

UGC NET PAPER-1

GENERAL APTITUDE

Solved Paper November 2021

Time Allotted: 1 Hour

Maximum Marks: 100

Important Instructions:

- Each question carries 2 marks.
- This paper consists of fifty (50) multiple-choice type of questions.
- Each item has four alternative responses marked (a), (b), (c) and (d). You have to darken the oval as indicated below on the correct response against each item.
Example: where (c) is the correct response.
- Your responses to the items are to be indicated in the **Answer Sheet**.
- Use of any calculator or log table etc., is prohibited.**
- Negative Marking:** For each incorrect answer 0.5 marks shall be deducted.

Direction for Questions (1 to 5):

Study the table carefully and answer the questions that follow:

In the following table, total Exports and Imports of 5 countries over 4 years (in ₹ Crore) is given. Study the table carefully and answer the given questions. (I-import, E-export)

Year Country	2017		2018		2019		2020	
	I	E	I	E	I	E	I	E
P	25	30	24	32	28	36	22	32
Q	28	26	26	31	29	37	26	34
R	24	32	28	25	32	36	28	34
S	22	28	18	28	16	21	23	32
T	26	31	16	33	12	23	21	28

- Which year has the maximum export?
(a) 2017 (b) 2018
(c) 2019 (d) 2020
- Which year has the minimum average import?
(a) 2017 (b) 2018
(c) 2019 (d) 2020
- Which country has the maximum percentage of profit increase from 2019 to 2020?
(Profit = Export – Import)
(a) P (b) Q
(c) R (d) S
- Find out the ratio of export done by country S and T during 2017-2020.
(a) $\frac{109}{115}$ (b) $\frac{111}{115}$

(c) $\frac{108}{117}$ (d) $\frac{107}{117}$

- Find out the difference between the average export and average import for the country P.
(a) 7.25 (b) 7.75
(c) 8.25 (d) 8.50

Given below are two statements:

Statement I: Exploration is particularly useful when researchers lack a clear idea of the problems they will meet during the study.

Statement II: Through exploration, researchers develop concepts more clearly, establish priorities, develop operational definitions, and improve the final research design.

- In light of the above statements, choose the correct answer from the options given below:
(a) Both Statement I and Statement II are false
(b) Both Statement I and Statement II are true
(c) Statement I is false but Statement II is true
(d) Statement I is true but Statement II is false
- In order to transform the regulatory system of Higher Education, the NEP proposes to set up HECI (Higher Education Commission of India). Which of the following are verticals of HECI?
A. NHERC B. NAS
C. HEGC D. NCIVE
E. NAC

Choose the correct answer from the options given below:

- (a) A, B and C only
 (b) A, C and E only
 (c) B, C and E only
 (d) C, D and E only
8. The average of ten number is 7. If each number is multiplied by 11, then the average of the new set of numbers is:
 (a) 72 (b) 77
 (c) 78 (d) 82
9. How many terms are there in the series 168, 175, 182, _____, 266?
 (a) 13 (b) 14
 (c) 15 (d) 16
10. Survey research is based on which of the following?
 (a) Constructivism (b) Hermeneutics
 (c) Interpretivism (d) Positivism
11. Some of the types of hypothesis are as follows:
 A. Descriptive B. Null
 C. Confounding D. Intervening
 E. Explanatory (Causal)
 Choose the correct answer from the options given below:
 (a) A, B and D only (b) A, B and E only
 (c) A, B and C only (d) B, C and D only
12. The number of Sustainable Development Goals is:
 (a) 13 (b) 15
 (c) 17 (d) 19
13. Marshall McLuhan's name is associated with the assertion:
 (a) A message is a message
 (b) The medium is the message
 (c) The message determines the medium accurately
 (d) The message is the medium
14. Match List I with List II

List I Steps in Inference	List II Statements
A. Thesis (Pratijna)	I. Because of smoke
B. Reason (Hetu)	II. Wherever there is smoke, there is fire, as in the kitchen

C. Example (Udaharana)	III. The mountain has fire
D. Application (Upanaya)	IV. The mountain also has smoke accompanied by fire, like the kitchen

Choose the correct answer from the options given below:

- (a) A - II, B - I, C - III, D - IV
 (b) A - III, B - I, C - II, D - IV
 (c) A - III, B - II, C - I, D - IV
 (d) A - III, B - IV, C - II, D - I
15. Given below are two statements regarding the Router:
Statement I: It enables data packets to be routed between different networks.
Statement II: It works in the Data Link Layer.
 In light of the above statements, choose the correct answer from the options given below
 (a) Both Statement I and Statement II are false
 (b) Both Statement I and Statement II are true
 (c) Statement I is false but Statement II is true
 (d) Statement I is true but Statement II is false
16. _____ messages have more or less same meaning for the audience.
 (a) Abstract (b) Complex
 (c) Connotative (d) Denotative
17. Match List I with List II

List I I/O device	List II Data transfer rate
A. Disk	I. 50 bps
B. Mouse	II. 1 Mbps
C. Laser printer	III. 120 bps
D. Keyboard	IV. 100 Mbps

Choose the correct answer from the options given below:

- (a) A - I, B - II, C - III, D - IV
 (b) A - II, B - I, C - III, D - IV
 (c) A - IV, B - II, C - I, D - III
 (d) A - IV, B - III, C - II, D - I
18. Identify the fallacy committed in the argument:
 Some birds are not beautiful creatures.
 All dogs are beautiful creatures.
 Therefore, no dogs are birds.
 (a) Fallacy of Exclusive Premises

- (b) Fallacy of the Illicit Process of Major Term
 (c) Fallacy of the Illicit Process of Minor Term
 (d) Fallacy of the Undistributed Middle Term
19. moodKIT platform uses _____, an open source content management system.
 (a) DRUPAL (b) JOOMLA
 (c) Moodle (d) SAKAI
20. The Post Office protocol is
 (a) Protocol used for sending emails
 (b) Protocol used for transfer of files from one computer to another computer
 (c) Protocol used to handle email attachments
 (d) Protocol used when receiving emails from the email server
21. United Nations Environmental Program (UNEP) was the result of deliberations held during
 (a) Earth Summit at Rio de Janeiro in 1992/1992
 (b) Human Environmental Conference at Stockholm in 1972/1972
 (c) Kyoto Protocol 1997
 (d) Montreal Protocol 1987
22. CBCS is
 (a) Choice Based Credit System
 (b) Credit Based Choice Scores
 (c) Criteria Based Choice System
 (d) Criteria Based Creditable Scores
23. If 'All men are mortal' is given as True, then which of the following options can be validly inferred from it?
 A. 'No men is mortal' is False
 B. 'Some men are mortal' is True
 C. 'Some men are not mortal' is True
 D. 'Some men are not mortal' is False
 E. 'Some men are mortal' is False
- Choose the correct answer from the options given below:
 (a) A, B and D only (b) A, B and C only
 (c) A, B, C and D only (d) B, C, D and E only
24. INFLIBNET Centre, which is an autonomous Inter-University Centre of the University Grants Commission, maintains
 (a) e-Gyankosh (b) e-Pathshala
 (c) Shodhganga (d) Swayam Prabha
25. Which among the following are non-parametric statistics?
 A. t-test
 B. F-test
 C. Spearman's rank order correlation
 D. Mann-Whitney-Wilcoxon test
 E. Kendall coefficient of concordance
- Choose the correct answer from the options given below:
 (a) A, B and C only (b) B, C and D only
 (c) B, D and E only (d) C, D and E only
26. Given below are two statements:
Statement I: Truth and Falsehood are predicates of Arguments
Statement II: Validity and Invalidity are predicates of Statements
- In light of the above statements, choose the most appropriate answer from the options given below:
 (a) Both Statement I and Statement II are correct
 (b) Both Statement I and Statement II are incorrect
 (c) Statement I is correct but Statement II is incorrect
 (d) Statement I is incorrect but Statement II is correct
27. Which region of brain is involved in our ability to learn new information, particularly if it is verbal?
 (a) Cerebrum (b) Hippocampus
 (c) Pons (d) Thalamus
28. Given below are two statements:
Statement I: The compound interest on 280 for 18 months at 10% per annum is 44.3.
Statement II: At 5.6% rate of simple interest, a certain sum will be doubled in 15 years
- In light of the above statements, choose the correct answer from the options given below
 (a) Both Statement I and Statement II are false
 (b) Both Statement I and Statement II are true
 (c) Statement I is false but Statement II is true
 (d) Statement I is true but Statement II is false
29. Given below are two statements:
Statement I: According to Piaget, the ability to solve conservation problems depends on having an understanding of three basic aspects of reasoning: identity, compensation, and reversibility.
Statement II: The stage of classification does not depend on a student's ability to focus on a single characteristic of objects in a set and group the objects according to that characteristic.

In light of the above statements, choose the most appropriate answer from the options given below:

- (a) Both Statement I and Statement II are correct
- (b) Both Statement I and Statement II are incorrect
- (c) Statement I is correct but Statement II is incorrect
- (d) Statement I is incorrect but Statement II is correct

30. The number of characters in 8 bit ASCII code (American Standard Code for Information Interchange) is

- (a) 128
- (b) 256
- (c) 512
- (d) 64

31. Given below are two statements:

Statement I: Small amount of atmospheric Nitrogen dioxide NO_2 is produced from polluting sources

Statement II: Most of the atmospheric NO_2 is produced due to photochemical reactions in the atmosphere

In light of the above statements, choose the most appropriate answer from the options given below:

- (a) Both Statement I and Statement II are correct
- (b) Both Statement I and Statement II are incorrect
- (c) Statement I is correct but Statement II is incorrect
- (d) Statement I is incorrect but Statement II is correct

32. Given below are two statements:

Statement I: Policy action and implementation plans require sound database systems at the regional level only.

Statement II: The statistical system should ensure its impeccability with data architecture, security, quality, cleaning and integration.

In light of the above statements, choose the most appropriate answer from the options given below:

- (a) Both Statement I and Statement II are correct
- (b) Both Statement I and Statement II are incorrect

(c) Statement I is correct but Statement II is incorrect

(d) Statement I is incorrect but Statement II is correct

33. Which of the following fractions is the smallest?

- (a) $\frac{11}{16}$
- (b) $\frac{29}{40}$
- (c) $\frac{5}{8}$
- (d) $\frac{65}{80}$

34. Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: According to Naiyayikas, the fallacy of Savyabhicara occurs when the middle term leads to different opposite conclusions.

Reason R: When the middle term is irregular, it is distributively not related to the major term. In light of the above statements, choose the correct answer from the options given below:

- (a) A is false but R is true
- (b) A is true but R is false
- (c) Both A and R are true and R is the correct explanation of A/(A)
- (d) Both A and R are true but R is NOT the correct explanation of A/(A)

35. A total of 324 coins of 20 paise and 25 paise make a sum of 71. The number of 20 paise coins is

- (a) 124
- (b) 125
- (c) 144
- (d) 200

36. Which of the following water borne diseases may be caused by virus, bacteria and protozoa?

- (a) Cholera
- (b) Diarrhea
- (c) Hepatitis
- (d) Typhoid

37. Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: In classroom communication, teachers should acknowledge and take into account students' views.

Reason R: In a classroom, the probability of message reception can be enhanced by establishing a viewpoint.

In light of the above statements, choose the correct answer from the options given below:

- (a) A is false but R is true
- (b) A is true but R is false
- (c) Both A and R are true and R is the correct explanation of A/(A)
- (d) Both A and R are true but R is NOT the correct explanation of A/(A)

38. According to Urie Bronfenbrenner's biological model of human development, microsystem constitutes _____.

- A. Immediate family B. School
C. Beliefs D. Customs
E. Neighbourhood

Choose the correct answer from the options given below:

- (a) A, B and E only (b) A, B and C only
(c) A, C and E only (d) C, D and E only

39. Which of the following state has maximum installed wind power as per MNRE's latest report?

- (a) Andhra Pradesh (b) Karnataka
(c) Maharashtra (d) Tamil Nadu

40. The communication among persons working at different levels who have no direct reporting relationship is called:

- (a) Diagonal communication
(b) Horizontal communication
(c) Intrapersonal communication
(d) Upward communication

41. Match List I with List II

List I	List II
A. Indian Institute of Advanced Study	I. Noida, UP
B. Indian Biological Sciences and Research Institute	II. Shimla, HP
C. Indian Institute of Soil Science	III. Bhopal, MP
D. Indian Institute of Sugarcane Research	IV. Lucknow, UP

Choose the correct answer from the options given below:

- (a) A - I, B - IV, C - II, D - III
(b) A - II, B - I, C - III, D - IV
(c) A - III, B - IV, C - II, D - I
(d) A - IV, B - III, C - II, D - I

42. Following are some statements regarding File Transfer Protocol (FTP). Choose the correct statements

- A. It is used to access the world wide web (www)
B. It is used to download data from file servers
C. It is used for very small files

D. Files are transferred from one device to another

Choose the correct answer from the options given below:

- (a) A and B only (b) A and C only
(c) B and C only (d) B and D only

43. Which one of the following is an important characteristic of the researchers involved in qualitative study?

- (a) Enthusiasm (b) Non-partisan
(c) Reflexivity (d) Transparency

44. Global Citizenship Education promotes

- (a) Common international laws for global citizenship
(b) International public relations
(c) Issues pertaining to citizenship across countries involving VISA
(d) More peaceful, tolerant, inclusive, secure and sustainable societies

45. Which one of the following is an example of a technological barrier in communication?

- (a) Complexity of ideas
(b) Low bandwidth of internet
(c) Personal attitude towards technology
(d) Physical locations of communicators

Direction for Questions (1 to 5):

46. Read the passage carefully and answer the questions that follows:

Leadership studies are an emergent discipline, and the concept of leadership will continue to change. Leadership lore is defined as an influence relationship among leaders and followers who want real change and outcomes that reflect their shared purpose. Leadership involves influence. It occurs among people; those people who intentionally desire significant changes, and the changes reflect purpose shared by the leaders and their followers.

Influence means that the relationship among people is not passive; however, also part of this definition is that influence is multidirectional. It does not use orders or threats to make somebody do something. The basic cultural values in America make it easiest to think of leadership as something a leader does to a follower. However, leadership has an effect in both directions. In most organizations, superiors influence subordinates, but subordinates also

influence superiors. The people involved in the relationship want real and important changes- leadership involves creating change, not maintaining what normally happens. In addition, the changes sought are not dictated by leaders, but reflect purposes that leaders and followers share. Moreover, change is toward an outcome that the leaders and follower both want; a desired future or shared purpose that motivates them toward this more preferable outcome. An important aspect of leadership is influencing others to come together around a common vision. Thus, leadership involves the influence of people to bring about change toward a desirable future.

What should be the outcome of leadership actions?

- (a) Movement towards common vision of the leader and the followers
 - (b) Movement towards the vision of the leader
 - (c) Movement towards the vision of the majority
 - (d) Strengthening of the authority of leaders
47. "Leadership studies are an emerging discipline", means:
- (a) Leadership studies are a valid field of research

- (b) Leadership studies are an established field
- (c) Leadership studies is an elaborate field
- (d) Leadership studies is an evolving domain of scholarship

48. The concept of leadership discussed in this passage is
- (a) Exceptional (b) Horizontal
 - (c) Individualistic (d) Verticle-topdown
49. What is the main theme of this passage?
- (a) Argument about leadership
 - (b) Explanation of leadership construct
 - (c) Models of leadership
 - (d) Pros and cons of leadership
50. What variables are used for defining leadership?
- (a) Power to affect relationship and desire for change in the true sense of the team
 - (b) Power to change and control
 - (c) Power to effect and desire for mandated change
 - (d) Power to get things done quickly by influence

□□□

Answer Key

Q.No.	Answer	Topic's Name	Chapter's Name
1	d	Data Interpretation	Data Interpretation
2	b	Data Interpretation	Data Interpretation
3	d	Data Interpretation	Data Interpretation
4	a	Data Interpretation	Data Interpretation
5	b	Data Interpretation	Data Interpretation
6	b	True & False Statements	Logical Reasoning
7	b	HECI	Higher Education System of India
8	b	Number-based	Logical Reasoning
9	c	Numerical Series	Logical Reasoning
10	d	Survey	Teaching Aptitude
11	b	Hypothesis	Research Aptitude
12	c	SDGs	People & Environment
13	b	Assertion	Research Aptitude
14	b	Inference-Statement	Research Aptitude
15	d	True & False Statements	Logical Reasoning
16	c	Types of Messages	Teaching Aptitude
17	d	Input-output Devices	Information & Communication Technology
18	b	Syllogism	Logical Reasoning
19	a	Management Tools	Information & Communication Technology
20	d	Communication Protocols	Information & Communication Technology
21	b	UNEP	People & Environment
22	a	CBCS	Higher Education System of India
23	a	Inference-based	Logical Reasoning
24	c	INFLIBNET	Higher Education System of India
25	d	Statistics	Teaching Aptitude
26	b	True & False Statements	Logical Reasoning
27	a,b,c	Terminology	Higher Education System of India
28	a	True & False Statements	Logical Reasoning
29	c	True & False Statements	Logical Reasoning
30	b	ASCII Code	Information & Communication Technology
31	a	True & False Statements	Logical Reasoning
32	d	True & False Statements	Logical Reasoning
33	c	Number-based	Logical Reasoning
34	c	Assertion & Reason	Logical Reasoning
35	d	Algebra	Mathematics
36	b	Terminology	Higher Education System of India
37	c	Assertion & Reason	Logical Reasoning

38	a	Fill in the Blanks	Higher Education System of India
39	d	Wind Power	People & Environment
40	a	Type of Communication	Information & Communication Technology
41	a	National Institutes	Higher Education System of India
42	d	File Transfer Protocol	Information & Communication Technology
43	c	Quality of a Researcher	Research Aptitude
44	d	Global Education Citizenship	People & Environment
45	b	Technological Barriers	Information & Communication Technology
46	c	Inference-based	Comprehension
47	d	Fact-based	Comprehension
48	b	Fact-based	Comprehension
49	b	Main theme	Comprehension
50	a	Fact-based	Comprehension

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GENERAL APTITUDE

Solved Paper November 2021

ANSWERS WITH EXPLANATIONS

1. Option (d) is correct.

Export of 2017 = $30 + 26 + 32 + 28 + 31 = 147$

Export of 2018 = $32 + 31 + 25 + 28 + 33 = 149$

Export of 2019 = $36 + 37 + 36 + 21 + 23 = 153$

Export of 2020 = $32 + 34 + 34 + 32 + 28 = 160$
(maximum)

2. Option (b) is correct.

Average imports of:

2017; $(25 + 28 + 24 + 22 + 26)/5 = 125/5 = 25$

2018; $(24 + 26 + 28 + 18 + 16)/5 = 112/5 = 22.4$
(Minimum)

2019; $(28 + 29 + 32 + 16 + 12)/5 = 117/5 = 23.4$

2020; $(22 + 26 + 28 + 23 + 21)/5 = 120/5 = 40$

3. Option (d) is correct.

Country	2019 Export	2019 Import	2019 Profit	2020 Export	2020 Import	2020 Profit	Change in profit 2019-2020	% Change in profit
P	36	28	8	32	22	10	2	$2 \times 100/8 = 25\%$
Q	37	29	8	34	26	8	0	0
R	36	32	4	34	28	6	2	$2 \times 100/4 = 50\%$
S	21	16	5	32	30	2	3	$3 \times 100/5 = 60\%$ (max)

4. Option (a) is correct.

Export done by country S = $28 + 28 + 21 + 32 = 109$

Exports done by country T = $31 + 33 + 23 + 28 = 115$

Ratio = $109/115$ or $109:115$

5. Option (b) is correct.

Average export of country P = $30 + 32 + 36 + 32/4 = 130/4 = 32.5$

Average import of country P = $25 + 24 + 28 + 22/4 = 99/4 = 24.75$

Difference of average import and average export = $32.5 - 24.75 = 7.75$

6. Option (b) is correct.

Both statements are true. Exploratory research or exploration is done almost before every research to get a clear idea of the research problem. Exploratory research refers when a research is done to explore a less known field. Hence, both statements are true.

7. Option (b) is correct.

The Higher Education Commission of India is a result of the New Education Policy of 2020. It is a regulatory body with four verticals. Those are:

1. NHERC or National Higher Education Regulatory Council
2. GEC or General Education Council
3. HEGC or Higher Education Grant Council
4. NAC or National Accreditation Council

8. Option (b) is correct.

Average or mean is affected by change in scale, which means if every number, of which average has been calculated, is multiplied or divided by a same number, average also gets affected by the same.

If every number of series is multiplied by 7, then the average also will be 7 times. Average = 7. New average after multiplying every number with 11 = $7 \times 11 = 77$.

- 9. Option (c) is correct.**
 Difference between every number is of 7
 Starting from 168 and ending at 266
 Difference of lowers and largest term
 $= 266 - 168 = 98$ $98/7 = 14$
 Number of terms in series $= 14 + 1 = 15$
 1 is to be added as while calculating difference the first term is neglected and we have to consider every term of the series.
- 10. Option (d) is correct.**
 Survey research is based on the Positivism approach. Positivism approach believes that everything has a logic that can be known by observation, surveys and so on.
- 11. Option (b) is correct.**
 Null, alternative and descriptive are the types of research whereas confounding and intervening are the types of variables.
- 12. Option (c) is correct.**
 In 2015, 17 Sustainable Development Goals or SDGs were designed and launched to achieve a more sustainable environment for all by replacing MDGs Or Millennium Development Goals.
- 13. Option (b) is correct.**
 The medium is the message. This statement is given by Marshall McLuhan.
- 14. Option (b) is correct.**
 Pratijan or thesis is the statement which is thought to be presented. Here, The mountain has fire.
 Hetu or Reason is on which the thesis statement is based. Here, because of smoke (the mountain has fire because of smoke).
 Udharana or example is the statement which is given to support the thesis. Here, wherever there is smoke, there is fire, as in the kitchen.
 Application or Upanaya is the comparison of reason and main statement. Here, the mountain also has fire accompanied by smoke like the kitchen.
- 15. Option (d) is correct.**
 Router enables data packets to be routed between various networks but it does not work in the data link layer.
- 16. Option (c) is correct.**
 Connotative words or communication or message refers to words having second meaning than it commonly seeks to. For example; blue commonly means a color but in literature it denotes the feeling of sadness. She is feeling blue today. These types of messages convey a less understanding to the audience unless they have a vast knowledge of literature and second meanings of the word.
- 17. Option (d) is correct.**
 Data transfer rate of input and output devices are as follows:
 Disk-100 mbps
 Mouse-120 mbps
 Laser printer-1 mbps.
- 18. Option (b) is correct.**
 Fallacy of the illicit of major term. Fallacy of illicit of major term is when the major term is distributed in premise but not in conclusion. In simple words, when there is no valid reason that exists or an unmatched conclusion is given, this fallacy or error is called the fallacy of an illicit or major term.
- 19. Option (a) is correct.**
 DRUPAL is an open source Content Management System (CMS) which helps individuals and organizations to build and maintain their websites.
- 20. Option (d) is correct.**
 Post Office Protocol or POP is a protocol that is used while receiving emails from a server.
 Protocol used for sending emails and managing email attachment is SMTP or Simple Mail Transfer Protocol. Protocol used for transferring files from one computer to another is FTP or File Transfer Protocol.
- 21. Option (b) is correct.**
 Conference in Stockholm was held in 1972 with the goal of environmental health. The United Nations Environmental Programme or UNEP was introduced and launched in this conference.
- 22. Option (a) is correct.**
 Choice Based Credit System. CBCS or Choice Based Credit System is a system in which students are offered to select the subjects and

field of their choice. It includes the following characteristics:

1. Choice among various courses and subjects.
2. Grading system
3. Modern education system
4. Semester system
5. Various aspects for calculating credits
6. Includes various subjects in core, elective subjects, skills etc.

23. Option (a) is correct.

If statement "All men are mortal" than following arguments are valid:

- A. No man is mortal is false
- B. Some men are mortal is true
- D. Some men are not mortal is false

Tips for exam: for understanding this type of question, take an example if you have ₹ 100. Then you can spend ₹ 50 also. Likewise, if all men are mortal then some men are mortal is also true.

24. Option (c) is correct.

Shodhganga and shodhgangotri are the centers and an initiative taken by UGC or Universities Grant Commission. Thesis of various scholars of all universities are uploaded at Shodhganga and accepted synopsis are uploaded on shodhgangotri.

25. Option (d) is correct.

C, D and E are non-parametric tests whereas F-test and t-test are parametric tests.

26. Option (b) is correct.

Both statements are incorrect. Statements are written in opposite characteristics. Validity and invalidity are predicates of argument whereas truth and falsehood are predicates of statement.

27. Option (a,b,c) is correct.

Three answers were given by NTA of this question as all these three parts of the brain are included in learning new information.

28. Option (a) is correct.

Both statements are false. Interest for principal 280 at the rate of 10% for 18 months:

(As calculating compound interest is quite complicated because of various aspects we can calculate it as follows:)

$$280 \times 10\% = 28$$

Amount after 1 year = 308 Interest for more 6 months $308 \times 10 \times 6 / (100 \times 12) = 15.4$

Total interest after 18 months = 28 + 15.4 = 43.4

Thus, statement 1 is incorrect

For statement 2,

Let the principal 100

Interest for 15 years with 5.6%

$$100 \times 15 \times 5.6 / 100 = 84$$

Amount after 15 years = 100 + 84 = 184 (not doubled)

Thus, statement 2 is also incorrect.

29. Option (c) is correct.

According to Piaget's theory of cognitive development, the ability of every person to solve problems is based on three aspects those are-identification, comparison and reversibility. The stage of classification is based on ability to focus on every single aspect of the problem.

30. Option (b) is correct.

UNI code, UTF8 and ASCII are the major technologies used in computers. Character in the 8 bit ASCII code is 256.

31. Option (a) is correct.

Small amount of atmospheric Nitrogen dioxide is produced from polluting sources and a major amount is produced naturally due to photochemical reactions in the atmosphere.

32. Option (d) is correct.

Policy action and implementation require a sound database not only on the regional level but at every level. Thus, statement 1 is incorrect. Statistical strength must be required for this. Thus, statement 2 is correct.

33. Option (c) is correct.

For comparison, denominator should be equal

$$\frac{11}{16} = \frac{55}{80}$$

$$\frac{29}{40} = \frac{58}{80}$$

$$\frac{5}{8} = \frac{50}{80}$$

$$\frac{65}{80} = \frac{65}{80}$$

$$\text{Smallest fraction} = \frac{50}{80} = \frac{5}{8}$$

34. Option (c) is correct.

According to Naiyayikas, the fallacy of vyabhichara occurring in the middle term is irregular and leads to a different or opposite conclusion.

35. Option (d) is correct.

Let the number of coins of 25 paise = X

Then, the number of coins of

$$20 \text{ paise} = 324 - X$$

$$\text{So, } 0.25 \times X + 0.20 (324 - X) = 71$$

$$\Rightarrow 0.25X + 64.80 - 0.20X = 71$$

$$\Rightarrow 0.25X - 0.20X + 64.80 = 71$$

By multiplying both sides with 100

$$\text{Then, } 5X + 6480 = 7100$$

$$\Rightarrow 5X = 7100 - 6480$$

$$\Rightarrow 5X = 620$$

$$\Rightarrow X = 620/5 = 124$$

X = Number of coins of 25 paise = 124

$$\begin{aligned} \text{Number of coins of 20 paise} &= 324 - X \\ &= 324 - 124 = 200 \end{aligned}$$

36. Option (b) is correct.

Diarrhoea is a waterborne disease which may be caused by viruses, bacteria and protozoa.

37. Option (c) is correct.

A teacher should acknowledge and accept the point of views of students because this helps to enhance the environment of the classroom and it becomes very interactive and helps in permanent learning.

38. Option (a) is correct.

According to Urie Bronfenbrenner's biological model of human development, in the development of a human being, the microsystem is constituted by family, neighborhood and school.

39. Option (d) is correct.

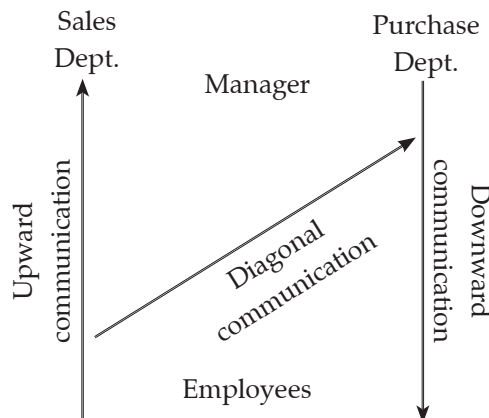
According to a recent report of MNREs or Ministry of New and Renewable Energies, Tamil Nadu has the maximum installed wind power with capacity of 9.3 GW wind energy which consists 25% of total installed wind energy of India.

40. Option (a) is correct.

When communication flows or is between different levels and different departments of an organization, it is called diagonal communication.

Upward and downward communication are types of vertical communication which happens between people working in the same department at different levels.

Horizontal communication is the communication between people working on the same level in different departments.



41. Option (a) is correct.

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Indian Biological Sciences and Research Institute - Noida, Uttar Pradesh

Indian Institute of Soil Science (IISS) - Bhopal, Madhya Pradesh

Indian Institute of Sugarcane Research - Lucknow, Uttar Pradesh

42. Option (d) is correct.

FTP or File Transfer Protocol is the protocol used for transferring files from one to another computer and downloading files from the server. It is used for small as well as large files.

43. Option (c) is correct.

Qualitative research is a research which is majorly dependent on beliefs of the researcher. Being reflexive is the most important quality of a researcher involved in qualitative research.

44. Option (d) is correct.

More peaceful, tolerant, inclusive, secure and sustainable societies.

Global Citizenship Education objects to peace all over the world. It promotes peace, secure and sustainable development.

45. Option (b) is correct.

Low Bandwidth of internet. Low bandwidth of the internet is a technical barrier.

Physical location is a physical barrier.

Personal attitude toward technology is a personal barrier. Complexity of ideas is a personal barrier.

46. Option (c) is correct.

The outcomes of leadership and the main motive of leadership is to motivate the followers to work as a team.

Leaders try to generalize the goals of the organization and the followers.

47. Option (d) is correct.

Leadership studies is an evolving domain of scholarship.

48. Option (b) is correct.

Horizontal leadership is a form of leadership which is closely associated with participatory and democratic leadership. In this form leaders work as a mentor and motivator. They invite the point of views of the subordinates and motivate them to work as a team.

49. Option (b) is correct.

The main theme of the passage is fully dependent on a good leadership power.

50. Option (a) is correct.

According to the passage, leadership should work to develop team spirit and it should have the power to affect relationships and desire of followers to work for the team.

□□□