with an eye for the intentions of the image's creator. Those skills can be applied equally to any type of image: photographs, paintings and drawings, graphic art, films, maps and various kinds of charts and graphs. The first level in reading is simply decoding words and sentences, but reading *comprehension* is equally important: Understanding requires broad vocabulary, experience in a particular content area, and critical thought. Whether they are images in a text or a picture book, news photos in the morning's newspaper, or a digitally altered photo of a fashion model on the cover of a magazine—images are a major part of our world.

Uses viewing skills and strategies to interpret visual media

We understand the main idea or message in visual media (e.g., graphics, animation, comic books, television) .We must try to understand how symbols, images, sound, and other conventions are used in visual media (e.g., time lapse in films; set elements that identify a particular time period or culture; short cuts used to construct meaning, such as the scream of brakes and a thud to imply a car crash; sound and image used together; the use of close-ups to convey drama or intimacy; the use of long camera shots to establish setting; sequences or groups of images that emphasize specific meaning, differences between visual and print media. And also should understand how images and sound convey messages in visual media (e.g.special effects, camera angles, symbols, color, line, texture, shape, headlines, photographs, reaction shots, sequencing of images, sound effects, music, dialogue, narrative, lighting)

1.Observe the following diagrams and interpret them in 100 words. Give a suitable title.

2**. Observe the video and give interpretation of it.**

https://www.youtube.com/watch?v=7IP0Ch1Va44

3. Observe the following picture and give interpretation of it.

4.Observe the following advertisement and give interpretation of it

4. Read the news published in "The Hindu" and give an interpretation of it.

More pieces of metal debris found washed up on Reunion were taken into police custody.

Malaysia said on Sunday that the plane debris that washed up on the Indian Ocean island of Reunion has been identified as being from a Boeing 777, the same model as Malaysian Airlines flight MH370 which vanished early last year.

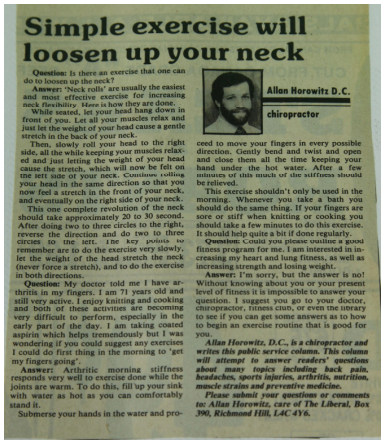
Experts hope the 2-2.5 metre wing surface, known as a flaperon, and a fragment of luggage found on Reunion could yield clues on the fate of Flight MH370.

"We know the flaperon has been officially identified as being part of a Boeing 777 aircraft," Transport Minister Liow Tiong Lai said in a statement.

"This has been verified by French authorities together with aircraft manufacturer Boeing, U.S. National Transportation Safety Board (NTSB) and the Malaysian team comprising the Department of Civil Aviation, Malaysia Airlines, and Malaysian ICAO Annex 13 Safety Investigation Team for MH370." The flaperon was flown to Paris on Saturday and was taken to Toulouse to undergo more detailed analysis.

Representatives from Malaysia, the United States, China, France and Boeing are due to participate in a "verification" of the flaperon on Wednesday. More pieces of metal debris found washed up on Reunion were taken into police custody on Sunday. Discovery of the debris may finally confirm the plane crashed into the sea after veering off course from Kuala Lumpur to Beijing, helping to end 16 months of lingering uncertainty for relatives. Investigators believe someone deliberately switched off MH370's transponder before diverting it thousands of miles off course. Most of the passengers were Chinese.

5. Read the following newspaper article and summarize it.



Simple exercise will loosen up your neck

Question: Is there an exercise that one can do to loosen up the neck?

Answer: 'Neck rolls' are usually the easiest and most effective exercise for increasing neck flexibility. Here is how they are done.

While seated, let your head hang down in front of you. Let all your muscles relax and just let the weight of your head cause a gentle stretch in the back of your neck.

Then, slowly roll your head to the right side, all the while keeping your muscles relaxed and just letting the weight of your head cause the stretch, which will now be felt on the left side of your neck. Continue rolling your head in the same direction so that you now feel a stretch in the front of your neck, and eventually on the right side of your neck.

This one complete revolution of the neck should take approximately 20 to 30 second. After doing two to three circles to the right, reverse the direction and do two to three circles to the left. The key points to remember are to do the exercise very slowly, let the weight of the head stretch the neck (never force a stretch), and to do the exercise in both directions.

Question: My doctor told me I have arthritis in my fingers. I am 71 years old and still very active. I enjoy knitting and cooking and both of these activities are becoming very difficult to perform, especially in the early part of the day. I am taking coated aspirin which helps tremendously but I was wondering if you could suggest any exercises I could do first thing in the morning to 'get my fingers going'.

Answer: Arthritic morning stiffness responds very well to exercise done while the joints are warm. To do this, fill up your sink with water as hot as you can comfortably stand it.

Submerse your hands in the water and proceed to move your fingers in every possible direction. Gently bend and twist and open and close them all the time keeping your hand under the hot water. After a few minutes of this much of the stiffness should be relieved.

This exercise shouldn't only be used in the morning. Whenever you take a bath you should do the same thing. If your fingers are sore or stiff when knitting or cooking you should take a few minutes to do this exercise. It should help quite a bit if done regularly.

Question: Could you please outline a good fitness program for me. I am interested in increasing my heart and lung fitness, as well as increasing strength and losing weight.

Answer: I'm sorry, but the answer is no! Without knowing about you or your present level of fitness it is impossible to answer your question. I suggest you go to your doctor, chiropractor, fitness club, or even the library to see if you can get some answers as to how to begin an exercise routine that is good for you.

Allan Horowitz D.C.
chiropractor

Allan Horowitz, D.C., is a chiropractor and writes this public service column. This column will attempt to answer readers' questions about many topics including back pain, headaches, sports injuries, arthritis, nutrition, muscle strains and preventive medicine.

Please submit your questions or comments to: Allan Horowitz, care of The Liberal, Box 390, Richmond Hill, L4C 4Y6.

ESSAY WRITING

Writing a great essay is not about simply surveying and re-telling existing ideas. Instead, a good essay takes into account various opinions and points of view and puts forward an argument that reflects the writer's informed opinion. Before you begin planning any essay, then, it's crucial to have a clear idea of what you think about your topic; you need to have apposition , argument*, or* clear stance on a topic, that you defend with evidence and argument.

Writing an essay involves a lot of careful thinking about beginnings, middles and ends. A good way to make a plan is to jot down all your interesting thoughts on separate pieces of paper as you research and then put them into a logical order. When it comes to writing, the introduction is always a good place to start. This should show that you've got the right question and that you understand what it's talking about. It should also give some pointers about how you are going to tackle it. Don't feel you have to put in everything you have learned from your reading. Try to be original, except when it comes to spelling and grammar. While it is always good to use quotes, to show that you have read widely, you should make sure that a lot of the essay is written in your own words. In the conclusion, avoid surprises and conclude with something completely different. Don't forget that you'll need to read it through several times.

How To Write an Essay - Ten sequential steps

1. Research: Begin the essay writing process by researching your topic, making yourself an expert. Take notes and immerse yourself in the words of great thinkers.

2. Analysis: Start analyzing the arguments of the essays you're reading. Clearly define the claims, write out the reasons, the evidence.

3. Brainstorming: Your essay will require insight of your own, genuine essay-writing brilliance. Ask yourself a dozen questions and answer them.

4. Thesis: Pick your best idea and pin it down in a clear assertion that you can write your entire essay around. It's practically impossible to write a good essay without a clear thesis.

5. Outline: Use one-line sentences to describe paragraphs, and bullet points to describe what each paragraph will contain.

6. Introduction: Now sit down and write the essay. The introduction should grab the reader's attention, set up the issue, and lead in to your thesis. The title and first paragraph are probably the most important elements in your essay.

7. Paragraphs: Each individual paragraph should be focused on a single idea that supports your thesis. Begin paragraphs with topic sentences.

8. Conclusion: Gracefully exit your essay by making a quick wrap-up sentence, and then end on some memorable thought, perhaps a quotation.

9. Language: You're not done writing your essay until you've polished your language by correcting the grammar, making sentences flow, incorporating rhythm, emphasis, adjusting the formality, giving it a level-headed tone, and making other intuitive edits.

10.Proofread Writing an essay can be tedious. Proofread till it sounds good. ..

Group activity: The class is divided into six groups and each group has to choose any one of the topic given below and to write an essay, following the steps.

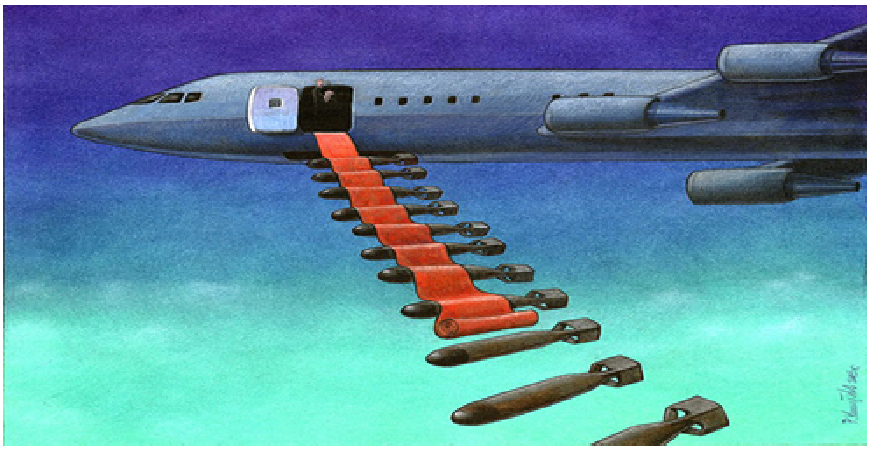
1. The importance of examinations.
2. Talk about the subject which you consider the most important .
3. Life in the city.
4. Money is the root of all evil. Give your opinion
5. What do you think of the use and abuse of private tuition?
6. Today, there are many books to read. What do you think of the choice of books?

Images and Pictures for Teaching English

- Image prompts to express opinion/ argumentative essay
- Look at the following image/s.
- Read the question/ s prompt for the image.
- Write a five paragraph essay by defending your point of view.

Hints: You can raise an issue; cite examples from real life to support your stand. Conclude by reinstating your stand and also by giving your constructive suggestions.

1. Is war a necessary evil?



2. Can technology change the world for the better?

NOTE MAKING

Note-making is a necessary academic activity it ensures the gleaning of all the essentials. It also facilitates the retention of the central ideas. It lessens the burden on memory and forestalls the possibility of losing the vital points of an essay, a chapter, a book or a lecture. It preserves knowledge against the lapses and vagaries of memory. Hence every student should master the art of note making. Note-making is a systematic activity. It can not be made all on a sudden instead, we try to grasp the theme of the passage or lecture. We gather the ideas and construct the theme. We note the keywords and phrases. We recognize the logical development of the ideas. We try to capture each unit or sequence in one phrase or word. We must make sure that we have not missed any vital information. Then we proceed to making notes.

Good Note-making involves three different kinds of skills ; learning to read/listen closely, recording quickly and clearly, reviewing regularly.

Tips

1. Concentrate on the lecture/notes/ diagram
2. Write legibly
3. Translate the ideas in your own words
4. Skip a line after each idea, to add information
5. Use abbreviation and members
6. Omit verbs
7. Be brief; Don't write full sentences
8. Don't be concerned with spelling and grammar
9. Take notes selectively

Forms of Note-Taking

1. Outlining
2. Topic sentence or Main idea

   A Major Points

   a. sub points

   i) Minor points

Guidelines for Note-making

1. Don't take notes immediately as soon as you see the passage.
2. Avoid unnecessary reading. Think of the purpose
3. Note down the main points and highlight them with markers.
4. Take down only the key words
5. Simplify what you read
6. Arrange them in order

Three Methods of Note-making

1. Taking notes from a written text-reading
2. Taking notes from lectures of lectures- listening
3. Taking notes from the diagrams – observation

Steps involved in Note –Taking

3 steps are to be followed

1. First Reading – Skimming
2. Second Reading – Scanning
3. Third Reading – detailed Reading

Collection of Information can be done in three ways

I – Main points indicated by Roman letters

II – Sub points – indicated by capital Alphabets

III – Minor Points indicated by Small Alphabets

Example : M

Exercise : N

Notes are a summary and should therefore be much shorter than the original. Thus, abbreviations and symbols can be used whenever possible. The table below shows some conventional English symbols and abbreviations. You will need specific ones for your own subject.

and	&
and others (people)	et. al.
and other things	etc.
answer	A
approximately	, approx., c.

at @

because

before example :

centimetre cm

century C

chapterch.

compare cf.

correct

decreases, falls

degrees □

department dept.

divided by □

east E

equal to =

equivalent to

especially esp.

for example e.g.

government govt.

greater than >

grows, increases

important N.B.

in one year p.a.

information info.

kilogram kg

less than <

maximum max.

minimum min.

minus -

much greater than >>

much less than<<

multiplied by □

north N

not come from

not equal

not lead to

not proportional to

number No. or #

page p.

pages pp.

percent %

plus +

possibly poss.

probably prob.

proportional to

question Q

results from

results in, leads to

same as above "

similar to

that is to say, in other words i.e.

therefore

south S

unlikely ??

uncertain, not sure ?

very v.

with reference to re.

wrong X

west W

year yr.

Model : Make notes on the following passage

Anesthetics are drugs causing unconsciousness or insensibility to pain. Their use in modern medicine permits painless surgery during the simplest operation of a few minutes' duration, to the most delicate operation lasting many hours. Anesthetics are divided into two broad groups. General anesthetics and local anesthetics. General anesthetics can cause total unconsciousness in the patient by temporarily altering the normal activities of the central nervous system. Local anesthetics temporarily deaden the sensation on a particular, or local area of the body. General anesthetics are usually administered to the patient in one of the two ways' inhalation or intravenous injections. In the inhalation method the patient breathes a gas or vapour into his lungs in the intravenous injection, the drug is put directly into a vein. Two drug often used as general anesthetics in operations of short duration are the liquid vinethene, which causes rapid anesthesia, and trilene, which produces a light, painkilling effect. Trilene is usually combined with nitrous oxide and oxygen. Not all surgery requires that the patient be unconscious. For minor operations, only restricted or local area of the body need be made insensible to pain; thus a local anesthetic is administered. The local anesthesia prevents sensations of pain from traveling through the nerves in the drugged area. Local anesthesia can be produced through three sites of injection. Infiltration is the injection of the drug into the tissues. Block anesthesia is produced by the injection of the drug around the main nerves leading to the operation area. These main nerves are blocked from transmitting sensory impulses. Spinal anesthesia results from the injection of the drug into the space surrounding the spinal cord.

Format I

1. **Anesthetics**
   - 1.1 Drugs causing
     - 1.1.1 Unconsciousness
     - 1.1.2 Insensibility
   - 1.2 Used for _____
2. **Grps**
   - 2.1 General – Cause _____
   - 2.2 _____
3. **Ways of Administering**
   - 3.1 _____Breathes

3.2 Intravenous injection

4. Local Anesthetics

4.1 Used for _____ operation

4.2 Prevents _____

4.3 Produced through 3 injection sites

4.3.1 _____ _____

4.3.2 _____ _____

4.3.3 _____ injection into _____

Format II

1. Central Idea : Anaesthetis : Pain killing drugs its use-painless surgery

2. Main Points : a. General Anaesthetics

b. Local Anaesthetics

3. Supporting points : a. General Anaesthetics

i. Total Unconsciousness

ii. How administered

1. Inhalation-gas or vapour
2. intravenous injection

iii. Two drugs used in operation

b. Local Anaesthetics

i. Insensible to pain

ii. Three sites of injection

1. Injection into the tissues
2. Injection around the main nerves
3. Injection surrounding the spinal cord

WH QUESTIONS

You need to ask WH questions to anyone for getting apt information

Word	How to use the word	Example sentence
what	asking for information about anything	What is your age and name?
what	asking someone to repeat something or get confirmation	What? I missed that can you say it again please. You did what?
what for	asking for a reason, asking why	What made you do that for?
when	asking about time	When did you leave the office yesterday?
where	asking in or at what place or position	Where do they live?
which	asking about choice	Which colour do you want?
who	asking what or which person or people (subject)	Who opened the door?
whom	asking what or which person or people (object)	Whom did you see?
whose	asking about ownership	Whose are these shoes? Whose turn is it to clean the car?
why	asking for reason, asking what...for	Why do you say that?
why don't	making a suggestion	Why don't I help you?
how	asking how to do something	How does this work?
how	asking about someones condition or quality	How was your test today?
how + adj or adv	**how to ask about extent or degree**	
how far	distance to a certain place	How far is London from Manchester?
how long	length (time or space)	How long will the chicken take to cook?

how many	quantity how many	How many cars are there?
how much	quantity (uncountable)	How much cash do you have in the bank?
how old	What is your age	How old are you?
how come (informal)	asking for reason, asking why	How come I can't see her?

In English there are seven 'Wh…' questions. Let us see how they are used:

What is used for a thing.

'What is it?'

Who is used for a person. Whose has the same meaning but it is always followed by a noun.

'Who were you talking to?'

'Whose car is that?'

Why is used for a reason.

'Why were you late?'

When is used for a time or date

'When did you start working here?'

Which is used for a choice.

'Which do you prefer, tea or coffee?'

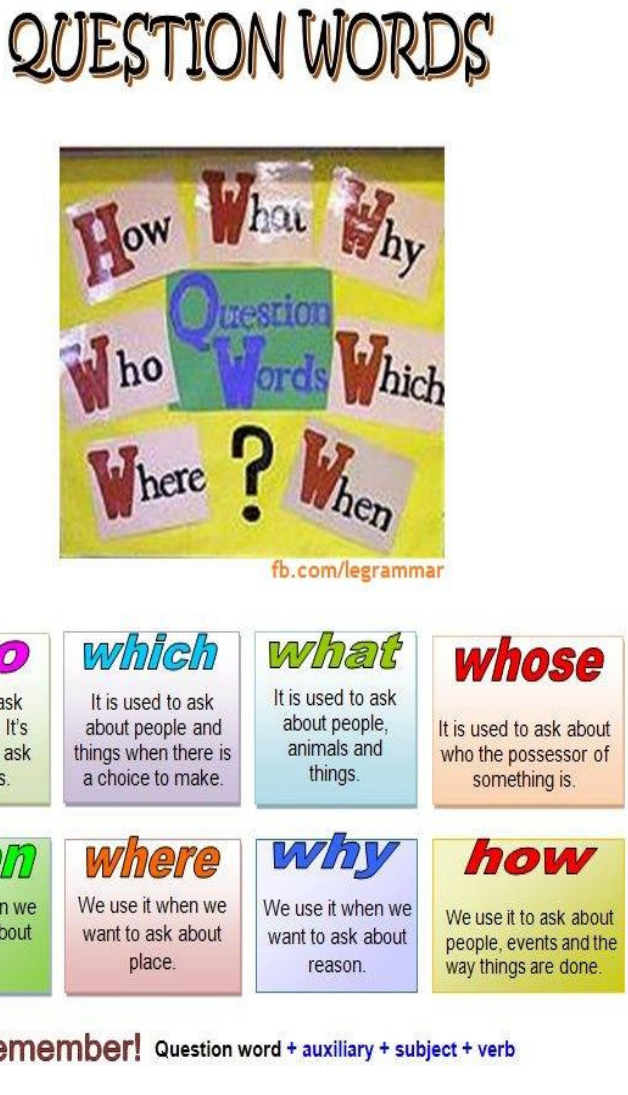
Where is used for a place.

'Where do you live?'

How is used for an amount or the way.

'How much does it cost?'

'How do I get to the station?'



Asking questions

1.If you ask about the subject of the sentence, simply add the question word at the beginning:

Example:

James writes good poems. — **Who** writes good poems?

2.If you ask about the predicate of the sentence (the part of a sentence which contains the verb and gives information about the subject), there are three options:

a.If there is a helping (auxiliary) verb that precedes the main verb (for example: can, is, are, was, were, will, would...), add the question word and invert the subject and the helping (auxiliary) verb.

Examples:

He can speak **Chinese**. — **What** can he speak?

They are leaving **tonight**. — **When** are they leaving?

b.If you ask about the predicate and there is no helping (auxiliary) verb and the verb is "to be", simply add the question verb and invert the subject and the verb.

Example:

The play was **interesting**. — **How** was the play?

c.If there is no helping (auxiliary) verb in the the predicate and the main verb is not "to be", add the auxiliary "do" in the appropriate form.

Examples:

They go to **the movies** every Saturday. — **Where** do they go every Saturday?

He wakes up **early**. — **When** does he wake up?

They sent **a letter**. — **What** did they send?

QUESTION TAGS

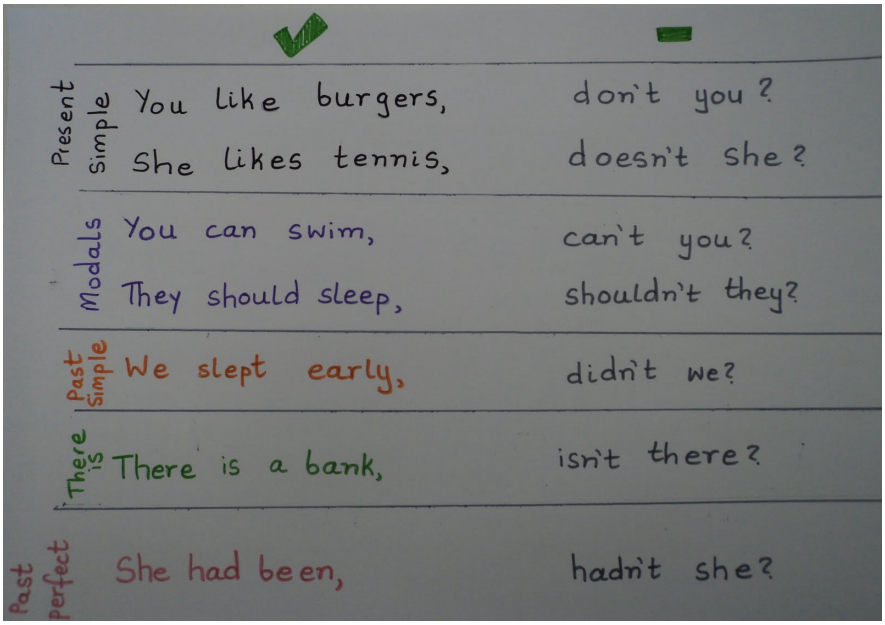
A question tag is a question added at the end of a sentence. Speakers use question tags chiefly to make sure their information is correct or to seek argument. They consist of a statement and a tag . A negative tag is used with an affirmative statement whereas a positive tag is used with a negative statement.

A. If the statement has "be" as an ordinary verb, we use a form of be in the tag. Tags are always used with pronouns.

After positive statements, we use a negative tag.

You are from Zaire, *aren't you?*
Angela is here, *isn't she*?
Your father was at school, *wasn't he?*
They were on holiday, *weren't they?*
It was a super show, *wasn't it?*
It is a big garden, *isn't it?*

After negative statements, we use a positive tag.

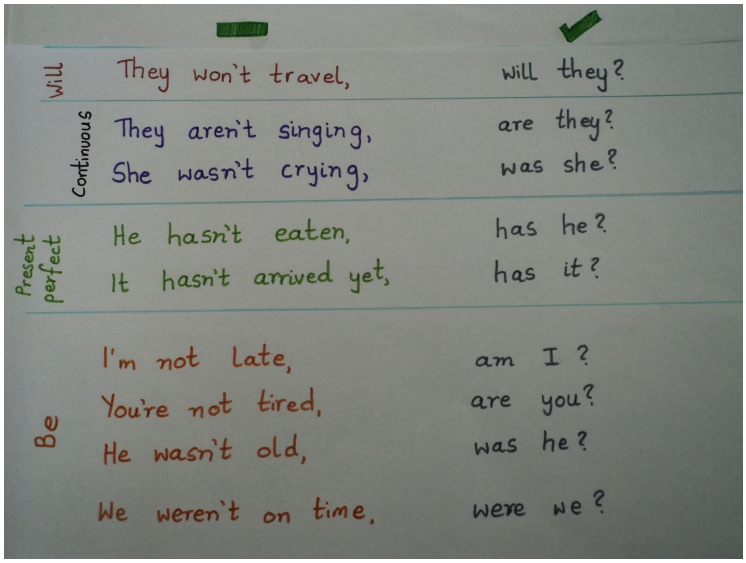


I am not surprised, *am I?*
Tim and Ted aren't rich, *are they?*
They weren't at the movie theater, *were they?*
That isn't Ben, *is it?*
You are not a policeman, *are you?*
We aren't lucky, *are we?*
Amanda isn't at home, *is she?*
They are not with us, *are they?*

B. If the statement has a modal, it is repeated in the tag.

Karan can go herself, *can't she?*
You should get up early, *shouldn't you?*
You wouldn't do that, *would you?*
We must help them, *mustn't we?*

C. With the Simple Present Tense we use do / does - don’t / doesn't? With the Simple Past Tense we use did / didn't?



They like going to the movie theater, *don’t they?*
You don’t take sugar in tea, *do you?*
Alan works at a bank, *doesn't he?*
You all watched TV during the night, *didn't you?*
He didn't read the novel, *did he?*
Andrew doesn't live here, *does he?*

We use auxiliary for certain verbs.

Malar is coming today, *isn't she?*
Mohamed is not drinking wine, *is he?*
They were playing football yesterday, *weren't they*?
Loyola and Steve were on the bus, *weren't they?*
They are going to play football, *aren't they?*

Note: Remember that ‘s = is or has, and ‘d = had or would

Peter’s got a job, *hasn't he?*
She’s in the office*, isn't she?*

D. Question tags with HAVE and DO are often both possible after the noun– auxiliary "have".
Note: "do" is preferred in American English.

Mr. Farmer has two cars, hasn't he? Or doesn't he?
She has a nice kitten, hasn't she? Or doesn't she?
You haven’t a house, have you? Do you?
They have a garden, haven’t they? Or don’t they?

E. If the statement contains words such as no , no one , nothing , nobody , scarcely , hardly , hardly ever , never , neither , seldom, under no circumstances … etc, it is considered a negative statement and followed by an affirmative tag.

Julia hardly ever drinks coke, *does she?*
Nothing will cure his illness, *will it?*

He never acts like a gentleman, *does he?*
She is hardly the right person for the job, *is she?*
It is no good*, is it?*

F. If the subject of the statement is somebody, anybody, nobody, everybody, no one, and neither …. We use the pronoun "they" in question tag.

Somebody entered the garden, didn't they?
Everybody was upset, weren't they?
Nobody objects to the plan, do they?

G. When the subject of the statement is that or this, the pronoun in the tag is "it". The pronoun is "they" for their plural forms these and those.

This is an expensive necklace, isn't it?
Those are very naughty children, aren't they?
That wasn't a big surprise, was it?
These weren't yours, were they?

H. When we use a there + be combination in a sentence the pronoun in the tag is again "there".

There isn't a hotel next to the museum, is there?
There won't be any trouble, will there?
There is a bus to Atlantic City every hour, isn't there?
There weren't any children at school, were there?

I. Let's has the tag "shall we?"

Let's go to the movie theater, shall we?
Let's have a party, shall we?
Let's drink tea, shall we?
Let's go out for a walk, shall we?

J. "Have to" is considered Simple Present and "had to" is considered Simple Past.

Your father has to wear glasses, doesn't he?
They don't have to come early, do they?
We had to borrow some money to buy a new house, didn't we?
They didn't have to read the story book, did they?

K. Some introductory phrases such as "I am afraid, I think, I believe, I am sure, I suspect, I suppose , it appears that , it seems that , it looks as if , as far as I remember , as far as I can see … so on " don't affect question tags except for the transfer of negation .

I suppose you are not serious, are you?
I think my mom returned home, didn't she?
I don't suppose you are serious, are you?
I don't believe you have paid for it yet, have you?
I don't think anyone will volunteer, will they?
I hope he won't object to our plan, will he?
It appears that she is enjoying herself, isn't she?
As far as I can see, Wade is the best, isn't he?
Note: For the phrase "you know that " the question tag is don't you ?
You know that you can do it, don't you?

L. If the subject of the sentence is everything, nothing, something, anything the pronoun in the tag is "it".

Everything is ready, isn't it?
Nothing has the end, has it?
Anything is possible, isn't it?

M. After positive imperatives, we use will you, won't you, can you, can't you, could you …etc .Yet for the negative imperatives we only use "will you? "

Open the door, will you / won't you, can you, could you …etc
Don't play with your nose, will you?

After "I am" the tag is "aren't".
I am your father, aren't I?
I am a bit late, aren't I?
I am a teacher, aren't I?

Intonation In Question Tags

When a tag is spoken, the voice can go up or down. If the voice goes up, it is called Rising Intonation and if it goes down, it is called Falling Intonation.

It is a nice day today, isn't it? ↘

A falling intonation means that the speaker is sure (or almost sure) that the statement is true. The speaker knows that it is a nice day. The tag is not a real question. He is inviting his friend to continue the conversation.

You have been on holiday, haven't you? ↗

A rising intonation means that the speaker is less sure. He thinks that his friend has been on holiday, but he isn't sure. The tag is more like a real question.

TYPES OF SENTENCES

SIMPLE, COMPOUND AND COMPLEX SENTENCES

1. **Simple Sentence:** One (subject + predicate) (**Being, Because of, in spite of , on account of .,** etc)
   Eg: Twenty Freeport citizens protested the ban against smoking

2. **Compound Sentence:** Two complete sentences joined by coordinate conjunction (**and, or, nor, but, for, because, yet,so, still, whereas ,on the other hand etc.)**
   Eg: Twenty Freeport citizens protested the smoking ban, **but** the newspaper failed to cover the story.

3. **Complex Sentences**: One complete sentence (also known as an independent or main clause) + 1 subordinate (or dependent) clause (missing either a subject or a predicate; or introduced by a conjunctive adverb **although, who,when,where.what,that,if,unless,after,before, as soon as, as long as,since** etc.)
   Eg: Although the citizens protested the smoking ban, the newspaper failed to cover the story.

TRANSFORMATION OF SENTENCES

The transformation of a sentence means changing its form without altering its sense.

Noun clause
He liked my suggestion. (Simple sentence)
He liked what I suggested. (Complex sentence)
His advice did not prove successful. (Simple sentence)
What he advised did not prove successful. (Complex sentence)
Note that it is usually a noun or a noun equivalent that can be changed into a noun clause.
Adjective clause
There I saw a beautiful girl. (Simple sentence)
There I saw a girl who was beautiful. (Complex sentence)
A wounded tiger is very fierce. (Simple sentence)
A tiger that is wounded is very fierce. (Complex sentence)
You can notice that it is adjectives or adjective equivalents or appositional words or phrases that are generally converted into adjective clauses.

Adverb clauses
She was too poor to educate her children. (Simple sentence)
She was so poor that she could not educate her children. (Compound sentence)
On being challenged they ran away. (Simple sentence)
When they were challenged they ran away. (Complex sentence)
You will have noticed that it is adverb phrases and adverbs that are converted to adverb clauses.

Transformation of a Simple Sentence into a Compound Sentences

- Climbing up the tree, he plucked some mangoes. (Simple Sentence)
- He climbed up the tree and plucked some mangoes. (Compound Sentence)

Here we changed the participial phrase 'Climbing up the tree' into the clause 'He climbed up the tree' and connected it to the original clause with the coordinating conjunction and. Thus a simple sentence can be converted into a compound sentence by expanding a word or a phrase into a clause and by using the coordinating conjunction to connect the clauses. More examples are given below.

- Driven by rain, he took shelter under a tree. (Simple sentence)
- He was driven by rain and took shelter under a tree. (Compound Sentence)
- Besides being beautiful, she is intelligent. (Simple Sentence)
- She is not only beautiful but also intelligent. (Compound Sentence)
- In spite of his poverty he is happy. (Simple Sentence)
- He is poor but he is happy. (Compound Sentence)

Transformation of a Compound Sentence into a Simple Sentence

He got up and walked away. (Compound sentence)
Getting up, he walked away. (Simple Sentence)

Here we reduced the clause 'He got up' into the participial phrase 'getting up'.
More examples are given below.

- He gave them not only a house but some land also. (Simple Sentence)
  Besides a house, he gave them some land also. (Compound sentence)
- Here we reduced the clause 'he gave them some land also' into the prepositional phrase 'besides a house'.
- He ran away and thus escaped arrest. (Simple Sentence)
  He ran away in order to escape arrest. (Compound Sentence)
- Here the clause 'thus escaped arrest' is replaced by the infinitive phrase 'in order to escape arrest'.

Now we have seen that to convert **compound sentences** into **simple sentences**, clauses have to be reduced to **participial, prepositional** or **infinitive phrases**.

COMPOUND NOUNS

Compound nouns are nouns that have been created by joining two words together.

They are of three types.

- Joined (input / bathroom / waterpark)
- Open (post office / real estate / night watchman)
- Hyphenated (mother-in-law / jack-in-the-box)

Expand the following nouns

Compound nouns		**Definition**
1. Air pump	-	Pump operated by Air
2. Air supply	-	Supply of air
3. Alarm clock	-	Clock which has an alarm in it
4. Aluminum extraction	-	Extraction of aluminium
5. Arithmetic unit	-	A unit in which arithmetic if performed
6. Atom bomb	-	Bomb made up of atoms
7. Ball pen	-	Pen that works on the principle of ball tip
8. Battery car	-	Car run by battery
9. Beam transmission	-	Transmission of beam
10. Blast furnace	-	Furnace of the type which works by blast
11. Boiler feed water	-	water for feeding the boiler
12. Butt weld	-	weld of that type called butt
13. Cable television	-	Television that receives the signal through the cable
14. Carbon content	-	content of carbon
15. Concrete structure	-	structure made of concrete
16. Condenser extraction pump	-	Pump for extracting from condenser
17. Control tower	-	Tower to control

18. Cooling tower - Tower for the purpose of cooling
19. Computer design - Design by computer
20. Copper wire - Wire made of copper
21. Cylinder condensation losses - Losses due to condensation of cylinder
22. Cylinder head design - Design of the head of the cylinder
23. Cylinder walls - walls of the cylinder
24. Dry cell battery - Battery composed of dry cells
25. Digital clock - clock that works on digital principles
26. Direct current - Electric current flowing in one direction
27. Energy sources - Sources wherefrom energy is obtained
28. Ferrous oxide coated tape - Tape coated with ferrous oxide
29. Fire tube boiler inspection door- Door for the inspection of boiler of fire tube type
30. Flood damage - Damage caused by flood
31. Friction losses - Losses caused by friction
32. Gas condenser - condenser for gas
33. Gas light - Light that works with gas
34. Gear mechanism - Mechanism of the gear
35. Gold bar - Bar made of gold
36. Gravity feed lubricating system- System of lubricating by feeding by gravity
37. Grease gun - Gun used for injection grease
38. Gun powder - Powder used for the gun
39. Heat Content - Content of heat
40. Heat transfer - Transfer of heat
41. Heat transfer - Transfer with or by heat
42. Hot water - Water that is hot in condition
43. Information centre - centre for collecting information
44. Lock nut - Nut of the kind that locks
45. Machine testing condition - condition under which a machine is tested
46. Mains electricity - Electricity that comes from the mains

47. Media support	-	Support by the media
48. Meccury thermometer	-	Thermometer using mercury
49. Metal tubes	-	Tubes made of metal
50. Mild steel	-	Steel that is mild in nature
51. Nickel alloy	-	Alloy containing nickel from nuclear, sources
52. Oil cake	-	Cake obtained from oil seeds
53. Oil sand	-	Sand that contains oil
54. Pedal power	-	Power obtained by pedaling
55. Petrol engine	-	Engine using petrol
56. Petroleum product	-	Product obtained from petroleum
57. Power cable	-	Cable for transmitting power
58. Power output	-	output of power
59. Power source	-	Source of power
60. Power transmission problem	-	problem of transmission of power
61. Radio frequency	-	Frequency of the radio
62. Role play	-	playing of role
63. Roller mill	-	Mill of rolling
64. Safety wave	-	Valve used for safety purposes
65. Soil laboratory	-	Laboratory in which soil is tested
66. Steam boiler	-	Boiler that generates steam
67. Steam chest	-	Chest for storing steam
68. Steam consumption	-	consumption of steam
69. Steam engine	-	Engine that is operated by steam
70. Steam jackets	-	jackets containing steam
71. Steel bar	-	Bar made of steel
72. Steel bridge	-	Bridge made of steel
73. Stop valve	-	valve used for safety purposes
74. Temperature drop	-	drop in temperature
75. Turret lathe	-	Lathe having a turret

76. Video frequency signal	-	Frequency signal of video
77. Waste disposal	-	Disposal of waste
78. Water pollution	-	Water that is polluted
79. Water tube	-	Tube containing water
80. Water softener	-	Softener of water
81. Water way	-	Way for water
82. Wet steam	-	Steam that is wet in condition
83. Work machinery	-	machinery for the workshop

Activity:

1. Write a mix of simple words on the board and use them to create as many compound nouns as you can.
2. Focus on one word and see how many different endings you can find. For example: earache, eardrum, earlobe, earmarked, earmuff, earphone, earring, earshot.

You need to construct compound nouns from these words in the box below to fill in the gaps in the sentences. Some of the words are used twice, but in a different order! All answers should be entered as **two separate words**.

window	reading	seat	pub	day
phone	child	light	fishing	card
table	food	frame	work	boat

1. I only have coins on me and that's a ---------- I will have to see if there is a public phone in that bar.
2. I want to put a ---------- in the car as they say it really makes toddlers safer while driving.
3. John was furious with the airline company. He sat on that plane for 14 hours and his ---------- didn’t work. He couldn't even finish that novel he was reading during the flight. He had to try and sleep.
4. "What type of credit card is that?" "That's not a credit card. That's a ----------.I use it once a week to call my mum back home in New Zealand."
5. All the ---------- in this house have to be repainted. Otherwise, they will rot over the winter and then we may not be able to open the windows in the spring.
6. English restaurants have a terrible reputation, but the ---------- in very tasty.
7. I worked at night for so long that when I finally started to do some ----------, I found it really strange.
8. A ---------- sank off the Spanish coast last night. Both fishermen were saved by the coast guard.
9. I know that Monday is a holiday for everyone else, but for us it's a normal ----------.We have to get this project finished by Wednesday!
10. Why do you have a ---------- in the middle of your lounge? I keep feeling tempted to go up to the bar to order drinks!!

Match a word in A with a word in B to make a new noun. Then fill in the gaps in the sentences below the table with a compound noun from the table.

A	B
(A) Town (B) Railway (C) Traffic (D) Book (E) Bus (F) Free (G) Departme nt (H) Car (I) Travel (J) Ticket (K) Rush (L) Air	( ) Park ( ) Way ( ) Agent's ( ) Center ( ) Office ( ) Station ( ) Port ( ) Stop ( ) Store ( ) Shop ( ) Light ( ) Hour

(A) Stop the car! The _____ is red!

(B) When you arrived in Brazil, which _____ did you fly into?

(C) In a _____ you can buy almost anything you desire.

(D) We waited in the rain at the _____for an hour before the bus arrived.

(E) All big towns have a _____ in the morning and evening.

(F) *Getaway* is the best _____ in the town. They have good cheap holidays.

(G) I hate driving on the_____ when it is full of traffic.

(H) The _____ was very big. There were trains arriving and departing all the time. I bought a ticket at the _____ and found the Platform my train was due to depart from.

(I) No I didn't borrow this book from the library. I bought it at a _____.

TECHNICAL DEFINITIONS

Vocabulary development:

Bearing: The part of a machine within which a rotating or sliding shaft is held.
Bell crank: A pivoting double lever used to change the direction of applied motion.
Cam : A mechanical device consisting of an eccentric or multiply curved wheel mounted on a rotating shaft used to produce variable or reciprocating motion in another engaged part.
Clevis: A U-shaped piece with holes used as a fastening device which allows rotational motion.
Collar: A cylindrical feature on a part fitted on a shaft used to prevent sliding (axial) movement.
Collet: A cone - shaped sleeve used for holding circular or rod like pieces in a lathe or other machine.
Coupling: A device used to connect two shafts together at their ends for the purpose of transmitting power.
Fillet: A rounded surface filling the internal angle between two intersection surfaces
Fixture: A device used to hold a workpiece while manufacturing operations are performed upon that work piece
Gage: A device used for determining the accuracy of specified manufactured parts by direct comparison.
Accelerometer. A device that measures the acceleration to which it is subjected and develops a signal proportional to it.
Acceleration Servosystem. A servo-system that controls the acceleration (rate of change in velocity) of a load.
Accumulator. A register that both stores a number and adds to other numbers loaded into the register.
AC generator. [Alternator] A rotating machine that converts mechanical energy into alternating current.
Acorn Tube. A small tube, used in low power uhf circuits, with closely spaced electrodes and no base.
Balanced Amplifier. An amplifier with two identical branches connected to operate in opposite phase, with their input and outputs connections balanced to ground.
Hamming Code. An error-detecting and error-correcting binary code, used in data transmission, that can detect all single- and double-bit errors and correct all single-bit errors.
Joystick. A peripheral device used with personal computers to translate physical movement in two axis into electrical signals used by the computer.
Junction Box. A box with a cover that serves the purpose of joining different runs of wire or cable and provides space for the connection and branching of the enclosed conductors.
Junction Diode. A two-terminal device containing a single crystal of semi-conducting material that ranges from P-type at one terminal to N-type at the other.

Keyboard. A peripheral device used with a personal computer which allows data entry.

Laminated Core. A core built up from thin sheets of metal insulated from each other and used in transformers.

Machine Language. A language that need not be modified, translated, or interpreted before it can be used by the processor for which it was designed.

Magnetic Amplifier. An electromagnetic device that uses one or more saturable reactors to obtain a large power gain.

Magnetic Head. A device that records, reads or erases data on a magnetic tape.

Narrow Band Amplifier. An amplifier which only functions over a narrow band of frequencies or is optimized for a limited band of frequencies.

Nixie Tube. A vacuum tube that contained wires in the shape of numbers or wires that would light when powered.

Algorithm

A set of rules for solving a problem in a given number of steps.

Archive

A file with a structure that allows storage of multiple files within it in such a way that the names of the files can be listed and files can be individually added and deleted.

Backbone

Refers to a piece of cable used to connect different floors or departments together into a network.

Binary

A file containing one or more strings of data bits which are not printable characters.

Broadband

A communications medium on which multiple signals are simultaneously transmitted at different frequencies.

Bridge

A device that connects two networks and passes traffic between them based only on the node address, so that traffic between nodes on one network does not appear on the other network

Buffer

A temporary memory for data, normally used to accommodate the difference in the rate at which two devices can handle data during a transfer.

Client/server

A relationship in which client software obtains services from a server on behalf of a person.

Compiler

A program that translates human-readable programs into a form the computer understands.

Computer

A device or system that is capable of carrying out a sequence of operations in a distinctly and explicitly defined manner.

Drive

A generic term used to identify the equipment that serves as a player or recorder for a storage medium.

Bandpass Filter. A filter that allows a narrow band of frequencies to pass through the circuit.
Cable Modem. A PC modem which interfaces between a personal computer and a cabled internet connection, normally coax.
Cable Tray. A lattice work or mesh of intersecting metal used to support some number of cables running between different points
Capacitor. An electrical device capable of storing electrical energy in an electrostatic field.
Cartridge Fuse. An instrument with a cylindrical body usually made of plastic or ceramic and terminated with metal end caps.
Echo Box. A resonant cavity device that is used to check the overall performance of a radar system.
Fast Recovery Diode. A diode that can switch between forward and reverse bias in a relatively small amount of time, compared to other diode types.
Fault Indicator. A component or device that indicates a failure or defect in the equipment being monitored either by audio or visual indication.
Galvanometer. A meter used to measure small values of current by electromagnetic or electrodynamic means.
Generator. A machine that converts mechanical energy to electrical energy by applying the principle of magnetic induction.

QUESTIONS FOR PRACTICE

Part-A

I. Choose the correct WH Question word.

1. _____ do you live? I live in Toronto. a) Who b) What c) Where
2. _____ do you wake up? I wake up at 7:30 am. a) When b) Why c) How
3. _____ is your brother? He is great, thanks for asking. a) Where b) Why c) How
4. _____ is this?That's my electronic dictionary. a) Who b) What c) Where
5. _____ do you take English class? Because I want to improve my speaking.
   a) Where b) When c) Why
6. _____ does your father work? He works at the post office. a) When b) Who c) Where
7. _____ do I cook rice? You need to use a pot with water. a) How b) Who c) Where
8. _____ is the party? It is on Saturday night. a) Where b) When c) Why
9. _____ are you sad? Because my dog is sick. a) Who b) What c) Why
10. _____ is the bank? It is on 4th Avenue. a) When b) Where c) How

II.Frame "Wh" questions for the following sentences. Consider the words in the brackets as answers.

1. They study (English) every Tuesday morning.
2. Romi goes to school (by bus).
3. The teacher explains the lesson (in front of the class).
4. (My brother) does his homework carefully.
5. My maid cleans the vessels (everyday).
6. John loves eating (pizza).
7. Omega sings a song (beautifully).
8. Shaju gets up (at five).
9. Harry doesn't go to school (because he is sick).
10. (Mother) cooks rice in the kitchen.
11. Tommy rides his bike (very fast).
12. Brian (has breakfast) before going to school.
13. I give (Sherin) a birthday present.

14. Mario celebrates (his birthday) in September.

15. The students listen to (the teacher's explanation).

16. I like (the white T-shirt), not the red one.

17. Julia has (two) brothers.

18. The little boys play (hide and seek).

III. Make questions with the words given. Add punctuation.

1. What / language / they / speak / in Spain
2. When / you / go / to / school
3. What / time / you / go / to bed
4. Where / the President / live
5. How / this computer / work?
6. Why / he / ask / a lot of / question

IV. Fill up the blanks with suitable question tags

1. You wanted that, ... ?

a) would you
b) didn't you
c) wouldn't you
d) do you

2. He saw that ..... ?

a) is he
b) won't he
c) didn't he
d) doesn't he

3. You know that's right ..... ?

a) would you
b) wouldn't you
c) don't you
d) didn't you

4. He wil be coming ..... ?

a) is he

b) did he

c) doesn't he

d) won't he

5. After all this time you'd think he'd have forgotten ..... ?

a) didn't you

b) wouldn't you

c) don't you

d) do you

6. The amount he is suffering from hay fever he needs to see a doctor ..... ?

a) doesn't he

b) did he

c) won't he

d) is he

7. You may think you know the answer but you don't ..... ?

a) don't you

b) would you

c) wouldn't you

d) do you

8. After working so hard he didn't deserve to fail the exam ..... ?

a) doesn't he

b) did he

c) won't he

d) is he

9. You wouldn't report me, ... ?

a) don't you
b) would you
c) wouldn't you
d) do you

10. He isn't going to like this, ... ?

a) didn't he
b) did he
c) won't he
d) is he

V.Match the sentences with suitable tag questions

1. You can't answer all the questions, ----------	a. didn't he?
2. You will help me to do the dishes, ----------	b. will you?
3. He believes you,----------	c. can't you?
4. The teacher should explain the lesson, ---------	d. doesn't he?
5. The boy didn't know the lesson,----------	e. can you?
6. Bob frightened you----------	f. should he?
7. You can speak English well, ----------	g. could she?
8. She couldn't arrange that,----------	h. won't you?
9. You won't tell him, ----------	i. did he?
10. He shouldn't do it, ----------	j. shouldn't he?

VI. Identify the following types of sentences.

1. The training rooms of these college athletes smell of grease and gasoline
2. Their practice field is a stretch of asphalt, and their heroes make living driving cars.
3. Their tools are screwdrivers and spanners rather than basketballs and footballs.
4. This new brand of college athlete is involved in the sport of auto racing.
5. Most of the students are engineering majors, and they devote every minute of their spare time to their sport.

6. Although the sport is new, it has already attracted six collegiate teams in the Southeast
7. The students work on special cars designed for their sport
8. The cars are called Legends cars, models of Fords and Chevys from 1932 to 1934, and they are refitted by the students with 1200 cc motorcycle engines
9. Although their usual speed ranges from 50 to 90 miles an hour, Legends cars can move up to 100 miles an hour on a straightaway.

VII. Convert the following simple sentences into complex sentences by changing the italicized words or phrases into clauses.

1. John admitted *his guilt.*
2. The principal is likely *to punish him.*
3. I have informed him *of his success*.
4. Alice is a said *to be a good doctor.*
5. His looks proclaim *his innocence*.

VIII. Convert the following simple sentences into compound sentences.

1. Being innocent, he never thought of running away.
2. Besides being thrown into jail, he was heavily fined.
3. The old man sat near the fire, smoking.
4. By his pleasant manner, the boy became popular.

IX. Convert the following compound sentences into simple sentences.

1. You must take your medicine, otherwise you cannot get well.
2. The storm subsided and we continued our journey.
3. Not only the crops, but cattle and sheep also were destroyed by the flood.
4. He is rich, yet he is not happy.

X. Expand the following compound nouns.

1. Heat transfer
2. Power cable
3. Steel bar
4. Friction losses
5. Silver extraction
6. Information center
7. Calculation speed
8. Cooling towers
9. Air supply
10. Waste disposal
11. Stop valve
12. Extractor pump
13. Steam engine
14. Glass jar
15. Control tower
16. Space travel
17. Circuit diagram
18. Petroleum products
19. Machine operator
20. Ball pen

XI. Observe the diagrams and guess the compound nouns

XII. Read the following passage and underline the compound nouns.

Fuel-cell vehicles have long promised several major advantages over those powered by electricity or hydrocarbons. Fuel-cell vehicles are therefore hybrids and will likely also deploy regenerative braking, which recovers energy from waste heat, a key capability for maximizing efficiency and range. Unlike battery-powered electric vehicles, fuel-cell powered ones have a long cruising range—up to 650 kilometers per tank (the fuel is usually compressed hydrogen gas); a hydrogen fuel refill only takes about three minutes. Hydrogen is clean-burning, producing only water vapor as waste, so fuel-cell vehicles using hydrogen will be zero-emission, an important factor given the need to reduce air pollution.

Hydrogen can also be split from water in high-temperature nuclear reactors or generated from fossil fuels such as coal or natural gas, with the resulting carbon dioxide captured and sequestered rather than released into the atmosphere.

Long-distance transport of hydrogen, even in a compressed state, is not considered economically feasible today. Innovative hydrogen storage techniques, such as organic liquid carriers that do not require high-pressure storage, however, will soon lower the cost of long-distance transport and ease the risks associated with gas storage and inadvertent release.Mass-market fuel-cell vehicles are an attractive prospect because they will offer the range and fueling convenience of today's diesel and gas-powered vehicles while providing the benefits of sustainability in personal transportation. Achieving these benefits will, however, require the reliable and economical production of hydrogen from entirely low-carbon sources as well as its distribution to a growing fleet of vehicles, expected to number in the many millions within a decade.

QUESTIONS FOR PRACTICE
PART-B

ESSAY WRITING

Read the following topics and write an essay of 200 words . You are expected to

1. Analyze
2. Argue
3. Compare and contrast
4. Describe
5. Discuss
6. Summarize

1. The role of the police force in society
2. Describe some of the interesting places in your country
3. Talk about the role of science & technology
4. Talk about present day life in the village
5. Is traveling an educative experience? Discuss.

"Is technology a two-edged sword?" Justify.

NOTE MAKING

1. Make notes on the following passage. Give a suitable title.

Computers differ based on their data processing abilities. They are classified according to purpose, data handling and functionality. According to purpose, computers are either general purpose or specific purpose. **General purpose computers** are designed to perform a range of tasks. They have the ability to store numerous programs, but lack in speed and efficiency. Specific purpose computers are designed to handle a specific problem or to perform a specific task. A set of instructions is built into the machine.

According to data handling, computers are analog, digital or hybrid. Analog computers work on the principle of measuring, in which the measurements obtained are translated into data. Modern analog computers usually employ electrical parameters, such as voltages, resistances or currents, to represent the quantities being manipulated. Such computers do not deal directly with the numbers. They measure continuous physical magnitudes. Digital computers are those that operate with information, numerical or otherwise, represented in a digital form. Such computers process data into a digital value (in 0s and 1s). They give the results with more accuracy and at a faster rate. Hybrid computers incorporate the measuring feature of an analog computer and counting feature of a digital computer. For computational purposes, these computers use analog components and for storage, digital memories are used.

According to functionality, computers are classified as:Analog Computer - An analog computer (spelt analogue in British English) is a form of computer that uses *continuous* physical phenomena such as electrical, mechanical, or hydraulic quantities to model the problem being solved and Digital Computer - A computer that performs calculations and logical operations with quantities represented as digits, usually in the binary number system .Hybrid Computer (Analog + Digital) - A combination of computers those are capable of inputting and outputting in both digital and analog signals. A hybrid computer system setup offers a cost effective method of performing complex simulations.

On the basis of Size 4 types are used. Super Computer-The fastest and most powerful type of computer Supercomputers are very expensive and are employed for specialized applications that require immense amounts of mathematical calculations. For example, weather

forecasting requires a supercomputer. Other uses of supercomputers include animated graphics, fluid dynamic calculations, nuclear energy research, and petroleum exploration. The chief difference between a supercomputer and a mainframe is that a supercomputer channels all its power into executing a few programs as fast as possible, whereas a mainframe uses its power to execute many programs concurrently. Mainframe Computer - A very large and expensive computer capable of supporting hundreds, or even thousands, of users simultaneously. In the hierarchy that starts with a simple microprocessor (in watches, for example) at the bottom and moves to supercomputers at the top, mainframes are just below supercomputers. In some ways, mainframes are more powerful than supercomputers because they support more simultaneous programs. But supercomputers can execute a single program faster than a mainframe.

Mini Computer is a midsized computer. In size and power, minicomputers lie between workstations and mainframes. In the past decade, the distinction between large minicomputers and small mainframes has blurred, however, as has the distinction between small minicomputers and workstations. But in general, a minicomputer is a multiprocessing system capable of supporting from 4 to about 200 users simultaneously. Micro Computer or Personal Computer can be classified into Desktop Computer: a personal or micro-mini computer sufficient to fit on a desk. Laptop Computer: a portable computer complete with an integrated screen and keyboard. It is generally smaller in size than a desktop computer and larger than a notebook computer. Palmtop Computer/Digital Diary /Notebook /PDAs**:** a hand-sized computer. Palmtops have no keyboard but the screen serves both as an input and output device.

2. Read the following passage and make notes on it. Give a suitable title.

An automobile is a vehicle that is capable of propelling itself. Since 17th century, several attempts have been made to design and construct a practically operative automobile.Today, automobiles play crucial role in the social, economic and industrial growth of any country.After the designing of Internal Combustion Engines, the Automobile industries has seen a tremendous growth. Automobiles can be classified into several types based on many criteria. A brief classification of automobiles is listed below:Based on purpose they are of three types: passenger vehicles which carry passengers. E.g: buses, cars, passenger trains. Goods vehicles carry goods from one place to another place. E.g: goods lorry, goods carrier. Special purpose vehicles include ambulance, fire engines, army vehicles. Based on load capacity, there are two types of vehicles.

One is light duty vehicle or small motor vehicles such as car, jeep, scooter, motor cycle and the other one is heavy duty vehicle : large and bulky motor vehicles. E.g: bus, truck, tractor. Based on fuel used they are of 5 types.Petrol engine vehicles that are powered by petrol engine. E.g: scooters, cars, motorcycles. Diesel engine vehicles , powered by diesel engine. E.g: trucks, buses, tractors, gas vehicles that use gas turbine as power source. E.g: turbine powered cars.electric vehicles that use electricity as a power source. E.g: electric cars, electric buses, steam engine vehicles powered by steam engine. E.g: steamboat, steam locomotive, steam wagon. Based on drive of the vehicles they are classified into three. Left hand drive vehicles in which steering wheel fitted on left hand side and right hand drive vehicles in which steering wheel fitted on right hand side. Fluid drive : Vehicles employing torque converter, fluid fly wheel or hydramatic transmission.

Based on number of wheels and axles , Two wheeler : motor cycles, scooters, Three wheeler : Tempo, auto-rickshaws, Four wheeler : car, Jeep, Bus, truck, Six wheeler : Buses and trucks have six tires out of which four are carried on the rear wheels for additional reaction, Six axle wheeler : Dodge(10 tire to 12) vehicle are categorized. Based on type of transmission:Automatic transmission vehicles that are capable of changing gear ratios automatically as they move. e.g: Automatic Transmission Cars, Manual transmission vehicles whose gear ratios have to be changed manually and Semi-automatic transmission vehicles that facilitate manual gear changing with clutch pedal. Based on Suspension system used Convectional - Leaf Spring and Independent - Coil spring, Torsion bar, Pneumatic are the possible two types.