

Rules for preparation of objective type tests

Objectives: At the end of this lesson you shall be able to

- distinguish between subjective and objective test
- state the advantages and disadvantages of objective type test
- list out the types of objective type test
- explain the structure of multiple choice test item
- enumerate the rules for preparation of objective type test item
- explain the use of test profile and mind map preparation.

The main classification of tests are -

- Oral
- Practical (or) performance
- Written test

Written test is further classified into two

- Subjective and
- Objective type test.

Subjective test

The subjective type is also called as 'essay type test'. Normally the questions are few, and short. But the answers are lengthy. Setting of question papers is easy, but evaluation takes more time.

Performance and expression of the student, is affected by personal views and ideas of teacher.

Objective test

An objective test is a test that has right and wrong answers and so can be marked objectively.

Objective tests are popular because they are easy to prepare and take, less time to mark and provide a quantifiable and concrete results.

There is no need to have command over language etc.,

Every question has one definite answer, so scoring is easy and uniform. But it requires great skill on the part of the teacher to design the test.

Advantages of objectives test

- Scoring is uniform as personal opinion in grading is eliminated.
- There is only one correct answer to every question.
- Grading is easy with the help of a key prepared in advanced.

- A wide range of subject matter can be covered.
- The students have to study the entire syllabus in great detail.
- Quality of language, handwriting etc., does not affect the marks obtained.
- Checks effectiveness of knowledge and quick thinking.
- Easy for student to score high marks.

Disadvantages

- Answers are open to guessing.
- Difficult to design. The teacher has to be very careful in designing the question. there should be no repetition, no clues to the answer and no doubt of correctness of the answer.
- Chances of copying are more.
- Quality of knowledge cannot be tested.
- Not useful for advanced students.
- Not useful to show personality traits.

Types of objective test items

- | | |
|---------------------------|-----------------------|
| • Matching test | • Simple recall test |
| • Multiple choice test | • Best answer test |
| • True or false test | • Completion test |
| • Correct/ incorrect test | • Identification test |

Among the above objective test items, **The multiple choice** test item is widely conducted for measuring skill and knowledge of the students/ trainees.

The multiple choice tests are best adapted for testing well defined (or) lower order skills, problem solving and higher order reasoning skills are better assessed through.

The purpose of a multiple choice item is to access candidates ability with regards to a specific content area.

Structure

Multiple choice item consists of a problem, known as stem, and a list of suggested solution, known as alternatives. The alternatives consists of one correct (or) best answer (key) and incorrect alternative is known as distractor.

The student has to select the best answer and complete the statement.

The four alternatives includes keys which are represented by the alphabet A,B,C and D.

- Stem - consists of informations and questions.

Answer field consists of

A -----

B -----

C -----

D -----

} 3 alternatives and one key

- Distractor - choose the correct answer (or) best answer

Answer field

A ☐ B ☐ C ☐ D ☐

Key

A ☐ B ☐ C ☒ D ☐

In All India Trade Test conducted by Directorate General Training (DGT), for all ITI's, the above structure of multiple choice question are prepared for written exam, such as Trade theory, Workshop Calculation for Science, Engineering Drawing and Employability skill papers.

The criteria's for multiple choice questions are already explained in Lesson 6.2 in detail.

Rules for preparation of objective test

Preparation for objective type test, the two important steps are involved.

- Planning
- Preparation

Planning: The test must be planned in advance by considering the following points.

- The class for which the test is to be prepared
- The convenient time/ date available for the test
- The subject and the units for which the test is intended
- The types of questions and items to be planned
- The scoring procedures to be adopted
- The nature of analysis and interpretation of score.

Preparation

Objective type test should be prepared by an instructor. It is for testing the trainees ability to assess the desired behaviour in related subject (or) content (or) performance. There are two important aspects for the end of term tests. They are

- The type of things the trainee should be able to do (abilities)
- The subject matter in which he should be able to do them (i.e. content)

By analysing both the above for a particular situation, a chart/ table can be prepared.

Content

To arrive at the important areas of syllabus and the weight to be given to that area in the examination, the points given below can be considered.

- To what extent this area is necessary for understanding the other areas and the syllabus.
- Whether the students/ trainees make use of the material in this area of his job / day to days life economically.
- How many periods have been allotted for teaching the particular unit?

Preparation of Good Question Paper

Preparation of a good question paper requires proper planning. The question paper must be prepared on a multi dimensional basis. They are

- Objective to be tested
- Content to be covered
- Types of questions to be used
- Number of items to be included

The last two factors are interdependent. The number of questions must depend upon the kinds of questions to be used.

The number of questions in a paper must be divided with different levels of complexity (3 levels).

Now, multiple choice questions are only asked. For engineering trades 50 questions are asked in 3 levels, and each question carriers 3 marks.

In a theory question paper, 3 levels are distributed in all topics which are as follows

Level -1	-	30%	(i.e.)	15 Questions
Level -2	-	50%	(i.e.)	25 Questions
Level -3	-	20%	(i.e.)	10 Questions
Total				50 Questions

Before preparation of question paper the paper setter must consider and keep in their mind, about the points given below.

- Number of compulsory questions to be answered
- If you give choice, specify it in easy understandable language
- Give the scores for each questions and parts of questions
- Provide time for the paper
- Never ask tricky questions
- Prepare a key before the test conducted.

Test profile

For preparing objective type test question paper, test profile must be prepared.

Functions of test profile

- It guides and monitors the test item development.
- Ensuring content coverage of test paper (validity, reliability).
- Ensuring paper setting as per predetermined profile.
- monitoring and balancing at question bank development as per profile.
- Providing uniformity and transparency in paper setting procedure.

Fig 1 shows the sample test profile for preparing question bank in NIMI. It gives idea about the profile.

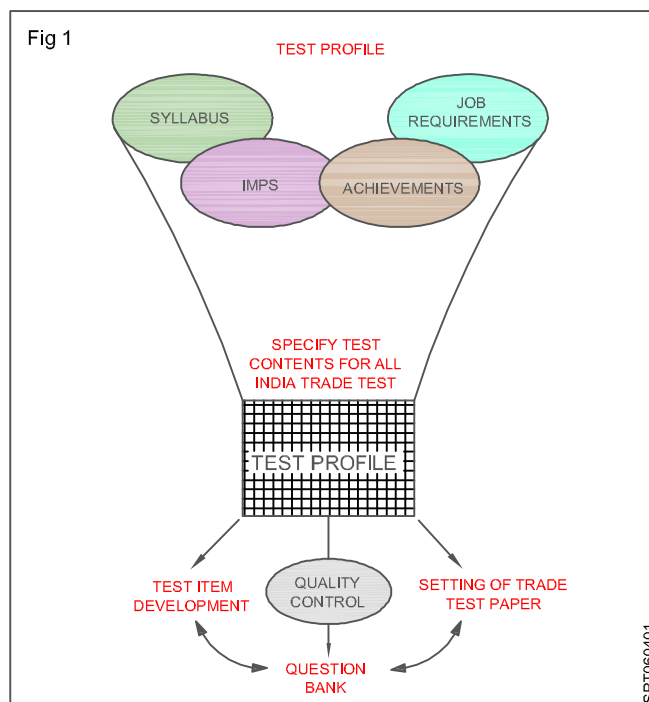
Previously till 2012, before introducing semester system in ITI's the objective and subjective type of question papers were prepared and tested in All India trade test.

In that, Trade theory questions paper includes,

- Short answer
 - Multiple choice
 - Multiple type
 - Calculation and
- objective (70%) type
- Essay (subjective) - 30%
 - For objective type
- | | | |
|-----------|---|-----|
| Level - 1 | - | 25% |
| Level - 2 | - | 50% |
| Level - 3 | - | 25% |

In 2013, semester system introduced, the syllabus which were revised. The objective type test is conducted only with multiple choice test item of 50 questions, 3 marks allotted for each questions.

Fig 1



For considering, the below average, average and above average trainees, the question papers are prepared with 3 levels of complexity to cover all categories of trainees and (3) are equally allotted (3 marks) for each levels.

In 50 nos of questions, the levels are considered as follows.

Level -1	-	30%	(i.e.)	15 Questions
Level -2	-	50%	(i.e.)	25 Questions
Level -3	-	20%	(i.e.)	10 Questions
100%				50 Questions

Before Preparing questions for question bank (or) question paper, for multiple choice objective test, test profiles must be prepared for module weightage and topic weightage and considering the future and practical relevance, along with testing compulsory question weightage for the total number of questions. All types should be covered in the question paper.

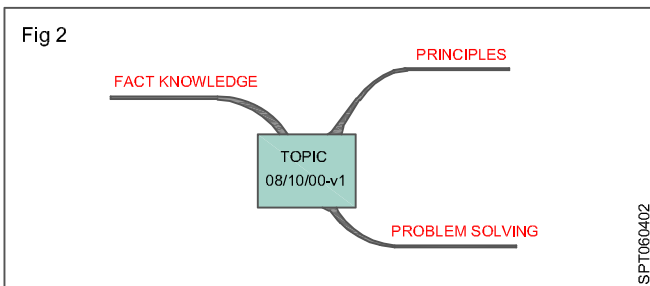
Test Paper profiles	
Feature	
Module / Topic	8-10 modules weightage based on time and relevance
Time	90 minutes
Level of complexity	Level : 25% Level : 50% Level : 25%
Test item type	Short answer : (30%) Multiple choice: (50%) Matching items : (20%)
Illustration	50%

Mind map

Before taking question in a practical topic, **mind map** can be prepared for covering all content with level of complexity.

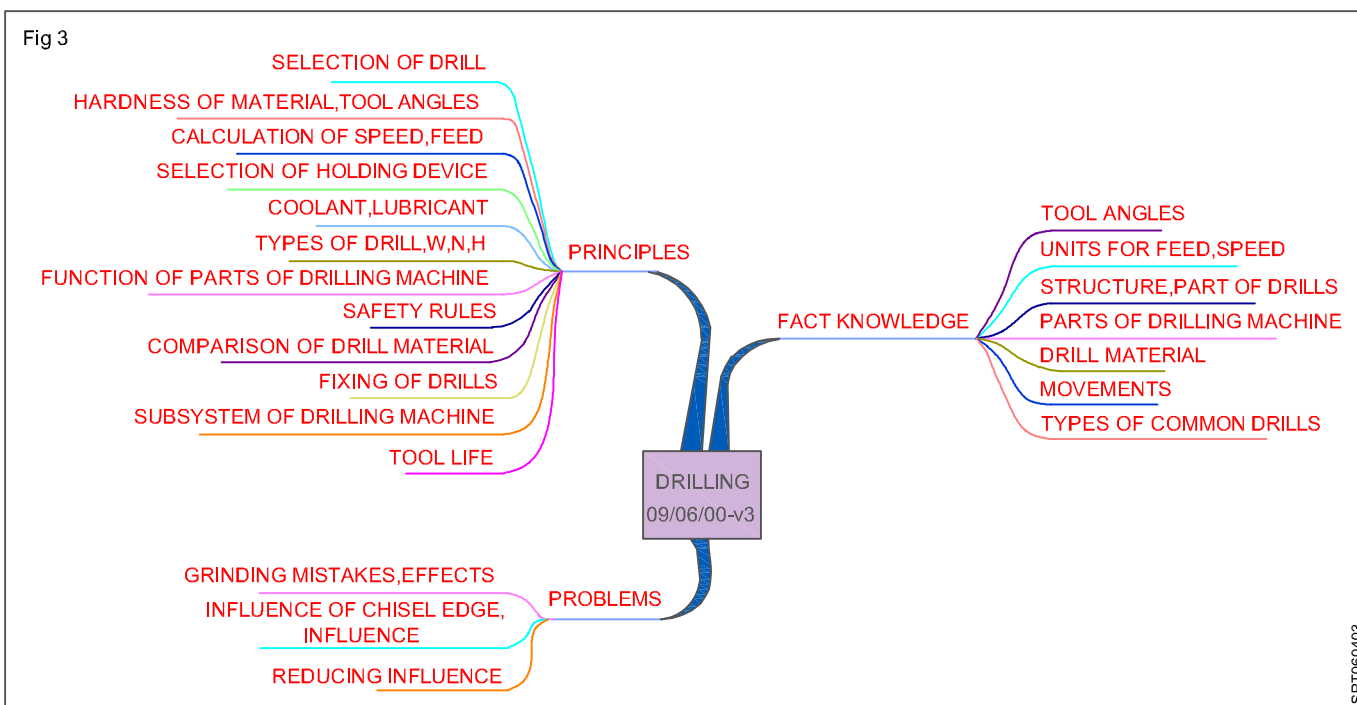
Mind map helps to prepare the questions in each level with flow of contents in the topic like tree branches.

Mind map is a diagram used to visually organise information. It is hierarchical and shows relationships among pieces of the whole topic. (Fig 2)



It is often created around a single concept, draw as an image in the center of a blank page to associated representation of ideas as images, words and parts etc.

A sample mind map is shown in Fig 3 for a drilling machine topic for making question.



Model Questions

Theory 6.4

12 What is the advantages of objective type test?

- A Chances of copying is less
- B Easy for student to score high marks
- C Quality of knowledge can be tested
- D Useful for advanced students

13 Which type of objective test item is adapted in All India Trade test theory question paper?

- A Short answer type
- B Subjective type
- C Matching type
- D Multiple choice type