# Previous-Year Question Analysis

Teaching Aptitude | Research Aptitude | ICT

UGC NET Paper 1, December 2012 to December 2018: what was asked, how often, and what to revise first

**What this is.** We went through 13 past Paper 1 question papers (December 2012, June 2013, the September 2013 reconduct of June 2013, December 2013, June 2014, December 2014, June 2015, December 2015, July 2016, January 2017, November 2017, July 2018 and December 2018) and noted every question that belongs to these three units. The tables below say **which concepts were asked and in which papers**, so you can see what repeats. Concepts are described in our own words, not copied question by question.

**Read this carefully.** The question mapping is our own reading of each question, so treat the counts as a guide, not an official statistic. Papers from 2019 onwards (conducted by NTA) are not covered here; look at them separately. Old papers had 60 questions of which 50 counted; from November 2017 there are 50 questions with about five per unit.

## 1. What the Pattern Tells You

- **Each unit gives roughly five questions per paper.** In the 50-question papers (Nov 2017 onwards) Teaching Aptitude is Q1 to Q5, Research Aptitude is Q6 to Q10 and ICT is around Q36 to Q40.
- **Repeats are common.** Research ethics, sampling, thesis writing, steps of research, evaluation types, learner characteristics and computer memory or binary numbers each came up in many different papers.
- **ICT is the most factual unit.** Most questions are one-liners: full forms, memory types, number systems, protocols, open source software. The Abbreviation Bank in the ICT notes covers these.
- **Assertion-reason and matching formats are growing** in Teaching and Research from 2016 onwards, so learn definitions precisely, not just the keywords.

## 2. Teaching Aptitude: Concepts Asked

| Concept | Asked in (paper) | Revise in notes |
|---|---|---|
| **Best or most effective method of teaching** | Dec 2012, Sep 2013 reconduct, Jun 2014 | Teaching methods |
| **Formative evaluation (feedback during instruction)** | Sep 2013 reconduct, Jun 2014, Jan 2017, Jul 2018 | Evaluation |
| **Diagnostic evaluation; summative test interpretation** | Dec 2014; Nov 2017 | Evaluation |
| **Continuous and comprehensive evaluation; evaluation systems** | Dec 2015, Jul 2016 | Evaluation, CBCS |
| **Learner characteristics that help teaching** | Jul 2016, Nov 2017, Jul 2018, Dec 2018 | Learners |
| **Nature and objectives of teaching and learning; teaching implies learning** | Nov 2017, Jul 2018, Jan 2017 | Teaching and learning |
| **Factors affecting or key behaviours of effective teaching** | Dec 2013, Jun 2015, Dec 2015, Jul 2016, Jan 2017, Nov 2017 | Factors affecting teaching |
| **Teaching aids and instructional aids** | Dec 2014, Jun 2015, Jul 2016 | Support system and ICT |
| **Teaching techniques; learner participation; matching methods** | Jun 2015, Dec 2015, Jan 2017, Jul 2018 | Teaching methods |
| **Levels of teaching** | Dec 2014 | Teaching levels |
| **Micro-teaching (scaled-down teaching situation)** | Sep 2013 reconduct | Teaching methods |
| **Teacher qualities and role** | Sep 2013 reconduct, Dec 2013, Jun 2015, Dec 2015 | Teacher and learner |
| **Educational thinkers and theories (Vivekananda, Dewey, multiple intelligences, Delors report)** | Dec 2014, Dec 2015, Dec 2018 | Education and philosophy |

**Priority for Teaching:** 1) Evaluation types (formative, summative, diagnostic, CCE). 2) Learner characteristics. 3) Effective teaching factors and methods. 4) Teaching aids. 5) Thinkers and theories.

## 3. Research Aptitude: Concepts Asked

| Concept | Asked in (paper) | Revise in notes |
|---|---|---|
| **Research ethics (principles, stage, what is unethical)** | Dec 2012, Jun 2013, Dec 2013, Jul 2016, Jan 2017, Nov 2017, Jul 2018 | Section 12 |
| **Probability and non-probability sampling; sampling terms** | Dec 2012, Jun 2013, Sep 2013 reconduct, Dec 2013, Jun 2014, Dec 2014, Dec 2015 | Section 8 |
| **Thesis and dissertation writing, format, supplementary pages** | Jun 2014 (two questions), Dec 2014, Jun 2015, Jul 2016, Nov 2017 | Section 9 |
| **Steps of research and scientific method (sequence)** | Dec 2012, Sep 2013 reconduct, Dec 2013, Jan 2017, Jul 2018 | Section 8 |
| **Types of research (fundamental, applied, experimental, descriptive); research design** | Sep 2013 reconduct, Dec 2013, Jun 2014, Dec 2014, Nov 2017, Jul 2018 | Sections 4 and 5 |
| **Action research: sequence and cycle** | Jan 2017, Jul 2018 | Section 6 |
| **Referencing styles (APA, MLA)** | Dec 2012, Jun 2013, Dec 2015 | Section 10 |
| **Seminar, workshop, symposium; research paper** | Jun 2013, Dec 2015 | Section 9 |
| **Hypothesis and its testing; working hypothesis** | Jun 2013, Dec 2015 | Section 7 |
| **Variables (moderator, dependent)** | Sep 2013 reconduct, Dec 2018 | Section 7 |
| **Paradigms, Weber's approach, qualitative research, deconstruction** | Sep 2013 reconduct, Jun 2014, Jul 2016 | Sections 3 and 5 |
| **Journal quality and impact** | Dec 2012 | Section 9 |
| **Review of literature; empirical research; questionnaire design** | Jun 2015, Dec 2018 | Sections 5 and 8 |

**Priority for Research:** 1) Ethics. 2) Sampling types. 3) Thesis and report format. 4) Order of research steps. 5) Types of research and action research. 6) Referencing and meetings.

## 4. ICT: Concepts Asked

| Concept | Asked in (paper) | Revise in notes |
|---|---|---|
| **Binary numbers and number conversion (decimal, binary, hexadecimal)** | Jun 2015, Jul 2016, Jan 2017, Dec 2018 | Section 5 |
| **Computer memory: ROM start-up routine, memory hierarchy, storage units** | Jul 2016, Jan 2017, Nov 2017, Jul 2018 | Section 5 |
| **Full forms and abbreviations (WWW, FTP, ASCII, DVD, USB, MOOC, NMEICT)** | Jun 2013, Jun 2014, Dec 2014, Dec 2015, Jul 2016, Jan 2017, Nov 2017 | Abbreviation Bank |
| **Meaning of ICT** | Jul 2016, Jan 2017, Jul 2018 | Section 2 |
| **Internet basics: URL, IP address, search engine, first browser, origin of the internet** | Jun 2014, Dec 2014, Nov 2017, Dec 2018 | Section 6 |
| **Protocols and e-mail: POP, FTP, e-mail fields, spam** | Dec 2012, Jun 2014, Jul 2016, Jul 2018 | Sections 6 and 7 |
| **Open source software** | Jun 2015, Dec 2015 | Section 5 |
| **Translators: compiler and interpreter** | Jun 2013 (two questions) | Section 5 |
| **Virus, encryption, security** | Dec 2012, Jun 2015 | Section 10 |
| **Digital initiatives: MOOC, NMEICT, smart classroom, digital empowerment** | Dec 2014, Dec 2015 | Sections 2 and 3 |
| **Social networks, netiquette, Bluetooth** | Dec 2013, Sep 2013 reconduct, Dec 2018 | Sections 6 and 9 |
| **Office software: mail merge, MS Office suite; writing to CD** | Jul 2016, Jan 2017, Dec 2018 | Sections 5 and 9 |

**Priority for ICT:** 1) Binary and memory. 2) Abbreviations. 3) Internet, URL and protocols. 4) Open source and software types. 5) Digital initiatives (SWAYAM, NMEICT, NPTEL).

## 5. A One-Week Plan Using These Notes

| Day | Do |
|---|---|
| **1** | Teaching Aptitude notes sections on evaluation, learners and effective teaching; Practice Set sections 4 to 7 |
| **2** | Teaching Aptitude methods, support system, levels; remaining Practice Set sections; revise the Rapid Revision Sheet |
| **3** | Research Aptitude sections 2 to 8; matching Practice Set blocks |
| **4** | Research Aptitude sections 9 to 12 (writing, referencing, ethics); Practice Set ethics and writing blocks |
| **5** | ICT sections 5 and 6 (computers, internet); memorise the Abbreviation Bank |
| **6** | ICT sections 2, 3, 7 to 10; Practice Set |
| **7** | Redo every question you missed; revise the three Rapid Revision Sheets |

Free practice is also available at physicaledmastery.com. Always compare with the latest official question papers and the current NTA syllabus.