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## **PREFACE**

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In this course, we shall deal with various aspects of Editing and Photojournalism. The SLM divided into four units. Each unit introduced is thoroughly described, number of examples are included in this SLM:

The block consists of the following units :

- Unit - I : Editing
- Unit - II : Editorial Department
- Unit - III : Editor
- Unit - IV : Camera
- Unit - V : Lenses

The first unit of this block deals with the :

- ◆ Know the definition of the term “Feature”
- ◆ Understand the term Editing
- ◆ Describe the Principles of editing
- ◆ Discuss the elements of editing
- ◆ Examine the Precautionary measures of editing
- ◆ Explain the golden rules to be followed in editing

The second unit of this block deals with the :

- ◆ Know the Structure of editorial department
- ◆ Describe the members of Editorial department
- ◆ Discuss the duties and responsibilities of the Editorial department
- ◆ Know the Organization of Editorial department
- ◆ Examine the qualifications of the members of the Editorial department

The third unit of this block deals with the :

- ◆ Understand the roles of news editor
- ◆ Write about the deputy news editor

- ◆ Describe the term Chief sub-editor
- ◆ Discuss the duties of the Chief sub-editor
- ◆ Examine the responsibilities of Shift in-charge
- ◆ Explain the qualities of a sub-editor

The fourth unit of this block deals with the :

- ◆ Know the history of the term “Camera”
- ◆ Explain the “Types of cameras”
- ◆ Describe the salient features of various types of cameras
- ◆ Explain the parts of cameras
- ◆ Discuss the functions done by different parts of the cameras

The fifth unit of this block deals with the :

- ◆ Understand the term “Lens”
- ◆ Explain the different types of lenses such as Normal, wide, telephoto, zoom, fish eye lens and close up lens
- ◆ Describe the functions of the following: Aperture, focal length, shutter speed, depth of focussing, exposure, exposure meter

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# CONTENTS

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Chapter	Particulars	Page No.
<b><u>UNIT - I</u></b>		
<b>EDITING</b>		
1.0	Learning Objectives	9
1.1	Introduction	9
1.2	Principles of Editing	10
1.3	Elements of Editing	12
1.4	Precautionary Measures and Golden Rules of Editing	13
1.5	Summary	14
1.6	Key Words	14
1.7	Answers to Check Your Progress	14
1.8	Terminal Questions	15
1.9	Further Readings	15
<b><u>UNIT - II</u></b>		
<b>EDITORIAL DEPARTMENT</b>		
2.0	Learning Objectives	19
2.1	Introduction	19
2.2	Structure of Editorial Department	19
2.3	Organization of Editorial Department	22
2.4	Summary	25
2.5	Key Words	25
2.6	Answers to Check Your Progress	25
2.7	Terminal Questions	26
2.8	Further Readings	26

Chapter	Particulars	Page No.
	<b><u>UNIT - III</u></b>	
	<b>EDITOR</b>	
3.0	Learning Objectives	29
3.1	Introduction	29
3.2	Role of News Editor	29
3.3	Deputy News Editor	30
3.4	Chief Sub-Editor	31
3.5	Shift In-Charge	32
3.6	Qualities of a Sub-Editor	33
3.7	Summary	36
3.8	Key Words	36
3.9	Answers to Check Your Progress	36
3.10	Terminal Questions	37
3.11	Further Readings	37
	<b><u>UNIT - IV</u></b>	
	<b>CAMERA</b>	
4.0	Learning Objectives	41
4.1	Introduction	41
4.2	History of Camera	41
4.3	Types of Cameras	43
4.4	Parts of Cameras	45
4.5	Summary	47
4.6	Key Words	47
4.7	Answers to Check Your Progress	48
4.8	Terminal Questions	48
4.9	Further Readings	48
	<b><u>UNIT - V</u></b>	
	<b>LENSES</b>	
5.0	Learning Objectives	51

<b>Chapter</b>	<b>Particulars</b>	<b>Page No.</b>
5.1	Introduction	51
5.2	Different Types of Lenses	51
5.3	Aperture, Focal Length, Shutter Speed, Depth of Focussing, Exposure, Exposure Meter	53
5.4	Summary	57
5.5	Key Words	57
5.6	Answers to Check Your Progress	58
5.7	Terminal Questions	58
5.8	Further Readings	58

**B. A. JOURNALISM AND MASS  
COMMUNICATION**

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**I - YEAR**

**EDITING AND PHOTOJOURNALISM**

## BA - JMC - I YEAR

### EDITING AND PHOTO JOURNALISM

#### UNIT - I

Principles of editing - Elements of editing - Precautionary measures and golden rules of editing

#### UNIT - II

Structure of Editorial department - Organization of editorial department

#### UNIT - III

Role of News editor - Deputy News editor - Chief Sub-editor - Shift in-charge - Qualities of a Sub-editor

#### UNIT - IV

Camera - Types of cameras - Parts of cameras

#### UNIT - V

Different types of lenses: Normal - Wide - Telephoto - Zoom - Fish Eye Lens - Close Up Lens - Aperture - Focal Length - Shutter Speed - Depth of Focusing - Exposure - Exposure Meter

## GENERAL INTRODUCTION

### EDITING AND PHOTO JOURNALISM

Editing is the process of selecting and preparing written, visual, audible, and film media used to convey information through the processes of correction, condensation, organization, and other modifications performed with an intention of producing a correct, consistent, accurate, and complete work.

The editing process often begins with the author's idea for the work itself, continuing as a collaboration between the author and the editor as the work is created. As such, editing is a practice that includes creative skills, human relations, and a precise set of methods.

The title of the top editor at many publications may be known as the editor-in-chief, executive editor, or simply the editor. A frequent and esteemed contributor to a magazine may acquire a title of editor at-large or contributing editor. Mid-level newspaper editors often manage or help manage sections, such as business, sports and features. In U.S. newspapers, the level below the top editor is usually the managing editor.

The editor is like the captain of a ship. He is important because of his being legally and procedurally responsible for publishing or not publishing any news items. A good editor should have high principle and social aim, interest in the progress of the nation, a unique approach and a desire for novelty and a creative ability. The success or failure of a newspaper depends on its editor who is the organizer and the coordinator. He has to act according to the views of people's liking. The editorial need not be written by the editor but the topic has to be decided by him. He should be an expert in writing special articles.

A camera is a device that records images that can be stored directly, transmitted to another location, or both. These images may be still photographs or moving images such as videos or movies. The term camera comes from the word camera obscura (Latin for "dark chamber"), an early mechanism for projecting images. The modern camera evolved from the camera obscura.



**UNIT - I**  

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**EDITING**

## Unit - I : Editing

### STRUCTURE

- 1.0 Learning Objectives
- 1.1. Introduction
- 1.2. Principles of Editing
- 1.3. Elements of Editing
- 1.4. Precautionary Measures and Golden Rules of Editing
- 1.5. Summary
- 1.6. Key Words
- 1.7. Answers to Check Your Progress
- 1.8. Terminal Questions
- 1.9. Further Readings

### 1.0 Learning Objectives

After reading this unit, you will be able to

- ◆ Understand the term Editing
- ◆ Describe the Principles of editing
- ◆ Discuss the elements of editing
- ◆ Examine the Precautionary measures of editing
- ◆ Explain the golden rules to be followed in editing

### 1.1 Introduction

Editing is the process of selecting and preparing written, visual, audible, and film media used to convey information through the processes of correction, condensation, organization, and other modifications performed with an intention of producing a correct, consistent, accurate, and complete work.

The editing process often begins with the author's idea for the work itself, continuing as a collaboration between the author and the editor as the work is created. As such, editing is a practice that includes creative skills, human relations, and a precise set of methods.

There are various editorial positions in publishing. Typically, one finds editorial assistants reporting to the senior-level editorial staff and directors who report to senior executive editors. Senior executive editors are responsible for developing a product to its final release. The smaller the publication, the more these roles overlap.

The title of the top editor at many publications may be known as the editor-in-chief, executive editor, or simply the editor. A frequent and esteemed contributor to a magazine may acquire a title of editor at-large or contributing editor. Mid-level newspaper editors often manage or help manage sections, such as business, sports and features. In U.S. newspapers, the level below the top editor is usually the managing editor.

In the book publishing industry, editors may organize anthologies and other compilations, produce definitive editions of a classic author's works (scholarly editor), and organize and manage contributions to a multi-author book (symposium editor or volume editor). Obtaining manuscripts or recruiting authors is the role of an Acquisitions Editor or a commissioning editor for a publishing house. Finding marketable ideas and presenting them to appropriate authors are the responsibility of a sponsoring editor.

**NOTES**

Copy editors correct spelling, grammar, and align writings to house style. Changes to the publishing industry since the 1980s have resulted in nearly all copy editing of book manuscripts being outsourced to freelance copy editors.

At newspapers and wire services, copy editors write headlines and work on more substantive issues, such as ensuring accuracy, fairness, and taste. In some positions, they design pages and select news stories for inclusion. At U.K. and Australian newspapers, the term is sub-editor. They may choose the layout of the publication and communicate with the printer—a production editor. These editors may have the title of layout or design editor or (more so in the past) makeup editor.

**1.2 Principles of Editing**

Principles of editing are certain rules that we should stick to when making a film, these rules are put there to help we create the best film we can with our storyline and characters. The principles are very important to follow and without them our film would be a pointless video without meaning and would not evoke emotion from the audience.

There are many different principles of editing and some are more important than others but if a film maker was to take all these principles into consideration then we shouldn't go wrong on the editing side.

- (1) Continuity
- (2) Make the edit invisible
- (3) There should be a motive for every edit
- (4) Always deliver a certain message
- (5) Bear audio in mind
- (6) Editing is creating
- (7) Don't overuse techniques or visual effects.

**Seamless editing**

Seamless editing is invisible or classical editing - a style of editing that aims to make the cuts 'invisible' to the audience.

**Continuity editing**

Continuity editing is editing in order to construct the illusion of continuity, e.g. by matching action between cuts.

**Montage**

Montage is the style of editing used by Russian Formalists.

**Jump cutting**

Jump cutting is deliberately not matching action so as to disrupt the illusion of continuity - used by the Russians.

**Parallel editing**

Parallel editing is intercutting between two or more scenes of action.

**Crosscutting**

Crosscutting same as parallel editing - used to cut between parallel actions.

## Transitions

Transitions (e.g. cut, fade, dissolve, wipe) is used to manipulate time: transitions can be used to establish pace, create rhythm or signify the end of a scene or a change in time or space.

## Splicing

Splicing is an analogue editing technique where two strips of film are joined together with tape or glue.

Pudovkin's techniques describe several ways editing can be used to enhance the viewer's understanding of a story, and they're all designed to create a specific reaction from the audience, something he calls relational editing.

## Contrast

Cutting between two different scenarios to highlight the contrast between them. As an example, Pudovkin suggests moving from scenes of poverty to someone really rich to make the difference more apparent.

## Parallelism

Here we can connect two seemingly unrelated scenes by cutting between them and focusing on parallel features. For example if we were shooting a documentary about fish stocks in the Atlantic, we could cut from a trawler being tossed about in the ocean to a family chomping down on some fish'n'chips - in both scenes drawing our attention to the fish; the object that connects them. It creates an association in the viewers' mind.

## Symbolism

Again, more intercutting, we move from our main scene to something which creates a symbolic connection for the audience. Pudovkin (living in Soviet Russia) suggested cutting between shots of striking workers being shot by Tsarist police and scenes of cows being slaughtered: in the audience's mind, they associate the slaughter of the cattle with the slaughter of the workers.

## Simultaneity

This is used lots in Hollywood today, cutting between two simultaneous events as a way of driving up the suspense. If we're making a film about a politician on election night, we might cut between shots of the vote being counted to shots of our main subject preparing to hear the result. This extending of time builds anticipation.

## Leit motif

This 'reiteration of theme' involves repeating a shot or sequence at key moments as a sort of code. Think how Spielberg uses a 'point of view' shot in *Jaws* showing the shark looking up at swimmers. The first time he does it creates a visual code for "the shark's about to attack". Every time we see that underwater POV we know an attack is imminent. He has allowed us to participate in the decoding.

## Check your Progress

1. Define the term Editing.

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2. Write down the Principle of Contrast in Editing.

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## NOTES

NOTES

**1.3. Elements of Editing**

In a newspaper office, reporters are the ones who file stories. They may be given different assignments. These may be on politics, economics, parliament, the stock exchange, sports, courts or markets. The reporter's job is to write the story as quickly as possible with all the facts and figures. In their hurry, they may not be in a position to polish the language. So the first job of a sub editor is to see that the report is in good language and there are no mistakes. There can be spelling mistakes, mistakes in sentence construction, grammar and factual mistakes. If the sub editor finds a portion of the report ambiguous or incorrect or doubtful he has to cross check it with the reporter. The next job of the sub editor is to value add the report. If some background material has to be added, he has to collect it from the library and improve the story. For example, if a report is filed on a train accident killing ten people, the sub editor can improve the story by collecting information about other major train accidents that happened recently. Similarly if a report is filed on the spread of dengue fever in the city, the sub editor should take a backgrounder about the earlier outbreaks of such contagious diseases and the measures taken to check these.

The sub editor then has to find a good heading for the story. The heading should be sharp, attractive, and crisp and convey the spirit of the story. The heading should compel the reader to stop and read the whole story. While writing the heading, a sub editor should know the space available for the story, whether it is one column, two columns or three etc. The heading should fit within that column.

The type, or font, of the letters in each heading differs according to the length and width of the column. A sub editor should also know about the font sizes available. Each paper has its fonts and types. While writing the heading, it should fit into the mood of the story. A sarcastic heading for a hard story will look odd. Similarly a hardline heading will spoil the spirit of a humorous piece. The heading should also be suggestive. It should never be a full sentence.

The sub editor now has to see if there is a possibility for including photographs along with the news item. Pictures or graphs can improve the visual quality of a report. For example, if there is a report about the names of probable ministers in an impending cabinet reshuffle, readers would be expecting their pictures also along with the report. So the sub editor should get their pictures from the photo library. Similarly, if the report is about the change in income tax rates, the sub editor should think of a graph to go along with that. Newspaper production is one area where technological revolution has made sweeping changes. It is interesting to note that though the newspaper is printed on paper, most newspaper offices are becoming paperless places. Computers have replaced paper. Filing of stories, editing and photo editing are all done on a computer.

So it goes without saying that a reporter or editor in the present time should be familiar with the computer. Knowledge of computers is a basic requirement for a newspaper job. Nowadays cartoonists also prefer to draw on the computer. Graphs and charts can be created on a computer easily. Photographers use laptops for editing and filing photos. Editing on the computer has its advantages. Words and sentences can be corrected on the screen. There are a wide range of typefaces available. Pages can be set on the computer. The pages so set can directly go to the press. Regional languages have also developed their own keyboards. Picture editing also involves placing the picture in the correct position in the page. It is part of the page layout. Usually in the front page, only very important news pictures will find a place. Like in the case of news reports, pictures can also be classified into various categories, like, news pictures, human interest pictures, sports pictures etc. Most papers have picture editors who select the pictures to be published. But it is the news editor who finally decides on the number of pictures to be carried in each page.

**Check your Progress**

3. What is the first job of the Sub-editor?

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.....

4. What are the advantages of editing in computer?

NOTES

**1.4 Precautionary Measures and Golden Rules of Editing**

Copy editors can edit any kind of copy. They read through endless pages of newsletters, marketing materials, Web material, academic works, books, newspapers and magazines with a fine-toothed comb. They must address issues of language mechanics, grammar, spelling, punctuation, style and, just as importantly, fact checking. They also must identify problems and correct them for clarity and accuracy without reworking the author's original style or ideas to the point of inauthenticity.

**Style**

Vigilant copy editors do well by keeping themselves acquainted with the most commonly used style guides: MLA (Modern Language Association), AP (Associated Press) and the Chicago Manual of Style. The style manuals publish the most up-to-date information on commonly used (and confusing) words, their proper usage, as well as punctuation and information on the writing discipline. Usage manuals and dictionaries are also an important part of the editing repertoire. Copy editors also must be familiar with the specific style guide of the publication for which they are working, which may cover local or in-house issues not included in a general style guide. The in-house style guide may also have rules that contradict traditional style guides, and the copy editor must get to know them well. A copy editor must be a master of her in-house style. Because the writers and authors whose work they edit may write for a spectrum of publications, they may confuse or apply a writing convention that's inconsistent with the publication for which the editor works.

**Punctuation**

Copy editors must tackle the most difficult punctuation issues to ensure clarity and convey the emotion intended by the writer through the text. The University of Capetown says the comma and apostrophe are the most confusing punctuation marks when writing and are often used incorrectly.

**Spelling**

The advent of the computer spell-check function has made this part of a copy editor's job somewhat easier. But the copy editor still must be vigilant, as not all words are included in computer dictionary. A computer spell-checker also won't catch if a correctly spelled word has been used in the wrong way (led vs. lead or rein vs. rain).

**Grammar and Syntax**

Copy editors must not only know the principles of grammar and syntax, but also how to convey them to the author in a tactful and professional manner. They must meet tone and sentence structure guidelines without affecting the author's message or their relationship.

**Checking the Facts**

Just as they must preserve a writer's integrity and style, the copy editor must also protect the integrity and reputation of the publication, which he helps do by double-checking the facts, statistics and quotes of an article to reduce the risk of embarrassing and potentially libelous mistakes. Fact-checking may include contacting the author's sources; making sure the writer cites the source of information and gives credit where it's due; and researching the facts online or from texts.

**NOTES**

**Brevity and Concise Writing**

A piece of writing must convey important information clearly and concisely. The copy editor must weed out unnecessary words and make sure the piece is free of the journalist's opinions or flowery language, keeping the article as tight and factual as possible.

**Check your Progress**

5. How does the edited copy of news story should be?

.....  
.....

**1.5 Summary**

Editing is the process of selecting and preparing written, visual, audible, and film media used to convey information through the processes of correction, condensation, organization, and other modifications performed with an intention of producing a correct, consistent, accurate, and complete work.

The reporter's job is to write the story as quickly as possible with all the facts and figures. In their hurry, they may not be in a position to polish the language. So the first job of a sub editor is to see that the report is in good language and there are no mistakes. There can be spelling mistakes, mistakes in sentence construction, grammar and factual mistakes. If the sub editor finds a portion of the report ambiguous or incorrect or doubtful he has to cross check it with the reporter.

Copy editors can edit any kind of copy. They read through endless pages of newsletters, marketing materials, Web material, academic works, books, newspapers and magazines with a fine-toothed comb. They must address issues of language mechanics, grammar, spelling, punctuation, style and, just as importantly, fact checking. They also must identify problems and correct them for clarity and accuracy without reworking the author's original style or ideas to the point of inauthenticity.

**1.6 Key Words**

1. **Seamless editing** : Seamless editing is invisible or classical editing - a style of editing that aims to make the cuts 'invisible' to the audience.
2. **Continuity editing** : Continuity editing is editing in order to construct the illusion of continuity, e.g. by matching action between cuts.
3. **Montage** : Montage is the style of editing used by Russian Formalists.
4. **Jump cutting** : Jump cutting is deliberately not matching action so as to disrupt the illusion of continuity - used by the Russians.
5. **Parallel editing** : Parallel editing is intercutting between two or more scenes of action.

**1.7. Answers to Check Your Progress**

1. Editing is the process of selecting and preparing written, visual, audible, and film media used to convey information through the processes of correction, condensation, organization, and other modifications performed with an intention of producing a correct, consistent, accurate, and complete work.
2. Cutting between two different scenarios to highlight the contrast between them. As an example, Pudovkin suggests moving from scenes of poverty to someone really rich to make the difference more apparent.
3. The first job of a sub editor is to see that the report is in good language and there are no mistakes. There can be spelling mistakes, mistakes in sentence construction, grammar and factual mistakes.

4. Editing on the computer has its advantages. Words and sentences can be corrected on the screen. There are a wide range of typefaces available. Pages can be set on the computer. The pages so set can directly go to the press. Regional languages have also developed their own keyboards. Picture editing also involves placing the picture in the correct position in the page.
5. A piece of writing must convey important information clearly and concisely. The copy editor must weed out unnecessary words and make sure the piece is free of the journalist's opinions or flowery language, keeping the article as tight and factual as possible.

**NOTES**

**1.8. Terminal Questions**

1. Write an essay on "Editing".
2. Describe the Principles of editing.
3. Discuss the elements of editing.
4. Examine the Precautionary measures of editing.
5. Explain the golden rules to be followed in editing.

**1.9. Further Readings**

1. Mass Communication; Keval J.Kumar
2. The News Paper - An international history; Anthony smith
3. Mass communication and journalism; D.S.Mehta in India.



**UNIT - II**

**EDITORIAL DEPARTMENT**

## Unit - II : Editorial Department

### STRUCTURE

- 2.0. Learning Objectives
- 2.1. Introduction
- 2.2. Structure of Editorial Department
- 2.3. Organization of Editorial Department
- 2.4. Summary
- 2.5. Key Words
- 2.6. Answers to Check Your Progress
- 2.7. Terminal Questions
- 2.8. Further Readings

### 2.0. Learning Objectives

After reading this unit, you will be able to :

- ◆ Know the Structure of editorial department
- ◆ Describe the members of Editorial department
- ◆ Discuss the duties and responsibilities of the Editorial department
- ◆ Know the Organization of Editorial department
- ◆ Examine the qualifications of the members of the Editorial department

### 2.1. Introduction

There are various editorial positions in publishing. Typically, one finds editorial assistants reporting to the senior-level editorial staff and directors who report to senior executive editors. Senior executive editors are responsible for developing a product to its final release. The smaller the publication, the more these roles overlap.

Copy editors correct spelling, grammar, and align writings to house style. Changes to the publishing industry since the 1980s have resulted in nearly all copy editing of book manuscripts being outsourced to freelance copy editors.

At newspapers and wire services, copy editors write headlines and work on more substantive issues, such as ensuring accuracy, fairness, and taste. In some positions, they design pages and select news stories for inclusion. At U.K. and Australian newspapers, the term is sub-editor. They may choose the layout of the publication and communicate with the printer – a production editor. These editors may have the title of layout or design editor or (more so in the past) makeup editor.

### 2.2. Structure of Editorial Department

The editorial board is a group of people, usually at a publication, who dictate the tone and direction the publication's editorial policy will take. At a newspaper, the editorial board usually consists of the editorial page editor, and editorial writers. Some newspapers include other personnel as well.

Editorial boards for magazines may include experts in the subject area that the magazine focuses on, and larger magazines may have several editorial boards grouped by subject. An executive editorial board may oversee these subject boards, and usually includes the executive editor and representatives from the subject focus boards. Book publishers may also make use of editorial boards, using subject experts to select manuscripts.

## NOTES

Editorial boards meet on a regular basis to discuss the latest news and opinion trends and discuss what the newspaper should say on a range of issues. They will then decide who will write what editorials and for what day. When such an editorial appears in a newspaper, it is considered the institutional opinion of that newspaper.

At some newspapers, the editorial board will also review wire service and syndicated columns for inclusion on the editorial page or opinion page. Some newspapers, particularly small ones, do not have an editorial board, choosing instead to rely on the judgment of a single editorial page editor.

Book and magazine publishers will often use their editorial boards to review or select manuscripts or articles, and sometimes to check facts. The editorial board controls the endorsement process for the newspaper during campaigns. Candidates will come before the editorial board for a group interview which can last for several hours, depending on the office. During the meeting, the board asks the candidate a range of questions on various issues and uses the meeting as a way to judge which candidate to endorse.

Candidates may routinely meet with editorial board early in their campaigns in order to provide their opinions to the newspaper's decision makers. This is a way to steer media coverage their way and to influence the final endorsement.

### Responsibilities of the Editorial Board:

- ◆ Coordinate the selection-and-approval process of the Editor-In-Chief for each mandate;
- ◆ Oversee compliance of the editors' duties and replace them if their tasks are not being adequately performed;
- ◆ Deliberate on RC&F editorial policy, including: changes in mission, scope and focus, target public, visual identity, editorial process and periodicity;
- ◆ Serve as ombudsmen through a designated spokesperson;
- ◆ Submit proposal of rules changing to the EAC council.

### Editor-In-Chief

The Editor-In-Chief coordinates the editorial process, aiming to enhance the development of submissions to RC&F, authors and reviewers. The selection of the Editor-In-Chief should consider factors like: scientific leadership, community acknowledgement, activity history as manuscript reviewer and author, and project for the journal.

- ◆ The Editor-In-Chief works on a two-year mandate, with possible renewals.
- ◆ The Editor-In-Chief is not allowed to publish any papers, notes or communications in RC&F.

### The Editor-In-Chief is responsible for:

- ◆ Coordinating the team involved in the journal, including Associate Editors, reviewers and staff;
- ◆ Desk reviewing submissions directly or by a Scientific Editorial Committee member;
- ◆ Recommending to include and/or replace Scientific Editorial Committee members;
- ◆ Selecting, assessing and replacing Ad-Hoc Consultants;
- ◆ Indicating reviewers for submitted manuscripts;
- ◆ Recommending changes in submitted contents, although this responsibility can occasionally be delegated to a Scientific Editorial Committee member or Associate Editor;
- ◆ Informing the corresponding authors about the editorial decision at the end of the assessment process.

**The Editor-In-Chief should also aim to:**

- ◆ Permanent improvement of the journal and editorial management processes;
- ◆ Enhance the speed of the editorial process;
- ◆ Maintain records of Ad-Hoc Consultants' performance assessments, especially regarding aspects related to the quality of opinions and deadlines for issuing opinions;
- ◆ Advice to authors about everything expected from them;
- ◆ Oversee compliance with deadlines for issuing opinions and releasing papers;
- ◆ Mediate the relationship between reviewers and authors;
- ◆ Designate guest editors (external to RC&F) to edit papers by members of the EAC council, RC&F Editorial Board and Scientific Editorial Committee submitted to the journal.

**Associate Editors**

The editorial structure into research areas demands specific knowledge and specialties. The following research areas are identified:

- ◆ Controllership and management accounting;
- ◆ Accounting for external users;;
- ◆ Markets: financial, credit and capital;
- ◆ Education and research in accounting, finance and actuarial sciences; and
- ◆ Actuarial sciences.

Therefore, the editorial structure includes five Associate Editors who may assist the Editor-In-Chief regarding the editorial process within each of these areas. The selection process of the associated editors should consider factors like: community acknowledgement and academic history as reviewers and authors within the designated research area.

The Associate Editors work on a two-year mandate, with possible renewals. If necessary and depending on the Editor-In-Chief's judgment, RC&F may include Associate Editors who are not linked with specific journal sections, due to the amount of manuscripts under revision and considering these editors' specialization areas.

The Editor-In-Chief indicates the body of Associate Editors for the approval of the Editorial Board. They work on a two-year mandate, independently of the Editor-In-Chief's mandate, with possible renewals. Their main duties include:

- ◆ Supporting the Editor-In-Chief in the identification and invitation of Ad-Hoc consultants for assessing manuscripts;
- ◆ Supporting the Editor-In-Chief in the assessment of objective aspects of the submission assessment process;
- ◆ Managing the manuscript reviewing process either in Portuguese, English, Spanish;
- ◆ Managing the adaptation process of the manuscripts to the journal standards;
- ◆ Managing the flow of manuscripts through the editorial process, assuring compliance with each phase deadline;
- ◆ Managing the journal editing processes.

**Scientific Editorial Committee**

The RC&F Scientific Editorial Committee is a multi-institutional board, including experts widely acknowledged in the Brazilian and/or international academic communities, distributed in terms of their

**NOTES**

**NOTES**

areas of expertise and geographical origins, covering different Brazilian regions and other countries and a broad range of scientific fields in the area.

The Scientific Editorial Board members work on a two-year mandate, with possible renewals. The RC&F Scientific Editorial Board comprises researchers, chosen by the Editor-In-Chief, who serve as advisors for:

- ◆ Desk review of manuscripts submitted for publication;
- ◆ Selection of reviewers;
- ◆ Other decisions related to the scientific aspects of the editorial process, whenever requested by one of the Editors.

**Ad-Hoc Scientific Consultants**

The RC&F Ad-Hoc Scientific Consultants are renowned specialists in the Brazilian and/or international academic communities, distributed in terms of their areas of expertise and geographical origins, covering different Brazilian regions and other countries and a broad range of scientific fields in the area. The RC&F Ad-Hoc Scientific Consultants are chosen by the Editor-In-Chief.

**Check your Progress**

1. Define Editorial board.

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2. Write down the structure of the Editorial board in newspapers.

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3. Write down the structure of the Editorial board in magazines.

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**2.3. Organization of Editorial Department**

The editorial department actually has two sides, and usually these are separately responsible to the publisher. They are "news" and "editorial". The news side is usually under the supervision of a managing or executive editor. The editorial page crew consists of editorial writers and is directed by a "chief editorial writer," and "editor", or "editor-in-chief", or sometimes an "editorial page editor".

**The News Desk**

All stories destined for the newspaper, whether they come from the typewriters of reporters and rewrite men or from the several wire services, teleprinters and other sources-require editing. This duty falls chiefly on the copyreader who sits on the horseshoe shape table called the desk. The city editor and other editors read all the copy.

In the old days there was what was called the universal desk system under which the desk editor handled everything that came in. Nowadays, even in small dailies, the work is usually divided between the city desk and the teleprinter's desk. Between them they edit the copy and write headlines for all spot news-everything except sports and financial coverage.

The independent or separate desk system in operation on a large scale allocates the news of different readers, each of whom has his own team of copyreaders. The editors with a crew of men edit the news designated as cable, teleprinter, city beats, society, business, finance, sports and reserve news. In larger newspapers there is a separate desk for international news.

Where the system is the universal desk or separate desk, the process of editing runs along similar lines, in which case the story goes to a 'slot man' who sits at the head but on the inside rim of the horseshoe desk.

This editor, called the news editor, glances through the copy quickly, gauges its relative importance, determines the space it should occupy-200 words or a half or three-quarters of a column- and decides the type on the copy and passes it on to one of his copyreaders who sits on the rim of the horseshoe.

This copyreader, also called the desk man, rim man or 'mechanic' of the editorial room, is the anonymous and frequently unappreciated collaborator of the writer. Newsmen or correspondents who see his blue pencil flay their cherished prose; have no words of praise for him. Neil Mac Neil in his book "Without Fear or Favour" indicates the newsman's true worth. He says that the reputation of many a star reporter rests partly on the work done by rim man in the green eye shade who comes out the reporter's cliches and trims them, to pieces.

Only where the copyreader happens to be a former reporter, driven to the horseshoe desk by the dint of seniority, does the correspondent feel encouraged. Copyreaders are generally paid higher than reporters. The work holds out attractions for men with editorial ability. The chances for advancement are good as the copy desk is a recruiting ground for office executives. The work is mainly two-fold: the editing of the story and the construction of a suitable headline for it.

The amount, of this work varies with each paper and even at different timings on each day. On a big desk the copyreader may edit from 10 to 15 columns. His editorial function is to bring news that comes to him up to par. As he picks up the copy and reads; he forms general conclusions about the story in hand. Has it news value? If it hasn't, then it is not worth printing.

- ◆ Is it accurate and fair? Inaccurate and uncertain items are no; wanted by a good newspaper. If at all he selects anything which is dubious or doubtful, he takes the responsibility for published inaccuracies.
- ◆ Is it libellous? An item that contains words or implications that may get the paper into legal difficulties has to have the danger spots eliminated.
- ◆ Is it complete? Is the treatment fragmentary and partial? Will it lead the reader up in the air? If so, its details must be rounded, with or without the help of background materials.

If the item meets these qualifications, the copyreader starts his editing to fit his paper's requirements. These requirements may vary but, as a general rule, we take it that the paper requires.

#### (i) Clearness:

The reader must have no difficulty in finding out what the story means.

#### (ii) Condensation:

The copyreader must cut and condense each story to the length assigned to it. Condensation applies to words and not to ideas. Verbal frills may go but the meaning must remain. Condensation is done by substituting short words for long ones-even smaller words for bigger ones; for example, 'try' in place of 'endeavour'.

#### (iii) Arrangement:

The copyreader's notion of arrangement differs from that of the literary man. It is based on the convention of the Mead' which puts the important parts first and the least important parts last. It also makes for the sequence of ideas.

#### (iv) Style:

The copyreader's style has nothing to do with literary quality. It refers to particular rules which his paper has laid down for spelling, punctuation, capitalization, abbreviation, use of numerals and the like.

The copyreader edits his copy along the foregoing principles by means of a set of standardized copy reading symbols, which tell the typesetter what section to omit, when to transpose, when to spell a word

## NOTES

**NOTES**

out and when to contract. He then proceeds to check the copy paragraphs and if the story has sufficient length, supplies subheads.

The subhead is a line to be printed in a type which differs from the body of the story/article and is used to break up the too solid look of a long column. The best rule is to paragraph for ideas and not for mechanical reasons. Copyreaders try to avoid being mechanical when it comes to the subhead.

The look of the column demands a sub-head every two sticks or a stick and a half at least, or say about every 300 or 350 words. The copyreader aims to have his subheads make divisions in the subject, each division meant for something new, and not merely for repeating what has been already told.

The copyreader usually faces three problems:

- (i) to tighten up the story and thereby speed up the action;
- (ii) to cut out the excess matter and bromides; and
- (iii) to reduce the story so that a telegraphic editor could splash it in a page-one box if he chose to handle it that way.

**The Art of the Headline**

Although the copyreader works anonymously, when he constructs a good headline, he feels the pleasure of a creative artist. With short words and in short compass, he can tell a whole story. He knows that the headline must fulfill two requirements-it must attract attention to the story; it must announce the story's main facts. He sees to it that each headline he concocts does both.

The editorial department is responsible for pretty much everything that appears in your publication that isn't advertising. Its main goal is to report the news accurately and in a reader-friendly way.

The amount of news that appears in your newspaper usually has very little to do with what's newsworthy that day or week. Instead, it's typically based on a ratio of 60% advertising to 40% editorial.

Most newspapers simply add up all the advertising space that's been sold, determine what size newspaper would be needed just to accommodate the ads, and then determine how many pages editorial would need to supply to make up 40% of the newspaper. The editorial department then writes (or cuts) more copy to fit within that ratio.

Significantly less editorial than this and the publication will look too full of ads and start resembling a shopper publication. Any more editorial and there may not be enough advertising revenue to make a profit.

In fact, some in the business say this ratio of advertising to editorial is an easy way to determine how well your competition is doing. Over the years, the advertising and editorial departments have been very separate entities, each contributing different elements to the final product, but not spending a lot of time with each other. Much of this is based on the fact that advertisers often put pressure on advertising representatives in an effort to influence the editorial content.

For example, in the future we may encounter local businesses who, instead of purchasing advertising, or in addition to purchasing advertising, may ask us to make arrangements for an editorial story to run about their business. In fact, some advertisers, because of the money they spend with a particular newspaper, actually expect that a story about them be run with the paper from time to time.

Although our editorial department may actually be willing to run a story of newsworthiness on one of our advertisers, most won't write a story simply because the advertiser is spending a lot of money. In fact, our success as a salesperson hinges on the fact that our writers won't compromise the editorial integrity of the newspaper simply to make an advertiser happy. First and foremost, their job is to put out a quality product every day or week that people will read.

It's safe to assume that countless advertising salespeople have approached our editorial staff in the past to try to get a story in about one of their advertisers. So be extremely careful in both accepting anything from our advertisers related to the editorial side as well as approaching the editorial department about running a story on our advertisers.

**NOTES**

When approached by an advertiser asking for help getting a story in our publication, explain to the advertiser that although their advertising revenue may pay the editorial staff's salaries, they have their own criteria regarding what is newsworthy. Don't give the advertiser any assurances that the story will get in, and certainly don't let them make the sale of the ad contingent upon a story being published. If we feel we have an advertiser with a newsworthy story about his business, ask our manager for guidance on how to introduce this to the editorial staff.

**Check your Progress**

4. What are the two sides of Editorial board?

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5. What are the other names for copy reader?

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**2.4. Summary**

The editorial board is a group of people, usually at a publication, who dictate the tone and direction the publication's editorial policy will take. At a newspaper, the editorial board usually consists of the editorial page editor, and editorial writers. Some newspapers include other personnel as well.

Editorial boards for magazines may include experts in the subject area that the magazine focuses on, and larger magazines may have several editorial boards grouped by subject. An executive editorial board may oversee these subject boards, and usually includes the executive editor and representatives from the subject focus boards. Book publishers may also make use of editorial boards, using subject experts to select manuscripts.

Editorial boards meet on a regular basis to discuss the latest news and opinion trends and discuss what the newspaper should say on a range of issues. They will then decide who will write what editorials and for what day. When such an editorial appears in a newspaper, it is considered the institutional opinion of that newspaper.

**2.5. Key Words**

1. **Editorial Board** : The editorial board is a group of people, usually at a publication, who dictate the tone and direction the publication's editorial policy will take.

2. **Editor-In-Chief** : The Editor-In-Chief coordinates the editorial process, aiming to enhance the development of submissions to RC&F, authors and reviewers.

3. **Sub-head** : The subhead is a line to be printed in a type which differs from the body of the story/article and is used to break up the too solid look of a long column.

4. **Copy editors** : Copy editors correct spelling, grammar, and align writings to house style.

5. **Desk system** : Separate desk system in operation on a large scale allocates the news of different readers, each of whom has his own team of copyreaders.

**2.6. Answers to Check Your Progress**

1. The editorial board is a group of people, usually at a publication, who dictate the tone and direction the publication's editorial policy will take.

2. At a newspaper, the editorial board usually consists of the editorial page editor, and editorial writers. Some newspapers include other personnel as well.



**NOTES**

3. Editorial boards for magazines may include experts in the subject area that the magazine focuses on, and larger magazines may have several editorial boards grouped by subject. An executive editorial board may oversee these subject boards, and usually includes the executive editor and representatives from the subject focus boards.
4. The editorial department actually has two sides, and usually these are separately responsible to the publisher. They are "news" and "editorial". The news side is usually under the supervision of a managing or executive editor. The editorial page crew consists of editorial writers and is directed by a "chief editorial writer," and "editor", or "editor-in-chief", or sometimes an "editorial page editor".
5. Copyreader is also called the desk man, rim man or 'mechanic' of the editorial room, is the anonymous and frequently unappreciated collaborator of the writer. Newsmen or correspondents who see his blue pencil flay their cherished prose; have no words of praise for him.

**2.7. Terminal Questions**

1. Explain the Structure of editorial department.
2. Describe the members of Editorial department.
3. Discuss the duties and responsibilities of the Editorial department.
4. Describe the Organization of Editorial department.
5. Examine the qualifications of the members of the Editorial department.

**2.8. Further Readings**

1. Mass Communication; Keval J.Kumar
2. The News Paper - An international history; Anthony smith
3. Mass communication and journalism; D.S.Mehta in India.

## **UNIT - III**

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### **EDITOR**

## Unit - III : Editor

### STRUCTURE

- 3.0. Learning Objectives
- 3.1. Introduction
- 3.2. Role of News Editor
- 3.3. Deputy News Editor
- 3.4. Chief Sub-Editor
- 3.5. Shift In-Charge
- 3.6. Qualities of a Sub-Editor
- 3.7. Summary
- 3.8. Key Words
- 3.9. Answers to Check Your Progress
- 3.10. Terminal Questions
- 3.11. Further Readings

### 3.0. Learning Objectives

After reading this unit, you will be able to

- ◆ Understand the roles of news editor
- ◆ Write about the deputy news editor
- ◆ Describe the term Chief sub-editor
- ◆ Discuss the duties of the Chief sub-editor
- ◆ Examine the responsibilities of Shift in-charge
- ◆ Explain the qualities of a sub-editor

### 3.1. Introduction

The editor is like the captain of a ship. He is important because of his being legally and procedurally responsible for publishing or not publishing any news items. A good editor should have high principle and social aim, interest in the progress of the nation, a unique approach and a desire for novelty and a creative ability. The success or failure of a newspaper depends on its editor who is the organizer and the coordinator. He has to act according to the views of people's liking. The editorial need not be written by the editor but the topic has to be decided by him. He should be an expert in writing special articles.

### 3.2. Role of News Editor

Newspaper editors are responsible for determining the content we see in our newspaper on a daily or weekly basis. Editors evaluate what news may be occurring in their area of responsibility and ensure it is covered thoroughly. Editors typically need a four-year college degree in a field such as English or journalism and may start as reporters before moving into the editorial ranks.

A newspaper editor decides what stories will be covered. For example, the sports editor may determine that a particular local high school game is of interest to readers and will dispatch a reporter to cover the event. The reporter is responsible for writing the story and submitting it for editorial approval.

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**Story Selection**

A newspaper editor decides what stories will be covered. For example, the sports editor may determine that a particular local high school game is of interest to readers and will dispatch a reporter to cover the event. The reporter is responsible for writing the story and submitting it for editorial approval.

**Layout**

The editor will determine where each article will be placed in his / her section of the paper. Stories that the editor believes will have the most interest to readers will be placed on the front page of the section. The most important stories are placed on the top portion of the page, often referred to as "above the fold" since it is above where the paper is folded in half when delivered.

**Photo Selection**

The editor determines if photos should accompany articles and may assign a photographer to accompany a reporter to cover the story. The editor will review the finished photos to determine which ones will be included in the paper, where they will be placed and what size they will be.

**Managerial Duties**

Editors often perform managerial functions at a newspaper. A managing editor supervises the editorial work of all sections of the newspaper and typically has the final say in what is printed. Editors also supervise the reporters who work under them and may conduct performance reviews. Editors determine the work schedules of their reporters as well as which assignments reporters will cover.

**Miscellaneous Duties**

Editors may perform a variety of duties that aren't strictly editorial. Some editors assist in writing headlines for stories, while others known as copy editors review stories for factual and grammatical accuracy. Editors may also write stories on occasion or may write opinion articles known as op-ed pieces. Some editors write a regular column for their section of the paper.

**Check your Progress**

- 1. Who is responsible for determining the content of the news story?

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- 2. Write down the managerial functions of a news editor.

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**3.3. Deputy News Editor**

- ◆ Analyze and capitalize various attributes and requirements of print and digital media to strengthen editor's position.
- ◆ Manage and produce news to present information with accuracy, flow, and within time frame. Design innovative and unique solutions to optimize routine news coverage.
- ◆ Monitor and use multimedia, nonlinear and alternative storytelling strategies to widen readership base.
- ◆ Manage and edit contents to cater to readers' requirement and provide detailed information for same.
- ◆ Work within creative environment to respond to various competing priorities.

**NOTES**

- ◆ Prepare work schedule and deadlines and encourage team members to meet targets to facilitate timely publication.
- ◆ Design and implement coverage strategies to facilitate wide coverage of all sorts of issues and news.
- ◆ Provide training to news reporters on how to select news for existing readership and gain new readers.
- ◆ Coordinate with colleagues in the newsroom and other departments to define priorities for same.
- ◆ Coordinate with internal and external customer service to obtain optimum workflow.
- ◆ Evaluate all new for authenticity and check with sources to ensure correctness of published article to avoid conflicts.
- ◆ Collaborate with reporters, editors and photojournalists and anchors to facilitate efficient news coverage to strengthen company's position in media market.
- ◆ Administer technology backup such as computer graphics, stingers, maps, and editor's software to make news presentation attractive for readers.
- ◆ Manage and edit daily news, special news stories and periodical items with help of video editing tools to facilitate video telecast.
- ◆ Monitor all feeds from news bureaus and other agencies for editing and further publication.
- ◆ Provide assignments to freelance photographers and prepare reports for current news trends new readers and sustain existing readers.

**Check your progress**

3. List down any two functions of deputy news editor.

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**3.4. Chief Sub-Editor**

Sub-editors in charge of a variety of activities are usually not known outside. State editor, city editor, news editor, sundry editors and section editors structure the news items carefully. A Sub-editor is described as a creative artist and compared to the foundation stone just as the editor to the tower top. Sub-editors provide attraction and taste for their newspapers leading to public appreciation. The work of the sub-editor is undoubtedly the basis for a newspaper.

Copy editing also written as copy-editing or copyediting, and sometimes abbreviated to ce) is the work that an editor does to improve the formatting, style, and accuracy of text. Unlike general editing, copy editing might not involve changing the substance of the text. Copy refers to written or typewritten text for typesetting, printing, or publication. Copy editing is done before both typesetting and proofreading, the latter of which is the last step in the editorial cycle.

In the U.S. and Canada, an editor who does this work is called a copy editor. An organization's highest-ranking copy editor, or the supervising editor of a group of copy editors, may be known as the copy chief, copy desk chief, or news editor. In book publishing in the United Kingdom and other parts of the world that follow British nomenclature, the term copy editor is used, but in newspaper and magazine publishing, the term is sub-editor (or the unhyphenated subeditor), commonly shortened to sub. The senior sub-editor on a title is frequently called the chief sub-editor. As the "sub" prefix suggests, British copy editors typically have less authority than regular editors.

The qualities of the Sub-Editors are as followings

- ◆ Should be a very patient person.
- ◆ Should not be hot tempered.
- ◆ Must be hardworking.

**NOTES**

- ◆ Should not be in a stress mood.
- ◆ Must always love his work.

Sub-editor is a person who corrects and checks articles in a newspaper before they are printed. A big newspaper or magazine would employ several types of editors. For example, there may be a news editor, a features editor, a sports editor, and possibly several sub editors. An executive editor is one at a senior position, and may thus oversee the work of other editors, who may deal with specific areas such as international news, local news, feature stories, or sports. However, he/she has the final word on which stories are published and the perspective taken on them. They also have to ensure that the editorial stance of the material is in keeping with that of the publication. In most organizations, the managing editor sees to the daily functioning of the news department, and news/feature/sports editors assign work and the copy/sub editors edit a reporter/writers material for accuracy, content, grammar, and style. Editor in chief responsibilities include hiring writers/reporters, and is usually the one heading the department.

An editor at a magazine or a features editor also oversees the layout and appearance of articles, which may include duties such as overseeing artwork, design, photography and sometimes attending photo-shoots. They may occasionally have to negotiate payments with freelance writers and network at industry events.

Work activities vary and can depend on the extent to which production and layout work falls within a sub-editor's shelve. They are responsible for ensuring that the tone, style and layout of final copy matches the publication's house style and suits the target market. The work involves processing all the copy before it is published to ensure that it is grammatically and factually correct and reads well. Sub-editors also lay out the story on the page, write headings and may be involved with overall page design.

A sub editor, thus, is responsible for giving the finishing touch to the to-be-published material. He turns the dry dull facts or information into interesting and readable one. He dresses the news and the information that it contains to make it sweet and attractive to the readers. He guards the newspaper world against the charges of libel, misrepresentation, silly grammatical and spelling errors and more. He ensures accountability, responsibility and professionalism in the organization and furnishes accurate and objective news. He is well educated, talented, skilled and creative. He does a little of writing himself although he knows all the techniques and methods of writing. He has great command over language and is very diplomatic.

**Check your Progress**

4. Describe the Sub-editor.

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**3.5. Shift In-Charge**

- ◆ Deliver excellent customer service and customer management, at all times
- ◆ Serve and present news stories, quickly and efficiently, meeting our standards
- ◆ Keep up to date with current promotions and new products for news articles
- ◆ Speak to customers to ensure that they are satisfied with their news stories
- ◆ Manage the opening and closing of the news
- ◆ Be responsible for financial issues
- ◆ Monitor and manage maintenance issues
- ◆ Manage office administration as instructed by the Chief editor
- ◆ Manage and maintain correct staffing levels
- ◆ Identify and take an active role in the recruitment of new staff members

- ◆ Deal with readers complaints in a professional manner
- ◆ Deal with deliveries
- ◆ Maintain accurate stock control, including ordering, delivery checks, line checks and wastage
- ◆ Assist in achieving all financial targets set
- ◆ Maintain personal knowledge by completing in-house training, attending courses and completing workbooks
- ◆ Always adhere to all newspaper policies and procedures and licensing laws
- ◆ Be involved and contribute at team meetings
- ◆ Carry out instructions given by the chief editor

## NOTES

### 3.6. Qualities of A Sub-Editor

#### News Sense

News sense is the basic quality of newsmen. Every reporter has to have news sense or nose for news to distinguish news from non-news. He should be able to compare various news values and decide where to begin his story and should not miss important details. News sense is essential for a sub-editor also. He is the first reader of a reporter's copy and if the reporter has made a mistake he has to correct it. A bad copy may have the *most important element of the story buried in the fourth paragraph*. It will be left to the sub-editor's nose for news to bring that to the first paragraph.

#### Clarity

A reporter should have clarity of mind and expression. A person who is confused himself cannot tell a story to others. Only clarity of mind is not enough unless it is accompanied by clarity of expression. Without clarity of expression clarity of mind has no meaning. Sub-editor is the judge of clarity of the copy a good subeditor will never allow a copy escape him unless the meaning is crystal clear. He has every right to make life miserable for a reporter who is not clear and does not write in simple language.

#### Objectivity

Reporter and sub-editor should aim at objectivity while dealing with a story. They should not allow their personal bias or ideas to creep into a story. They should not take sides but try to cover all the different viewpoints to achieve balance in the story.

#### Accuracy

A reporter should strive for accuracy. He should check and re-check his facts till he is satisfied that he has them accurate. In this respect he should not take any chance as accuracy is directly proportional to the credibility of a reporter and his newspaper. The role of a sub-editor is to check for accuracy. It is particularly important when background is involved. In the case of dates and names the reporter may rely on his memory but the sub-editor must check them from reference material available in the newspaper office. When there is a doubt he should leave it out – this is the golden rule of journalism. It is better not to say a thing than to say it wrong.

#### Alertness

A reporter should always be alert while dealing with his subjects. Many major news breaks in the past were possible because of alertness of reporters. Scoops don't walk into newspaper offices – alert reporters catch them in air and pursue. A sub-editor has to be alert while working on news-desk. Lack of alertness of a sub-editor can be seen by readers in the morning for he will be leaving or introducing mistakes for everybody to see.

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**Speed**

In today's world speed matters are everywhere. A person who cannot work fast cannot be a good reporter. While maintaining all other desirable qualities a reporter should strive to work faster. He should think fast, decide fast and write or type fast for he has to meet deadlines or may have to go to another assignment. A sub-editor also has to work with speed. He cannot sit with a copy for long. He has to do swiftly whatever is required of him for a lot more copy is waiting for him. A slow sub-editor is a curse at the news desk and is treated with contempt. Some people are misfits in the profession.

**Calmness**

Reporters and sub-editors often work in trying circumstances. They have to remain calm and composed in most exciting and tragic circumstances. In many situations they have to be calm—devoid of hysterical actions or utterances and apply appropriate mental and physical effort to write or edit the story. Reporters and sub-editors are human beings. They have emotions but they have to stifle them in the face of disturbing influences—they have to develop resistance to excitability. Being in the field, reporters face many such occasions when they have to control their emotions. Sub-editors should develop a temperament to work under pressure of deadlines. They should not lose their cool if they are behind the clock for calm mind can work faster.

**Curiosity**

Reporters and sub-editors should have an insatiable curiosity. For reporters it is useful in developing lust for facts that may lead to better stories. This characteristic will keep on improving a sub-editor for with every passing day a curious subeditor will have a better background to do his job the next day. Reporters and sub-editors should read as much as possible to constantly improve their awareness level.

**Scepticism**

It is another necessary quality which a reporter and a subeditor should cultivate. They should not take anything for granted. They should have an unwavering posture of doubt until faced with undeniable proof. Reporters should be more vigilant for many forces constantly try to use them, and through them their paper. Many people try to plant on reporters a wrong story for their own ends. Many a time reporters' falls into such traps in good faith. They should have enough scepticism to avoid such plots. Sub-editors should also be careful for some clever politicians, public relations men and product advertisers keep on trying to take them for a ride. They should not allow anything to go in news columns that should actually go as advertisement. They should not fail to check even reporters, copy for such foul play.

**Punctuality**

It is a good habit. For reporters it is a must for if they are not punctual they may miss something for which they may have to depend on secondary sources. It is always better to be punctual and then wait than reach late and ask others—a rival may misinform you or hide some important information. At the desk too punctuality pays. If a sub-editor is punctual he will be treated with respect by his co-workers. If he is late he will irritate them and spoil the working atmosphere. Besides he may have to face the problem of backlog of copy which he will have to clear under the pressure of deadline.

**Patience**

It is a quality which helps a reporter in a big way for many a time almost daily he has to test his patience, the voluntary self-control or restraint that helps one to endure waiting, provocation, injustice, suffering or any of the unpleasant vicissitudes of time and life. Most of the time a reporter waits for someone or something and patience gives him the willingness for wait without becoming disgruntled or anxious. Many a time he has to tolerate other people's shortcomings and has to remain unperturbed by someone else's slowness or other quirks. Patience also helps sub-editors as they work long hours in trying conditions. They have to put up with many annoying situations everyday vis-a-vis reporters, proof readers or typesetters.



## Imagination

This basic mental faculty helps reporters in writing better stories that retain the reader's interest. For a sub-editor this creative faculty is very useful as he can add sparkle to somebody else's copy and make it lively. Besides, imaginative headlines attract the reader and improve the quality of a newspaper.

## Farsightedness

An intelligent envisioning of the future helps newsmen in general. The quality helps them in identifying processes and people who will be important in future. Reporters can watch such processes and cultivate people who may become important news sources in the future. It helps reporters and sub-editors in determining the importance of an event. A reporter with foresight can think ahead and prepare for eventualities. With a little forethought sub-editors can plan their work so as to avoid tension and it results in better functioning of the desk.

## Self-discipline

One can achieve a degree of proficiency in sub-editing or reporting by systematic effort and self-control. In this sense self-discipline suggests dedication and firm commitment. It helps in journalism as in any other field.

## Integrity

It is a virtue in itself and implies undeviating honesty and strict adherence to a stern code of ethics. This human quality is important for journalists. It is more important for reporters for they are more exposed to temptation as compared to sub-editors.

## Fearlessness and Frankness

These qualities help reporters in asking unpleasant questions and taking risks to find out truth. Nobody gives a story on a platter. The reporter will have to probe, question, authenticate and exercise his power of deduction to get a good story.

## Tactfulness

A reporter should be tactful. He should have the ability to handle sensitive people and situations gracefully without causing hurt or angry feelings. He should be considerate of others and should be careful not to embarrass, upset or offend them. A reporter should have flexible and sociable personality and should have a nature that relishes variety of experiences. He should have an understanding of human behaviour and emotions. This will help him in developing contacts that are so essential for news gathering.

## Initiative

A reporter who works in the field should have an outgoing nature with initiative and drive. These qualities will help him get acquainted with news sources and get stories from them. A meek, retiring or shy person is not fit for reporting. He may be good at his desk. Reporters need a fair amount of assertiveness and aggressiveness to be successful in their career.

## Mobility

A reporter should be mobile. He should enjoy moving around and should not hesitate travelling distances to get stories when required. He should go to his news sources as often as possible for such constant contacts help him get news. A mobile reporter is seldom caught napping when a major story breaks.

## Diligence

Reporters and sub-editors should be diligent. Their jobs require painstaking exertion of intense care and effort, alertness and dedication to the task and wary watchfulness. They have to make extremely fine

**NOTES**

distinctions while writing or editing copy a sub-editor should insist on perfection and should lose his job for he can make or impair the newspaper. These qualities are basically qualities of good and efficient human beings. Good and efficient human being makes good and efficient sub-editors and reporters. All other things being equal reporters need additional qualities to deal effectively with all sorts of people they meet in the field. Sub-editors should have better command over language as they improve what reporters write.

**Check your Progress**

5. Why Patience is important for a reporter?

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**3.7. Summary**

A good editor should have high principle and social aim, interest in the progress of the nation, a unique approach and a desire for novelty and a creative ability. The success or failure of a newspaper depends on its editor who is the organizer and the coordinator. He has to act according to the views of people's liking. The editorial need not be written by the editor but the topic has to be decided by him. He should be an expert in writing special articles.

A newspaper editor decides what stories will be covered. For example, the sports editor may determine that a particular local high school game is of interest to readers and will dispatch a reporter to cover the event. The reporter is responsible for writing the story and submitting it for editorial approval.

**3.8. Key Words**

- 1. **Editor** : The editor is like the captain of a ship. He is important because of his being legally and procedurally responsible for publishing or not publishing any news items.
- 2. **News editors** : Editors evaluate what news may be occurring in their area of responsibility and ensure it is covered thoroughly are called news editors.
- 3. **Copy** : Copy refers to written or typewritten text for typesetting, printing, or publication.
- 4. **Copy Editing** : Copy editing is the work that an editor does to improve the formatting, style, and accuracy of text.
- 5. **Sub-editor** : Sub-editor is a person who corrects and checks articles in a newspaper before they are printed.

**3.9. Answers to Check Your Progress**

- 1. Newspaper editors are responsible for determining the content we see in our newspaper on a daily or weekly basis.
- 2. Editors often perform managerial functions at a newspaper. A managing editor supervises the editorial work of all sections of the newspaper and typically has the final say in what is printed. Editors also supervise the reporters who work under them and may conduct performance reviews. Editors determine the work schedules of their reporters as well as which assignments reporters will cover.
- 3. A) Monitor all feeds from news bureaus and other agencies for editing and further publication. B) Provide assignments to freelance photographers and prepare reports for current news trends new readers and sustain existing readers.
- 4. A Sub-editor is described as a creative artist and compared to the foundation stone just as the editor to the tower top. Sub-editors provide attraction and taste for their newspapers leading to public appreciation. The work of the sub-editor is undoubtedly the basis for a newspaper.

5. It is a quality which helps a reporter in a big way for many a time almost daily he has to test his patience, the voluntary self- control or restraint that helps one to endure waiting, provocation, injustice, suffering or any of the unpleasant vicissitudes of time and life. Most of the time a reporter waits for someone or something and patience gives him the willingness for wait without becoming disgruntled or anxious.

## NOTES

### 3.10. Terminal Questions

1. Enumerate the roles of news editor.
2. Write about the deputy news editor.
3. Discuss the duties of the Chief sub-editor.
4. Examine the responsibilities of Shift in-charge.
5. Explain the qualities of a sub-editor.

### 3.11. Further Readings

1. Mass Communication; Keval J.Kumar
2. The News Paper - An international history; Anthony smith
3. Mass communication and journalism; D.S.Mehta in India.

## **UNIT - IV**

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### **CAMERA**

## Unit - IV : Camera

### STRUCTURE

- 4.0. Learning Objectives
- 4.1. Introduction
- 4.2. History of Camera
- 4.3. Types of Cameras
- 4.4. Parts of Cameras
- 4.5. Summary
- 4.6. Key Words
- 4.7. Answers to Check Your Progress
- 4.8. Terminal Questions
- 4.9. Further Readings

### 4.0. Learning Objectives

After reading this unit, you will be able to :

- ◆ Know the history of the term "Camera"
- ◆ Explain the "Types of cameras"
- ◆ Describe the salient features of various types of cameras
- ◆ Explain the parts of cameras
- ◆ Discuss the functions done by different parts of the cameras

### 4.1. Introduction

A camera is a device that records images that can be stored directly, transmitted to another location, or both. These images may be still photographs or moving images such as videos or movies. The term camera comes from the word camera obscura (Latin for "dark chamber"), an early mechanism for projecting images. The modern camera evolved from the camera obscura.

Cameras may work with the light of the visible spectrum or with other portions of the electromagnetic spectrum. A camera generally consists of an enclosed hollow with an opening (aperture) at one end for light to enter, and a recording or viewing surface for capturing the light at the other end. A majority of cameras have a lens positioned in front of the camera's opening to gather the incoming light and focus all or part of the image on the recording surface. The diameter of the aperture is often controlled by a diaphragm mechanism, but some cameras have a fixed-size aperture. Most cameras use an electronic image sensor to store photographs on flash memory. Other cameras, particularly the majority of cameras from the 20th century, use photographic film.

A typical still camera takes one photo each time the user presses the shutter button (except in continuous-fire mode). A typical movie camera continuously takes 24 film frames per second as long as the user holds down the shutter button, or until the shutter button is pressed a second time.

### 4.2. History of Camera

The forerunner to the photographic camera was the camera obscura. In the fifth century B.C., the Chinese philosopher Mo Ti noted that a pinhole can form an inverted and focused image, when light passes through the hole and into a dark area. Mo Ti is the first recorded person to have exploited this phenomenon to trace the inverted image to create a picture. Writing in the fourth century B.C., Aristotle also

**NOTES**

mentioned this principle. He described observing a partial solar eclipse in 330 B.C. by seeing the image of the Sun projected through the small spaces between the leaves of a tree. In the tenth century, the Arabic scholar Ibn al-Haytham (Alhazen) also wrote about observing a solar eclipse through a pinhole, and he described how a sharper image could be produced by making the opening of the pinhole smaller. English philosopher Roger Bacon wrote about these optical principles in his 1267 treatise *Perspectiva*. By the fifteenth century, artists and scientists were using this phenomenon to make observations. Originally, an observer had to enter an actual room, in which a pinhole was made on one wall. On the opposite wall, the observer would view the inverted image of the outside. The name camera obscura, Latin for "dark room", derives from this early implementation of the optical phenomenon.

The actual name of camera obscura was applied by mathematician and astronomer Johannes Kepler in his *Ad Vitellionem paralipomena* of 1604. He later added a lens and made the apparatus transportable, in the form of a tent. British scientist Robert Boyle and his assistant Robert Hooke developed a portable camera obscura in the 1660s.

The first camera obscura that was small enough for practical use as a portable drawing aid was built by Johann Zahn in 1685. At that time there was no way to preserve the images produced by such cameras except by manually tracing them. However, it had long been known that various substances were bleached or darkened or otherwise changed by exposure to light. Seeing the magical miniature pictures that light temporarily "painted" on the screen of a small camera obscura inspired several experimenters to search for some way of automatically making highly detailed permanent copies of them by means of some such substance.

Early photographic cameras were usually in the form of a pair of nested boxes, the end of one carrying the lens and the end of the other carrying a removable ground glass focusing screen. By sliding them closer together or farther apart, objects at various distances could be brought to the sharpest focus as desired. After a satisfactory image had been focused on the screen, the lens was covered and the screen was replaced with the light-sensitive material. The lens was then uncovered and the exposure continued for the required time, which for early experimental materials could be several hours or even days. The first permanent photograph of a camera image was made in 1826 by Joseph Nicéphore Niepce using a sliding wooden box camera made by Charles and Vincent Chevalier in Paris.

Similar cameras were used for exposing the silver-surfaced copper Daguerreotype plates, commercially introduced in 1839, which were the first practical photographic medium. The collodion wet plate process that gradually replaced the Daguerreotype during the 1850s required photographers to coat and sensitize thin glass or iron plates shortly before use and expose them in the camera while still wet. Early wet plate cameras were very simple and little different from Daguerreotype cameras, but more sophisticated designs eventually appeared. The Dubroni of 1864 allowed the sensitizing and developing of the plates to be carried out inside the camera itself rather than in a separate darkroom. Other cameras were fitted with multiple lenses for photographing several small portraits on a single larger plate, useful when making cartes de visite. It was during the wet plate era that the use of bellows for focusing became widespread, making the bulkier and less easily adjusted nested box design obsolete.

For many years, exposure times were long enough that the photographer simply removed the lens cap, counted off the number of seconds (or minutes) estimated to be required by the lighting conditions, then replaced the cap. As more sensitive photographic materials became available, cameras began to incorporate mechanical shutter mechanisms that allowed very short and accurately timed exposures to be made.

The electronic video camera tube was invented in the 1920s, starting a line of development that eventually resulted in digital cameras, which largely supplanted film cameras around the start of the 21st century.

**Check your Progress**

1. Who is the forerunner of photographic camera?

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.....

## 2. Who gave name to camera obscura?

.....

.....

## NOTES

### 4.3. Types of Cameras

There are many types of Cameras which are given below :

#### Plate camera

The earliest cameras produced in significant numbers used sensitized glass plates and are now termed plate cameras. Light entered a lens mounted on a lens board which was separated from the plate by an extendible bellows. There were simple box cameras for glass plates but also single-lens reflex cameras with interchangeable lenses and even for color photography (Autochrome Lumière). Many of these cameras had controls to raise or lower the lens and to tilt it forwards or backwards to control perspective.

Focusing of these plate cameras was by the use of a ground glass screen at the point of focus. Because lens design only allowed rather small aperture lenses, the image on the ground glass screen was faint and most photographers had a dark cloth to cover their heads to allow focusing and composition to be carried out more easily. When focus and composition were satisfactory, the ground glass screen was removed and a sensitized plate put in its place protected by a dark slide. To make the exposure, the dark slide was carefully slid out and the shutter opened and then closed and the dark slide replaced.

Glass plates were later replaced by sheet film in a dark slide for sheet film; adaptor sleeves were made to allow sheet film to be used in plate holders. In addition to the ground glass, a simple optical viewfinder was often fitted. Cameras which take single exposures on sheet film and are functionally identical to plate cameras are still used for static, high-image-quality work.

#### Large Format Camera

The large-format camera taking sheet film, is a direct successor of the early plate cameras and remain in use for high quality photography and for technical, architectural and industrial photography. There are three common types, the view camera with its monorail and field camera variants, and the press camera. They have an extensible bellows with the lens and shutter mounted on a lens plate at the front. Backs taking roll film, and backs are available in addition to the standard dark slide back. These cameras have a wide range of movements allowing very close control of focus and perspective. Composition and focusing is done on view cameras by viewing a ground-glass screen which is replaced by the film to make the exposure; they are suitable for static subjects only, and are slow to use.

#### Medium-format camera

Medium-format cameras have a film size between the large-format cameras and smaller 35mm cameras. Typically these systems use 120 or 220 roll film. The most common image sizes are 6×4.5 cm, 6×6 cm and 6×7 cm; the older 6×9 cm is rarely used. The designs of this kind of camera show greater variation than their larger brethren, ranging from monorail systems through the classic Hasselblad model with separate backs, to smaller rangefinder cameras. There are even compact amateur cameras available in this format.

#### Folding camera

The introduction of films enabled the existing designs for plate cameras to be made much smaller and for the base-plate to be hinged so that it could be folded up compressing the bellows. These designs were very compact and small models were dubbed vest pocket cameras. Folding roll film cameras were preceded by folding plate cameras, more compact than other designs.

NOTES

**Box camera**

Box cameras were introduced as a budget level camera and had few if any controls. The original box Brownie models had a small reflex viewfinder mounted on the top of the camera and had no aperture or focusing controls and just a simple shutter. Later models such as the Brownie 127 had larger direct view optical viewfinders together with a curved film path to reduce the impact of deficiencies in the lens.

**Rangefinder camera**

As camera and lens technology developed and wide aperture lenses became more common, rangefinder cameras were introduced to make focussing more precise. Early rangefinders had two separate viewfinder windows, one of which is linked to the focusing mechanisms and moved right or left as the focusing ring is turned. The two separate images are brought together on a ground glass viewing screen. When vertical lines in the object being photographed meet exactly in the combined image, the object is in focus. A normal composition viewfinder is also provided. Later the viewfinder and rangefinder were combined. Many rangefinder cameras had interchangeable lenses, each lens requiring its own range- and viewfinder linkages. Rangefinder cameras were produced in half- and full-frame 35 mm and roll film (medium format).

**Single-lens reflex**

In the single-lens reflex camera the photographer sees the scene through the camera lens. This avoids the problem of parallax which occurs when the viewfinder or viewing lens is separated from the taking lens. Single-lens reflex cameras have been made in several formats including sheet film 5 x 7" and 4 x 5", roll film 220/120 taking 8, 10, 12 or 16 photographs on a 120 roll and twice that number of a 220 film. These correspond to 6 x 9, 6 x 7, 6 x 6 and 6 x 4.5 respectively (all dimensions in cm). Notable manufacturers of large format and roll film SLR cameras include Bronica, Graflex, Hasselblad, Mamiya, and Pentax. However the most common format of SLR cameras has been 35 mm and subsequently the migration to digital SLR cameras, using almost identical sized bodies and sometimes using the same lens systems.

Almost all SLR cameras used a front surfaced mirror in the optical path to direct the light from the lens via a viewing screen and pentaprism to the eyepiece. At the time of exposure the mirror flipped up out of the light path before the shutter opened. Some early cameras experimented other methods of providing through the lens viewing including the use of a semi transparent pellicle as in the Canon Pellix and others with a small periscope such as in the Corfield Periflex series.

**Twin-lens reflex**

Twin-lens reflex cameras used a pair of nearly identical lenses, one to form the image and one as a viewfinder. The lenses were arranged with the viewing lens immediately above the taking lens. The viewing lens projects an image onto a viewing screen which can be seen from above. Some manufacturers such as Mamiya also provided a reflex head to attach to the viewing screen to allow the camera to be held to the eye when in use. The advantage of a TLR was that it could be easily focused using the viewing screen and that under most circumstances the view seen in the viewing screen was identical to that recorded on film. At close distances however, parallax errors were encountered and some cameras also included an indicator to show what part of the composition would be excluded.

Some TLR had interchangeable lenses but as these had to be paired lenses they were relatively heavy and did not provide the range of focal lengths that the SLR could support. Most TLRs used 120 or 220 film; some used the smaller 127 film.

**Subminiature camera**

Cameras taking film significantly smaller than 35 mm were made. Subminiature cameras were first produced in the nineteenth century. The expensive 8x11 mm Minox, the only type of camera produced by the company from 1937 to 1976, became very widely known and was often used for espionage (the Minox company later also produced larger cameras). Later inexpensive subminiatures were made for



general use, some using rewound 16 mm cine film. Image quality with these small film sizes was limited.

**NOTES**

**Instant picture camera**

After exposure every photograph is taken through pinch rollers inside of the instant camera. Thereby the developer paste contained in the paper 'sandwich' distributes on the image. After a minute, the cover sheet just needs to be removed and one gets a single original positive image with a fixed format. With some systems it was also possible to create an instant image negative, from which then could be made copies in the photo lab. The ultimate development was the SX-70 system of Polaroid, in which a row of ten shots - engine driven - could be made without having to remove any cover sheets from the picture. There were instant cameras for a variety of formats, as well as cartridges with instant film for normal system cameras.

**Cine camera**

A cine camera or movie camera takes a rapid sequence of photographs on strips of film. In contrast to a still camera, which captures a single snapshot at a time, the cine camera takes a series of images; each called a "frame" through the use of an intermittent mechanism.

The frames are later played back in a cine projector at a specific speed, called the "frame rate" (number of frames per second). While viewing, a person's eyes and brain merge the separate pictures to create the illusion of motion. The first cine camera was built around 1888 and by 1890 several types were being manufactured. The standard film size for cine cameras was quickly established as 35mm film and this remains in use to this day. Other professional standard formats include 70 mm film and 16mm film whilst amateurs film makers used 9.5 mm film, 8mm film or Standard 8 and Super 8 before the move into digital format.

The size and complexity of cine cameras varies greatly depending on the uses required of the camera. Some professional equipment is very large and too heavy to be hand held whilst some amateur cameras were designed to be very small and light for single-handed operation. In the last quarter of the 20th century, digital camcorders supplanted film motion cameras for amateurs. Professional video cameras did the same for professional users around the start of the 21st century.

**Check your Progress**

3. Which is called as the earliest camera?

.....  
 .....

4. Write about folding camera.

.....  
 .....

**4.4. Parts of Cameras**

**Film Advance Lever or Knob**

It transports the film from one frame to the next on the roll of film.

**Film Rewind Knob**

This knob rewinds the film back into the film cassette.

**Flash Shoe**

This is the point at which the flash or flash cube is mounted or attached.

## NOTES

### Self-Timer

This mechanism trips the shutter after a short delay - usually 7 to 10 seconds - allowing everyone to be in the photograph.

### Shutter

It opens and closes to control the length of time light strikes the film. There are two types of shutters: a leaf shutter, located between or just behind the lens elements, and a focal plane shutter, located in front of the film plane.

### Shutter Speed Control

This control controls the length of time the shutter remains open. Typical shutter speeds are measured in fractions of a second, such as: 1/30 1/60 1/125 1/250 1/500 and 1/1000 of a second.

### Lens

The lens is one of the most vital parts of a camera. The light enters through the lens, and this is where the photo process begins. Lenses can be either fixed permanently to the body or interchangeable. They can also vary in focal length, aperture, and other detail. It draws the light into the camera and focuses it on the film plane.

### Viewfinder

Viewfinder is the "window" through which we look to frame our picture. The viewfinder can be found on all DSLRs and some models of digital compacts. On DSLRs, it will be the main visual source for image-taking, but many of today's digital compacts have replaced the typical viewfinder with an LCD screen.

### Body

The body is the main portion of the camera, and bodies can be a number of different shapes and sizes. DSLRs tend to be larger bodied and a bit heavier, while there are other consumer cameras that are a conveniently smaller size and even able to fit into a pocket.

### Shutter Release

The shutter release button is the mechanism that "releases" the shutter and therefore enables the ability to capture the image. The length of time the shutter is left open or "exposed" is determined by the shutter speed.

### Aperture

The aperture affects the image's exposure by changing the diameter of the lens opening, which controls the amount of light reaching the image sensor. Some digital compacts will have a fixed aperture lens, but most of today's compact cameras have at least a small aperture range. This range will be expressed in f/stops. For DSLRs, the lens will vary on f/stop limits, but it is usually easily defined by reading the side of the lens. There will be a set of numbers stating the f/stop or f/stop range, ex: f/2.8 or f/3.5-5.6. This will be your lowest settings available with that lens. It dilates and contracts to control the diameter of the hole that the light passes through, to let in more or less light. It is controlled by the f-stop ring.

### Image Sensor

The image sensor converts the optical image to an electronic signal, which is then sent to your memory card. There are two main types of image sensors that are used in most digital cameras: CMOS and CCD. Both forms of the sensor accomplish the same task, but each has a different method of performance.

## Memory Card

The memory card stores all of the image information, and they range in size and speed capacity. The main types of memory cards available are CF and SD cards, and cameras vary on which type that they require.

## LCD Screen

The LCD screen is found on the back of the body and can vary in size. On digital compact cameras, the LCD has typically begun to replace the viewfinder completely. On DSLRs, the LCD is mainly for viewing photos after shooting, but some cameras do have a "live mode" as well.

## Flash

The on-board flash will be available on all cameras except some professional grade DSLRs. It can sometimes be useful to provide a bit of extra light during dim, low light situations.

## User Controls

The controls on each camera will vary depending on the model and type. Your basic digital compacts may only have auto settings that can be used for different environments, while a DSLR will have numerous controls for auto and manual shooting along with custom settings.

## Check your Progress

5. Define the term "Lens".

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 .....

## 4.5. Summary

Cameras may work with the light of the visible spectrum or with other portions of the electromagnetic spectrum. A camera generally consists of an enclosed hollow with an opening (aperture) at one end for light to enter, and a recording or viewing surface for capturing the light at the other end. A majority of cameras have a lens positioned in front of the camera's opening to gather the incoming light and focus all or part of the image on the recording surface. The diameter of the aperture is often controlled by a diaphragm mechanism, but some cameras have a fixed-size aperture. Most cameras use an electronic image sensor to store photographs on flash memory. Other cameras, particularly the majority of cameras from the 20th century, use photographic film.

A cine camera or movie camera takes a rapid sequence of photographs on strips of film. In contrast to a still camera, which captures a single snapshot at a time, the cine camera takes a series of images; each called a "frame" through the use of an intermittent mechanism.

The aperture affects the image's exposure by changing the diameter of the lens opening, which controls the amount of light reaching the image sensor. Some digital compacts will have a fixed aperture lens, but most of today's compact cameras have at least a small aperture range. This range will be expressed in f/stops.

## 4.6. Key Words

1. **Camera** : A camera is a device that records images that can be stored directly, transmitted to another location, or both.
2. **Film Rewind Knob** : This knob rewinds the film back into the film cassette.
3. **Flash Shoe** : This is the point at which the flash or flash cube is mounted or attached.

**NOTES**

**4. Self-Timer :** This mechanism trips the shutter after a short delay - usually 7 to 10 seconds - allowing everyone to be in the photograph.

**5. Shutter :** It open and closes to control the length of time light strikes the film.

**4.7. Answers to Check Your Progress**

1. The forerunner to the photographic camera was the camera obscura. In the fifth century B.C., the Chinese philosopher Mo Ti noted that a pinhole can form an inverted and focused image, when light passes through the hole and into a dark area.
2. The actual name of camera obscura was applied by mathematician and astronomer Johannes Kepler in his *Ad Vitellionem paralipomena* of 1604.
3. The earliest cameras produced in significant numbers used sensitized glass plates and are now termed plate cameras. Light entered a lens mounted on a lens board which was separated from the plate by an extendible bellows.
4. The introduction of films enabled the existing designs for plate cameras to be made much smaller and for the base-plate to be hinged so that it could be folded up compressing the bellows. These designs were very compact and small models were dubbed vest pocket cameras. Folding roll film cameras were preceded by folding plate cameras, more compact than other designs.
5. The lens is one of the most vital parts of a camera. The light enters through the lens, and this is where the photo process begins. Lenses can be either fixed permanently to the body or interchangeable. They can also vary in focal length, aperture, and other detail. It draws the light into the camera and focuses it on the film plane.

**4.8. Terminal Questions**

1. Write down the history of the term "Camera".
2. Explain the "Types of cameras".
3. Describe the salient features of various types of cameras.
4. Explain the parts of cameras.
5. Discuss the functions done by different parts of the cameras.

**4.9. Further Readings**

1. Mass Communication; Keval J.Kumar
2. The News Paper - An international history; Anthony smith
3. Mass communication and journalism; D.S.Mehta in India.

# **UNIT - V**

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## **LENSES**

## Unit - V : Lenses

### STRUCTURE

- 5.0. Learning Objectives
- 5.1. Introduction
- 5.2. Different Types of Lenses
- 5.3. Aperture, Focal Length, Shutter Speed, Depth of Focussing, Exposure, Exposure Meter
- 5.4. Summary
- 5.5. Key Words
- 5.6. Answers to Check Your Progress
- 5.7. Terminal Questions
- 5.8. Further Readings

### 5.0. Learning Objectives

After reading this chapter, you will be able to

- ◆ Understand the term "Lens"
- ◆ Explain the different types of lenses such as Normal, wide, telephoto, zoom, fish eye lens and close up lens
- ◆ Describe the functions of the following: Aperture, focal length; shutter speed, depth of focussing, exposure, exposure meter

### 5.1. Introduction

A lens is an optical device which transmits and refracts light, converging or diverging the beam. A simple lens consists of a single optical element. A compound lens is an array of simple lenses (elements) with a common axis; the use of multiple elements allows more optical aberrations to be corrected than is possible with a single element. Lenses are typically made of glass or transparent plastic. Elements which refract electromagnetic radiation outside the visual spectrum are also called lenses: for instance, a microwave lens can be made from paraffin wax. The variant spelling *lense* is sometimes seen. While it is listed as an alternative spelling in some dictionaries, most mainstream dictionaries do not list it as acceptable.

The word *lens* comes from the Latin name of the lentil, because a double-convex lens is lentil-shaped. The genus of the lentil plant is *Lens*, and the most commonly eaten species is *Lens culinaris*. The lentil plant also gives its name to a geometric figure.

The oldest lens artifact is the Nimrud lens, dating back 2700 years to ancient Assyria. David Brewster proposed that it may have been used as a magnifying glass, or as a burning-glass to start fires by concentrating sunlight. Another early reference to magnification dates back to ancient Egyptian hieroglyphs in the 8th century BC, which depict "simple glass meniscal lenses".

### 5.2. Different Types of Lenses

We see Various types of Lenses. Some of them are discussed below :

#### **Normal Lens**

In photography and cinematography, a normal lens is a lens that reproduces a field of view that gener-

## NOTES

ally looks "natural" to a human observer under normal viewing conditions, as compared with lenses with longer or shorter focal lengths which produce an expanded or contracted field of view that distorts the perspective when viewed from a normal viewing distance. Lenses of shorter focal length are called wide-angle lenses, while longer-focal-length lenses are referred to as long-focus lenses (with the most common of that type being the telephoto lenses).

For still photography, a lens with a focal length about equal to the diagonal size of the film or sensor format is considered to be a normal lens; its angle of view is similar to the angle subtended by a large-enough print viewed at a typical viewing distance equal to the print diagonal; this angle of view is about 53° diagonally. For cinematography, where the image is normally viewed at a greater distance, a lens with a focal length of roughly double the film or sensor diagonal is considered 'normal'. The term normal lens can also be used as a synonym for rectilinear lens. This is a completely different use of the term.

A standard lens has a focal length range of 35-70mm. The most common standard lens is a fixed 50mm lens. Standard lenses are most commonly used for documentary and street photography, where photographers need to move quickly and capture an interesting point of action. Pioneers of modern street photography, such as Henri Cartier-Bresson, always used a 50mm lens, choosing to move themselves around so as to best frame an image.

### Wide Lens

Traditionally, a super wide-angle lens is classified as anything under 20mm. Wide-angle is 21-35mm. With the advent of digital cameras, and the APS-C format, camera manufacturers have also started producing specific lenses for this format. Wide-angle lenses for crop frame DSLRs range from 10-24mm, with a few going down to a super wide 8mm. Wide-angle lenses are most commonly used for photographing landscapes and architecture, although they are often also used for photographing large groups of people.

### Telephoto Lens

The focal range between 80-135mm is nearly always used by portrait photographers. Fixed lenses at these lengths produce ideal framing for head and shoulders shots. These are specialist lenses, but can be surprisingly reasonably priced. Any lens with a focal length of between 135mm and 300mm is a true telephoto lens. Manufacturers make a huge range of lenses in this range ... at an equally large range of prices. Telephoto lenses are traditionally used for sports and wildlife photography, but their essential function is to bring distant objects closer.

### Zoom Lens

Some lenses, called zoom lenses, have a focal length that varies as internal elements are moved, typically by rotating the barrel or pressing a button which activates an electric motor. Commonly, the lens may zoom from moderate wide-angle, through normal, to moderate telephoto; or from normal to extreme telephoto. The zoom range is limited by manufacturing constraints; the ideal of a lens of large maximum aperture which will zoom from extreme wideangle to extreme telephoto is not attainable. Zoom lenses are widely used for small-format cameras of all types: still and cine cameras with fixed or interchangeable lenses. Bulk and price limit their use for larger film sizes. Motorized zoom lenses may also have the focus, iris, and other functions motorized.

### Fish Eye Lens

A fisheye lens is an ultra wide-angle lens that produces strong visual distortion intended to create a wide panoramic or hemispherical image. Fisheye lenses achieve extremely wide angles of view by forgoing producing images with straight lines of perspective (rectilinear images), opting instead for a special mapping (for example: equisolid angle), which gives images a characteristic convex non-rectilinear appearance.

The term fisheye was coined in 1906 by American physicist and inventor Robert W. Wood based on how a fish would see an ultra-wide hemispherical view from beneath the water (a phenomenon known as

Snell's window). Their first practical use was in the 1920s for use in meteorology to study cloud formation giving them the name "whole-sky lenses". The angle of view of a fisheye lens is usually between 100 and 180 degrees while the focal lengths depend on the film format they are designed for.

Mass-produced fisheye lenses for photography first appeared in the early 1960s and are generally used for their unique, distorted appearance. For the popular 35 mm film format, typical focal lengths of fisheye lenses are between 8 mm and 10 mm for circular images, and 15-16 mm for full-frame images. For digital cameras using smaller electronic imagers such as 1/4" and 1/3" format CCD or CMOS sensors, the focal length of "miniature" fisheye lenses can be as short as 1 to 2mm.

These types of lenses also have other applications such as re-projecting images filmed through a fisheye lens, or created via computer generated graphics, onto a hemispherical screens. Fisheye lenses are also used for scientific photography such as recording of aurora and meteors, and to study plant canopy geometry and to calculate near-ground solar radiation. They are also used as peephole door viewers to give the user a wide field of view. These are on the edge of wide-angle lenses, and give a distorted view of the subject matter. The center of the image is magnified, and objects diminish in size in all directions around it.

### Close Up Lens

A macro lens used in macro or "close-up" photography (not to be confused with the compositional term close up) is any lens that produces an image on the focal plane (i.e., film or a digital sensor) that is the same size or larger than the subject being imaged. This configuration is generally used to image close-up very small subjects. A macro lens may be of any focal length, the actual focus length being determined by its practical use, considering magnification, the required ratio, access to the subject, and illumination considerations. They can be special lens corrected optically for close up work or they can be any lens modified (with adapters or spacers) to bring the focal plane "forward" for very close photography. The depth-of-field is very narrow, limiting their usefulness. Lenses are usually stopped down to give a greater depth-of-field.

### Check your Progress

1. Write about Normal Lens.

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2. Write down the features of Zoom Lens.

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3. Define the Fish Eye Lens.

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### 5.3. Aperture, Focal Length, Shutter Speed, Depth of Focussing, Exposure, Exposure Meter Aperture and Focal length

The two fundamental parameters of an optical lens are the focal length and the maximum aperture. The lens' focal length determines the magnification of the image projected onto the image plane, and the aperture the light intensity of that image. For a given photographic system the focal length determines the angle of view, short focal lengths giving a wider field of view than longer focal length lenses. A wider aperture, identified by a smaller f-number, allows using a faster shutter speed for the same exposure.

The maximum usable aperture of a lens is specified as the focal ratio or f-number, defined as the lens' focal length divided by the effective aperture (or entrance pupil), a dimensionless number. The lower

### NOTES



## NOTES

the f-number, the higher light intensity at the focal plane. Larger apertures (smaller f-numbers) provide a much shallower depth of field than smaller apertures, other conditions being equal. Practical lens assemblies may also contain mechanisms to deal with measuring light, secondary apertures for flare reduction, and mechanisms to hold the aperture open until the instant of exposure to allow SLR cameras to focus with a brighter image with shallower depth of field, theoretically allowing better focus accuracy.

Focal lengths are usually specified in millimetres (mm), but older lenses might be marked in centimetres (cm) or inches. For a given film or sensor size, specified by the length of the diagonal, a lens may be classified as a:

- ◆ Normal lens: angle of view of the diagonal about 50° and a focal length approximately equal to the image diagonal.
- ◆ Wide-angle lens: angle of view wider than 60° and focal length shorter than normal.
- ◆ Long-focus lens: any lens with a focal length longer than the diagonal measure of the film or sensor. Angle of view is narrower. The most common type of long-focus lens is the telephoto lens, a design that uses special optical configurations to make the lens shorter than its focal length.

A side effect of using lenses of different focal lengths is the different distances from which a subject can be framed, resulting in a different perspective. Photographs can be taken of a person stretching out a hand with a wideangle, a normal lens, and a telephoto, which contain exactly the same image size by changing the distance from the subject. But the perspective will be different. With the wideangle, the hands will be exaggeratedly large relative to the head. As the focal length increases, the emphasis on the outstretched hand decreases. However, if pictures are taken from the same distance, and enlarged and cropped to contain the same view, the pictures will have identical perspective. A moderate long-focus (telephoto) lens is often recommended for portraiture because the perspective corresponding to the longer shooting distance is considered to look more flattering.

The widest aperture lens in history of photography is believed to be the Carl Zeiss Planar 50mm f/0.7, which was designed and made specifically for the NASA Apollo lunar program to capture the dark side of the moon in 1966. Three of these lenses were purchased by filmmaker Stanley Kubrick in order to film scenes in his movie *Barry Lyndon*, using candlelight as the sole light source

## Image capture

Traditional cameras capture light onto photographic film or photographic plate. Video and digital cameras use an electronic image sensor, usually a charge coupled device (CCD) or a CMOS sensor to capture images which can be transferred or stored in a memory card or other storage inside the camera for later playback or processing.

Cameras that capture many images in sequence are known as movie cameras or as ciné cameras in Europe; those designed for single images are still cameras. However these categories overlap as still cameras are often used to capture moving images in special effects work and many modern cameras can quickly switch between still and motion recording modes.

A video camera is a category of movie camera that captures images electronically (either using analog or digital technology).

## Lens

The lens of a camera captures the light from the subject and brings it to a focus on the film or detector. The design and manufacture of the lens is critical to the quality of the photograph being taken. The technological revolution in camera design in the 19th century revolutionized optical glass manufacture and lens design with great benefits for modern lens manufacture in a wide range of optical instruments from reading glasses to microscopes. Pioneers included Zeiss and Leitz.

Camera lenses are made in a wide range of focal lengths. They range from extreme wide angle, wide angle, standard, medium telephoto and telephoto. Each lens is best suited a certain type of photography. The extreme wide angle may be preferred for architecture because it has the capacity to capture a

wide view of a building. The normal lens, because it often has a wide aperture, is often used for street and documentary photography. The telephoto lens is useful for sports, and wildlife but it is more susceptible to camera shake.

## Focus

Due to the optical properties of photographic lenses, only objects within a limited range of distances from the camera will be reproduced clearly. The process of adjusting this range is known as changing the camera's focus. There are various ways of focusing a camera accurately. The simplest cameras have fixed focus and use a small aperture and wide-angle lens to ensure that everything within a certain range of distance from the lens, usually around 3 metres (10 ft) to infinity, is in reasonable focus. Fixed focus cameras are usually inexpensive types, such as single-use cameras. The camera can also have a limited focusing range or scale-focus that is indicated on the camera body. The user will guess or calculate the distance to the subject and adjust the focus accordingly. On some cameras this is indicated by symbols (head-and-shoulders; two people standing upright; one tree; mountains).

Rangefinder cameras allow the distance to objects to be measured by means of a coupled parallax unit on top of the camera, allowing the focus to be set with accuracy. Single-lens reflex cameras allow the photographer to determine the focus and composition visually using the objective lens and a moving mirror to project the image onto a ground glass or plastic micro-prism screen. Twin-lens reflex cameras use an objective lens and a focusing lens unit (usually identical to the objective lens.) in a parallel body for composition and focusing. View cameras use a ground glass screen which is removed and replaced by either a photographic plate or a reusable holder containing sheet film before exposure. Modern cameras often offer autofocus systems to focus the camera automatically by a variety of methods. Some experimental cameras, for example the planar Fourier capture array (PFCA), do not require focusing to allow them to take pictures. In conventional digital photography, lenses or mirrors map all of the light originating from a single point of an in-focus object to a single point at the sensor plane. Each pixel thus relates an independent piece of information about the far-away scene. In contrast, a PFCA does not have a lens or mirror, but each pixel has an idiosyncratic pair of diffraction gratings above it, allowing each pixel to likewise relate an independent piece of information (specifically, one component of the 2D Fourier transform) about the far-away scene. Together, complete scene information is captured and images can be reconstructed by computation.

Some cameras have post focusing. Post focusing means take the pictures first and then focusing later at the personal computer. The camera uses many tiny lenses on the sensor to capture light from every camera angle of a scene and is called plenoptics technology. A current plenoptic camera design has 40,000 lenses working together to grab the optimal picture.

## Exposure control

The size of the aperture and the brightness of the scene controls the amount of light that enters the camera during a period of time, and the shutter controls the length of time that the light hits the recording surface. Equivalent exposures can be made with a larger aperture and a faster shutter speed or a corresponding smaller aperture and with the shutter speed slowed down.

## Shutters

Although a range of different shutter devices have been used during the development of the camera only two types have been widely used and remain in use today. The Leaf shutter or more precisely the in-lens shutter is a shutter contained within the lens structure, often close to the diaphragm consisting of a number of metal leaves which are maintained under spring tension and which are opened and then closed when the shutter is released. The exposure time is determined by the interval between opening and closing. In this shutter design, the whole film frame is exposed at one time. This makes flash synchronisation much simpler as the flash only needs to fire once the shutter is fully open. Disadvantages of such shutters are their inability to reliably produce very fast shutter speeds (faster than 1/500th second or so) and the additional cost and weight of having to include a shutter mechanism for every lens.

## NOTES

## NOTES

The focal-plane shutter operates as close to the film plane as possible and consists of cloth curtains that are pulled across the film plane with a carefully determined gap between the two curtains (typically running horizontally) or consisting of a series of metal plates (typically moving vertically) just in front of the film plane. The focal-plane shutter is primarily associated with the single lens reflex type of cameras, since covering the film rather than blocking light passing through the lens allows the photographer to view through the lens at all times except during the exposure itself. Covering the film also facilitates removing the lens from a loaded camera (many SLRs have interchangeable lenses).

### Complexities

Professional medium format SLR (single-lens-reflex) cameras (typically using 120/220 roll film) use a hybrid solution, since such a large focal-plane shutter would be difficult to make and/or may run slowly. A manually inserted blade known as a dark slide allows the film to be covered when changing lenses or film backs. A blind inside the camera covers the film prior to and after the exposure (but is not designed to be able to give accurately controlled exposure times) and a leaf shutter that is normally open is installed in the lens. To take a picture, the leaf shutter closes, the blind opens, the leaf shutter opens then closes again, and finally the blind closes and the leaf shutter re-opens (the last step may only occur when the shutter is re-cocked).

Using a focal-plane shutter, exposing the whole film plane can take much longer than the exposure time. The exposure time does not depend on the time taken to make the exposure over all, only on the difference between the time a specific point on the film is uncovered and then covered up again. For example an exposure of 1/1000 second may be achieved by the shutter curtains moving across the film plane in 1/50th of a second but with the two curtains only separated by 1/20th of the frame width. In fact in practice the curtains do not run at a constant speed as they would in an ideal design, obtaining an even exposure time depends mainly on being able to make the two curtains accelerate in a similar manner.

When photographing rapidly moving objects, the use of a focal-plane shutter can produce some unexpected effects, since the film closest to the start position of the curtains is exposed earlier than the film closest to the end position. Typically this can result in a moving object leaving a slanting image. The direction of the slant depends on the direction the shutter curtains run in (noting also that as in all cameras the image is inverted and reversed by the lens, i.e. "top-left" is at the bottom right of the sensor as seen by a photographer behind the camera).

Focal-plane shutters are also difficult to synchronise with flash bulbs and electronic flash and it is often only possible to use flash at shutter speeds where the curtain that opens to reveal the film completes its run and the film is fully uncovered, before the second curtain starts to travel and cover it up again. Typically 35 mm film SLRs could sync flash at only up to 1/60th second if the camera has horizontal run cloth curtains, and 1/125th if using a vertical run metal shutter.

### Film formats

A wide range of film and plate formats has been used by cameras. In the early history plate sizes were often specific for the make and model of camera although there quickly developed some standardisation for the more popular cameras. The introduction of roll film drove the standardization process still further so that by the 1950s only a few standard roll films were in use. These included 120 film providing 8, 12 or 16 exposures, 220 film providing 16 or 24 exposures, 127 film providing 8 or 12 exposures (principally in Brownie cameras) and 135 (35 mm film) providing 12, 20 or 36 exposures - or up to 72 exposures in the half-frame format or in bulk cassettes for the Leica Camera range.

For cine cameras, film 35 mm wide and perforated with sprocket holes was established as the standard format in the 1890s. It is still used for nearly all film-based professional motion picture production. For amateur use, several smaller and therefore less expensive formats were introduced. 17.5 mm film, created by splitting 35 mm film, was one early amateur format, but 9.5 mm film, introduced in Europe in 1922, and 16 mm film, introduced in the US in 1923, soon became the standards for "home movies" in their respective hemispheres. In 1932, the even more economical 8 mm format was created by doubling the number of perforations in 16 mm film, then splitting it, usually after exposure and processing. The Super 8 format, still 8 mm wide but with smaller perforations to make room for substantially larger film frames, was introduced in 1965.

## Shutter Speed

In photography, shutter speed or exposure time is the effective length of time a camera's shutter is open. The total exposure is proportional to this exposure time, or duration of light reaching the film or image sensor.

Shutter speed along with the aperture of the lens (also called f-number) determines the amount of light that reaches the film or sensor. Conventionally, the exposure is measured in units of exposure value (EV), sometimes called stops, representing a halving or doubling of the exposure.

Multiple combinations of shutter speed and aperture can give the same exposure: halving the shutter speed doubles the exposure (1 EV more), while doubling the aperture size (halving the focal number) increases the exposure area by a factor of 4 (2 EV). For this reason, standard apertures differ by  $\sqrt{2}$ , or about 1.4. Thus an exposure with a shutter speed of  $1/250$  s and  $f/8$  is the same as with  $1/500$  s and  $f/5.6$ , or  $1/125$  s and  $f/11$ .

In addition to its effect on exposure, the shutter speed changes the way movement appears in the picture. Very short shutter speeds can be used to freeze fast-moving subjects, for example at sporting events. Very long shutter speeds are used to intentionally blur a moving subject for artistic effect. Short exposure times are sometimes called "fast", and long exposure times "slow".

## Check your Progress

4. Write about the term "Lens".

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5. Write down the features of Shutter Speed.

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## 5.4. Summary

The word 'lens' comes from the Latin name of the lentil, because a double-convex lens is lentil-shaped. The genus of the lentil plant is Lens, and the most commonly eaten species is Lens culinaris. The lentil plant also gives its name to a geometric figure.

The oldest lens artifact is the Nimrud lens, dating back 2700 years to ancient Assyria. David Brewster proposed that it may have been used as a magnifying glass, or as a burning-glass to start fires by concentrating sunlight. Another early reference to magnification dates back to ancient Egyptian hieroglyphs in the 8th century BC, which depict "simple glass meniscial lenses".

## 5.5. Key Words

- 1. Lens :** A lens is an optical device which transmits and refracts light, converging or diverging the beam.
- 2. Fisf Eye Lens :** A fisheye lens is an ultra wide-angle lens that produces strong visual distortion intended to create a wide panoramic or hemispherical image.
- 3. Close Up Lens :** A macro lens used in macro or "close-up" photograph is any lens that produces an image on the focal plane that is the same size or larger than the subject being imaged.
- 4. Video Camera :** A video camera is a category of movie camera that captures images electronically.
- 5. Telephoto Lens :** Telephoto lens is often recommended for portraiture because the perspective corresponding to the longer shooting distance is considered to look more flattering.

## NOTES

**NOTES**

**5.6. Answers to Check Your Progress**

1. A normal lens is a lens that reproduces a field of view that generally looks "natural" to a human observer under normal viewing conditions, as compared with lenses with longer or shorter focal lengths which produce an expanded or contracted field of view that distorts the perspective when viewed from a normal viewing distance.
2. Some lenses, called zoom lenses, have a focal length that varies as internal elements are moved, typically by rotating the barrel or pressing a button which activates an electric motor. Commonly, the lens may zoom from moderate wide-angle, through normal, to moderate telephoto; or from normal to extreme telephoto.
3. A fisheye lens is an ultra wide-angle lens that produces strong visual distortion intended to create a wide panoramic or hemispherical image. Fisheye lenses achieve extremely wide angles of view by forgoing producing images with straight lines of perspective (rectilinear images), opting instead for a special mapping (for example: equisolid angle), which gives images a characteristic convex non-rectilinear appearance.
4. The lens of a camera captures the light from the subject and brings it to a focus on the film or detector. The design and manufacture of the lens is critical to the quality of the photograph being taken.
5. In photography, shutter speed or exposure time is the effective length of time a camera's shutter is open. The total exposure is proportional to this exposure time, or duration of light reaching the film or image sensor.

**5.7. Terminal Questions**

1. Write an essay on the term, "Lens".
2. Explain the different types of lenses such as Normal, Wide, Telephoto, Zoom lens.
3. Describe the features of Fish eye lens and close up lens.
4. Explain the functions of different parts of cameras.
5. Describe the functions of the following: Aperture, Focal length, Shutter speed, Depth of Focusing, Exposure, Exposure meter

**5.8. Further Readings**

1. Communications; Ahuja, B.N
2. Introduction to mass communication; Ault, Edwin emery
3. Mass communication - principles and practices; Cassata , mary B