

**2018 UGC-NET
PAPER – I**

Read the following passage carefully and answer questions from 1 to 5:

If India has to develop her internal strengths, the nation has to focus on the technological imperatives, keeping in mind three dynamic dimensions: the people, the overall economy and the strategic interests. These technological imperatives also take into account a 'fourth' dimension, time, an offshoot of modern day dynamism in business, trade, and technology that leads to continually shifting targets. We believe that technological strengths are especially crucial in dealing with this fourth dimension underlying continuous change in the aspirations of the people, the economy in the global context, and the strategic interests. The progress of technology lies at the heart of human history. Technological strengths are the key to creating more productive employment in an increasingly competitive market place and to continually upgrade human skills. Without a pervasive use of technologies, we cannot achieve overall development of our people in the years to come. The direct linkages of technology to the nation's strategic strengths are becoming more and more clear, especially since 1990s. India's own strength in a number of core areas still puts it in a position of reasonable strength in geo-political context. Any nation aspiring to become a developed one needs to have strengths in various strategic technologies and also the ability to continually upgrade them through its own creative strengths. For people-oriented actions as well, whether for the creation of large scale productive employment or for ensuring nutritional and health security for people, or for better living conditions, technology is the only vital input. The absence of greater technological impetus could lead to lower productivity and wastage of precious natural resources. Activities with low productivity or low value addition, in the final analysis hurt the poorest most. The technological imperatives to lift our people to a new life, and to a life they are entitled to is important. India, aspiring to become a major economic power in terms of trade and increase in GDP, cannot succeed on the strength of turnkey projects designed and built abroad or only through large-scale imports of plant machinery, equipment and know how. Even while being alive to the short-term realities, medium and long-term strategies to develop core technological strengths within our industry are vital for envisioning a developed India.

1. The advantage of technological inputs would result in:

(1) Lifting our people to a life of dignity

(2) Unbridled technological growth

(3) Importing plant machinery

(4) Sidelining environmental issues

2. More productive employment demands:

(1) Large industries

(2) Pervasive use of technology

(3) Limiting competitive market place

(4) Geo-political considerations

3. Absence of technology would lead to:

(a) Less pollution

(b) Wastage of precious natural resources

(c) Low value addition

(d) Hurting the poorest most

Code:

(1) (a), (c) and (d) only

(2) (a), (b) and (c) only

(3) (b), (c) and (d) only

(4) (a), (b) and (d) only

4. Envisioning a developed India requires:

(1) Development of core technological strengths

(2) Aspiration to become a major economic player

(3) Dependence upon projects designed abroad

(4) Focus on short-term projects

5. According to the above passage, which of the following are indicative of the fourth dimension?

(a) Aspirations of people

(b) Modern day dynamism

(c) Economy in the global context

(d) Strategic interests

Code:

(1) (a), (b) and (d) only

(2) (a), (b) and (c) only

(3) (b), (c) and (d) only

(4) (a), (c) and (d) only

6. Given below are two premises (A and B). Four conclusions are drawn from them. Select the code that states validly drawn conclusion(s) (taking the premises individually or jointly).

Premises:

(A) Most of the dancers are physically fit.

(B) Most of the singers are dancers.

Conclusions:

(a) Most of the singers are physically fit.

(b) Most of the dancers are singers.

(c) Most of the physically fit persons are dancers.

(d) Most of the physically fit persons are singers.

Code:

(1) (d) and (a)

(2) (a) and (b)

(3) (b) and (c)

(4) (c) and (d)

7. If VARANASI is coded as WCUESGZQ, then the code of KOLKATA will be:

(1) LQOOFZH

(2) LOQOZEH

(3) HLZEOOQ

(4) ZELHOQO

8. Introducing Rakesh to her husband a women said, “His brother’s father is the only son of my grandfather”. The woman is related to Rakesh as:

(1) Daughter

(2) Aunt

(3) Mother

(4) Sister

9. Assertion (A): To communicate well in the classroom is a natural ability.

Reason (R): Effective teaching in the classroom demands knowledge of the communication process.

Code:

(1) (A) is false, but (R) is true.

(2) Both (A) and (R) are true, and (R) is the correct explanation of (A).

(3) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

(4) (A) is true, but (R) is false.

10. Which one among the following is a presupposition in inductive reasoning?

- (1) Uniformity of nature
- (2) Law of identity
- (3) Unchangeability in nature
- (4) Harmony in nature

11. Superiority of intellect depends upon its power of concentration on one theme in the same way as a concave mirror collects all the rays that strike upon it into one point.

What type of reasoning is entailed in the above statement?

- (1) Deductive
- (2) Mathematical
- (3) Psychological
- (4) Analogical

12. Two numbers are in the ratio 2: 5. If 16 is added to both the numbers, their ratio becomes 1: 2. The numbers are:

- (1) 32, 80
- (2) 16, 40
- (3) 20, 50
- (4) 28, 70

13. Differentiation between acceptance and non-acceptance of certain stimuli in classroom communication is the basis of:

- (1) selective morality
- (2) selective expectation of performance
- (3) selective affiliation to peer groups

(4) selective attention

14. The next term in the series ABD, DGK, HMS, MTB, SBL,? , ... is:

(1) KZU

(2) ZKU

(3) ZCA

(4) ZKW

15. Which one of the following statements is not correct in the context of Venn diagram method?

(1) It can be used to represent classes as well as propositions.

(2) It is a method of testing the validity of arguments.

(3) It represents both the premises of a syllogism in one diagram.

(4) It requires two overlapping circles for the two premises of a standard-form categorical syllogism.

16. Assertion (A): Classroom communication is a transactional process.

Reason (R): A teacher does not operate under the assumption that students' responses are purposive.

Select the correct code for your answer:

(1) (A) is false, but (R) is true.

(2) Both (A) and (R) are true, and (R) is the correct explanation of (A).

(3) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

(4) (A) is true, but (R) is false.

17. If the proposition 'domestic animals are hardly ferocious' is taken to be false, which of the following proposition/propositions can be claimed to be certainly true? Select the correct code:

Propositions:

(a) All domestic animals are ferocious.

(b) Most of the domestic animals are ferocious.

(c) No domestic animal is ferocious.

(d) Some domestic animals are non-ferocious.

Code:

(1) (b) only

(2) (a) and (b)

(3) (a) only

(4) (c) and (d)

18. The next term in the series –1, 5, 15, 29,?, ... is:

(1) 63

(2) 36

(3) 47

(4) 59

19. Which of the following set of statements is correct for describing the human communication process?

(a) Non-verbal communication can stimulate ideas.

(b) Communication is a learnt ability.

(c) Communication is not a universal panacea.

(d) Communication cannot break-down.

(e) More communication means more effective learning by students.

(f) Value of what is learnt through classroom communication is not an issue for students.

Code:

(1) (a), (d), (e) and (f)

(2) (a), (c), (e) and (f)

(3) (b), (d), (e) and (f)

(4) (a), (b), (c) and (d)

20. Assertion (A): The initial messages to students in the classroom by a teacher need not be critical to establish interactions later.

Reason (R): More control over the communication process means more control over what the students are learning.

Code:

(1) (A) is false, but (R) is true.

(2) Both (A) and (R) are true, and (R) is the correct explanation of (A).

(3) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

(4) (A) is true, but (R) is false.

The table below embodies data on the production, exports and per capita consumption of rice in country P for the five years from 2012 to 2016. Answer questions 21 - 25 based on the data contained in the table.

Year-wise Production, Exports and Per Capita Consumption of Rice			
Year	Production (in million kg)	Exports (in million kg)	Per Capita Consumption (in kg)
2012	186.5	114	36.25
2013	202	114	35.2
2014	238	130	38.7
2015	221	116	40.7
2016	215	88	42

Where, Per Capita Consumption = $(\text{Consumption in million kg}) \div (\text{Population in million})$ and consumption (in million kg) = Production - Exports.

21. What is the population of the country in the year 2014 (in million)?

(1) 2.85

(2) 2.64

(3) 2.72

(4) 2.79

22. What is the average consumption of rice (in million kg) over the years 2012-2016?

(1) 100.1

(2) 104

(3) 102.1

(4) 108

23. In which year, the population of country was the highest?

(1) 2016

(2) 2013

(3) 2014

(4) 2015

24. The percentage increase in the consumption of rice over the previous year was the highest in which year?

(1) 2016

(2) 2013

(3) 2014

(4) 2015

25. The ratio of exports to consumption in the given period was the highest in the year:

(1) 2015

(2) 2012

(3) 2013

(4) 2014

26. Put the following units of storage into the correct order, starting with the smallest unit first and going down to the largest unit:

(a) Kilobyte

(b) Byte

(c) Megabyte

(d) Terabyte

(e) Gigabyte

(f) Bit

Give your answer from the following code:

(1) (f), (b), (a), (d), (c), (e)

(2) (f), (b), (a), (c), (d), (e)

(3) (f), (b), (a), (d), (e), (c)

(4) (f), (b), (a), (c), (e), (d)

27. Assertion (A): Indoor air pollution is a serious health hazard.

Reason (R): The dispersal of air pollutants is rather limited in indoor environment.

Choose the correct answer from the code given below:

(1) Both (A) and (R) are false.

(2) Both (A) and (R) are true and (R) is the correct explanation of (A).

(3) Both (A) and (R) are true but (R) is not the correct explanation of (A).

(4) (A) is true and (R) is false.

28. India has the largest Higher Education System in the World after:

(a) The United States of America

(b) Australia

(c) China

(d) United Kingdom (U.K.)

Select the correct answer from the code given below:

(1) (a) and (c) only

(2) (a), (b), (c) and (d)

(3) (a), (b) and (c) only

(4) (a), (c) and (d) only

29. Which of the following is considered as major source of pollution in rivers of India?

(1) Thermal power plants

(2) Unregulated small scale industry

(3) Untreated sewage

(4) Agricultural run-off

30. Given the following email fields, which of the email addresses will 'swami' be able to see when he receives the message?

To...	ram@test.com
Cc...	raj@test.com;
Bcc...	ravi@test.com swami@test.com; ama@test.com

(1) ram@test.com; rama@test.com; raj@test.com; ravi@test.com

(2) ram@test.com

(3) ram@test.com; raj@test.com; ravi@test.com

(4) ram@test.com; rama@test.com

31. Which of the following statements are correct about gender budgeting?

(a) It is a separate budget addressing the specific needs of women.

(b) It assesses the impact of government budget on women.

(c) It is an accounting exercise.

(d) It is another budgeting innovation.

Select the correct answer from the code given below:

(1) (b), (c) and (d) only

(2) (b) and (d) only

(3) (a) and (d) only

(4) (a), (c) and (d) only

32. Prime Minister Research Fellowship is for students pursuing Ph.D programme in:

(1) IITs and IISc

(2) State and Central Universities

(3) Central Universities, IISc, IITs, NITs, IISERs and IIITs

(4) IISc, IITs, NITs, IISERs, IIITs, State and Central Universities

33. Which of the following are the barriers to citizen-centric administration in India?

(a) Wooden and inflexible attitude of the civil servants

(b) Ineffective implementation of laws and rules

(c) Awareness of rights and duties of citizens

(d) Lack of job opportunities for the youth

Select the correct answer from the code given below:

(1) (a) and (b) only

(2) (a), (b), (c) and (d)

(3) (a), (b) and (c) only

(4) (a), (b) and (d) only

34. Leader of the Opposition is a member of committees which select:

(a) the Central Information Commissioner

(b) the Central Vigilance Commissioner

(c) the Chairperson of National Human Rights Commission

(d) the Chairperson of National Commission for Women

Select the correct answer from the code given below:

(1) (a), (b) and (d) only

(2) (a), (b), (c) and (d)

(3) (a), (b) and (c) only

(4) (a), (c) and (d) only

35. A new Laptop has been produced that weighs less, is smaller and uses less power than previous Laptop models.

Which of the following technologies has been used to accomplish this?

(1) Solid State Hard Drive

(2) Universal Serial Bus Mouse

(3) Faster Random Access Memory

(4) Blu Ray Drive

36. In terms of their contribution to the total power generation in India, identify the correct sequence of energy sources - Thermal Power Plants (TPP), Large Hydropower Projects (LHP), Nuclear Energy (NE) and Renewable Energy (RE) which includes solar energy, wind energy, biomass and small hydropower projects.

(1) LHP > TPP > NE > RE

(2) TPP > RE > LHP > NE

(3) TPP > LHP > RE > NE

(4) LHP > TPP > RE > NE

37. Which of the following types of natural disasters has no definite beginning and end?

(1) Droughts

(2) Earthquakes

(3) Landslides

(4) Hurricanes

38. Which of the following statements, regarding the term ICT is/are TRUE?

P: ICT is an acronym that stands for Indian Classical Technology.

Q: Converging technologies that exemplify ICT include the merging of audio-visual, telephone and computer networks through a common cabling system.

(1) Neither P nor Q

(2) P only

(3) Q only

(4) P and Q

39. With regard to computer memory, which of the following statement(s) is/are TRUE?

P: Read Only Memory (ROM) is 'volatile' memory.

Q: Random Access Memory (RAM) is 'volatile' memory.

R: Secondary Memory is 'volatile' memory.

(1) P and R only

(2) P only

(3) Q only

(4) P and Q only

40. 'Fly ash' produced in thermal power plants is an ecofriendly resource for use in:

(a) agriculture as micro-nutrient

(b) wasteland development

(c) dam and water holding structures

(d) brick industry

Choose the correct answer from the code given below:

(1) (a), (b), (c) and (d)

(2) (a), (b) and (d) only

(3) (b), (c) and (d) only

(4) (a), (c) and (d) only

41. Which of the sets of activities best indicate the cyclic nature of action research strategy?

(1) Plan, Act, Observe, Reflect

(2) Reflect, Observe, Plan, Act

(3) Observe, Act, Reflect, Plan

(4) Act, Plan, Observe, Reflect

42. From the list of evaluation procedures given below identify those which will be called 'formative evaluation'. Indicate your answer by choosing from the code:

(a) A teacher awards grades to students after having transacted the course work.

(b) During interaction with students in the classroom, the teacher provides corrective feedback.

(c) The teacher gives marks to students on a unit test.

(d) The teacher clarifies the doubts of students in the class itself.

(e) The overall performance of a students is reported to parents at every three months interval.

(f) The learner's motivation is raised by the teacher through a question-answer session.

Code:

(1) (b), (d) and (f)

(2) (a), (b) and (c)

(3) (b), (c) and (d)

(4) (a), (c) and (e)

43. In the two sets given below Set - I indicates methods of teaching while Set - II provides the basic requirements for success/effectiveness. Match the two sets and indicate your answer by choosing from the code:

Set – I (Method of teaching)	Set – II (Basic requirements for success/effectiveness)
(a) Lecturing (b) Discussion in groups (c) Brainstorming	(i) Small step presentation with feedback provided (ii) Production of large number of ideas (iii) Content delivery in a lucid language

(d) Programmed Instructional	(iv) Use of teaching-aids procedure (v) Theme based interaction among participants
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Code:

- | | | | |
|-----------|-------|-------|-------|
| (a) | (b) | (c) | (d) |
| (1) (iv) | (ii) | (i) | (iii) |
| (2) (i) | (ii) | (iii) | (iv) |
| (3) (ii) | (iii) | (iv) | (v) |
| (4) (iii) | (v) | (ii) | (i) |

44. Which of the following sequences of research steps is nearer to scientific method?

(1) Identifying the causal factors, Defining the problem, Developing a hypothesis, Selecting a sample, Collecting data and arriving at generalizations and Conclusions.

(2) Suggested solution of the problem, Deducing the consequences of the solution, Perceiving the problem situation, Location of the difficulty and testing the solutions.

(3) Perceiving the problem situation, Locating the actual problem and its definition, Hypothesizing, Deducing the consequences of the suggested solution and Testing the hypothesis in action.

(4) Defining a problem, Identifying the causes of the problem, Defining a population, Drawing a sample, Collecting data and Analysing results.

45. Which of the following set of statements best describes the nature and objectives of teaching? Indicate your answer by selecting from the code.

(a) Teaching and learning are integrally related.

(b) There is no difference between teaching and training.

(c) Concern of all teaching is to ensure some kind of transformation in students.

- (d) All good teaching is formal in nature.
- (e) A teacher is a senior person.
- (f) Teaching is a social act whereas learning is a personal act.

Code:

- (1) (d), (e) and (f)
- (2) (a), (b) and (d)
- (3) (b), (c) and (e)
- (4) (a), (c) and (f)

46. The problem of 'research ethics' is concerned with which aspect of research activities?

- (1) Evidence based research reporting
- (2) Following the prescribed format of a thesis
- (3) Data analysis through qualitative or quantitative techniques
- (4) Defining the population of research

47. There are two sets given below. Set - I specifies the types of research, while Set - II indicates their characteristics. Match the two and give your answer by selecting the appropriate code.

Set – I (Research types)	Set – II (Characteristics)
(a) Fundamental research (b) Applied research (c) Action research (d) Evaluative research	(i) Finding out the extent of perceived impact of an intervention (ii) Developing an effective explanation through theory building (iii) Improving an existing situation through use of interventions (iv) Exploring the possibility of a theory for use in various situations

	(v) Enriching technological resources
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Code:

- | | | | | |
|-----|------|-------|-------|------|
| | (a) | (b) | (c) | (d) |
| (1) | (ii) | (iii) | (iv) | (v) |
| (2) | (ii) | (iv) | (iii) | (i) |
| (3) | (v) | (iv) | (iii) | (ii) |
| (4) | (i) | (ii) | (iii) | (iv) |

48. In which of the following activities, potential for nurturing creative and critical thinking is relatively greater?

- (1) Participation in a workshop
- (2) Preparing research summary
- (3) Presenting a seminar paper
- (4) Participation in research conference

49. Which of the following learner characteristics is highly related to effectiveness of teaching?

- (1) Family size from which the learner comes.
- (2) Prior experience of the learner
- (3) Educational status of the parents of the learner
- (4) Peer groups of the learner

50. Assertion (A): All teaching should aim at ensuring learning.

Reason (R): All learning results from teaching.

Choose the correct answer from the following code:

- (1) (A) is false, but (R) is true.
- (2) Both (A) and (R) are true, and (R) is the correct explanation of (A).

(3) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

(4) (A) is true, but (R) is false.