

## Module III

### OCR

#### 3.1.1. Vocabulary Page No.88

1) Read the sentences in which the following words appear in the story and find out the meaning from those given in brackets.

- a) resplendent- bright appearance
- b) cosmos- a flower
- c) boughs- branches of a tree
- d) transact- to conduct

2) "He spread out his equipment." Is 'equipment' singular or plural?  
'Equipment' is an uncountable noun. So, it is singular.

Uncountable nouns are nouns that cannot be counted. They often refer to groups of similar objects. They have no plural forms. We use words such as a lot of, some, much, etc. to express the plural sense.

Eg. money, air, luggage, transportation, advice, education, evidence, information, knowledge, furniture

Choose the correct options from the brackets and complete the sentences.

- a) All our equipment has (has/have) been carefully tested.
- b) Good information is (are/is) essential for good decisions.

3) Complete the sentences with the correct forms of the words in brackets.

- a) His description of the product reveals close observation and vivid perception.(perceive)
- b) Nirmal seeks out a Master's Degree in Engineering, for career enhancement (enhance).
- c) We must ensure continuous (continue) power supply during the process of production.
- d) Ashish finished the work to the complete satisfaction (satisfy) of his supervisor.

4) "It was as much an honest man's labour as any other, and he deserved the wages..."

- a) What is the antonym of honest?  
deceitful
- b) What is the meaning of 'labour' here?  
physical work

3.1.2 We often request help or ask permission in real life.

You have been asked by your manager to submit a project proposal by tomorrow. You need one more day to complete it. Construct a conversation requesting extra time.

I: Good morning Sir. Are you busy now?

Manager: No Mr Ajay, go ahead.

I: Sir, I have been working on our project proposal for some time now. It is almost complete.

Manager: That's great! Will you submit it tomorrow?

I: I am afraid I cannot Sir, I need another day to complete it.

Manager: Well, if that is the case, you can certainly take a day more to submit it.

I: Thank you very much Sir.

Manager: My pleasure.

### 3.1.3 Understanding the Text

1) Do you think an astrologer's job is an honest one? Why?

I think an astrologer's job is an honest one. He/she observes people closely, understands what is troubling them and offers solution to their problems.

2) "This colour scheme never failed." What colour scheme does the writer mention here?

For the astrologer to be successful, he had to attract people. He applied sacred ash and vermilion on his forehead. His eyes sparkled with gleam, as they continually searched for customers. The power of his eyes was enhanced by his painted forehead and dark whiskers. He had also wound a saffron coloured turban around his head. This colour scheme attracted people to him as bees were attracted to flowers.

3) "People were attracted to him as bees were attracted to cosmos or dahlia stalks." The figure of speech used in this line is simile

4) Why did the astrologer choose to do his business by the light of a nearby flare?

The astrologer had never intended to be an astrologer. He had no idea what was going to happen to people or to himself the next minute. So the crisscross of light rays and shadows created by a nearby flare and shop lights gave him the opportunity to observe his customers and make shrewd guesses about their troubles.

5) "It was a remarkable place in many ways." How was the place remarkable?

People used to walk along the narrow road from morning till night. A variety of trades and occupations thrived all along the way. So the place was remarkable.

6) Comment on "He was as much a stranger to the stars as were his innocent customers."

The man had never intended to be an astrologer. He had no idea what was going to happen to people or to himself the next minute. He observed his customers and made shrewd guesses about their troubles. He had no idea what the position of stars meant, although he claimed to be an astrologer.

7) The astrologer could understand the problem in five minutes. How?

The astrologer had a keen understanding of what generally troubled people: marriage, money and the complexities in human relationships. He could analyse people's problems quickly.

8) What are the tricks used by the astrologer to endear himself to his customers?

The astrologer made such comments as "In many ways, you are not getting the fullest results for your efforts." Or he said that a person's troubles were due to the position of Saturn. He did not criticize people, but chose to put the blame of their problems on the stars. He pleased people with his talk.

### 3.2.2 Phrasal Verbs Page no.95

### Phrasal Verbs and their meanings

hook up: link someone or something to an object, especially an electronic equipment

power up: the action of switching on an electronic device, especially a computer

boot up: to make ready to use by putting in the instructions needed to start working a device

drop-down: appearing below a menu title when it is selected, and remaining until it is used or dismissed

scroll up/down: to move up or down through text or graphic on a computer

back up: make a spare copy of data or a disc

run out: be used up, be finished

go down: crash

wipe out: eliminate completely

shut down: to cause to stop operating

turn off: to stop the operation of

### 3.2.3 Prefixes and Suffixes

sensation    humbleness    satisfaction

agreement    provider    darkness

preparation    remark    patience

belief    worker    function

comfort    consideration    ruthlessly

containment    invitation    technic

stranger    activation    variety

Fill up the blanks by adding appropriate suffixes or prefixes to the words given in brackets.

- a) The manager expressed his satisfaction (satisfy) in the new project.
- b) The purchase officer signed the new agreement (agree).
- c) The company made sufficient preparation (prepare) for the launch of the new product.
- d) Some of the people complained of discomfort (comfort) after vaccination.

### 3.2.4 Find out the names of the branches of study mentioned below. Page no.96

- a) The scientific study of the universe and the objects in it, including stars, planets, nebulae and galaxies

Astronomy

b) The study of the movements of the planets, sun, moon and stars in the belief that these movements can influence people's lives

Astrology

3.2.5 Match the following people against their description. Page no.97

Supervisor: one who supervises workers or work done by others

Draughtsman: one who makes detailed technical plans or drawings

Fitter: one who puts together or installs machinery, engine parts or other equipment

Turner: one who shapes or fashions objects on lathe

Plumber: one who fits and repairs pipes, fittings, and other apparatus of water supply, sanitation or heating system

Electrician: one who installs and maintains electrical equipment

Assembler: one who assembles machines or their parts

Brazer: one who joins melted metals

Automation technician: one who repairs and maintains the computer-controlled systems and robotic devices used within industrial or commercial facilities

Millwright: one who is in-charge of installing, transferring and maintaining equipment used in multiple industries

3.3 Understanding the Text Page no. 97

1) Read the following sentences and choose the correct answer.

The stranger consults the astrologer because he wants to.....

c) get the answer to a specific question

2) Why did the astrologer pick up his paraphernalia and plan to pack up for the day?

The astrologer worked by the light of the flare of the nuts-vendor. When the nuts-vendor blew out his flare and rose to go home, the astrologer picked up his paraphernalia and began to pack up for the day.

3) How much did the astrologer usually get from his clients for each question?

The astrologer charged three pies per question.

4) "This pact was accepted." What is the pact referred to here?

The stranger had some questions to ask. If the astrologer gave satisfactory answers, he would give him five rupees. If the astrologer was wrong, he would give twice the amount to the stranger.

5) The client that night was different from his usual clients. Do you agree with this statement? Why?

The stranger came to the astrologer as he was packing his paraphernalia to go back home. He challenged the astrologer saying, "You call yourself an astrologer?" He offered the astrologer an anna if he answered his questions satisfactorily, an amount much greater than the money he usually got. He even threatened the astrologer by saying that if he did not answer his questions, he would disgorge all his coins from him.

6. Rearrange the sentences logically.

- b) The astrologer was about to pack up his paraphernalia.
- c) He noticed a man standing before him.
- i) Then he threw a challenge.
- h) He told him to tell his future.
- d) The astrologer demanded one rupee.
- a) The stranger first refused to listen to him.
- g) The stranger offered eight Anna's.
- f) The deal was finalized.

### 3.3.2 Vocabulary Page no. 100

1) Homonyms: words with the same spelling and pronunciation but different meaning

Eg. well: a deep pit or hole sunk into the ground for water

well: in a good way ( We played well.)

2) Homophones: words having the same pronunciation but different spelling and meaning

Eg. desert: a vast area of land, usually hot, with no water, rain or vegetation

dessert: a sweet course eaten at the end of a meal

3) I am deeply gratified that you will be able to come for the inauguration of our new company.

Which of the three options can best replace the underlined word?

delighted, depressed, dejected

Ans. delighted

### 3.3.3 Types of Sentences Page no. 102

Imagine you are in charge of the Electrical Lab of your college. Write down three instructions to be followed in the lab.

- a) Do not work with wet hands.
- b) Ensure safe use of electrical equipment.
- c) Switch off the device after use.

### 3.3.4 Understanding the Text

1) Guru Nayak was not able to recognize the astrologer. Why?

The stranger came at a time when all the vendors in the street had left. There was not enough light for Guru Nayak to see the astrologer clearly.

2) Why did the astrologer advise Guru Nayak to go home immediately?

The astrologer told Guru Nayak that he saw great danger to his life if he went away from home. So he advised him to go home immediately.

3) Did astrology come to the rescue of the astrologer? If not, what else saved his life?

Guru Nayak believed the astrologer because he thought he was truly one. He did not see the astrologer clearly as it was quite dark when they met. The astrologer was able to convince Guru Nayak that his life was in danger if he went away from home. He was quick witted and luck favoured him.

4) Why did the astrologer think that he had committed a murder?

When the astrologer was young, he drank, gambled and quarrelled with a young man. He stabbed him and pushed him into a well. Thinking that he had killed the young man, the astrologer ran away from his village in fear.

5) "Do you know a great load is gone from me today? I thought I had the blood of a man on my hands all these years." What does this say about his character?

We understand that the astrologer is repentant of his sin. He had lived all those years with the feeling of guilt for killing Guru Nayak. He is relieved to know that he is still alive.

### 3.5 OCR Page no. 104

1. What is the benefit of using OCR?

OCR makes it possible to digitize printed texts so that they can be electronically edited, searched, stored more compactly, displayed online and used in machine processes.

2. What is the capability of the latest OCR systems?

The latest OCR systems are capable of reproducing formatted output that closely approximate the original page including images, columns and other non-textual components.

3. How does OCR analyse handwriting?

OCR uses handwriting movements analysis as input to handwriting recognition. The technic captures motions, such as the order in which segments are drawn, the direction and the pattern of putting the pen down and lifting it.

4. Prepare a note on OCR in the format already learnt.

Optical Character Recognition

## 1. OCR

1.1 Electronic or mechanical conversion of images

1.2 Machine-encoded text

1.2.1 of typed, handwritten or printed text

1.2.2 from a scanned document, photo document, scene photo, subtitle text

## 2. Benefits of OCR

2.1 To digitise printed texts

2.1.1 to electronically edit, store, and display them online

2.2 Advanced OCR systems

2.2.1 capable of high degree of recognition accuracy, output closely approximates the original

## 3. Analysis of handwritten document

### 3.5.1 Look at the object and answer the following. Page 105

Technical description is used to name, define, describe and illustrate an object.

1. What is the use of an electric kettle?

An electric kettle is used to boil water

2. Write down the parts of this object.

a container, a handle, an electrical cord, heating element, an on/off switch and a base

3. Which are the materials used to make the kettle?

stainless steel and plastic

4. Identify the shape of the parts.

The base of the kettle is flat and circular. The container is cylindrical, the spout is triangular shaped and the lid is circular.

### 3.5.2 Study the picture, read the description and fill in the table. Page 106

Function: to measure the diameter and radius of thin wire or thin metal sheet

Appearance: U-shaped frame and a spindle or screw attached to the thimble

Parts: stud, screw, frame, pitch scale, circular scale, thimble, ratchet

### 3.5.3 Complete the description of the object with the help of the hints. Page 107

A bench vice is a mechanical apparatus used to secure an object that is to be worked on. Most often, the material used to make this apparatus is metal. It is rectangular, oval or sometimes conical in shape. It is available in many sizes. A bench vice can be blue, white, silver or metallic in colour. Its surface can be smooth, uneven or sandy. The base holds everything together. The jaw clamps the object in place. The main screw rotates and moves the sliding jaw. Materials can be shaped in the anvil. The slide moves and applies pressure to the objects when the handle is turned.

### 3.5.4 Page 109

Do you know how sanitisers are made? Let us read the process of making sanitisers. Read the paragraph given below on sanitisers and answer the questions that follow.

1. What are air sanitisers used for?

Air sanitisers are used to remove germs from the air around.

2. Which are the two ingredients mixed to make sanitiser?

Water and carbopol are mixed to make sanitiser.

3. What is added so that the gel won't irritate the skin?

Triethanolamine is added to prevent the gel from irritating the skin.

4. Why do you think the doer of the action is not mentioned in the paragraph?

The paragraph describes a process where the procedure is important, not the doer of the action.

5. Write down the verb forms used in the paragraph.

1. is believed 2. are used

3. are sprayed 4. is made

5. is ensured 6. is added

3.6 Read the passage on animation and fill in the table.

3.6.1 Pick out from the passage the base forms and passive verb forms used and write them down. Page 111

Base form	Passive form
is, draw, paint	are made, is achieved
manipulate, are,	are manipulated,
use, operate	is thought, is drawn,
	were developed, is used

3.6.2 Complete the sentences using the correct form of the passive verb.

1. A diode is made by joining two equally doped P type and N type semiconductor material.

2. The first handheld cellular mobile phone was invented by John F Mitchell and Martin Cooper of Motorola.

3. Iron is used as a catalyst in the process of ammonia synthesis.

4. The order will be shipped in two days.

5. The machine must be lubricated once every month.

3.6.3 Working of the lathe machine Page no. 112

Fill in the blanks using the appropriate passive forms of the verbs given in brackets.

Lathe machine is one of the most important machine tools in use in the metal working industry.

The prototype was designed by David Wilkinson in 1794. The lathe machine is used to remove

unwanted metals from the workpiece to give desired shape and size. The important parts are

the workpiece and the faceplate. The workpiece is held between two rigid and strong supports

called centers or in a chuck or faceplate which revolves. The faceplate or chuck is mounted to

the machine spindle. The normal cutting operations are performed with the cutting tool fed either

parallel or at right angles to the axis of work.

3.7 Shaping of Plastics Process Description Page No. 113

Extrusion Blow Moulding is used to make plastic bottles. First, the thermoplastic material is

melted and poured into a hollow tube. Then the mould is closed. After that, compressed air is

blown into the parison filling the mould. The product is then cooled and crystallised. Finally, the

product is removed from the blow mould to avoid deformation.

### 3.7.1 Differences between Petrol Engine and Diesel Engine Page No.114

Petrol engine and diesel engine are different in many ways. Firstly, petrol engines are used mainly in light vehicles such as motorcycles and cars whereas diesel engines are used in heavy vehicles such as trucks and buses. Petrol engine was invented by Nicolaus Otto in 1876 and diesel engine was developed by Rudolf Diesel in 1890. In petrol engine, fuel is compressed and mixed with air but diesel engine does not compress fuel and air mixture together. Petrol engine uses high volatile fuels and diesel engine uses low volatile fuels. Petrol engine consumes less fuel but diesel engine consumes more fuel. In petrol engine, we inject air and fuel together whereas in diesel engine we first inject air and compress it and then add fuel.

### 3.7.2 Read the steps involved in recording the pH of water and describe the process in a paragraph. Make appropriate use of passive voice and linkers.

First, the meter is calibrated with buffers. Then the electrode and glassware are rinsed with distilled or deionized water. 100 ml of the sample is then measured and placed in a 150 ml beaker. After that, the rinsed electrode is placed in a test sample. The sample is then stirred very gently, preferably with a magnetic stirrer. The reading should be taken within 3 to 5 minutes. Finally, the sample pH needs to be recorded to the nearest 0.01 pH unit.