UGC NET PAPER – 1

GENERAL APTITUDE

SOLVED PAPER JUNE 2025

Time Allotted: 1 Hour   **Maximum Marks:** 100

Important Instructions:-
1. Each question carries 2 marks.
2. This paper consists of fifty (50) multiple choice questions.
3. Each item has four alternative options marked **(a), (b), (c)** and **(d)**. You have to select the correct option.
   Example: where **(c)** is the correct option then you will select it like this (a) ◯ (b) ◯ (c) ◯ (d) ◯.
4. Use of any calculator or log table, etc., is prohibited.
5. There is no negative marking for incorrect answers.

Directions for Questions (1–5):

The following table shows the cumulative number of sales of Red Electric Vehicles (EVs) out of the total number of Red and White EVs sold and the cumulative percentage of the total number of EVs sold in five different months from May to September. Based on the data in the table, answer the questions that follow.

Month-wise sales distribution of EVs

Months	Cumulative number of sales of Red EVs	Cumulative percentage of sale of EVs (Red and White in colour)
May	360	25%
Till June	456	41%
Till July	816	61%
Till August	1032	79%
Till September	1232	100%

Note: Total number of EVs (Red and White) sold in all the 5 months in 2400.

Q.1. What is the ratio of the number of EVs sold in May and the average number of Red and White EVs sold in August?
   (a) 11 : 7   **(b)** 9 : 4   **(c)** 17 : 12   **(d)** 25 : 9

Q.2. What is the average number of White EVs sold in May, June and July together?
   (a) 270   **(b)** 224   **(c)** 216   **(d)** 308

Q.3. What is the number of Red EVs sold in August?
   (a) 180   **(b)** 200   **(c)** 160   **(d)** 216

Q.4. Number of White EVs sold in May is .... % more than the number of Red EVs sold in September.
   (a) 10   **(b)** 5   **(c)** 20   **(d)** 15

Q.5. What is the difference between the number of White EVs sold in June and the number of Red EVs sold in August?
   (a) 120   **(b)** 90   **(c)** 104   **(d)** 72

Q.6. Which of the following is a chemical treatment process in the context of water treatment?
   (a) Sedimentation   **(b)** Coagulation
   (c) Filtration   **(d)** Grit Chamber

Q.7. Write the correct chronological order of the following films as per their release year. (From earliest to the latest)
   (A) Psycho   **(B)** Bicycle Thieves
   (C) City Lights   **(D)** Citizen Kane
   (E) Rashomon
   Choose the correct answer from the options given below:
   (a) (A), (B), (C), (D), (E)   **(b)** (B), (C), (A), (D), (E)
   (c) (C), (D), (B), (E), (A)   **(d)** (B), (D), (A), (C), (E)

Q.8. Which of the following statements are correct?
   (A) One KB has 1024 bytes.
   (B) Cache memory is a secondary storage.
   (C) Operating system is not an application software.
   (D) Hub is a network device.
   (E) ALU is a control unit.
   Choose the correct answer from the options given below:
   (a) (A), (D) and (E) only **(b)** (A), (B) and (C) only
   (c) (A), (C) and (D) only **(d)** (C), (D) and (E) only

Q.9. What is pure research?
   (a) It is concerned with search for ways of using scientific knowledge to solve practical problems.
   (b) It does not develop and test hypotheses and theories.
   (c) This research is not used to reject or support the existing theories about social phenomena.
   (d) It is also called basic research and is concerned with quest for knowledge and knowing more about the phenomenon without concern for its practical use.

Q.10. In which year was the first film Raja Harishchandra, directed by Dadasaheb Phalke, made in India?

(a) 1913   (b) 1914   (c) 1915   (d) 1931

Q.11. The full form of MOOC is

(a) Massive Open Optional Course.

(b) Massive Open Online Course.

(c) Multimedia Open Online Course.

(d) Multimedia Open Optional Course.

Q.12. If in a certain code language 'PERFECT' is written as '73', then how will 'COMPACT' be written in that language?

(a) 69   (b) 71   (c) 75   (d) 77

Q.13. Match the **LIST-I** with **LIST-II**

LIST I (n = Number of Trials, p = Probability of Success)		LIST II (Mean and Standard Deviation of Binomial Distribution)	
(A)	$n = 5, p = 0.4$	**(I)**	2.8 and 1.296
(B)	$n = 6, p = 0.6$	**(II)**	2.0 and 1.095
(C)	$n = 8, p = 0.5$	**(III)**	4.0 and 1.414
(D)	$n = 7, p = 0.4$	**(IV)**	3.6 and 1.200

Choose the correct answer from the options given below:

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

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

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

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

Q.14. Research misconduct includes which of the following?

(A) Data fabrication

(B) Plagiarism

(C) Data falsification

(D) Differences of opinion

(E) Data validation

Choose the correct answer from the options given below:

(a) (A), (B), (C) and (D) only

(b) (C), (D) and (E) only

(c) (D) and (E) only

(d) (A), (B) and (C) only

Q.15. Arrange the steps of classroom action research.

(A) Plan   (B) Reflect

(C) Action   (D) Observe

(E) Follow up

Choose the correct answer from the options given below:

(a) (B), (A), (C), (E), (D)

(b) (C), (B), (E), (D), (A)

(c) (A), (C), (D), (B), (E)

(d) (D), (E), (A), (C), (B)

Q.16. What is a case study method.

(a) It studies the phenomenon, event, situation or development in a very simplified and shallow manner.

(b) It is studying the phenomenon, event, situation or development through a thorough and detailed analysis or intensive study.

(c) This study depends on analysis of responses collected though data.

(d) It is concerned with search for ways of using common sense to solve practical problems.

Q.17. Which of the following are the characteristics of adolescent learners?

(A) Increased emotional sensitivity

(B) High level of self-discipline

(C) Strong need for social belonging

(D) Cognitive development for abstract thinking

(E) Emotional validity

Choose the correct answer from the options given below:

(a) (A) and (D) only

(b) (B) and (C) only

(c) (D), (C) and (E) only

(d) (A), (C), (D) and (E) only

Q.18. Match the **List I** with **List II.**

LIST I (Name of Institutions)		LIST II (Year of Establishment)	
(A)	AICTE	(I)	1972
(B)	ICHR	(II)	1945
(C)	NITI Aayog	(III)	1977
(D)	ICPR	(IV)	2015

Choose the *correct* answer from the options given below:

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

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

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

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

Q.19. In the Vedic Period, as education was idealistic in nature, the Acharyas laid stress upon.

(A) Creation of an aptitude for the development of nation

(B) Worship of God

(C) Fulfilment of desire and needs

(D) Religiousness

(E) Formation of character

Choose the correct answer from the options given below:

(a) (A), (D) and (C) only

(b) (B), (D) and (E) only

(c) (A) ,(B), (C), (D) and (E)

(d) (A), (B), (D) and (E) only

Q.20. HTTP stands for ....

(a) Hyper Text Transmission Protocol

(b) Hyper Text Transfer Protocol

(c) Hyper Text Testing Protocol

(d) Hyper Text Transit Protocol

Q.21. Which of the following statements are sub-contraries?
(A) All sparrows are birds.
(B) No sparrows are birds.
(C) Some sparrows are birds.
(D) Some sparrows are not birds.
Choose the *correct* answer from the options given below:
(a) (C) and (D) only   **(b)** (B) and (D) only
(c) (A) and (B) only   **(d)** (B) and (C) only

Q.22. Which of the following is one of the advantages of behavioural objectives that determine teaching and learning in higher education?
(a) These are teacher-centred.
(b) These make learning focused and achievable.
(c) These focus too narrowly on minutiae.
(d) These limit opportunities from spontaneous unintended outcomes occurring during learning experience.

Q.23. How much more energy is released in an earthquake that measures 4 on the Richter scale than in one that measures 3?
(a) Twice   **(b)** 10%
(c) 10 times   **(d)** 50%

Q.24. Which of the following is the strategy that supports motivation?
(a) Connections across the curriculum.
(b) Attributions to intellect rather than effort.
(c) Work that is too much difficult.
(d) Emphasis on finishing, not learning.

Q.25. If the statement "Some animals are not birds" is given as false, which of the following statements can be inferred to be true?
(A) All animals are birds.
(B) No birds are animals.
(C) No animals are birds.
(D) Some animals are birds.
Choose the correct answer from the options given below:
(a) (A) and (B) only   **(b)** (B) and (D) only
(c) (A) and (D) only   **(d)** (B) and (C) only

Q.26. Mean (M) and coefficient of variation (CV expressed as a percentage) of different datasets are given in A–D below. Compute the standard deviation of each dataset and arrange in ascending order.

(A) $M = 60$, $CV = \dfrac{70}{3}$

(b) $M = 80$, $CV = 6.25$

(c) $M = 70$, $CV = \dfrac{160}{7}$

(d) $M = 90$, $CV = \dfrac{40}{9}$

Choose the correct answer from the options given below:
(a) (D), (A), (B), (C)
(b) (A), (C), (D), (B)
(c) (D), (B), (A), (C)
(d) (B), (D), (C), (A)

Q.27. The IEEE name of Wi-Fi is ....
(a) 802.3   **(b)** 802.11   **(c)** 802.15   **(d)** 802.2

Q.28. The first talkie film *Alam Ara*, directed by Ardeshar Irani was made in which year in India?
(a) 1929   **(b)** 1930
(c) 1931   **(d)** 1913

Q.29. Which is the correct increasing order of memory storage capacity?
(A) 1 PB   **(B)** 1 TB
(C) 1 KB   **(D)** 1 GB
(E) 1 MB
Choose the *correct* answer from the options given below:
(a) (C), (D), (E), (A), (B)   **(b)** (C), (E), (D), (A), (B)
(c) (C), (E), (D), (B), (A)   **(d)** (C), (D), (E), (B), (A)

Q.30. Match the LIST I with LIST II.

	LIST I (Question)		LIST II (Answer)
(A)	What per cent of a day is 3 hours?	(I)	9
(B)	What is the average of first nine prime numbers?	(II)	12
(C)	What is the average of first five multiples of 3?	(III)	12.5
(D)	Sum of the ages of A and B is 12 years more than the sum of the ages of B and C. How many years younger is C than A?	(IV)	11.111

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

Q.31. International Day for Biological Diversity is observed on
(a) 2 February   **(b)** 22 April
(c) 22 May   **(d)** 16 September

Q.32. The price of a jewel, passing through three hands, rises on the whole by 65%. If the first and second sellers make 20% and 25% profit respectively, then find the percentage of profit earned by the third seller.
(a) 10   **(b)** 15   **(b)** 20   **(d)** 30

Q.33. "It is immoral to use textbooks with profane words in them because it is not right for out children to be exposed to disrespectful and ugly words." Which logical fallacy is committed in the above argument?
(a) Argument in Circle   **(b)** Hasty Generalisation
(c) Strawman   **(d)** Fallacy of Division

Q.34. Which of the following statements, A–D are correct?
(A) 5% of (25% of 1600) is 50.

(B) 0.15% of $33\dfrac{1}{3}\%$ of 10,000 is 5.

(C) If interest earned on ₹15,000 in 3 years at simple interest is ₹5,400, then the rate of interest is 12%.

(D) If $\frac{x}{3} = \frac{y}{4} = \frac{z}{5}$, then $x : y : z = 2 : 3 : 7$

Choose the correct answer from the options given below:
(a) (A), (B) and (C) only
(b) (B) and (C) only
(c) (B), (C) and (D) only
(d) (A) and (D) only

Q.35. Arrange the following steps in correct sequence to establish effective governance in higher education institutions.
(A) Formulate policies that ensure transparency and accountability.
(B) Involve faculty, staff and students in decision-making process.
(C) Establish a governing body with clear roles and responsibilities.
(D) Monitor and evaluate the implementation of policies and strategies.
(E) Review and update policies based on feedback and changing needs.
Choose the correct answer from the options given below:
(a) (A), (B), (D), (E), (C)   **(b)** (C), (A), (B), (D), (E)
(c) (B), (C), (A), (E), (D)   **(d)** (D), (E), (C), (A), (B)

Q.36. NEP 2020 emphasised the integration of value education to promote
(a) life skill education among students.
(b) religious education among students.
(c) holistic development among students.
(d) skill development among students

Q.37. What is the correct sequence, from smaller to larger, of following photovoltaic related systems?
(A) Module   **(B)** Array
(C) Solar cell   **(D)** Array Field
Choose the correct answer from the options given below:
(a) (C), (A), (D), (B)   **(b)** (C), (A), (B), (D)
(c) (B), (D), (A), (C)   **(d)** (D), (B), (A), (C)

Q.38. Match the LIST I with LIST II.

	LIST I (Terms)		LIST II (Examples)
(A)	Communication Event	**(I)**	Radio and TV
(B)	Communication Media	**(II)**	Smartphone and Email
(C)	Communication Technology	**(III)**	Journalists and Advertisers
(D)	Communication Professional	**(IV)**	Conference and Meeting

Choose the correct answer from the options given below:
(a) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
(b) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
(c) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
(d) (A)-(I), (B)-(IV), (C)-(III), (D)-(II)

Q.39. Which of the following are sinks of atmospheric carbon dioxide (CO_2)?
(A) Wetlands   **(B)** Oceans
(C) Soil   **(D)** Elephants
Choose the correct answer from the options given below:
(a) (A) and (B) only
(b) (C) and (D) only
(c) (A), (B) and (C) only
(d) (A), (B), (C) and (D)

Q.40. Match the LIST I with LIST II.

	LIST I (Terms)		LIST II (Definition)
(A)	Classroom Management	**(I)**	Objective focusing on attitudes and feelings.
(B)	Collaboration	**(II)**	Memory and reasoning objectives.
(C)	Affective domain	**(III)**	Techniques used to maintain a healthy learning environment.
(D)	Cognitive domain	**(IV)**	A philosophy about how to relate to others.

Choose the correct answer from the options given below:
(a) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
(b) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
(c) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
(d) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)

Q.41. What among the following are the barriers to communication?
(A) Loud music
(B) Ill health
(C) A telephone that is in poor working order
(D) Good health
(E) Traffic noise
Choose the correct answer from the options given below:
(a) (A), (B), (C) and (D) only
(b) (A), (B), (C) and (E) only
(c) (B) and (D) only
(d) (A), (D) and (E) only

Q.42. Find the wrong number in the series given below:
1, 2, 5, 14, 41, 125
(a) 125   **(b)** 5   **(c)** 2   **(d)** 41

Q.43. Arrange the following in order of decreasing extension.
(A) Cheese
(B) Food Products
(C) Dairy Products
(D) Cottage Cheese
Choose the correct answer from the options given below:
(a) (A), (D), (C), (B)   **(b)** (C), (B), (A), (D)
(c) (B), (C), (A), (D)   **(d)** (D), (A), (C), (B)

Q.44. Match the List I with List II.

	LIST I (Hardware)		LIST II (Function)
(A)	Modem	**(I)**	Regenerate Signals
(B)	Router	**(II)**	Physical address
(C)	NIC	**(III)**	IP address
(D)	Repeater	**(IV)**	Conversion of analog and digital signal

Choose the *correct* answer from the options given below:
(a) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
(b) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
(c) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)
(d) (A)-(I), (B)-(II), (C)-(IV), (D)-(III)

Q.45. "A university student is never seen to be writing or reading during the day time but she always submits her assignment in time. Therefore one can conclude that she must be studying and writing during the night time." According to Mimamsa School of Classical Indian Philosophy, which instrument of knowledge (Pramana) is used in the above argument?
(a) Anumana   (b) Arthapatti
(c) Unupalabdhi   (d) Alaukika Pratyaksa

Direction for Questions (46–50):

Read the following passage carefully and answer the questions:

Self-directed learning, in its broadest meaning, describes a process in which individuals take the initiative with or without the help of others, in diagnosing their learning needs, formulation of learning goals, identifying resources for learning, choosing and implementing learning strategies and evaluating learning outcomes. Thus, it is important to attain new knowledge easily and skilfully for the rest of his or her life.

What is the need for self-directed learning? One reason is that there is convincing evidence that people, who take the initiative in leaning, learn more things and learn better than people waiting to be taught, the second reason is that self-directed learning is more in tune with our natural processes of psychological development: an essential aspect of maturing is developing the ability to take increasing responsibility of our own lives to become increasingly self-directed. The third reason is that many of the new developments in education put a heavy responsibility on the learners to take a good deal of initiative in their own learning. To meet the responsibility, the learners have to take a good deal of initiative in their own learning. To meet the challenges in today's instructive environment, self-directed learning is most essential.

Q.46. The synonym of the word 'diagnosing' is
(a) looking for   (b) identifying
(c) inspecting   (d) observing

Q.47. Which of the following best describes self-directed learning?
(a) Out bound learning   (b) Instructive learning
(c) Active learning   (d) Repulsive leaning

Q.48. According to the author, modern environment is
(a) restrictive   (b) not very conducive
(c) instructive   (d) impracticable

Q.49. Self-directed learning is useful as
(a) it is an innovative way of learning.
(b) it is full of challenges.
(c) it enables people to learn more thing and learn better.
(d) it is cost-effective.

Q.50. An individual, by virtue of self-directed learning,
(a) can independently take initiatives.
(b) remains passive and waits for directions.
(c) always depends on others.
(d) feels helpless in the absence of any support.

Answer Key			
Q. No.	**Answer**	**Topic**	**Unit/Chapter**
1	d	Data interpretation	Data interpretation
2	c	Data interpretation	Data interpretation
3	d	Data interpretation	Data interpretation
4	c	Data interpretation	Data interpretation
5	d	Data interpretation	Data interpretation
6	b	Pollution	People and environment
7	c	General awareness	People and environment
8	c	Computer memory	ICT
9	d	Types of research	Research aptitude
10	a	General awareness	People and environment
11	b	Modes of learning	Higher education
12	b	Alphabetical series	Mathematical reasoning
13	d	Statistics	Research aptitude
14	d	Research ethics	Research aptitude
15	c	Types of research	Research aptitude
16	b	Types of research	Research aptitude

17	d	Characteristics of learner	Teaching aptitude
18	b	Institutions/organisations of higher education	Higher education
19	b	Ancient education	Higher education
20	b	Terminology	ICT
21	a	Square of opposition	Logical reasoning
22	b	Approaches of teaching	Teaching aptitude
23	c	Natural hazards	People and environment
24	a	Teaching learning process	Teaching aptitude
25	c	Syllogism	Logical reasoning
26	c	Statistics	Research aptitude
27	b	Computer codes	ICT
28	c	General awareness	People and environment
29	c	Computer memory	ICT
30	c	Percentage, average	Mathematical reasoning
31	c	Days related with environment	People and environment
32	a	Profit and loss	Mathematical reasoning
33	a	Fallacy, Indian logic	Logical reasoning
34	b	Percentage, interest, ratio, average	Mathematical reasoning
35	b	E-governance	People and environment
36	c	NEP-2020	Higher education
37	b	Energy resources	People and environment
38	a	Terminology	Communication
39	c	Pollution	People and environment
40	a	Classroom management	Teaching aptitude
41	b	Barriers to communication	Communication
42	a	Number series	Mathematical reasoning
43	c	Venn diagram	Logical reasoning
44	a	Terminology	ICT
45	b	Indian logic	Logical reasoning
46	b	Reading comprehension	Reading comprehension
47	a	Reading comprehension	Reading comprehension
48	c	Reading comprehension	Reading comprehension
49	c	Reading comprehension	Reading comprehension
50	a	Reading comprehension	Reading comprehension

Answers with Explanations

1. **Option (d) is correct.**

Month	Cumulative Sale of Red & White EVs	Cumulative Total EVs (2400x%)	Sale of Red EVs (each month)	Cumulative Sale of Red EVs
May	25%	600	360	360
June	41%	984	96	456
July	61%	1464	360	816
August	79%	1896	216	1032
September	100%	2400	200	1232

Total Sale of Every Month	Sale of White EVs
600	240
384	288
480	120
432	216
504	304

- Total RED EVs Sold = 1232
- Total White EVs Sold = 1164
- EVs sold in May = 600
- Red and White EVs sold in August = 216 + 216 = 432

Average = $\dfrac{432}{2}$ = 216

Ratio between sale of EVs in May and average sale of Red and White EVs in August.

600 : 216

25 : 9

2. **Option (c) is correct.**

Average number of White EVs in May, June and July together = $\dfrac{240 + 288 + 120}{3}$ = 216

3. **Option (d) is correct.**

From the above table it can be seen that the total number of Red EVs sold in August is 216.

4. **Option (c) is correct.**

From the above table

White EVs sold in May = 240

Red EVs sold in September = 200

Difference = 240 – 200 = 40

Per cent more = $\dfrac{40}{200} \times 100$ = 20%

5. **Option (d) is correct.**

White sold in June = 288

Red sold in August = 216

Difference = 288 – 216 = 72

6. **Option (b) is correct.**

All processes of water treatment given in the question are physical processes except coagulation which is a chemical process.

(A) Sedimentation – This is a physical process for water treatment which is used when the impurities are heavier than water. Water is left undisturbed, allowing heavier particles to settle due to gravity and clarified water is taken.

(B) Filtration – This is a very common and easy process of water treatment. In this, water is passed through a filter which is generally a sand filter.

(C) Coagulation – This is a chemical process of water treatment in which chemicals like alum and ferric chloride are added to the water and they work as neutralisers. They neutralise the electric charge on suspended particles causing them to clump together.

7. **Option (c) is correct.**

City Lights (1931)

Citizen Kane (1941)

Bicycle Thieves (1948)

Rashomon (1950)

Psycho (1960)

8. **Option (c) is correct.**

- Cache memory is a primary memory.
- ALU is arithmeticological unit not a controlling unit. CPU is the controlling unit.
- 1024 bytes = 1KB
- Hub is a networking device.
- Operating system is an system software not an application software.

9. **Option (d) is correct.**

Pure research, also called basic research, is concerned with the quest for knowledge and understanding phenomena without concern for its practical use. In basic or pure research, a hypothesis is formed and later either rejected or supported. Theories or theses are also written.

Research which is concerned with solving a practical problem is called action research.

10. **Option (a) is correct.**

Raja Harishchandra was an Indian silent film released in 1913 which was directed and edited by Dada Saheb Phalke. It was produced by the Phalke Films Company and was the first full length Indian feature film, with a runtime of 40 minutes.

The film had intertitles in English, Marathi, and Hindi.

11. **Option (b) is correct.**

MOOC stands for massive open online course.

This is a web-based distance learning programme.

The objective of this programme is to provide education and learning beyond the geographically boundaries and to underprivileged areas.

It gives accessibility, flexibility, affordability and variety to the students.

There are many examples of MOOC platforms like SWAYAM, edX, etc. These platforms provide various courses through online mode.

12. **Option (b) is correct.**

PERFECT = 73

COMPACT = ?

Positional numbers of alphabet are added here

P + E + R + F + E + C + T

16 + 5 + 18 + 6 + 5 + 3 + 20 = 73

C + O + M + P + A + C + T

3 + 15 + 13 + 16 + 1 + 3 + 20 = 71

13. **Option (d) is correct.**

In binomial distribution,

Mean = $n \times p$

$$\text{Standard deviation} = \sqrt{n \times p \times q}$$

$$q = 1 - p$$

n	p	q	Mean	SD
5	0.4	0.6	2.0	1.095
6	0.6	0.4	3.6	1.200
8	0.5	0.5	4.0	1.414
7	0.4	0.6	2.8	1.296

14. **Option (d) is correct.**

Research misconduct refers to violation of the standards and ethics of research. It includes fabrication falsification, and plagiarism at any step of research.

This generally takes place during the proposing, conducting, or reporting of research.

Falsification – manipulating or omitting data, materials, equipment, or processes, resulting in misrepresented or false outcomes.

Fabrication – creating data or results without any basis in actual evidence.

Plagiarism – copying data from someone else's research or work without giving appropriate credit to the original author.

15. **Option (c) is correct.**

When the research theories are practically applied to solve a problem in an organisation, it is called action research.

- Action research is cyclic in nature
- Problem oriented
- Action oriented

Steps of action research (PAOR)

Plan → Act → Observe → Reflect

Here A, C, D , B, E

Apart from the above steps, action research can also have these steps

1. Identification of a problem area
2. Collection and organisation of data
3. Interpretation of data
4. Action which is based on data
5. Reflection
6. Follow up

16. **Option (b) is correct.**

Case study is a type of descriptive research method in which a particular phenomenon, event, situation, person or development is studied in a very detailed way. This can also be called an intensive study.

17. **Option (d) is correct.**

Adolescent learner (age group of 12 – 18 or teenage is generally:

- Emotionally sensitive.
- Has desire for social belongings.
- Have ability or cognitive development for abstract thinking.

- Has emotional validity.

18. **Option (b) is correct.**

AICTE—AICTE or All India Council for Technical Education is a national level council for technical education in India.

It was established in 1945.

The functions of AICTE include:

- Regulating and providing standards for technical education
- Promotion of quality education
- Supporting research and development in technical education
- Funding and monitoring institutions which are involved in technical education
- Initiative of skill development of students as well as faculty
- Linkage between industry and institute
- Providing scholarships to students and grants to institutions

ICHR – Indian Council of Historical Research is an autonomous organisation which works under the Ministry of Education, Government of India.

It was established in 1972.

Functions of this council include:

- Promotion and direction to historical research in India
- Facilitation of scientific writing in the field of history
- Providing fellowships and financial assistance
- Organising seminars, workshops and publishing research

NITI Aayog – Niti Aayog was established in 2015 by replacing the Planning Commission.

This Aayog prepares plans for short, medium and long term

NITI stands for National Institute for Transforming India.

Niti Aayog is also called the think tank of India as it provides expertise on various development issues to the Government of India.

Apart from these functions it provides monitoring and guidance on various issues.

ICPR – Indian Council of Philosophical Research was established in 1977 but officially started functioning in 1981.

Initially it was registered under the Society Act.

The main function of this council is to provide a platform for philosophical development with the help of seminars, conferences, documentation service and training.

19. **Option (b) is correct.**

- In the Vedic period, education was based on the objective of formation of character.
- Knowledge was passed orally.
- Idealism philosophy was followed.
- There were three basic processes of getting

knowledge: Shravan, Manan and Nidyasana.
- Admission process was called Upnayan Sanskar.
- A student who received education up to the age of 24 was called Vasu. Until the age of 36, the title was Rudra, and by pursuing education up to the age of 48, the student was called Aditya.
- 5th year of age was the year of Vidyarambh or Upnayan Sanskar or the admission.
- Higher education was called Brahm Sangh.
- The primary goal of education was Moksha and the others were Artha, Karma and Dharma.
- Shudras were not allowed to have education.
- Universities like, Takshila, Vikramshila, Pushpagiri, Mithila, Udantpuri, Sarnath, Ajanta, vallabhi and Ujjain were the major points of education in Vedic period.

20. Option (b) is correct.

HTTP or Hypertext Transfer Protocol is the main protocol which helps in transmission of data over the network.

Apart from HTTP, some other elements are required in computer networking:

MAC address is a unique address of the device which is provided by the manufacturer.

IP address is the unique address of a device over a network. This address is provided by the network.

URL or Uniform Resource Locator is the website address that is typed in the address bar.

21. Option (a) is correct.
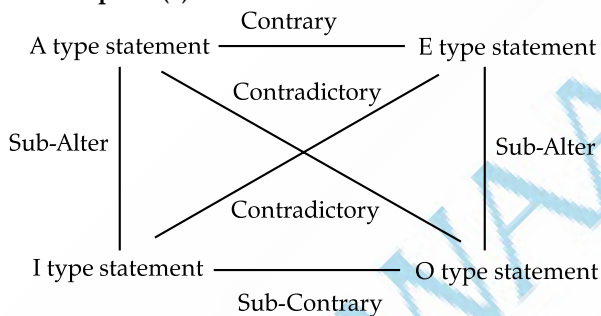
- A type sentence – All Singers are Painters (universally positive/universal affirmative)
- E type – All Singers are not Painters (universally negative)
- I type – Some Singers are Painters (particularly positive)
- O type – Some Singers are not Painters (particularly negative)
- Contradictory statements are A and O, E and I. If one statement is true, the other will be false, and if one statement is false, the other will be true.
- Contrary statements are A and E. These statements cannot be true at the same time but can be false at the same time. If one is false the another will be immediately true but the one is true then the other is doubtful or undetermined.
- Sub-contrary statements are I and O. Both cannot be false together but can be true together. If one is false the another will be true immediately but

if one is true the other will be undetermined.
- Sab – alteration statements are A and I, E and O. If the universal statement is true the particular statement will be false.
- If the universal statement is false the particular will be undetermined.
- If particular opposition is false universal, preposition will be false.
- If a particular statement is true the universal statement will be doubtful or undetermined.
- If one will be undetermined then the other will also be undetermined.

Here O type – some sparrows are not bird

I type – some sparrows are birds

are sub-contraries.

22. Option (b) is correct.

From all the given options, the benefit or advantage of behavioural objectives is asked. All options except the second one are disadvantages or negative points. Hence, the answer can also be found by eliminating the other options

23. Option (c) is correct.

The difference between an earthquake measuring 4 and one measuring 3 on the Richter scale is that the former is 31.6 times more powerful.

Which is not twice, not 10% or 50%.

According to options, a more suitable answer is 10 times.

24. Option (a) is correct.

Attributions to intellect promote rote study and do not support motivation. Difficulty of work demotivates.

25. Option (c) is correct.

'Some animals are not birds' is a particular negative or I type statement.

If we consider this statement false, following statements should be true (A and O type):-

- All animals are birds.
- Some animals are birds.

26. Option (c) is correct.

Standard deviation $= \dfrac{CV \times mean}{100}$

M	CV	SD
60	$\dfrac{70}{3}$	14
80	6.25	5
70	$\dfrac{160}{7}$	16
90	$\dfrac{40}{9}$	4

Ascending order = 4, 5, 14, 16

Options = D, B, A, C

27. Option (b) is correct.

IEEE or Institute of Electrical and Electronics Engineers is a global organisation which sets and defines the technical standards regarding the networking mainly in telecommunication, electronics and computer networking.

The set of these standards is called IEEE 802.

Common IEEE 802 Standards:

802.3 – Ethernet (Wired LAN)

802.11 – Wi-Fi (Wireless LAN)

802.15 – Bluetooth and Wireless PANs

802.16 – WiMAX (Wireless broadband)

802.2 – Logical Link Control (LLC Layer)

28. Option (c) is correct.

- The first talkie film of India, *Alam Ara*, directed by Ardeshar Irani was released in 1931 (14 March)
- This film was a turning point in the Indian cinema.
- It consisted of various technical innovations in Indian cinema like sound, music and song sequences.
- No print of this film survives today.

29. Option (c) is correct.

Bit
↓
Byte (s bits)
↓

| KB | Kilo byte | 1024 bytes |

↓

| MB | Megabyte | 1024 KB |

↓

| GB | Gigabyte | 1024 MB |

↓

| TB | Terabyte | 1024 GB |

↓

| PB | Petabyte | 1024 TB |

↓

| EB | Exabyte | 1024 PB |

↓

| ZB | Zettabyte | 1024 EB |

↓

| YB | Yottabyte | 1024 ZB |

30. Option (c) is correct.

(a) Hours in a day = 24

Percentage of 3 hours = $\dfrac{3}{24} \times 100$ = 12.5

(b) First nine prime numbers

= 2, 3, 5, 7, 11, 13, 17, 19, 23

Average = $\dfrac{2+3+5+7+11+13+17+19+23}{9}$

= $\dfrac{100}{9}$ = 11.111

(c) First five multiples of 3 = 3, 6, 9, 12, 15

Average = $\dfrac{3+6+9+12+15}{5}$ = $\dfrac{45}{5}$

= 9

31. Option (c) is correct.

International Biodiversity Day is on 22 May.

The celebration of the day was started in December, 2000, when the General Assembly of the United Nations adopted this day as the International Biodiversity Day.

In 1992 on the same day (22 May) Nairobi final act was adopted.

The theme of the 2025 International Day of Biodiversity was harmony with nature and sustainable development.

32. Option (a) is correct.

Let the initial price or cost = 100

Final price after 3 sellers = 100 + 65 = 165

(I) Seller earns 20%

100 + 20 = ₹120 (selling price)

(II) Seller earns 25%

$120 \times \dfrac{25}{100}$ = ₹ 30

Price = 120 + 30 = 150 (selling price by II seller)

(III) Seller earns profit of ₹15

which is 10% of 150 (purchase price for III seller)

33. Option (a) is correct.

An argument in a circle is a fallacy when the statement and the conclusion are the same. In other words, the conclusion is just a restatement of the statement. In the given example, "It is not right for our children" is just a restatement of the idea that it is immoral to use.

Hasty generalisation is the fallacy that occurs when a conclusion is drawn from very few statements or baseless facts, or when a conclusion is reached too quickly without any solid foundation

Straw Man fallacy – This tactic is used to misrepresent someone's argument in order to attack it or simply to win the debate. For example:

Person A: "We should have better food options in the cafeteria."

Person B: "Person A wants to ban all junk food and force us to eat only salads."

34. **Option (b) is correct.**

(a) 5% of (25% of 1600)

$$1600 \times \frac{25}{100} = 400$$

$$400 \times \frac{5}{100} = 20 \qquad \text{(A is false)}$$

(b) 33.33% of 10,000 = 3333

3333 × 0.15% = 4.99 or 5   (B is correct)

(c) Interest rate $= \dfrac{100 \times \text{S.I}}{P \times T} = \dfrac{100 \times 5400}{15000 \times 3} = 12\%$

                                         (C is correct)

(d) If $\dfrac{x}{3} = \dfrac{y}{4} = \dfrac{z}{5}$

Ratio of $x : y : z = 3 : 4 : 5$

                                         (D is incorrect)

35. **Option (b) is correct.**

The steps for effective government in higher education institutions are

1. Establish a governing body with clear rules and responsibilities.
2. Formulate policies that ensure transparency and accountability or giving responsibilities to related organisations.
3. Involve faculty, staff and students in the decision making process.
4. Monitor and evaluate the implementation of policies and strategies.
5. Review and update policies based on feedback and changing needs.

36. **Option (c) is correct.**

New Education Policy of 2020 focuses on the holistic development of a student. It promotes life, skill development, critical thinking and value education through intellectual emotional, and religious development.

37. **Option (b) is correct.**

Photovoltaic systems are used to convert solar energy into electric energy. This is a source of energy which is clean, eco-friendly renewable and non-conventional. The elements of this system are as follows:

Solar Cell
- The basic unit.
- Made of semiconductor material (like silicon).
- Converts sunlight into a small amount of direct current (DC) electricity.

Solar Module / Panel
- A group of solar cells connected together and sealed in a protective frame.
- Generates more electricity than a single cell.

Solar Array
- A group of solar panels/modules connected together.
- Used in homes, buildings or farms to generate higher power.

Array Field / PV Power Plant
- A large group of arrays, usually installed on land.
- Used in commercial or utility-scale solar power plants.

38. **Option (a) is correct.**
- Conference and meeting are communication events.
- Radio and television are media form of communication.
- Smartphone and email are examples of communication technology.
- Journalists and advertisers are communication professionals.

39. **Option (c) is correct.**

Wetlands, oceans, soil, forest and vegetation are sinks of atmospheric carbon dioxide.

40. **Option (a) is correct.**

Classroom management is a group of techniques used to maintain a healthy learning environment in the classroom.

Cognitive domain is connected with memorising and reasoning objectives.

Affective domain is focused on attitude and feelings or emotions.

Collaboration is a philosophy about connecting people or how to relate to others.

41. **Option (b) is correct.**

Barriers to communication are the cause of miscommunication. They are of the following types

- Technical barriers – These barriers occur due to dependency on technology – for example, problems in hardware or software, differences in version or improper knowledge of technology, etc.
- Physical barriers – These barriers occur due to location, voice, layout, structure , distance and time.
- Semantic barrier – Semantic barriers are related to the meaning of words in different languages. This barrier occurs when the literal meaning of a word and its dictionary meaning differ.
- Psychological barriers – Psychological barriers are related to prejudicial attitude,no interest, inattention, etc.
- Social barriers – These barriers are related to the social standard or rank of the communicator and the receiver.
- Cultural barriers – these barriers arise due to differences in cultures – language, symbol, traditions, rituals , norms, etc.
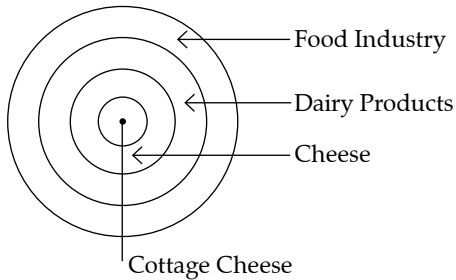
42. **Option (a) is correct.**

$$\begin{array}{cccccc} 1 & 2 & 5 & 14 & 41 & \boxed{125} \\ & 1 & 3 & 9 & 27 & 84 \\ & & 1\times3 & 3\times3 & 9\times3 & \end{array}$$

125 is incorrect.

Correct = 27 × 3 = 81 should be added.

43. **Option (c) is correct.**

Note: Extension is the area. (wider or narrow)

44. **Option (a) is correct.**

Modem → IV. Conversion of analog and digital signal

Router → III. IP address

NIC (Network Interface Card) → II. Physical address

Repeater → I. Regenerate signals

45. **Option (b) is correct.**

Arthapatti or assumption or postulation:
- In Arthapatti, the cause of knowledge is assumption. In this, imagination and assumption play an important role.
- Nyaya school does not validate Arthapatti as valid source of knowledge.
- This is an independent source of knowledge and the conclusion is based on circumstances.
- For example, if Dev Dutt is fat and does not eat during the day. We can assume that he must be eating during the night.

Anuplabdhi or absence:
- According to Nyaya philosophy, this is not a valid source of knowledge.
- In this, the knowledge is acquired by the non-existence of an object.
- This is also called negative or cognitive proof.
- Only Anupalabdhi Pramana gives negative results.

Inference or Anumana Pramana:
- Anumana Pramana is the second and indirect source of basic knowledge and mediated knowledge.
- In this, the knowledge is acquired by the previous knowledge and through some sign or mark.

- Anumana is made up of two words *Anu* and *man*. *Anu* means after and man means knowledge. Hence, Anumana stands for later knowledge, in other words this means to acquire knowledge on the basis of previous knowledge.
- For example if we see smoke on a Hill, we conclude there must be fire as we know where there is fire there is smoke.

Pratyaksha Pramana:
- Perception or Pratyaksha Praman is the first source of knowledge, it involves direct cognition: either internal or external, determinant or indeterminate.
- Pratyaksha Pramana is accepted by every school of Indian logic, it is extremely clear but has a limited scope.

46. **Option (b) is correct.**

Diagnosing is a synonym of identifying.

For example, diagnostic teaching is done with the purpose of identifying problems in teaching learning process.

47. **Option (a) is correct.**

Self-directed learning is a form of outbound learning in which the learner gains knowledge through real-world experiences, learning more effectively than those who wait to be taught.

Self-directed learning is also more in tune with our natural process of psychological development.

48. **Option (c) is correct.**

According to the given passage or according to the author, the modern environment is an instructive one in which self-directed learning is most essential (as stated in the last line).

49. **Option (c) is correct.**

According to the given passage, self-directed learning is used because
- it enables people to learn more things and learn better.
- it is more in tune with natural process of human psychological development.
- it helps to meet the challenges of today's modern environment.

50. **Option (a) is correct.**

According to the given passage, through self-directed learning, an individual can independently take initiative.

❑❑