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216en15

## MANAGEMENT OF TIME AND ENERGY

We perform many activities in a day. Some of the activities like eating, cooking, exercising, sleeping, bathing and entertaining are also carried out by us along with our work related activities but all these are to be completed within the available time that is 24 hours. We work and feel exhausted, if we do not rebuild our energy from time to time. This means that like time we also need something else to perform these activities. This is called **energy**. It is the capacity to do the work. It means that just as available time as a resource is limited, we also have limited amount of energy. So we can say that within limited time we must finish all our work with our limited energy.

Time and energy are the resources available to all of us. These two resources are very closely interlinked. Each one affects the other. Although energy available to each one of us is different but the time we all have with us is equal i.e. 24 hours in a day. If we want to finish our work properly and on time we need to make best possible use of our time and energy. In other words we must learn to manage our time and energy properly. But how do we manage our time? How do we use our energy to complete our work on time? We will learn about these issues in this lesson. Time and energy are both limited resources and we have to use them efficiently.



### OBJECTIVES

After studying this lesson you will be able to :

- explain the meaning and importance of time and energy as valuable resources;
- discuss the role of a time plan for effective utilization of available time;
- elaborate the procedure of making a time plan;
- suggest ways to save time and energy;



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- understand the role of dovetailing in time and energy management;
- explain the concept of work simplification and its usefulness in the conservation of time and energy, and
- evaluate your work by simplification methods at home.

### 15.1 TIME AND ENERGY AS RESOURCES

You have studied in the previous chapter that a resource is something that is available to you for getting some work done. Resources are of two types- human and non-human. Resources like time, money and energy are available to us but these are limited and we have to use these wisely and efficiently.

Making use of available resources efficiently in a way that we get our work done is called the management of that resource. If you go to your friend's house on a bicycle, you will require time to reach the friend's house and energy to ride a bicycle. Even if you walk to the friend's house, you still will need these two resources. Most of the time these two resources are used together and managed together. If you reach your friend's house using a short cut you are saving time and your energy. Hence, you are managing your time and energy more efficiently. **Making best use of time and energy is known as time and energy management.**

### 15.2 TIME PLAN/ SCHEDULE

In the previous chapter, you have studied that planning the use of resources helps us using them effectively and efficiently. In case of time, we have to prepare a **time plan** or we can call it a **time schedule**. It involves thinking in advance about how are we going to use our time for doing various activities. **A time plan is an advance plan of what we are going to do in a given time period.**



Figure 15.1

You have two assignments to submit to your study centre by tomorrow. You find that your mother is not well and you have to get medicine for her, cook dinner for the family and make beds. With the limited time available with you, how do you think you will complete all the tasks successfully? Think of the different options available to you:

**Option 1-** Get medicines, make dinner, make beds, serve dinner and next day request your teacher to give you one more day to submit the assignments.

OR



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**Option 2-** You list all the tasks to be done and prioritize them. Get medicine and give to mother; do assignments; cook dinner and in between go and make the beds, serve dinner, and go back to complete the assignment.

What was the difference between the two options?

In the first option, you did not list all activities and prioritize them. In second option, you planned your time properly and completed all the tasks i.e. you made a Time Plan in your mind.

What was the first thing you did in Option 2 which made it possible to do your work successfully. Yes, you listed all the activities to be completed and organized them in an order of priority.

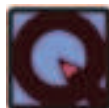
### 15.2.1 Steps in time-planning

1. **Listing all the activities:** List activities that you have to perform on a particular day. These can be eating, sleeping, going to school, school time and complete homework, playing going for shopping with your mother, helping your father in cleaning the surroundings of the house; dusting in the house; going for music or dance classes, etc.
2. **Grouping flexible and inflexible activities:** Separate the activities into two types. Those which are **flexible** like going to market for shopping. The timing and day for shopping can be changed as the situation demands and can be delayed to the next day. The other set of activities are those which are **inflexible**, like going to school, music or dance classes. The time for performing these activities is fixed and cannot be delayed or changed.
3. **Estimating time required for performing each activity:** In the list that you have prepared in the step-1, allot time required for performing each activity. Going to school may take between 7 -10 minutes or 1 hour. School time may be 5-6 hours. Fill in all other works which can be done within a short time in between all the other activities with fixed activities.
4. **Balancing:** This is the most difficult task. On one hand you have the total time of the day available with you and on the other hand are the activities you have to do. After allotting time to each of the activities, you might find that the total time required by you to do all the work is more than 24 hours.

However, you only have 24 hours to complete the task. Balancing is the adjustment of time for each of the activities. Reducing time from some activities can help in balancing the total time needed with the total time available bring to harmony. This is a step towards adjustment where listing of flexible and inflexible activities can help you. Also start with things that take long to complete so that these are ready when you are ready.



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### INTEXT QUESTION 15.1

1. Classify the following activities into flexible and inflexible activities, keeping in mind that these are for your parents.

Activities	
Dusting, Mopping, Cooking food, Stitching clothes, Going to school, Washing clothes, Going for shopping, Preparing lunchbox for children, to attend a marriage ceremony, Ironing clothes	
Flexible	Inflexible

2. List the steps of making a time-plan.

### 15.2. 2 While planning the use of your time in advance keep the following points in mind:

1. Make a time schedule which you can easily follow.
2. Make a time schedule which is practical and flexible and can be changed easily in emergencies.
3. Think of an alternative plan of action for emergency.
4. Allow for rest and leisure time activities.
5. Dovetail for better time utilization of time. (You will learn about this a little later in this lesson)

Here is a model of time schedule for Seetha who has a school going child and is also doing a course through open schooling. A list of all the activities to be performed by her are presented in a table given below.

**Note:** The activities that are underlined in the table given below have to be done at those definite times as the time to do them is inflexible. The other activities can be done according to her convenience as they are flexible.

**Table 15.1- An example of a time-plan**

TIME	ACTIVITY
<u>5.30 a.m.—6.15 a.m.</u>	Wake up, freshen up
6.15 a.m.— 7.00 a.m.	Wash clothes
7.00 a.m.—8.15 a.m.	Prepare breakfast and start cooking lunch
<u>8.15 a.m.—8.30 a.m.</u>	Dress the child and send to school



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8.30a.m.—9.00 a.m.	Cleaning the surroundings and packing the lunch box
9.00 a.m. —9.30 a.m.	Have breakfast
9.30 a.m. —11.00 a.m.	Clean the house
11.00a.m – 11.30 a.m.	Bathe and get ready
11.30 a.m. — 11.145 a.m.	Rest
11.45 a.m. — 12.45 p.m.	Study
<u>12.45 p.m. — 1.00p.m.</u>	Pick the child from school
1.00 p.m.—1.45 p.m.	Serve and eat lunch
1.45 p.m.—2.00 p.m.	Wind up and clean kitchen
2.00 p.m. —2.45 p.m.	Personal Hobbies/ rest
2.45 p.m. — 3.30 p.m.	Pre-preparation for dinner
3.30 p.m. — 4.00 p.m.	Tea break
4.00 p.m.—4.15 p.m.	Shop for daily needs
4.15 p.m.—5.15 p.m.	Help child to do homework
5.15 p.m. — 6.15 p.m.	Prepare dinner
6.15 p.m.—7.30 p.m.	Serve and eating dinner
7.30 p.m.—8.30 p.m.	Wind up and clean kitchen
8.30 p.m—8.45 p.m.	study
8.45 p.m- 10.00 p.m	Get ready for sleeping
10.15 p.m.—10.30 p.m.	Rest

From the time plan presented above, you can observe that there are certain times of the day when a number of activities have to be performed within a fixed time period. These time periods are called **peak load** periods. These peak loads need to be managed by proper planning. For example, children's uniform can be ironed and kept ready for the next morning and some pre-preparations of lunch and breakfast can be done in the evening. This will reduce some pressure from this peak work load period in the morning next day. Working constantly leads to tiredness and **fatigue** both physical and mental. You may have also noticed that the afternoon time is being spent on rest and hobbies. This is called **leisure period**. This is essential to give rest to the body and to break the monotony of the hectic routine. This also helps to recharge the body physically and emotionally. This also helps us to manage our peak work load efficiently and remove stress.

Every member of a family will have their own time-plan and any chance of time-plans of family members clashing can be resolved by adjusting timing of different activities. Consider a family, where the son is the first to leave for school, daughter leaves for



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college after that, then the mother leaves for office; hence their bathing time can be adjusted accordingly. Son takes bath first, next is the daughter and then their mother. Father is a shopkeeper, so he can bathe after everyone has had their bath and left for school, college or office.



### ACTIVITY 15.1

Use the time plan given in Table 15.1 and answer the following:

If a guest arrives suddenly during one of your peak load period how would you manage your tasks. \*

*\*Hint: Reschedule activities/ seek help of other family members/ reschedule activities/ simplify tasks*

### 15.2.3 Advantages of preparing a time plan

When you plan and implement a time plan /schedule, you realize how useful it has been to you.

**You will be able to:**

- finish all your work efficiently without feeling tired;
- find time for rest and relaxation;
- find time for your hobbies like playing out door games (cricket, football, volleyball and hockey) doing embroidery , listening to music, dancing, watching T.V. etc;
- do more productive work in less time
- you are saved from last minute tensions and confusion; and
- better quality work is done.

What will happen if you do not make a time-plan either mentally or on paper?

- You may not have enough time for each task.
- You may not have time for unforeseen events like visitors dropping in or an unexpected and urgent visit to the doctor if a family member has been taken ill.

To enable us to complete all our tasks, we must try to save time. How do you think we can save time?

We can save time by-

- making time plans and following them strictly.
- not wasting time.



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- using labour saving equipments.
- doing two or more activities at the same time which is called as dovetailing of activities.

**Dovetailing** is the ability to do two or three activities at the same time.

Let's see how we can incorporate dovetailing in our activities.

You have to

- cook dal, vegetables, wash dishes and wash clothes in a washing machine.
- study, cook dinner, help sister with her homework.

There are two ways of doing these activities-

### Option I:

Activity	Time needed
Cook dal	20 minutes
Cook vegetables	20 minutes
Wash dishes	20 minutes
Wash clothes	20 minutes
<b>Total time taken to do all these activities</b>	<b>80 minutes</b>

### Option II:

Activity	Time needed
Fill water in washing machine, add detergent and start washing	5 minutes
First put water on stove for boiling dal	2 minutes
Clean and wash dal and put it in water for cooking	5 minutes
Wash and cut vegetables and keep for cooking	10 minutes
Wash dishes while cooking and washing of clothes is going on	20 minutes
Wind up kitchen cooking	5 minutes
Wind up washing of clothes and drying	8 minutes
<b>Total time taken to do all these activities</b>	<b>55 minutes</b>

Also, while doing dishes you can listen to music or radio.

Thus by dovetailing activities, we can save time.





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### ACTIVITY 15.2

1. Observe your mother performing her household chores for one full day.  
List all the activities she performs. Suggest to her ways by which she can save her time and is able to watch T.V. Follow her hobbies and find time for her to rest also. Request her to record the number of hours she is able to save by following your suggestions.
2. List four activities that your mother performs in a day and suggest how they can be dovetailed.

Let us now see how we can save energy to do tasks which otherwise might have got left undone.

### 15.3 WAYS OF SAVING ENERGY

During the day, we all do different types of activities which require different amount of energy.

- i) **Heavy activities** like running, jogging and mopping requires large amount of energy.
- ii) **Moderate activities** like sweeping, ironing and cooking require average amount of energy.
- ii) **Light activities** like reading, watching T.V. and listening to music need very little energy.



### ACTIVITY 15.3

1. Make a list of heavy, moderate and light activities performed by every family member in your home. (One example for each type is given. Add more in the table given below).

Family	Heavy	Moderate	Light
Father			
Mother			
You	Cycling	Cooking	Studying





### INTEXT QUESTION 15.2

1. State whether the following statements are True or False. If false, write the correct statement below it.

a. Time and energy are closely related to each other. _____	True/False
b. Time can be utilized more effectively if time-plan is not made. _____	True/False
c. When we combine two or three activities together it is known as dovetailing. _____	True /False
d. While preparing time-plan there is no need to think about number of activities to be performed. _____	True /False

2. A list of some activities is given below. State whether light, moderate or heavy work is required to be done to perform these activities.

- |                       |       |
|-----------------------|-------|
| a. preparing notes    | _____ |
| b. mopping house      | _____ |
| c. diwali cleaning    | _____ |
| d. cycling            | _____ |
| e. listening to radio | _____ |
| f. telling a story    | _____ |

### 15.3.2 Saving energy

Now you must be able to differentiate between different types of activities which require different amount of energy. We cannot escape performing heavy activities. Since everybody needs to perform all kinds of activities, we must learn ways to save energy.

Some of the ways to save our energy, while performing different activities, are:

- i. **Break the task into smaller activities:** Completing one task involves a number of tasks e.g. in lesson about care and maintenance of clothes, you have learnt about washing of clothes. Now to break this task of washing clothes into smaller activities involves separating different types of clothes, cotton-coloured, white etc., dipping clothes in soap/detergent solution for some time; rubbing of soiled areas etc. It also involves taking out soap/



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detergent. Then these are to be squeezed and put out or hung for drying.

### ii. Cut all extra movements and combine activities:

Sometimes we see that some people do more of running around and do less work. For example some guests arrive at home and you have to serve them water. You keep going to the kitchen and bring one glass of water at a time.

Don't you think that a better option is to bring all the glasses in a tray and serve all the guests. You have already learnt about 'dovetailing' in this chapter. It also helps us to save energy. In case you need to hang the clothes for drying on the roof and you have to sweep the roof as well, going to the roof once will save the energy of climbing the stairs twice.

- iii. **Perform activities in a better order:** Perform the activities in a proper order. Some tasks are to be performed before some other activities and some after them. For example, if the dusting is done before the sweeping of the floor, the dust will again settle on the furniture. Dusting will have to be done again. In the example given above regarding hanging clothes and sweeping the roof top, the correct sequence will be to sweep the roof-top first and hang the clothes later.



Fig.15.2




### ACTIVITY 15.4

Given below is an example of cleaning the table after eating food. Sequencing can help to reduce movement.

Sequence of activities to perform the task	How to reduce movements
<ul style="list-style-type: none"> <li>Collecting items</li> <li>Bring few things at a time to the washing area</li> <li>Comeback to collect remaining items</li> <li>Take remaining things to the kitchen</li> <li>You make a number of trips to kitchen</li> </ul>	<ul style="list-style-type: none"> <li>Collect all the plates of the same size and put smaller on top of the bigger ones and keep them on a tray.</li> <li>Put all spoons on the sides of plates</li> <li>Take them to kitchen.</li> <li>You make only 1-2 trips to kitchen</li> </ul>

Based upon this example suggest ways to reduce unnecessary movements in the following tasks:

- a. Serving food
  - b. Winding up the kitchen after cooking meal
  - c. Making bed
- iv. **Be more skilled at your work:** Being skillful in performing the tasks makes it easy to perform. This saves a lot of energy. Rajita is learning to ride a bicycle. Her father is holding the bicycle from behind to provide support and balance. He is constantly supervising her learning so that she is safe and gradually picks up the skill in riding a bicycle.
- v. **Use the correct posture :** Arun is sweeping the floor using a traditional broom with short handle. He needs to bend down, sweep with short strokes which allows him to complete his task without getting tired and spending unnecessary time and energy resulting in adopting a wrong posture for the work and sweeping inefficiently. If he uses long handle broom, he can do the same work without bending and making long strokes which reduces energy and time required to do the job. Similarly, while studying it is important to sit erect on the chair. Long hours spent on studying in a wrong posture may lead to pain in the neck and back.
- 
- Fig.15.4
- vi. **Work at proper heights and keep things near the place of use:** Sitting on the floor and trying to iron clothes cannot be done for a long time, as you have to bend to do the work. You will get tired and most likely your back will start paining. This happens because the ironing place is low and is not comfortable while ironing or cooking a meal or writing an assignment. However, if you are ironing on the table which is too high your arms and shoulders need to be raised to adjust to the height. This too causes unnecessary strain and fatigue.

When the work surfaces are of comfortable height, you save a lot of energy and indirectly save time also as you will be able to work faster. Where do you keep your text books and note books? Yes, near your study table because you can pick them easily while working on the study table. If you had kept them in a different room or a rack far away from your study table every time you need a book, you would have had to get up and bring it, you waste time and energy. So now, you know why we need to keep things near the place of their



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use. It is also important to use things and then put them back in their place. This way you don't waste time in looking for things.

- vii. Use labor-saving devices:** Use of electric labour saving devices helps to save both time and energy. e.g. using mixer grinder to grind spices or a toaster to toast bread. This saves a lot of energy and time.



### ACTIVITY 15.5

Make a list of time and energy saving equipments at your home. Perform any one activity both ways with and without using any device. Note down the difference in time it has taken and how much tired you feel with and without its use.

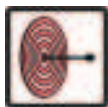


### INTEXT QUESTIONS: 15.3

- List several ways by which the following persons will save energy while doing their work:
  - a child studying in class V
  - a farmer
  - a housekeeper
- Given below in the box are activities required to clean and rearrange the house. List them in the correct order in the space given below.

Cleaning the house	Washing clothes	Making a Stuffed Parantha
dusting , shifting the furniture, clearing webs, mopping, sweeping	brushing, soaking, drying squeezing, hanging	Rolling, making a ball, making dough, preparing; filling, frying

### Correct order of doing

## WHAT YOU HAVE LEARNT

Time and Energy management → making the optimal use of your time and energy

### Time management



Time plan



- finish all the work in time
- find time to rest
- find time to enjoy yourself

### Energy management



Use work simplification procedures like

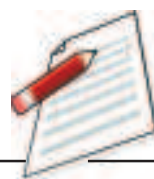
- cutting out extra movements
- developing work skills
- adopting correct postures
- working at proper height
- keeping things within reach
- use of proper equipments and labour saving devices



## TERMINAL EXERCISES

1. What are the advantages of preparing a time-plan?
2. Differentiate between heavy, moderate and light work. Give one example of each.
3. Why is it important to categorize activities of work?
4. What do you understand by the term dovetailing and how does it help to save time? Explain with a suitable example.
5. Your mother has to leave home for two days. All the family members have been assigned different tasks being performed by her. You have been assigned the task of cleaning the house.

Using the knowledge you have gained from this chapter, what approach will you use to save time and energy which your mother may not be using while doing all such tasks. Help your family members also to make a plan to save their time and energy.



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## ANSWERS TO INTEXT QUESTIONS

### 15.1

1.

Activities	Flexible	Inflexible
Dusting and Mopping	F	
Cooking food		I
Stitching Clothes	F	
Going to school		I
Washing clothes	F	
Going to shopping	F	
Preparing lunchbox for husband		I
Going to marriage ceremony	F	
Ironing Clothes	F	
Doing Prayer	F	

2. (a) Listing all the activities  
(b) Grouping flexible and inflexible activities  
(c) Estimating time required of performing each activity  
(d) Balancing

### 15.2

1. a. True  
b. False. Time can be utilized effectively only if time schedule is prepared.  
a. True  
b. False. Considering number of activities to be performed is very important while preparing time schedule.
2. a. Moderate.  
b. Heavy.  
c. Heavy.  
d. Heavy.  
e. Light.  
f. Light



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**15.3**

1. Refer to the text

2.

Correct order of doing		
Cleaning webs shifting furniture, sweeping, dusting, mopping	soaking, brushing, squeezing, hanging, drying	Sifting flour, mixing ingredients, baking, decorating