



Your Personal Exams Guide



NDA



CDS



SSC CGL



CBSE UGC NET



IAS



SSC CHSL



CTET



MPSC



AFCAT



CSIR UDC NET



IBPS PO



UP POLICE



SSC MTS



SBI PO



BPSC



UP TET



IBPS RRB



IBPS CLERK



IES



UPSC CAPF



SSC Stenogr..



RRB NTPC



SSC GD



RBI GRADE B



RBI Assistant



DSSSB

UGC NET 2022 Paper 1 Previous Year Paper (29-Sep-2022) (Shift 2)

Total Time: 1 Hour

Total Marks: 100

Instructions

1. Test will auto submit when the Time is up.
2. The Test comprises of multiple choice questions (MCQ) with one or more correct answers.
3. The clock in the top right corner will display the remaining time available for you to complete the examination.

Navigating & Answering a Question

1. The answer will be saved automatically upon clicking on an option amongst the given choices of answer.
2. To deselect your chosen answer, click on the clear response button.
3. The marking scheme will be displayed for each question on the top right corner of the test window.

Your Personal Exams Guide

Paper 1

1. The following table shows the percentage (%) distribution of number of students qualifying an Entrance Exam from seven schools A–G in the years 2020 and 2021. The number of students qualifying from School G in 2020 and 2021 are 90 and 135, respectively. Based on the data in the table, answer the questions: **(+2)**

School-wise Distribution of Qualified Students

School	Distribution (%) of Qualified students	
	2020	2021
A	21%	23%
B	14%	8%
C	16%	11%
D	10%	14%
E	18%	16%
F	9%	13%
G	12%	15%

If P and Q are the average number of students qualifying from Schools B, C and D in 2020 and from Schools E, F and G in 2021, respectively, then $Q - P$ is

- a. 32
- b. 35
- c. 38
- d. 41

2. The following table shows the percentage (%) distribution of number of students qualifying an Entrance Exam from seven schools A-G in the years 2020 and 2021. The number of students qualifying from School G in 2020 and 2021 are 90 and 135, respectively. Based on the data in the table, answer the questions: (+2)

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F	9%	13%
G	12%	15%

Number of student qualifying from Schools E and G together in 2020 is ____% of the number of students qualifying from School B in 2021.

- a. 188.5
 - b. 247.5
 - c. 342.5
 - d. 312.5
-
3. The following table shows the percentage (%) distribution of number of students qualifying an Entrance Exam from seven schools A-G in the years 2020 and 2021. (+2)

The number of students qualifying from School G in 2020 and 2021 are 90 and 135, respectively. Based on the data in the table, answer the questions:

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G	12%	15%

The ratio of the number of students qualifying from Schools B, C and D in 2020 to that of Schools E, F and G in 2021 is

a. 2 : 3

b. 51 : 75

c. 3 : 2

d. 25 : 33

4. The following table shows the percentage (%) distribution of number of students qualifying an Entrance Exam from seven schools A-G in the years 2020 and 2021. The number of students qualifying from School G in 2020 and 2021 are 90 and 135, respectively. Based on the data in the table, answer the questions: (+2)

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D	10%	14%
E	18%	16%
F	9%	13%
G	12%	15%

The percent rise in the number of students qualifying from School D from 2020 to 2021 is

- a. 60%
- b. 63%
- c. 68%
- d. 72%

5. The following table shows the percentage (%) distribution of number of students qualifying an Entrance Exam from seven schools A-G in the years 2020 and 2021. The number of students qualifying from School G in 2020 and 2021 are 90 and 135, respectively. Based on the data in the table, answer the questions: (+2)

School-wise Distribution of Qualified Students

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B	14%	8%
C	16%	11%
D	10%	14%
E	18%	16%
F	9%	13%
G	12%	15%

The percentage of the number of students qualifying from Schools A-G together in 2021 with reference to 2020 is

- a. 140%
- b. 120%
- c. 135%
- d. 112%

6. According to current estimate, the gross enrolment ratio in Higher Education in India is around 27%, which is expected to be increased to _____ by the end of 2035. (+2)
- a. 30%
 - b. 40%
 - c. 50%

d. 60%

7. What is the concept of International Net Neutrality? (+2)

- a. Imposed limitations for end-to-end Internet access
 - b. Broadband service providers can show preference to content
 - c. Unimpeded end.to-end Internet access and usage
 - d. All content that flows throughout the Internet should not be treated equally.
-

8. In communication, a high order of inference drawn from experience, direct or indirect, is responsible for (+2)

- a. Generalisation
 - b. Simplification
 - c. Abstraction
 - d. Strong reaction
-

9. In which of the following methods of teaching, the student has to find out the answer to his/her own problem by unaided efforts? (+2)

- a. Case-study method
- b. Heuristic method
- c. Flipped classroom method
- d. Demonstration method

10. In the context of MOOCs in Higher Education in India. which of the following are CORRECT? (+2)

- (A) They are learner-centric
- (B) They can be delivered only through SWAYAM portal
- (C) They can benefit large number of learners
- (D) They can be accessed anytime, anywhere and any number of times.
- (E) All MOOCs are for earning credit

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

- a. A & D Only
- b. C & D Only
- c. A, B & E Only
- d. A, C & D Only

11. A systematic review of literature adopts (+2)

- a. Explicit procedures
- b. Implicit procedures
- c. Personal-choice procedures
- d. Peer-suggested procedures

12. Given below are two statements: One is labelled as Assertion A and the other is labelled as Reason R. (+2)

Assertion (A): Chlorofluorocarbons (CFCs) are potent greenhouse gases.

Reasons (R): CFCs have the ability to catalytically destroy ozone in stratosphere.

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

- a. Both (A) and (R) are correct and (R) is the correct explanation of (A)
- b. Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)
- c. (A) is correct but (R) is not correct
- d. (A) is not correct but (R) is correct

13. There are three numbers in the ratio of 3 : 5 : 7 and the sum of these numbers is 975. Find the three numbers. (+2)

- a. 195, 325, 455
- b. 325, 195, 455
- c. 195, 310, 470
- d. 205, 315, 455

14. In a certain coding language, if 'CRICKET' is coded as 2632479, 'ROCKET' is coded as 612479, and 'KETTLE' is coded as 479907, then how 'LOCKER' shall be coded in that language? (+2)

- a. 102674
- b. 021647
- c. 120764

d. 012476

15. Which of the following statements are correct regarding VoLTE? (+2)

- (A) VoLTE stands for 'Voice over Long Term Evaluation'.
- (B) It is a digital packet voice service delivery over IP via an LTE access network.
- (C) Provides more efficient use of spectrum than traditional voice.
- (D) Eliminates the need to have voice on one network and data on another network.

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

- a. A, B, C and D Only
- b. B, C and D Only
- c. A, B and C Only
- d. A, C and D Only

16. Which of the following statements are correct? (+2)

Principal components of a CPU in a computer include:

- (A) The Solid State Drive (SSD) that stores data perristently, typically using flash memory.
- (B) The Arithmetic-Logic Unit (ALU) that performs arithmetic and logic operations.
- (C) Processor registers that supply operands to the ALU and stores the results of ALU operation.

(D) The Control Unit (CU) that orchestrates the fetching (from memory), decoding and execution of instructions.

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

- a. A, B and C Only
- b. B, C and D Only
- c. B and C Only
- d. A and D Only

17. Teacher 'A' uses chalk and board and dictates notes to students in classroom. (+2)
Teacher 'B' uses Videoconferencing tool and LMS for providing digital resources.
Which modes of teaching are used by teacher A and teacher B?

- a. Both online
- b. Both offline
- c. Teacher-A: online: Teacher-B: offline
- d. Teacher-A: offline: Teacher-B: online

18. Given below are two statements: (+2)

Statement I: Communication and socialisation are two non-convergent dimensions of any modern society.

Statement II: Communication enables the promotion of values that facilitate the process of enculturation of people in a society.

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

- a. Both Statement I and Statement II are true
 - b. Both Statement I and Statement II are false
 - c. Statement I is true but Statement II is false
 - d. Statement I is false but Statement II is true
-

19. Given below are two statements:

(+2)

Statement I: 8 megabytes = 2^{13} gigabytes

Statement II: The decimal equivalent of the binary number $(11101.101)_2$ is $(29.625)_{10}$.

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

- a. Both Statement I and Statement II are true
 - b. Both Statement I and Statement II are false
 - c. Statement I is true but Statement II is false
 - d. Statement I is false but Statement II is true
-

20. Given below are two statements:

(+2)

Statement I: Increasingly, photovoltaic panels are being used to supplement electrical energy from the power grid.

Statement II: One issue with grid-connected photovoltaics is that PV cells produce Alternating Current (AC) whereas powergrids use Direct Current (DC)

In the light of the above statements, choose the *correct 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

21. For which of the following forms of categorical propositions conversion is valid? (+2)

- (A) Some S is P
- (B) Some S is not P
- (C) No S is P
- (D) All S is P

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

- a. A, B, C, D, Only
- b. A, C and D only
- c. B, C and D Only
- d. A, B and D Only

22. Find the next term in the following series: 1, 2, 4, 6, 7, 18, 10, 54, ? (+2)

- a. 162
- b. 13
- c. 64
- d. 72

23. Which of the following are useful tips in preparing questions for a structured interview? (+2)

- (A) Introductory questions should be related to pleasantries.
- (B) Introductory questions should be related to the research topic.
- (C) Questions can be grouped, if the list of questions is long.
- (D) General questions should precede specific questions.
- (E) Repeat the personal questions again and again to test the truthfulness of the responses of the interviewee.

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

- a. A, B, C Only
- b. A, C, D Only
- c. B, C, D Only
- d. A, D, E Only

24. Which of the following tools can be used for ICT enabled teaching? (+2)

- a. Paper charts
- b. Physical models
- c. Projector
- d. Black Board

25. Which of the following is considered as the highest scale in measurement? (+2)

- a. Nominal
- b. Ordinal
- c. Interval
- d. Ratio

26. Given below are two statements:

(+2)

Statement I: Aristotelian syllogism is essentially verbalistic.

Statement II: Nyaya system recognizes the fact that the verbal form is the essence of inference.

In the 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. Depending on the intention which of the following logical informal fallacies may be involved in the following argument - 'I am shocked to hear you preaching atheism. Does your father know you believe that?'

(+2)

- (A) Appeal to authority
- (B) Appeal to emotion
- (C) Appeal to majority
- (D) Appeal to force

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

- a. A and D Only
- b. A and B Only
- c. B and D Only
- d. B and C Only

28. In India, much of the Central Government expenditure on general higher education is routed through (+2)

- a. National Council of Teacher Education.
- b. All India Council for Technical education.
- c. University Grants Commission.
- d. National Council for Educational Research and Training.

29. Broad parameters adopted by National Institutional Ranking Framework (NIRF) are (+2)

- (A) Teaching, learning and Resources
- (B) Graduation outcomes
- (C) Outreach and Inclusivity
- (D) Peer perception
- (E) Low Carbon footprint

Choose the *most appropriate* answer from the options given below:

- a. A, B, C, D Only

- b. A, B, D, E Only
- c. B, C, D, E Only
- d. A, C, D, E Only

30. Given below are two statements:

(+2)

Statement I: All potential pollutants are synthetic chemicals.

Statement II: Many of the emerging contaminants have been observed to bioaccumulate in wildlife and humans.

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

- a. Both Statement I and Statement II are true
- b. Both Statement I and Statement II are false
- c. Statement I is true but Statement II is false
- d. Statement I is false but Statement II is true

31. Which University in India was first to throw all University examinations open to girls?

(+2)

- a. Punjab University
- b. Calcutta University
- c. Savitribai Phule University
- d. Bombay University

32. When it comes to knowledge-sharing, the important aspects of communication are: (+2)

- (A) The supply side
- (B) The demand side
- (C) The policy currents
- (D) The push and pull of policy makers
- (E) The choice of filters

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

- a. A, B, C Only
- b. B, C, D Only
- c. C, D, E Only
- d. A, D, E Only

33. A major focus in quantitative research is on Exams Guide (+2)

- a. Historicity
- b. Causality
- c. Social reflections
- d. Creating an artificial environment

34. Given below are two statements: (+2)

Statement I: In svārtha Anumāna (inference for oneself) we do not require a formal statement of the different members of inference, according to Nyāya view of inference.

Statement II: Svārtha Anumāna is a psychological process.

In the light of the above statements, choose the *correct 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

35. Typhoid fever, a water born disease is caused by (+2)

- a. Virus
- b. Bacteria
- c. Protozoan
- d. Helminth

36. Miss Reena has been appointed by the Cyber Security Cell of Mumbai to break into the website of a terrorist organization to extract information. What among the following is a suitable description of Reena's profile? (+2)

- a. Hactivist
- b. Ethical Hacker
- c. Troller

d. Black hat hacker

37. Given below are two statements:

(+2)

Statement I: In India increasing access to higher education has been constrained by low completion rates at secondary education stage.

Statement II: By 2030, all multidisciplinary higher education institutions will be closed down.

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

- a. Both Statement I and Statement II are true
 - b. Both Statement I and Statement II are false
 - c. Statement I is true but Statement II is false
 - d. Statement I is false but Statement II is true
-

38. The simple interest accrued on a sum of certain principal is Rs. 1200 in 4 years at the rate of 8% per annum. What would be the simple interest accrued on thrice of that principle at the rate of 6% per annum in 3 years?

(+2)

- a. 2150
 - b. 2050
 - c. 2025
 - d. 2100
-

39. Which of the following are types of error in survey research?

(+2)

- (A) Sample error
- (B) Source error
- (C) Observational error
- (D) Data collection error
- (E) Data processing error

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

- a. A, B, C Only
- b. B, C, D Only
- c. B, D, E Only
- d. A, D, E Only

40. In which context, the true effects of mass media communication on mass audience can be understood? (+2)

- a. Economic
- b. Social
- c. Political
- d. Spiritual

41. Given below are two statements: One is labelled as Assertion A and the other is labelled as Reason R. (+2)

Assertion (A): Communication has the power to persuade, inform and disinform.

Reasons (R): The process of propaganda makes the line of distinction transparent between its elements for being persuasive.

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

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

42. Given below are two statements:

(+2)

Statement I: Often qualitative studies provide too many details of the setting that are investigated.

Statement II: Critics point out that qualitative research suffers from the issue of replication.

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

- a. Both Statement I and Statement II are true
- b. Both Statement I and Statement II are false
- c. Statement I is true but Statement II is false
- d. Statement I is false but Statement II is true

43. If 'some men are vegetarians' is given as false, which of the following can be inferred to be true from it?

(+2)

- (A) All men are vegetarians.
- (B) No men are vegetarians.
- (C) Some men are not vegetarians.
- (D) All non-vegetarians are men.

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

- a. A, B and C Only
- b. B, C and D Only
- c. B and C Only
- d. C Only

44. Global warming can lead to/aggravate which of the following natural disasters? (+2)

- (A) Draught
- (B) Earthquake
- (C) Flood
- (D) Storm

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

- a. A, B, C Only
- b. A, C, D Only
- c. B, C, D Only
- d. B, D Only

45. On allowing two successive discounts of 20% and 15%, the selling price of an article becomes Rs. 3060. What is the marked price of the article? (+2)

- a. 4000
- b. 4100
- c. 4200
- d. 4500

46. Read the following passage and answer questions. (+2)

The conceptions and treatment of poverty were quite different before 1940. In colonial times the concern with poverty was conditioned by the belief that even if the natives could be somewhat enlightened by the presence of the coloniser, not much could be done about their poverty. It was because their economic development was pointless. The natives' capacity for science and technology, the basis for economic progress was seen as nil. However, within Asian, African and Latin or Native American societies, vernacular societies had developed ways of defining and treating poverty that accommodated visions of community, frugality, and sufficiency. It is true that massive poverty in the modern sense appeared only when the spread of market economy broke down the communities. As a result, it deprived millions of people from access to land, water and other resources. With the consolidation of market economy, systemic issues became inevitable.

It is important to know the break that occurred in the conceptions and management of poverty first with the emergence of capitalism in Europe, and later with the advent of development in the Third world. The first break is described in terms of the advent in the nineteenth century of systems for dealing with the poor, based on assistance provided by impersonal institutions. Philanthropy occupied an important place in this transition. The

transformation of the poor into the assisted had a profound consequence. The modernisation of poverty invariably affected vernacular relations.

The market economy was responsible for

- a. Increased access to resources
- b. Massive poverty
- c. Enlightened development
- d. Idealisation of tradition

47. Read the following passage and answer questions.

(+2)

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of the poor into the assisted had a profound consequence. The modernisation of poverty invariably affected vernacular relations.

The Vernacular societies encountered economic poverty with

- a. Science and technology
- b. External aid
- c. Modern ideas
- d. Use of resources sparingly

48. Read the following passage and answer questions.

(+2)

The conceptions and treatment of poverty were quite different before 1940. In colonial times the concern with poverty was conditioned by the belief that even if the natives could be somewhat enlightened by the presence of the coloniser, not much could be done about their poverty. It was because their economic development was pointless. The natives' capacity for science and technology, the basis for economic progress was seen as nil. However, within Asian, African and Latin or Native American societies, vernacular societies had developed ways of defining and treating poverty that accommodated visions of community, frugality, and sufficiency. It is true that massive poverty in the modern sense appeared only when the spread of market economy broke down the communities. As a result, it deprived millions of people from access to land, water and other resources. With the consolidation of market economy, systemic issues became inevitable.

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transformation of the poor into the assisted had a profound consequence. The modernisation of poverty invariably affected vernacular relations.

Capitalistic development introduced the idea of

- a. Modernised poverty
- b. Impersonal institutions
- c. Third world
- d. Vernacular relations

49. Read the following passage and answer questions.

(+2)

The conceptions and treatment of poverty were quite different before 1940. In colonial times the concern with poverty was conditioned by the belief that even if the natives could be somewhat enlightened by the presence of the coloniser, not much could be done about their poverty. It was because their economic development was pointless. The natives' capacity for science and technology, the basis for economic progress was seen as nil. However, within Asian, African and Latin or Native American societies, vernacular societies had developed ways of defining and treating poverty that accommodated visions of community, frugality, and sufficiency. It is true that massive poverty in the modern sense appeared only when the spread of market economy broke down the communities. As a result, it deprived millions of people from access to land, water and other resources. With the consolidation of market economy, systemic issues became inevitable.

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transformation of the poor into the assisted had a profound consequence. The modernisation of poverty invariably affected vernacular relations.

The passage focuses on

- a. The merits of market economy
- b. The need for philanthropy to reduce poverty
- c. The ill-effects of capitalism
- d. The issue of redefining poverty in the Third World.

50. Read the following passage and answer questions.

(+2)

The conceptions and treatment of poverty were quite different before 1940. In colonial times the concern with poverty was conditioned by the belief that even if the natives could be somewhat enlightened by the presence of the coloniser, not much could be done about their poverty. It was because their economic development was pointless. The natives' capacity for science and technology, the basis for economic progress was seen as nil. However, within Asian, African and Latin or Native American societies, vernacular societies had developed ways of defining and treating poverty that accommodated visions of community, frugality, and sufficiency. It is true that massive poverty in the modern sense appeared only when the spread of market economy broke down the communities. As a result, it deprived millions of people from access to land, water and other resources. With the consolidation of market economy, systemic issues became inevitable.

It is important to know the break that occurred in the conceptions and management of poverty first with the emergence of capitalism in Europe, and later with the advent of development in the Third world. The first break is described in terms of the advent in the nineteenth century of systems for dealing with the poor, based on assistance provided by impersonal institutions. Philanthropy occupied an important place in this transition. The

transformation of the poor into the assisted had a profound consequence. The modernisation of poverty invariably affected vernacular relations.

Before 1940, colonisers believed that poor countries

- a. Can be changed
- b. Can be totally enlightened
- c. Cannot be changed
- d. Do not need their presence

Prepp

Your Personal Exams Guide

Answers

1. Answer: a

Explanation:

Formula

Average = total sum of all values/No. of values.

$$A \% B = A/B \times 100$$

Solution

Let the total number of students qualified in 2020 be $100x$.

$$\Rightarrow 12x = 90$$

$$\Rightarrow x = 7.5$$

School	Qualified student(2020)	Total
B	$14x$	$14 \times 7.5 = 105$
C	$16x$	$16 \times 7.5 = 120$
D	$10x$	$10 \times 7.5 = 75$

The average number of students qualifying from Schools B, C and D in 2020:

$$\Rightarrow P = (105 + 120 + 75)/3 = 100$$

Let the total number of students qualified in 2021 be $100y$.

$$\Rightarrow 15y = 135$$

$$\Rightarrow y = 9$$

School	Qualified student(2021)	Total
E	16y	$16 \times 9 = 144$
F	13y	$13 \times 9 = 117$
G	15y	$15 \times 9 = 135$

The average number of students qualifying from Schools E, F and G in 2020:

$$\Rightarrow Q = (144 + 117 + 135)/3 = 132$$

$$\text{Hence, } Q - P = 132 - 100 = 32$$

2. Answer: d

Explanation:

Formula

Average = total sum of all values/No. of values.

$$A \% B = A/B \times 100$$

Solution

Let the total number of students qualified in 2020 be $100x$.

$$\Rightarrow 12x = 90$$

$$\Rightarrow x = 7.5$$

The number of students qualifying from Schools E = $18x = 135$

The number of students qualifying from Schools G = $12x = 90$

$$\Rightarrow 135 + 90 = 225$$

Let the total number of students qualified in 2021 be $100y$.

$$\Rightarrow 15y = 135$$

$$\Rightarrow y = 9$$

The number of students qualifying from School B in 2021 = $8y = 72$

$$\Rightarrow 225/72 \times 100 = 312.5\%$$

The number of student qualifying from Schools E and G together in 2020 is 312.5% of the number of students qualifying from School B in 2021.

3. Answer: d

Explanation:

Let the total number of students qualified in 2020 be $100x$.

$$\Rightarrow 12x = 90$$

$$\Rightarrow x = 7.5$$

School	Qualified student(2020)	Total
B	$14x$	$14 \times 7.5 = 105$
C	$16x$	$16 \times 7.5 = 120$
D	$10x$	$10 \times 7.5 = 75$

The total number of students qualifying from Schools B, C and D in 2020:

$$\Rightarrow (105 + 120 + 75) = 300$$

Let the total number of students qualified in 2021 be $100y$.

$$\Rightarrow 15y = 135$$

$$\Rightarrow y = 9$$

School	Qualified student(2021)	Total
E	16y	$16 \times 9 = 144$
F	13y	$13 \times 9 = 117$
G	15y	$15 \times 9 = 135$

The total number of students qualifying from Schools E, F and G in 2020:

$$\Rightarrow 144 + 117 + 135 = 396$$

The ratio between the two will be:

$$\Rightarrow 300 : 396 = \mathbf{25 : 33}$$

4. Answer: c

Explanation:

Formula

Average = total sum of all values/No. of values.

$$A \% B = A/B \times 100$$

Solution

Let the total number of students qualified in 2020 be $100x$.

$$\Rightarrow 12x = 90$$

$$\Rightarrow x = 7.5$$

The number of students qualifying from School D in 2020 = $10x = 75$.

Let the total number of students qualified in 2021 be $100y$.

$$\Rightarrow 15y = 135$$

$$\Rightarrow y = 9$$

The number of students qualifying from School D in 2021 = $14y = 126$

The percent rise in the number of students qualifying from School D from 2020 to 2021:

$$\Rightarrow (126 - 75)/75 \times 100$$

$$\Rightarrow 68\%$$

5. Answer: b

Explanation:

Solution

Let the total number of students qualified in 2020 be $100x$.

$$\Rightarrow 12x = 90$$

$$\Rightarrow x = 7.5$$

The number of students qualifying in 2020 = $100x = 750$.

Let the total number of students qualified in 2021 be $100y$.

$$\Rightarrow 15y = 135$$

$$\Rightarrow y = 9$$

The number of students qualifying in 2021 = $100y = 900$.

The percentage of the number of students qualifying from Schools A-G together in 2021 with reference to 2020 is:

$$\Rightarrow 900/750 \times 100$$

⇒ 120%

6. Answer: c

Explanation:

The gross enrollment ratio is the entire enrollment regardless of age, stated as a percentage of the eligible official population in a given year.

★ Key Points

- In India, AISHE is responsible for collecting data related to Higher education.
- **According to the AISHE report 2019–20 , Gross Enrolment Ratio in higher education is 27%.**
- AISHE Report 2022 found that the total enrollment in higher education has increased to nearly 4.14 crore in 2020–21 from 3.85 crore in 2019–20.
- In 2020, the Government of India adopted New Education Policy.
- According to NEP, **the Government of India envision increasing enrollment by 50% by 2035.**
- AISHE report published by the Minister of Education with help.

Thus, according to the current estimate, the gross enrolment ratio in Higher Education in India is around 27%, which is expected to be increased to 50% by the end of 2035.

Hence, the correct answer is 50%.

★ Additional Information

- The Higher Education Commission of India (HECI) would be established as the lone umbrella organization for all higher education, except the fields of medicine and law.
- There are four verticals of HECI: National Higher Education Regulatory Council, General Education Council, Higher Education Grants Council, and National Accreditation Council.

7. Answer: c

Explanation:

The term Net Neutrality is coined by Tim Wu in 2003.

★ Key Points

International Net Neutrality:

- Internet services provider offers services for accessing the Internet.
- It provides a wide range of functions related to the internet such as Internet access, Internet transit, domain name registration, and web hosting.
- Net Neutrality is the idea that **Internet service providers must treat all Internet communications equally.**
- It also promotes openness and transparency of online material.
- This is based on the principle that traffic to one service or website cannot be restricted or degraded and the same amount of data access and speed to all traffic.

Thus, the concept of International Net Neutrality is **Unimpeded end-to-end Internet access and usage.**

★ Additional Information

- India adopted Net Neutrality Policy in 2017.

8. Answer: c

Explanation:

Communication is the process of transmission of information.

★ Key Points

- Effective communication ensures the message is received and understood with clarity and purpose.
- Concepts that cannot be directly experienced through our senses are referred to as abstract.
- A common or intuitive experience is necessary for efficient communication about abstract concepts.
- Abstraction is a process of simplification in which formerly precise aspects are left ambiguous, vague, or undefined.
- It helps receivers to draw inferences from the experience.
- Abstraction uses a strategy of simplification, wherein formerly concrete details are left ambiguous, vague, or undefined; thus effective communication about things in the abstract requires an intuitive or common experience between the communicator and the communication recipient.

Thus, in communication, a high order of inference drawn from experience, direct or indirect, is responsible for Abstraction.

★ Additional Information

- Generalisation is a broad assertion or concept that is applied to a variety of individuals or objects.
- The simplification process deals with a simple message and avoids clichés and jargon.

9. Answer: b

Explanation:

Teaching methods are principle, pedagogy, and managerial techniques applied during classroom education

★ Key Points

- There are two methods of teaching in higher education learner-centric and teacher-centric.

- There are various teaching methods of instruction which are employed by teachers in the classroom.
- It can be divided into three parts; Teacher- centric strategy, Mixed strategy and Learner- centric strategy.
- The **learner-centric strategy** encompasses various teaching methodologies such as Case studies, programmed instruction, Open learning, Heuristic method, and Computer-assisted learning.
- In the **heuristic method** , the learner must independently research the solution to the issue at hand and cultivate an inquiry-based spirit.
- The **heuristic method** refers to finding the best possible solution to a problem quickly, effectively, and efficiently.
- It is a practical method of mental shortcut for problem-solving and decision making that reduces the cognitive load and doesn't require to be perfect.
- The method is helpful in getting a satisfactory solution to a much larger problem within a limited time frame.

Thus, the heuristic method of teaching the student has to find out the answer to his/her own problem with unaided efforts.

★ **Additional Information**

- Flipped classroom method: It is an idea of using online lectures that students can view at home to replace traditional classroom lectures.
- Demonstration method: It refers to the visual display of the action and activities or practical work related to the facts and principles of a delivered lesson by the instructor in the classroom.
- Case-study method: It relates to given scenarios based on situations in which students observe, evaluate, record, execute, conclude, summarise, or recommend.

10. Answer: d

Explanation:

Teaching methods are principles, pedagogy, and managerial techniques applied during classroom education.

★ Key Points

- There are two methods based on the interaction between learner and teacher: Online and Offline Classroom.
- In the last few years with the advent of cheap technology Online classrooms become effective tools to reach the student.

MOOC:

- MOOC stands for 'massive open online course'. The term originated in the US in 2008 to describe free, easily accessible, completely online courses.
- MOOCs give you the chance to study with top universities around the world.
- MOOCs don't always lead to formal qualifications, but they do mean anyone can gain knowledge in all sorts of areas.
- India has the second-largest user of MOOCs .
- Features of MOOCs in Higher Education in India are the following:
 - It has a **self-paced and scheduled course** that can be accessed through mobile, laptop, tablet, and at any time.
 - Courses are available in **all languages** from **class 9th to post-graduation**.
 - **SWAYAM** is an Indigenous platform developed by MHRD and Microsoft function to **deliver content to learners** .
 - It is free of cost to the learners whereas certification courses charge an amount.
 - Users can opt for **credit-based or non-credit-based courses** .

Thus, the correct answer from the options is A, C & D Only.

★ Additional Information

- SWAYAM stands for Study Webs of Active-Learning for Young Aspiring Minds.
- The courses available are in 4 quadrants.

11. Answer: a

Explanation:

A literature review is a demonstration of knowledge of academic literature on a given subject.

★ Key Points

Systematic review of literature:

- A **systematic** review is a rigorous and systematic technique to review the available literature.
- The process of conducting a systematic literature review includes not only the information obtained in the literature.
- It also laid down **how** and **where** information is searched and what **tactics** and **tools** have been employed.
- It clearly specified the subject that **employs systematic and explicit procedures** to discover and select the literature.

Thus, A **systematic review of the literature adopts explicit procedures** is the correct answer..

★ Additional Information

- Some features of the systematic literature review:
 - its application of overt and explicit techniques
 - its adherence to a prescribed series of research phases
 - its mandate that the review be transparent, accountable, and updatable
 - it demands user participation to make sure reports are pertinent and helpful

12. Answer: b

Explanation:

The greenhouse effect is a process in which gases in the earth's atmosphere capture the Sun's heat.



Key Points Assertion (A): Chlorofluorocarbons (CFCs) are potent greenhouse gases.

- The **greenhouse** effect refers to the process through which solar energy is absorbed by greenhouse gases rather than being reflected back into space.
- The main greenhouse gases are carbon dioxide, methane, nitrous oxide, **Chlorofluorocarbons** (CFCs), hydrofluorocarbons (HFCs) and ozone.
- Because they prevent heat at that wavelength from escaping the earth's atmosphere.

So, Assertion (A) is correct.

Reasons (R): CFCs have the ability to catalytically destroy ozone in stratosphere.

- The ozone layer is situated in the **stratosphere** of Earth's poles.
- The main **gases** for **ozone depletion** are halocarbon refrigerants, solvents, propellants, and **chlorofluorocarbons** (CFCs), HCFCs, halons.
- CFCs ascend into the stratosphere are oxidized by potent UV light, and then interact with ozone molecules that affect the Ozone layer.

Thus, Reasons (R) is correct.

Therefore, both (A) and (R) are correct but (R) is NOT the correct explanation of (A)

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13. Answer: a

Explanation:

Given

The three numbers are in the ratio = 3 : 5 : 7.

The sum of these numbers = 975.

Solution

Let the given number be 3x, 5x and 7x.

$$\Rightarrow 3x + 5x + 7x = 975$$

$$\Rightarrow 15x = 975$$

$$\Rightarrow x = 65.$$

Hence the given numbers are:

$$\Rightarrow 3x = 195.$$

$$\Rightarrow 5x = 325.$$

$$\Rightarrow 7x = 455$$

The three numbers are 195, 325 and 455.

14. Answer: d

Explanation:

★ Key Points

CRICKET - 2632479

ROCKET - 612479

KETTLE - 479907

By seeing no with respect to the letter, As we want a code of LOCKER ,

C = 2, R = 6, I = 3, K = 2, E = 7, T = 9, O = 1, L = 0

Thus, code for LOCKER is **012476**

15. Answer: b

Explanation:

VoLTE is a popular term in the Internet world.

★ Key Points

- It stands for **Voice over Long-Term Evolution**.
- It is a device for high-speed wireless communication standards for mobile phones and data terminals.
- It is a digital packet voice service that is **supplied over IP over an LTE access network** and uses IMS technology.
- It more effectively utilises **sp**ectrum than traditional voice.
- VoLTE enables voice calls to be **pac**kaged and **trans**ported across LTE networks.
- VoLTE provides more efficient use of spectrum than traditional Voice. **Eliminates the need to have Voice on one network and data on another.**

Thus, the correct answer from the options is B, C and D Only.

VoLTE stands for 'Voice over Long Term**Evaluation**'. this statement is incorrect because the word 'Evaluation' is used in the place of 'Evolution'.

★ Additional Information

- LTE is a high-speed mobile data technology based on 3G networks.
- It is an evolution of the Universal Mobile Telecommunication System.

16. Answer: b

Explanation:

CPU stands for Central Processing Unit.

★ Key Points

- The CPU handles all significant tasks and different forms of data processing on a computer.
- It facilitates communication between and among input and output devices.
- It has three major components are:

- **M**emory or Storage Unit
- **C**ontrol Unit
- **A**rithmetic Logic Unit
- **Memory or Storage Unit:** This component stores data, programmes, and processing results in interim storage.
- **Arithmetic Logic Unit :** It is responsible for carrying out **arithmetic and logical** operations. The ALU receives instructions from the control unit on **what operation to do on the data** , and it then saves the **outcome in an output register**.
- **Control Unit:** It gives instructions to the entire computer system to carry out a specific task. It reads **instructions from memory, decodes them, and then executes them**. Its primary duty is to keep information flowing throughout the CPU.

Thus, the correct answer from the options are B, C and D Only.

Solid-state drive

★ Additional Information

- A solid-state drive (SSD) is a semiconductor-based storage device, which typically uses NAND flash memory to save persistent data.
- Each NAND flash memory chip consists of an array of blocks, also known as a grid, and within each block, there is an array of memory cells, known as pages or sectors.

17. Answer: d

Explanation:

Teaching methods are principles, pedagogy, and managerial techniques applied during classroom education.

★ Key Points

- There are two methods based on the interaction between learner and teacher: Online and Offline Classroom.

- Offline instruction is the **conventional** method of instruction in which instructors use a **blackboard** to communicate lessons and concepts to pupils and dictates notes to students in the classroom.
- Online learning is not characterised by a single definition.
- It includes using a computer and the Internet to aid in studying.
- Online methods incorporate a wide range of instruments such as Class Blog, Live Online Classes, **Online Whiteboard**, **Learning Management Systems** and Game-Based Teaching.

Thus, modes of teaching are used by Teacher-A: offline: Teacher-B: online is the correct answer.

★ Additional Information

- The drawback of Offline Instructions:
 - The "one-way flow" of knowledge in the classroom while utilizing chalk and talking is teaching.
 - Teachers frequently talk nonstop for an hour without knowing the students' opinions or responses.
 - The information supplied is only drawn from textbooks and lecture notes.

18. Answer: d

Explanation:

Communication is the process of transmission of information.



Key Points Statement I: Communication and socialisation are two non-convergent dimensions of any modern society.

- Communication plays a significant role in the growth of cognitive abilities, the transmission of knowledge, and socialization.
- It also makes it possible for people to exchange information, ideas, and thoughts.

- Communication and socialisation are two convergent dimensions of any modern society.

So, Statement I is false.

Statement II: Communication enables the promotion of values that facilitate the process of enculturation of people in a society.

- Acculturation is the process of integrating two cultures while adapting to the dominant culture of the society.
- Communication is a process through which people exchange information, values ideas, and thoughts.
- Communication enables the promotion of values that facilitate the process of enculturation of people in a society.

Thus, Statement II is true.

Therefore, The correct answer is Statement I is false but Statement II is true.

19. Answer: d

Explanation:

The binary number is expressed in the base 2 numeral system.



Key Points Statement I: 8 megabytes = 2^{13} gigabytes.

- As we know, 1 MB = 2^{10} KB.
- So, 8 MB = $2^3 + 2^{10}$ KB
- Thus, 8 MB = 2^{13} KB

Thus, Statement I is false.

Statement II: The decimal equivalent of the binary number $(11101.101)_2$ is $(29.625)_{10}$.

- According to Question, $(11101.101)_2 = (29.625)_{10}$.

- Now, Convert the Binary number to a Decimal number,
 - $(11101.101)_2 = 1 \cdot 2^4 + 1 \cdot 2^3 + 1 \cdot 2^2 + 0 \cdot 2^1 + 1 \cdot 2^0 + 1 \cdot 2^{-1} + 0 \cdot 2^{-2} + 1 \cdot 2^{-3}$
 - $(11101.101)_2 = 16 + 8 + 4 + 0.1/2 + 1/8.$
 - $(11101.101)_2 = 29 (.500 + .125).$
 - $(11101.101)_2 = 29 (.625)$
 - Thus, $(11101.101)_2 = 29.625$

So, Statement II is true.

Therefore, The correct answer is Statement I is false but Statement II is true.

20. Answer: c

Explanation:

Photovoltaic system is a well-organized collection of PV panels.

★ Key Points

Statement I: Increasingly, photovoltaic panels are being used to supplement electrical energy from the power grid.

- Photovoltaic systems are used to generate electricity from solar energy.
- In recent times, to reduce the dependence on fossil fuels countries are moving towards renewable energy sources.
- So, photovoltaic panels are being used to supplement electrical energy from the power grid.

Thus, Statement I is correct.

Statement II: One issue with grid-connected photovoltaics is that PV cells produce Alternating Current (AC) whereas powergrids use Direct Current (DC)

- A solar panel generates DC as its source of electricity.
- An inverter is used to Convert the DC to AC which is generated by the solar panel.
- Whereas, Power grid's operate on Alternating Current (AC).

Thus, Statement II is incorrect.

Therefore, the correct answer is :Statement I is correct but Statement II is incorrect.

21. Answer: b

Explanation:

A categorical proposition has quantity, Subject, Quality and Predicate.

★ Key Points

- Conversion in categorical propositions is a change in the position of the Subject and Predicate with each other.
 - For Example; No S is P = No P is S.
- After changing the position ties to access the proposition validity.

Original Proposition	Conserve	Validity
(A) All S is P	(I) Some P is S	<i>per accidens.</i>
(E) S is P	No P is S	Valid
(I) S is P	Some P is S	Valid
(E)Some S is not P None	Some P is not N	the fallacy of illicit conversion

- Logicians in the Case of an A-type proposition allow for conversion with **limitations, or *per accidens*** .
- The notion of limitation, or conversion per accidens, requires a change in the quantity of the proposition from universal to particular.

Thus, the correct answer from the options is A, C, and D only.

22. Answer: b

Explanation:

Given: 1, 2, 4, 6, 7, 18, 10, 54, ?

The logic follows here is:

There are two different series in the question.

1st number + 3 = Third Number

3rd number + 3 = 5th Number and so on.

2nd Number x 3 = Fourth Number

4th Number x 3 = 6th Number and so on.

So the answer will be $10 + 3 = 13$

Hence, the correct answer is "13".

23. Answer: c

Explanation:

An interview relies on the collection of data through the use of questions.

★ Key Points

- There are two types of Interviews:
 - **S** tructured interviews
 - **U** nstructured interviews
- **A structured interview is a quantitative research technique frequently used in survey research.**
- **Structured interviews are the most systematized type of interview.**
- The interviewer uses predetermined questions in a set order.
- Structured interviews are often closed-ended.

- They can be dichotomous, which means asking participants to answer “yes” or “no” to each question, or multiple-choice.
- While open-ended structured interviews do exist, they are less common.
- Asking set questions in a set order allows you to easily compare responses between participants in a uniform context.
- It is sometimes referred to as a standardized interview.
- Tips for preparing questions for a structured interview are
 - Introductory questions should be related to the research **topic**.
 - Questions can be **grouped** if the list of questions is long.
 - Keep the language of the Question simple.
 - Avoid **ambiguous** question
 - Avoid **Double-barrelled** questions.
 - General questions should precede specific questions.

Thus, the correct answer from the options are B, C, and D Only.

★ Additional Information

- Unstructured interviews are typically characterized as discussions performed with the aim of gathering information for the research study.
- It is also known as in-depth interviews.

24. Answer: c

Explanation:

ICT-enabled teaching is an approach to education that makes use of ICT to support, improve, and optimised information delivery.

★ Key Points

- Teaching instructional is divided into two parts Projected and Non-projected.
- The Projected instructional are Films, Slides, Projectors, etc.
- Whereas, Non-projectors can divide into graphics, Displays boards, 3-D, Audio and Activity.

- It contains such things as Models, Drama, Radio, Bulletin Board, Charts, Blackboard, etc.
- A **projector** is used in the classroom and allows teachers to use technology to enhance engagement.
- It gives their p **upils access to a wide range of superior learning opportunities.**

Thus, Projector tools can be used for ICT enabled teaching.

The correct option is Projector.

★ Additional Information

- Paper charts are a useful way to present and display information or instructions.
- Physical models are representations of things or concepts that help students understand the subject.

25. Answer: d

Explanation:

The variables or numbers are defined and categorised in statistics using various measuring scales.

★ Key Points

- Each scale of measurement has characteristics that dictate how the data should be analysed.
- Identity, magnitude, equal intervals, and a minimum value of zero are the properties that are assessed.
- There is various **type** of Measuring Scale:
 - Nominal or Classificatory
 - Ordinal or Ranking
 - Interval
 - **Ratio**

- The **ratio** has all the properties of interval scales; ratio scales also have a real zero.
- The **highest of the four hierarchical levels of measurement is the ratio level.**
- Ratio scale doesn't have a negative number, unlike interval scale because of the absolute zero or zero point characteristic.
- Ratio scale provides unique possibilities for statistical analysis.

Thus, the Ratio is considered the highest scale in measurement.

★ Additional Information

- Nominal: It is used to the classification of Individuals or objects.
- Ordinal: Numbers reflect rank order and show the order of quality or quantity.
- Interval: Numbers on interval scales form a continuum and reveal the degree of the difference.

26. Answer: c

Explanation:

Syllogism is a kind of logical argument that applies that if two propositions assume to be true then the conclusion must be true.

★ Your Personal Exams Guide

Key Points Statement I: Aristotelian syllogism is essentially verbalistic.

- Aristotle's syllogism consists of **three** successive assertions; the first two are the premises, and the third is the **conclusion**.
- The Aristotelian syllogism is **purely formal and deductive**.
- Aristotelian syllogism is essentially **verbalistic**.

Thus, Statement I is correct.

Statement II: Nyaya system recognizes the fact that the verbal form is the essence of inference.

- It is formal-material and deductive-inductive.
- Nyaya's syllogism acknowledges that verbal form is simply necessary to **persuade others**.
- According to Naya, **verbal form does not constitute the substance of the conclusion**.

So, Statement II is incorrect.

Therefore, Statement I is correct but Statement II is incorrect.

27. Answer: a

Explanation:

A fallacy is a defect in an argument due to a flaw in reasoning or the creation of an illusion.

★ Key Points

- The fallacy of appeal to force occurs when the arguer tries to convince the conclusion, saying that person is either **implicitly or explicitly** that some **harm** will come.
 - For Example, Does your father know you believe that?
- Here, the arguer tries to persuade him through treat by telling him implicitly that he shall tell to his father.
- The appeal to authority fallacy is the **mistaken belief that something is true because an authorized person said it**.
 - For Example, "I am shocked to hear you preaching atheism."
- In this case, does the arguer have the authority to talk about atheism?

Thus, the correct answer from options A and D Only.

★ Additional Information

- Appeal to authority is the manipulation of the recipient's emotions in order to win an argument, particularly in the absence of factual evidence.

- Appeal to the majority is an argument, often emotively laden for the acceptance of an unproved conclusion by adducing irrelevant evidence based on the feelings, prejudices, or beliefs of a large group of people.

28. Answer: c

Explanation:

After the 42nd Amendment Constitutional Education was transferred to the Concurrent List.

★ Key Points

- According to the Economic Survey 2019–20, the centre and the states' expenditures on education as a percentage of the GDP hovered around 3% between 2014–15 and 2018–19.
- Although higher and technical education is included in the concurrent list but in most cases, states are still in charge of finance.
- **The Central Government expenditure on general higher education is routed through the University Grants Commission.**
- **Under Section 2 (f) of UGC Act**, The University Grants Commission derived its power for expenditure on general higher education.

Thus, In India, much of the Central Government expenditure on general higher education is routed through University Grants Commission.

★ Additional Information

- **UGC** is responsible for setting, determining, and upholding the standards for higher education in India.
- The **AICTE** was established in November 1945 to review the facilities for technical education and to advance coordinated, comprehensive national development.
- **The National Council for Teacher Education** was established in 1973 and served as a consultative body to the government on all issues relating to teacher education.

- The National Council of Educational Research and Training (NCERT) is an autonomous organisation set up in 1961 by the Government of India to assist and advise the Central and State Governments on policies and programmes for qualitative improvement in school education.

29. Answer: a

Explanation:

National Institutional Ranking Framework (NIRF) was introduced in 2015 by the Government of India.

★ Key Points

- This framework provides a mechanism for classifying educational institutions across the nation.
- The approach is based on the overall recommendations and broad understanding reached by a Core Committee appointed by the Ministry of Education.
- The **Broad parameters** are mentioned below;
 - Teaching Learning and Resources
 - Research Professional Practice & Collaborative Performance
 - Graduation Outcome
 - Outreach & Inclusivity
 - Perception

Thus, the most appropriate answer from the options are A, B, C and D Only.

★ Additional Information

- The disciplines covered are Engineering, Management, Pharmacy, Medical, Architecture Law Universities, and Colleges.

30. Answer: d

Explanation:

A pollutant is a substance that is present in concentrations that could be harmful to organisms and the environment.



Key Points Statement I: All potential pollutants are synthetic chemicals.

- The majority of these pollutants are released by human activity, including burning fossil fuels, driving, and emissions from industry and agriculture.
- These may arise **naturally** or may have **human-caused origins**.
- Some of the important ones are Nitrogen oxides, Sulfur oxides, Particulate matter, Ground level ozone, Volatile organic compounds, and Greenhouse gases.

So, Statement I is false.

Statement II: Many of the emerging contaminants have been observed to bioaccumulate in wildlife and humans.

- Bioaccumulation is the gradual increase of substances in an organism.
- In a simple world, **how contaminants get into the food chain**.
- Some contaminants have bioaccumulated in people and animals worldwide as a result of drinking water and aquatic contamination.

Thus, Statement II is true.

Therefore, Statement I is false but Statement II is true.

31. Answer: b

Explanation:

Female Juvenile Society established schools for females in 1819.



Key Points

- David Hare founded and ran a girls' school in Calcutta at his own expense in 1820.
- In 1857, Calcutta, Bombay, and Madras Universities were established.
- Sorabjee Kharsetjee asked if his daughter might take the matriculation exam offered by the University of Bombay in 1875.
- **The first university to admit female students was Calcutta University in 1877.**
- Whereas, Bombay University admitted female students in **1883**.

Thus, Calcutta University was the first to throw all University examinations open to girls.

★ Additional Information

- Shreemati Nathibai Damodar Thackersey Women's University was the country's first women's university founded in 1916.

32. Answer: a

Explanation:

Communication is transferring information from one person or group to another.

★ Key Points

Knowledge Sharing:

The process of transferring or sharing undocumented and documented information from one person to the other is known as 'knowledge sharing.'

- Knowledge Sharing is a type of communication.
- Knowledge sharing is exchanging information, skills, or expertise among individuals and groups.
- In knowledge sharing the essential aspects of communication are:
 - **Supply-side**
 - **Demand side**
 - **Policy currents**

Thus, the correct answer from the options is A, B, and C Only.

★ Additional Information

- Explicit knowledge sharing is made available to be communicated between entities.
-

33. Answer: b

Explanation:

Quantitative research is to quantify the data collection and processing process.

★ Key Points

Quantitative research:

- It is based on a deductive method that focused the validation of the hypothesis and is influenced by positivist and empiricist theories.
- One of the objectives of quantitative research is to test the hypothesis.
- In quantitative research, variables are important: Dependent (Effect) and Independent (Cause).
- **One of the objectives of quantitative research is to check the causality between the Dependent and independent.**

Thus, A major focus in quantitative research is on Causality.

★ Additional Information

- Quantitative research methods for descriptive, correlational or experimental research.
 - Social reflection is essential for the Qualitative research.
-

34. Answer: a

Explanation:

Anumāna means the word "inference" or "knowledge that follows".

★ Key Points

Statement I: In svārtha Anumāna (inference for oneself) we do not require a formal statement of the different members of inference, according to Nyāya view of inference.

- Naiyayikas classified the Anumana Into three categories.
- On the basis of the **psy**chological process is divided into **svārtha** and **Parārtha**.
- **Svarthanumana** means inference from **prior knowledge**.

Thus, Statement I is correct.

Statement II: Svārtha Anumāna is a psychological process.

- Svartha Anumana is a knowledge obtained through **psychological connection from prior knowledge**.
- For Example, someone see smoke on the hill, then remember the universal connection between fire and smoke.
- Make observation there is fire on the hill.

Thus, Statement II is correct.

Therefore, Both Statement I and Statement II are correct.

35. Answer: b

Explanation:

Typhoid fever can spread throughout the body and harm numerous organs.

★ Key Points

Waterborne diseases:

- Waterborne diseases are illnesses caused by microscopic organisms, like viruses and bacteria, that are ingested through contaminated water or by coming in contact with feces.
- If every person on the planet was able to practice safe sanitation and hygiene and have access to clean water, these diseases would not exist.
- It can lead to major problems and even be fatal without early treatment.
- **The Salmonella Typhi bacteria are the primary cause of the potentially fatal disease typhoid fever.**
- Infections caused by bacteria can harm your skin, lungs, brain, blood, and other body organs.
- They enter your body when single-celled organisms grow or release toxins.

Thus, Typhoid fever, water-borne disease is caused by Bacteria.

★ Additional Information

- Malaria is caused by Protozoan.
- Viruses can cause diseases such as the common cold, flu and warts, AIDS, Ebola, and COVID-19.

36. Answer: b

Explanation:

Ethical hackers use their expertise to safeguard and advance an organization's technology.

★ Key Points

Ethical Hacker:

- An ethical hacker informs the **organization of the found vulnerabilities.**
- Ethical hackers use a more **of** fensive approach, which means they focus on security flaws.
- Ethical hackers are information **security professional** who breaches a computer system, network, application, or another computing resource.

- The term "hacking" was initially used in conjunction with events at the Massachusetts Institute of Technology in the 1960s.

Thus, Ethical Hacker is a suitable description of Reena's profile.

★ Additional Information

- Black Hat hackers are cybercriminals that intentionally breach computer networks.
- Hacktivists are an unethical collaboration to launch cyberattacks in favour of political causes.

37. Answer: c

Explanation:



India has the third-largest publicly supported higher education system in the world. Key Points Statement I: In India increasing access to higher education has been constrained by low completion rates at the secondary education stage.

- The University Grants Commission is the primary governing body at the tertiary level.
- India's enrolment rate of 9% is comparable to that of other nations with lower middle incomes.
- It is also **constrained by low completion rates at the secondary education stage**.

So, Statement I is true.

Statement II: By 2030, all multidisciplinary higher education institutions will be closed down.

- A multidisciplinary curriculum involves looking at the same subject from the perspectives of other academic fields.
- The **New Educational Policy 2020** emphasizes **a multidisciplinary approach**.

- Higher education through a variety of disciplines of study guarantees the learner's freedom and autonomy in choosing their course of study.

Thus, Statement II is false.

Hence, Statement I is true but Statement II is false

38. Answer: c

Explanation:

Given

$$S.I = 1200$$

$$\text{Rate} = 8\%$$

$$\text{Time} = 4 \text{ yr}$$

Formula

$$SI = \frac{PRT}{100}$$

Solution

$$\Rightarrow 1200 = \frac{(P \times 8 \times 4)}{100}$$

$$\Rightarrow P = 3750$$

Now the simple interest accrued on thrice of that principle at the rate of 6% per annum in 3 years:

$$\Rightarrow 3 \times P = 11250$$

$$\Rightarrow SI = \frac{(11250 \times 6 \times 3)}{100}$$

$$\Rightarrow SI = 2025$$

39. Answer: d

Explanation:

The process of gathering information from a predetermined group with the purpose of learning.

★ Key Points

- According to Check & Schutt Survey research is "the collection of information from a sample of individuals through their responses to questions".
- It is a set of questions intended to elicit specific information from a particular population.
- There can be different types of error in survey research;
 - Population-Specific Error
 - Selection Error
 - Sample Frame Error
 - Data processing Error

Thus, the correct answer from the options are A, D, and E Only.

★ Additional Information

- Surveys can be carried out via the phone, by mail, online, on street corners, and even in shopping centers.
- Surveys are a common way to collect data across a wide range of samples.

40. Answer: b

Explanation:

Effects of mass media communication on audience's thoughts, attitudes, and behaviour.

★ Key Points

- **M**ass media is the use of media technologies used to spread information to a large audience.
- Information can be quickly spread through mass communication to a huge population of people who often avoid the sources of information.
- The media used for mass communication includes radio, television, newspapers, magazines, flyers, etc.
- **I**nformation dissemination features **diversity and interactivity**, and mass media is the dominant trend in media development.
- **I**t influences **social life on individuals due to mass media communication on mass audience**.

Thus, in a social context, the true effects of mass media communication on the mass audience can be understood.

★ Additional Information

- Mass media communication characteristics are numerous audiences, a variety of audiences, dispersed audiences, and a lack of direct feedback.

41. Answer: c

Explanation:

Communication is transferring information from one person or group to another.

★ Key Points

Assertion (A): *Communication has the power to persuade, inform and disinform.*

- Communication is a way of giving, receiving and sharing information.
- Communication is the process of exchange of idea, opinions, feelings and information through between two or more person through any medium.
- **This information transmitted might be truth or lie or misleading and could even lead to persuading or dissuading certain behaviours.**
- Communication has the power to inform as well as misinform.

- It is the process of **exchanging ideas, thoughts, sentiments, and information between two or more**.
- Communication has the ability to both inform and misinform.

So, Assertion is true.

Reasons (R): The process of propaganda makes the line of distinction transparent between its elements for being persuasive.

- Propaganda is communication that is primarily used to persuade or influence an audience to support an agenda.
- It may use loaded language to elicit an emotional rather than a logical response to the information being presented.
- **It makes an effort to mislead others by using lies.**

Thus, Reasons is false.

Therefore, The correct answer is A is true but R is false.

42. Answer: a

Explanation:

The qualitative technique is used to comprehend people's attitudes, interactions, behaviours, and beliefs. It produces data that is not numerical.

★ Key Points

Statement I: Often qualitative studies provide too many details of the setting that are investigated.

- Qualitative research methods offer the possibility of using a variety of techniques to collect data on complex subjects.
- It also offers the option of gathering more **specific information** to understand **complex phenomena**.
- Qualitative research includes ethnography, grounded theory, discourse analysis, and interpretive phenomenological analysis.

Thus, Statement I is true

Statement II: Critics point out that qualitative research suffers from the issue of replication.

- Replication is an ongoing methodological dilemma in which it is challenging or impossible to **replicate the findings** of many scientific investigations.
- Qualitative research suffers from the **issue of replication**.

So, Statement II is true.

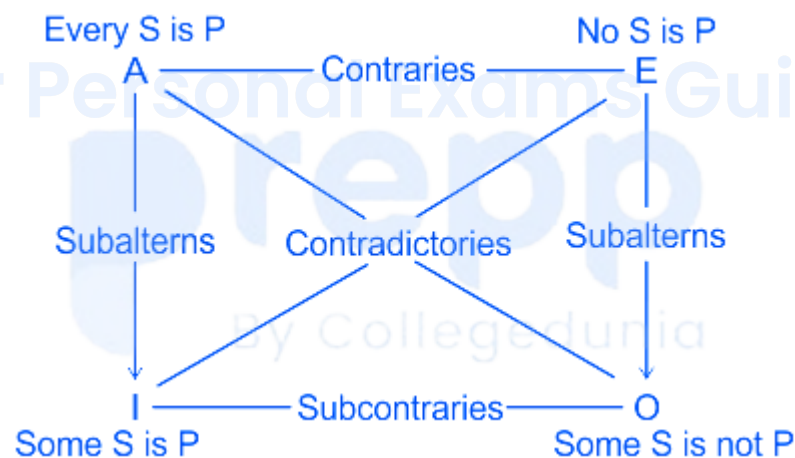
Thus, Both Statement I and Statement II are true.

43. Answer: c

Explanation:

The square of opposition is a diagram used in categorical logic to depict the logical relationship.

★ Key Points



Relationships between Propositions:

Types	Characteristics
<u>Contradictory</u>	- A and O, E, and I proposition are contradictory. - The truth of an assertion of the form All S are P implies the falsity of the corresponding proposition of the type. Some S are not P.
<u>Contrary</u>	- A and E propositions are contrary. - Propositions are contrary when they cannot both be true.
<u>Sub-contrary</u>	- I and E propositions are sub-contrary. - Propositions are sub-contrary when it is impossible for both to be false.
<u>Sub-alternation</u>	- A and I, E and O propositions are Sub-alternation. - The sub-alternation relation exists between a proposition and the equivalent I proposition. - the falsity of an I or O assertion implies, respectively, the falsity of the corresponding A or E proposition.

- Now, "some men are vegetarians" is given as false, A is False (Sub-alternation), E is True (Contradictory) and O is (Sub-contrary) True.
- So, "All men are vegetarians" is false, "No men are vegetarians". is true, and "Some men are not vegetarians" is true.

Therefore, the correct answer from the options are B and C Only.

44. Answer: b

Explanation:

Natural disasters are defined by the abnormal intensity of a natural agent.

★ Key Points

Global warming :

- The phenomenon of rising average air temperatures close to the surface of the Earth over the previous one to two centuries is known as global warming.
- Since the middle of the 20th century, climate scientists have accumulated extensive data on a variety of weather events,
- Including temperatures, precipitation, and storms, as well as on factors that have an impact on climates, such as ocean currents and the chemical makeup of the atmosphere.
- These findings show that Earth's climate has changed on practically every possible period since the beginning of geologic time.
- That human activities have increasingly affected the pace and scope of current climate change since the beginning of the Industrial Revolution.

Results:

- A natural disaster can result in human casualties or property damage and often leaves behind some economic harm.
- The resilience of the affected population and the state of the infrastructure determine how severe the damage will be.
- Global warming is the gradual increase in the earth's temperature.
- It will increase **drought, flood, wildfires, heat waves, tropical cyclones**, and other events.

Thus, the correct answer from the options are A, C and D Only.

★ Additional Information

- The United Nations Environment Program (UNEP) and the World Meteorological Organization (WMO) established the Intergovernmental Panel on Climate Change (IPCC) in 1988.
- **An earthquake** is caused by a sudden slip on a fault.
- The tectonic plates are always slowly moving, but they get stuck at their edges due to friction. When the stress on the edge overcomes the friction, there is

an earthquake .

45. Answer: d

Explanation:

Given

The two successive discounts are 20% and 15%.

S.P = 3060

Formula

$$\Rightarrow S.P = M.P(1 - d_1/100)(1 - d_2/100)$$

where d_1 and d_2 are the given discount.

Solution

Let the M.P be x .

$$\Rightarrow 3060 = x(1 - 20/100)(1 - 15/100)$$

$$\Rightarrow 3060 = x \times 4/5 \times 17/20$$

$$\Rightarrow x = 3060 \times 20/17 \times 5/4$$

$$\Rightarrow x = 4500.$$

46. Answer: b

Explanation:

The correct answer is 'Massive poverty'.

★ Key Points

- let's understand the given passage.
- From the passage, "..... *The natives' capacity for science and technology, the basis for economic progress was seen as nil. However, within Asian, African and Latin or Native American societies, vernacular societies had developed ways of defining and treating poverty that accommodated visions of community, frugality, and sufficiency. **It is true that massive poverty in the modern sense appeared only when the spread of market economy broke down the communities. As a result, it deprived millions of people from access to land. water and other resources. With the consolidation of market economy, systemic issues became inevitable.....***"
- It is said that with the spread of market community, communities got broken down which led to massive poverty.
- Hence, **option 2** is the correct answer.

Therefore, the correct answer is - '**Massive poverty**'.

47. Answer: d

Explanation:

The correct answer is '**Use of resources sparingly**'.

★ Key Points

- Let's understand the given passage.
- From the passage "..... *However, within Asian, African and Latin or Native American societies, vernacular societies had developed ways of defining and treating poverty that accommodated visions of community, frugality, and sufficiency. It is true that massive poverty in the modern sense appeared only when the spread of market economy broke down the communities. **As a result, it deprived millions of people from access to land. water and other resources. With the consolidation of market economy, systemic issues became inevitable.....***"
- Asian, African and other vernacular societies deprived people from using land, water and other important resources.

- Hence, **option 4** is the correct answer.

Therefore, the correct answer is – *'Use of resources sparingly'*.

48. Answer: a

Explanation:

The correct answer is '**Modernised poverty**'.

★ Key Points

- Let's understand the given passage.
- From the passage '..... It is important to know the break that occurred in the conceptions and management of poverty first with the emergence of capitalism in Europe, and later with the advent of development in the Third world. The first break is described in terms of the advent in the nineteenth century of systems for dealing with the poor, based on assistance provided by impersonal institutions. Philanthropy occupied an important place in this transition. **The transformation of the poor into the assisted had a profound consequence. The modernisation of poverty invariably affected vernacular relations**
- It was with the emergence of capitalism in Europe, a change happened in the way poverty was managed. The poor was given help by the philanthropist thus introducing modern poverty.
- Hence, **option 1** is the correct answer.

Therefore, the correct answer is – *'Modernised poverty'*.

-

49. Answer: c

Explanation:

The correct answer is 'The ill-effects of capitalism'.

★ Key Points

- Let's understand the passage.
- '..... As a result, **it deprived millions of people from access to land, water and other resources.** With the consolidation of market economy, systemic issues became inevitable.....'
- The passage highlights the changes different regions underwent after capitalism mostly with respect to economy and how it affected poverty.
- Capitalism deprived people from accessing land, water and other important resources.
- Hence, **option 3** is the correct answer.

Therefore, the correct answer is - '**The ill-effects of capitalism**'.

50. Answer: c

Explanation:

The correct answer is '**Cannot be changed**'.

★ Key Points

- Let's understand the passage.
- From the given passage, "..... The conceptions and treatment of poverty were quite different before 1940. In colonial times the concern with poverty was conditioned by the belief that even if the natives could be somewhat enlightened by the presence of the coloniser, **not much could be done about their poverty.** It was because their economic development was pointless."
- It was believed that even if the natives acquired better knowledge and understanding from the coloniser, poverty would remain unchanged.
- Hence, **option 3** is the correct answer.

Therefore, the correct answer is - '**Cannot be changed**'.