

# HOTS Module-1 – Complete Solved Answers

## 1. Activity: Introduction to HOTS Training

**Answer:**

The purpose of HOTS training is to familiarize teachers with modern teaching strategies so that they can develop critical thinking, problem-solving skills, and creative thinking among students. This training helps improve the overall teaching and learning process.

## 2. 1.1 Introduction to Module-1

**Answer:**

In this module, we learn about the introduction of HOTS, student-centered learning, higher-order thinking, and the practical implementation of HOTS in teaching.

## 3. 1.2 Activity: Self Assessment

**Answer:**

I provide opportunities for students to ask questions in my class.  
I use modern teaching methods in my teaching.  
I try to improve students' thinking abilities.  
I was partially aware of HOTS before this training.

## 4. Student Centered Learning (Why – How – What)

**What:**

Student-centered learning means that students are the central focus of the teaching-learning process.

**Why:**

So that students can think independently, ask questions, and express their ideas confidently.

**How:**

Through group work, question-answer sessions, practical activities, and classroom discussions.

## 5. 1.3 (a) Activity: A Child as the Center of Learning

**Answer:**

When a child is made the center of learning, his confidence increases, he learns better, and he can properly use his abilities.

## 6. 1.3 (b) Understanding HOT

**Answer:**

HOT refers to a type of thinking that is not limited to memorization but includes analysis, reasoning, problem-solving, and creative thinking.

### **7. 1.3 (c) Reflective Activity**

**Answer:**

I learned that through practical classroom activities, students' interest increases and the learning process becomes more effective.

### **8. 1.4 (a) Implementation of HOTS**

**Answer:**

Methods of implementing HOTS include:

- Group discussion
- Question and answer sessions
- Problem-solving activities
- Creative tasks

### **9. 1.4 (b) Activity: Implementation of HOTS**

**Answer:**

In my classroom, I will use stories to ask questions, encourage students to find solutions, and promote group work.

### **10. 1.4 (c) Module, Unit-1: Transactional Writing**

**Answer:**

Transactional writing includes applications, letters, notices, reports, and emails that are used in practical life.

### **11. 1.4 (d) Instructions and Reflection**

**Answer:**

Clear instructions help students learn better.

I realized that good instructions improve students' performance.

### **12. 1.5 (a) Handout**

**Answer:**

HOTS improves students' thinking skills, problem-solving abilities, and self-confidence.

### **13. 1.5 (b) Reflective Activity**

**Answer:**

Through HOTS activities, students become more active and learn more effectively.

### **14. 1.6 Activity: End of Module Assessment (MCQs)**

Q1: What does HOTS stand for?

Answer: Higher Order Thinking Skills

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Q2: Who is the center in Student-Centered Learning?

Answer: Student

Q3: What is the role of the teacher?

Answer: Guide / Facilitator

Q4: What does HOTS promote?

Answer: Critical Thinking

Q5: What does Assessment mean?

Answer: Evaluation

### **15. 1.6 MATCH (Matching)**

HOTS = Higher Order Thinking

Student Centered = Learner-Focused

Teacher = Guide

Assessment = Evaluation

### **16. 1.6 SORTING (Correct Order)**

1. Introduction
2. Activity
3. Practice
4. Assessment
5. Reflection

### **17. 1.7 Activity: Way Forward**

**Answer:**

In the future, I will:

- Use HOTS-based activities in my classroom
- Encourage students to ask more questions
- Promote group work
- Develop creative thinking skills

## **HOTS Module-2 Complete Solved Answers**

### **1. 2.1 Introduction to Module 2**

**Answer:**

Module 2 focuses on developing **Critical Thinking Skills** in students. This module helps teachers understand what critical thinking is, why it is important, and how it can be developed in classrooms through different strategies and activities.

### **2.2.2 (a) Self-Assessment**

**Answer:**

I try to encourage my students to ask questions.  
I motivate students to share their opinions in class.  
I use activities that promote thinking.  
I give students chances to solve problems themselves.

### **3.2.2 (b) Reflective Activity**

**Answer:**

I realized that when students are encouraged to think independently, their confidence improves and their learning becomes more effective.

### **4.2.3 (a) Introduction to Critical Thinking**

**Answer:**

Critical thinking is the ability to think clearly, logically, and independently. It includes analyzing information, evaluating ideas, solving problems, and making decisions based on reasoning rather than memorization.

### **5.2.3 (b) Reflective Activity**

**Answer:**

After learning about critical thinking, I understood that students should not only memorize but also understand, analyze, and apply knowledge.

### **6.2.4 (a) Strategies to Spark Critical Thinking**

**Answer:**

Some important strategies to promote critical thinking are:

- Asking open-ended questions
- Classroom discussions
- Problem-solving tasks
- Brainstorming
- Group work
- Real-life examples

### **7.2.4 (b) Activity: Strategies to Spark Critical Thinking (Reflective Exercise)**

**Answer:**

I will use open-ended questions in my class. I will encourage group discussions and ask students to explain their answers. This will improve their thinking and reasoning skills.

### **8.2.5 (a) Activity: Handout – Interpreting Lesson Plans**

**Answer:**

A good lesson plan should include:

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- Learning objectives
- Warm-up activity
- Teaching strategies
- Student activities
- Assessment
- Conclusion

Lesson plans should focus on student participation and critical thinking.

### **9. 2.5 (b) Reflective Activity**

**Answer:**

I learned that a well-planned lesson helps students understand better and participate actively in the class.

### **10. 2.5 (c) Activity: Critical Thinking in Practice**

**Answer:**

In my classroom, I will give students real-life problems, ask them to think of solutions, discuss in groups, and share their ideas. This will help them develop critical thinking skills.

### **11. 2.6 Activity: End of Module Assessment (MCQs)**

Q1: What is Critical Thinking?

Answer: The ability to analyze, evaluate, and solve problems

Q2: Which strategy promotes critical thinking?

Answer: Open-ended questions

Q3: What is the teacher's role in critical thinking?

Answer: Facilitator

Q4: Group work helps students to:

Answer: Share ideas and think deeply

Q5: Why is critical thinking important?

Answer: It helps in better decision-making

### **12. 2.7 (a) Critical Thinking – Why, How, Examples**

**Why:**

Critical thinking is important because it helps students understand deeply, solve real-life problems, and make logical decisions.

**How:**

Through questioning, discussion, activities, projects, and problem-solving tasks.

**Examples:**

- Solving a word problem in math

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- Discussing a story in English
- Finding solutions to daily life problems

### 13. 2.7 (b) Handout

**Answer:**

Critical thinking helps students to:

- Think independently
- Analyze information
- Make better decisions
- Improve creativity
- Gain confidence

### 14. 2.8 Reading URL

**Answer:**

The reading material helps in understanding the importance of critical thinking, modern teaching strategies, and how students learn better through active participation.

## HOTS Module-3 Complete Solved Answers

### 1. 3.1 Introduction to Module 3

**Answer:**

Module 3 focuses on developing **Analytical Thinking and Decision-Making Skills** in students. This module helps teachers understand how to improve students' ability to analyze information, think logically, and make correct decisions in real-life situations.

### 2. 3.2 Activity: Assessment

**Answer:**

I regularly assess my students through:

- Class discussions
- Question-answer sessions
- Written tests
- Group activities

Assessment helps me understand students' strengths and weaknesses and improve my teaching strategies.

### 3. 3.3 (a) Understanding Analytical Thinking

**Answer:**

Analytical thinking is the ability to break information into smaller parts, examine each part carefully, compare facts, and reach a logical conclusion. It helps students understand problems deeply and find effective solutions.

### **4.3.3 (b) Understanding Analytical Thinking – Reflection**

**Answer:**

I realized that analytical thinking helps students become better problem solvers and improves their ability to understand complex concepts easily.

### **5.3.4 (a) Strategies for Developing Analytical Thinking**

**Answer:**

Some important strategies for developing analytical thinking are:

- Asking “Why” and “How” questions
- Comparing and contrasting ideas
- Problem-solving activities
- Group discussions
- Case studies
- Brainstorming

### **6.3.4 (b) Activity: Strategies for Developing Analytical Thinking – Reflection**

**Answer:**

I will use problem-solving activities and group discussions in my classroom. I will encourage students to explain their thinking process to improve their analytical skills.

### **7.3.5 (a) Decision Making**

**Answer:**

Decision making is the process of choosing the best option from different choices after carefully analyzing all possibilities, advantages, and consequences.

### **8.3.5 (b) Reflective Activity**

**Answer:**

I learned that good decision making requires clear thinking, proper analysis, and understanding of the situation before choosing any option.

### **9.3.6 (a) Handout Activity: Teachers’ Resource**

**Answer:**

Teachers’ resources help in:

- Planning effective lessons
- Using modern teaching methods
- Developing students’ thinking skills
- Making learning more engaging and meaningful

### **10. 3.6 (b) Reflective Activity**

**Answer:**

I realized that using proper teaching resources makes classroom learning more effective and improves students' participation.

### **11. 3.6 (c) Teachers' Resource – Reflection**

**Answer:**

Teachers' resources play an important role in improving teaching quality. They help teachers deliver lessons in a structured and creative way.

### **12. 3.7 (a) Flip Book**

**Answer:**

The flip book is a useful learning tool that presents information in an interactive and visual way. It helps students understand concepts easily and increases their interest in learning.

### **13. 3.7 (b) End of Module Assessment (MCQs)**

**Answers:**

Q1: What is analytical thinking?

Answer: The ability to analyze information and reach logical conclusions

Q2: Which skill is improved by analytical thinking?

Answer: Problem-solving

Q3: What is decision making?

Answer: Choosing the best option after careful thinking

Q4: Which method improves analytical skills?

Answer: Problem-solving activities

Q5: Teachers' resources help in:

Answer: Improving teaching quality

### **14. 3.7 (c) End of Module Assessment (Short Answers)**

**Answers:**

- Analytical thinking breaks complex problems into simple parts.
- Decision making helps students choose correct solutions.
- Group discussion improves analytical and thinking skills.

### **15. 3.8 Activity: Way Forward**

**Answer:**

In the future, I will:

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- Use analytical thinking activities in my classroom
- Encourage students to solve problems independently
- Promote discussion-based learning
- Improve students' decision-making abilities
- Use teachers' resources effectively

## **HOTS Module-4 Complete Solved Answers**

### **1. 4.1 Introduction to Module 4**

**Answer:**

Module 4 is about developing **Problem Solving Skills** in students. This module helps teachers understand what problem solving is, why it is important, and how it can be developed through classroom activities and real-life examples.

#### **2. 4.2 Activity: Self-Assessment – Problem Solving Techniques**

**Answer:**

I encourage students to solve problems on their own.

I give real-life problems in the classroom.

I allow students to discuss different solutions.

I guide students instead of giving direct answers.

#### **3. 4.3 (a) Bridge – Good Problem Solving**

**Answer:**

Good problem solving involves:

- Understanding the problem
- Thinking of different solutions
- Choosing the best solution
- Applying the solution
- Reviewing the result

#### **4. 4.3 (b) Reflective Activity**

**Answer:**

I realized that when students are guided properly, they become confident problem solvers and can find solutions independently.

#### **5. 4.3 (c) Understanding Problem Solving**

**Answer:**

Problem solving is the ability to identify a problem, think logically about its solution, and apply the best strategy to solve it effectively.

### **6. 4.3 (d) Reflective Activity**

**Answer:**

I learned that problem solving improves students' thinking ability and prepares them for real-life challenges.

### **7. 4.4 Flip Book: The Art of Problem Solving**

**Answer:**

The flip book explains different steps of problem solving in a visual and interactive way. It helps students understand complex ideas easily and increases their learning interest.

### **8. 4.4 (b) Reflective Activity**

**Answer:**

I understood that visual learning tools make problem solving more interesting and effective for students.

### **9. 4.5 Ants – Problem Solving**

**Answer:**

The example of ants shows that teamwork, planning, and cooperation are important in problem solving. Ants work together to find food and overcome obstacles.

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### **10. 4.5 (b) Reflective Activity**

**Answer:**

I learned that teamwork plays a major role in solving difficult problems both in class and in real life.

### **11. 4.5 (c) Handout: What is Problem Solving**

**Answer:**

Problem solving is the process of identifying a problem, finding possible solutions, selecting the best one, and applying it successfully.

### **12. 4.5 (d) Handout: Why is Problem Solving Important**

**Answer:**

Problem solving is important because it:

- Develops critical thinking
- Improves decision-making
- Builds confidence
- Helps in daily life situations
- Makes students independent learners

### **13. 4.5 (e) Handout: Lesson Plans**

**Answer:**

A good problem-solving lesson plan includes:

- Learning objectives
- Warm-up activity
- Main problem-solving task
- Group activity
- Discussion
- Assessment
- Conclusion

### **14. 4.5 (f) Reflective Activity**

**Answer:**

I learned that a properly planned lesson helps students understand problems easily and apply solutions effectively.

### **15. 4.6 (a) Activity: End of Module Assessment (MCQs)**

**Answers:**

Q1: What is problem solving?

Answer: Finding a solution to a problem

Q2: Which skill is most important for problem solving?

Answer: Critical thinking

Q3: What helps in good problem solving?

Answer: Logical thinking

Q4: What improves problem-solving skills?

Answer: Practice

Q5: What role does teamwork play in problem solving?

Answer: It makes solving easier and faster

### **16. 4.6 (b) Short Answer Questions**

**Answers:**

- Problem solving helps students think independently.
- It improves decision making.
- It prepares students for real-life challenges.

### **17. 4.7 (a) Activity Handout: Way Forward**

**Answer:**

In the future, I will:

- Use problem-solving activities in my classes
- Encourage students to think independently
- Promote teamwork
- Use real-life examples
- Improve students' confidence

### **18. 4.7 (b) Capacity – Problem Solving Challenge Cards (Version 4)**

**Answer:**

These challenge cards help students practice problem solving through interesting and real-life based tasks. They promote logical thinking and teamwork.

### **19. 4.7 (c) KS 12 Problem Solving Activities – University of Cambridge (Answer Keys)**

**Answer:**

These activities help students develop advanced problem-solving skills using structured tasks, logical reasoning, and practical challenges. They improve critical thinking and analytical ability.

## **HOTS Module-5 Complete Solved Answers**

### **1. 5.1 Introduction to Module 5**

**Answer:**

Module 5 focuses on developing **Creativity and Innovation in the Classroom**. This module helps teachers understand how creativity can be nurtured in students and how innovative thinking can be encouraged through classroom activities and lesson planning.

### **2. 5.2 Exploring Creative Classroom**

**Answer:**

A creative classroom is one where students feel free to share ideas, ask questions, experiment, and learn through activities. The teacher encourages imagination, collaboration, and independent thinking.

### **3. 5.2 Activity: Assessment**

**Answer:**

I encourage creativity in my classroom.

I allow students to express ideas freely.

I use activities that promote imagination and thinking.

I appreciate new and different ideas from students.

#### **4. 5.3 Handout Activity: Introduction to Creativity & Innovation**

**Answer:**

Creativity means generating new ideas.

Innovation means applying creative ideas in practical ways.

Both creativity and innovation help students become confident, independent, and skilled thinkers.

#### **5. 5.3 (a) Arrange the Steps in Creative Thinking (Correct Order)**

Correct Order:

1. Identify the problem
2. Think of new ideas
3. Explore different possibilities
4. Select the best idea
5. Apply the idea
6. Review the result

#### **6. 5.3 (b) Place the Steps to Encourage Creativity (Correct Order)**

Correct Order:

1. Ask open-ended questions
2. Encourage students' ideas
3. Allow mistakes
4. Promote group discussion
5. Give positive feedback

#### **7. 5.3 (c) Arrange the Steps of Problem Solving (Correct Order)**

Correct Order:

1. Understand the problem
2. Think of possible solutions
3. Choose the best solution
4. Apply the solution
5. Check the result

#### **8. 5.3 (d) Drag & Drop: Steps to Develop Innovation (Correct Order)**

Correct Order:

1. Identify needs or problems
2. Generate creative ideas
3. Test the ideas
4. Improve the idea
5. Apply the innovation

### **9. 5.3 (e) Match Each Misconception About Creativity (Correct Matching)**

Correct Matching:

- Creativity is only for intelligent students → **Wrong**
- Creativity cannot be taught → **Wrong**
- Only artists are creative → **Wrong**
- Everyone can be creative → **Correct**
- Creativity grows with practice → **Correct**

### **10. 5.4 (a) Creativity and Innovation in Classroom**

**Answer:**

Creativity and innovation in the classroom help students think independently, solve problems creatively, and develop confidence. Students learn better when they actively participate and explore new ideas.

### **11. 5.4 (b) Reflective Activity**

**Answer:**

I realized that a creative classroom improves students' motivation and learning. Students enjoy learning when they are allowed to express their ideas freely.

### **12. 5.5 (a) Handout Activity: Lesson Plans**

**Answer:**

A creative lesson plan includes:

- Learning objectives
- Warm-up activity
- Creative task
- Group discussion
- Assessment
- Conclusion

Lesson plans should focus on student participation and innovative learning.

### **13. 5.5 Reflective Activity-1**

**Answer:**

I learned that creativity can be developed by giving students freedom to think and explore without fear of mistakes.

### **14. 5.5 Reflective Activity-2**

**Answer:**

I realized that students perform better when creative activities are included in daily lessons.

### **15. 5.5 (b) Video: Creativity in Practice**

**Answer:**

The video shows how teachers can use creative approaches such as storytelling, games, and projects to improve students' interest and learning.

### **16. 5.5 (c) Video: Creativity in Practice**

**Answer:**

This video highlights how innovation in teaching methods helps students think deeply and participate actively.

### **17. 5.5 (d) Creativity in Practice**

**Answer:**

Creativity in practice means applying creative ideas in real classroom situations through projects, activities, and problem-based tasks.

### **18. 5.5 Reflective Activity: Videos**

**Answer:**

After watching the videos, I learned that creativity makes learning enjoyable and improves students' confidence and performance.

### **19. 5.6 Activity: End of Module Assessment (MCQs)**

Q1: What is creativity?

Answer: Generating new ideas

Q2: What is innovation?

Answer: Applying creative ideas practically

Q3: Which classroom supports creativity?

Answer: Student-centered classroom

Q4: What encourages creativity most?

Answer: Freedom to express ideas

Q5: Why is creativity important?

Answer: It improves problem-solving and confidence

### **20. 5.7 Reading URL**

**Answer:**

The reading material helps teachers understand how creativity and innovation improve teaching methods and student learning through active participation.

## **HOTS Module-6 Complete Solved Answers**

### **1. 6.1 Introduction to Module 6**

**Answer:**

Module 6 focuses on **Innovative Teaching Practices, Reflective Practices, Gamification, and 21st Century Teaching Skills**. This module helps teachers improve their teaching through modern strategies that increase student engagement, motivation, and higher-order thinking.

### **2. 6.2 Activity: Self-Assessment**

**Answer:**

I reflect on my teaching practices regularly.  
I try new teaching strategies in my classroom.  
I use activities to engage students actively.  
I encourage students to participate and share ideas.

### **3. 6.3 Reflective Practices**

**Answer:**

Reflective practice means thinking about our teaching methods, evaluating what works well, and improving areas where students face difficulties. It helps teachers grow professionally and become more effective.

### **4. 6.3 Reflective Activity**

**Answer:**

I realized that when I reflect on my lessons, I understand my students' needs better and improve my teaching strategies accordingly.

### **5. 6.4 Gamification**

**Answer:**

Gamification is the use of game-based elements such as points, rewards, levels, and challenges in teaching. It increases students' motivation, participation, and interest in learning.

### **6. 6.4 Gamification - Reflective Activity**

**Answer:**

I learned that when learning is turned into a game, students enjoy lessons more and participate actively without fear of failure.

### **7. 6.4 Handout Activity: Gamification**

**Answer:**

Benefits of gamification in the classroom:

- Increases student motivation
- Improves engagement
- Encourages teamwork
- Makes learning fun

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- Develops problem-solving skills

### **8. 6.4 Reflective Activity**

**Answer:**

I realized that gamification can help weak students participate confidently and improve their learning outcomes.

### **9. 6.5 (a) Innovative Teaching Approaches – A Visual Guide**

**Answer:**

Innovative teaching approaches focus on:

- Student participation
- Activity-based learning
- Technology integration
- Project-based learning
- Group discussion

### **10. 6.5 (b) Innovative Teaching Approaches – A Visual Guide**

**Answer:**

This guide shows that teaching should shift from lecture-based methods to interactive and student-centered strategies.

### **11. 6.5 (c) Innovative Teaching Approaches – A Visual Guide**

**Answer:**

Innovative strategies help students think critically, work collaboratively, and apply knowledge in real-life situations.

### **12. 6.5 (d) Innovative Teaching Approaches – A Visual Guide**

**Answer:**

Modern teaching methods improve students' creativity, confidence, communication, and analytical thinking skills.

### **13. 6.6 (a) Final Module Evaluation (MCQs)**

Q1: What is reflective practice?

Answer: Thinking about and improving teaching methods

Q2: What is gamification?

Answer: Using game elements in learning

Q3: Which approach improves student engagement most?

Answer: Student-centered learning

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Q4: Innovative teaching helps students to:

Answer: Think critically

Q5: Technology in teaching helps in:

Answer: Better understanding and engagement

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#### 14. 6.6 (b) Fill in the Blanks

1. Gamification makes learning **interesting**.
2. Reflective practice helps teachers **improve** their teaching.
3. Innovative teaching focuses on **student participation**.
4. Technology helps in **interactive learning**.
5. HOTS promotes **higher-order thinking**.

#### 15. 6.6 (c) True or False

1. Gamification makes learning boring. → **False**
2. Reflective practice helps teachers improve. → **True**
3. Innovative teaching discourages creativity. → **False**
4. Student-centered learning improves engagement. → **True**
5. HOTS only focuses on memorization. → **False**

#### 16. 6.6 (d) Final Module Evaluation

**Answer:**

This evaluation helped me understand the importance of reflective practices, gamification, and innovative teaching approaches in improving students' learning experiences.

#### 17. 6.6 (e) Final Module Evaluation – Short Answers

**Q1:** What is reflective practice?

**Answer:** It is reviewing and improving one's teaching methods.

**Q2:** What is gamification?

**Answer:** The use of game features in education.

**Q3:** Why is innovative teaching important?

**Answer:** It improves creativity, thinking, and engagement.

#### 18. 6.7 Activity: Way Forward

**Answer:**

In the future, I will:

- Use innovative teaching strategies
- Apply gamification in classroom activities
- Reflect on my teaching regularly

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- Encourage higher-order thinking
- Improve students' participation

### **19. K12 HOTS – Practical Guidance**

**Answer:**

This guidance helps teachers apply HOTS in daily lessons through inquiry-based learning, open-ended questions, and problem-solving activities.

### **20. Kosasih – Higher Order Thinking Skills (2022)**

**Answer:**

This resource explains modern HOTS strategies and how teachers can improve analytical, critical, and creative thinking skills in students.

### **21. Skills for the 21st Century – Teaching Higher Order Thinking**

**Answer:**

21st-century skills include critical thinking, communication, collaboration, creativity, and digital literacy, which are essential for modern learners.

### **22. Teaching HOTS – Teach Starter**

**Answer:**

This resource provides classroom activities, lesson ideas, and tools to help teachers develop higher-order thinking skills effectively.