

UGC NET PAPER-1

GENERAL APTITUDE

Solved Paper January 2017

Time Allotted: 1 Hour

Maximum Marks: 100

Important Instructions:

- Each question carries 2 marks.
- There are 50 questions to be attempted out of 60 questions.
- Each item has four alternative responses marked (a), (b), (c) and (d). You have to darken the oval as indicated below on the correct response against each item.
Example: where (c) is the correct response.
- Your responses to the items are to be indicated in the **Answer Sheet**.
- Use of any calculator or log table etc., is prohibited.**
- Negative Marking: For each incorrect answer 0.5 marks shall be deducted.**

- The principal of a school conducts an interview session of teachers and students with a view to explore the possibility of their enhanced participation in school programmes. This endeavour may be related to which type of research?

- Evaluation Research
- Fundamental Research
- Action Research
- Applied Research

- In doing action research what is the usual sequence of steps?

- Reflect, observe, plan, act
- Plan, act, observe, reflect
- Plan, reflect, observe, act
- Act, observe, plan, reflect

- Which sequence of research steps is logical in the list given below?

- Problem formulation, Analysis, Development of Research design, Hypothesis making, Collection of data, Arriving at generalizations and conclusions.
- Development of Research design, Hypothesis making, Problem formulation, Data analysis, Arriving at conclusions and data collection.
- Problem formulation, Hypothesis making, Development of a Research design, Collection of data, Data analysis and formulation of generalizations and conclusions.

- Problem formulation, Deciding about the sample and data collection tools, Formulation of hypothesis, Collection and interpretation of research evidence.

- Below are given two sets – research methods (Set-I) and data collection tools (Set-II).

Match the two sets and indicate your answer by selecting the correct code:

Set-I (Research Methods)	Set-II (Data Collection Tools)
1. Experimental method	(i) Using primary and secondary sources
2. Ex post-facto method	(ii) Questionnaire
3. Descriptive survey method	(iii) Standardized tests
4. Historical method	(iv) Typical characteristic tests

Codes:

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

- The issue of 'research ethics' may be considered pertinent at which stage of research?

- At the stage of problem formulation and its definition

- (b) At the stage of defining the population of research
 - (c) At the stage of data collection and interpretation
 - (d) At the stage of reporting the findings.
6. In which of the following is the reporting format prescribed?
- (a) Doctoral level thesis
 - (b) Conference of researchers
 - (c) Workshops and seminars
 - (d) Symposia

Direction for questions 7 to 12:

Read the following passage carefully and answer the questions.

The last great war, which nearly shook the foundations of the modern world, had little impact on Indian literature beyond aggravating the popular revulsion against violence and adding to the growing disillusionment with the 'humane pretensions' of the Western World. This was eloquently voiced in Tagore's later poems and his last testament, *Crisis in Civilisation*. The Indian intelligentsia was in a state of moral dilemma. On the one hand, it could not help sympathising with England's dogged courage in the hour of peril, with the Russians fighting with their backs to the wall against the ruthless Nazi hordes, and with China groaning under the heel of Japanese militarism; on the other hand, their own country was practically under military occupation of their own soil, and an Indian army under Subhas Bose was trying from the opposite camp to liberate their country. No creative impulse could issue from such confusion of loyalties. One would imagine that the achievement of Indian independence in 1947, which came in the wake of the Allies' victory and was followed by the collapse of colonialism in the neighbouring countries of South-East Asia, would have released an upsurge of creative energy. No doubt it did, but unfortunately it was soon submerged in the great agony of partition, with its inhumane slaughter of the innocents and the uprooting of millions of people from their homeland, followed by the martyrdom of Mahatma Gandhi. These tragedies, along with Pakistan's invasion of Kashmir and its later atrocities in Bangladesh, did indeed provoke a poignant

writing, particularly in the languages of the regions most affected, Bengali, Hindi, Kashmiri, Punjabi, Sindhi and Urdu. But poignant or passionate writing does not by itself make great literature. What reserves of enthusiasm and confidence survived these disasters have been mainly absorbed in the task of national reconstruction and economic development. Great literature has always emerged out of chains of convulsions. Indian literature is richer today in volume, range and variety than it ever was in the past.

7. What was the impact of the last great war on Indian literature?
- (a) It had no impact.
 - (b) It aggravated popular revulsion against violence.
 - (c) It shook the foundations of literature.
 - (d) It offered eloquent support to the Western World.
8. What did Tagore articulate in his last testament?
- (a) Offered support to Subhas Bose.
 - (b) Exposed the humane pretensions of the Western World.
 - (c) Expressed loyalty to England.
 - (d) Encouraged the liberation of countries.
9. What was the stance of Indian intelligentsia during the period of great war?
- (a) Indifference to Russia's plight.
 - (b) They favoured Japanese militarism.
 - (c) They prompted creativity out of confused loyalties.
 - (d) They expressed sympathy for England's dogged courage.
10. Identify the factor responsible for the submergence of creative energy in Indian literature.
- (a) Military occupation of one's own soil
 - (b) Resistance to colonial occupation
 - (c) Great agony of partition
 - (d) Victory of Allies
11. What was the aftermath that survived tragedies in Kashmir and Bangladesh?
- (a) Suspicion of other countries
 - (b) Continuance of rivalry
 - (c) Menace of war
 - (d) National reconstruction

12. The passage has the message that
 (a) Disasters are inevitable.
 (b) Great literature emerges out of chains of convulsions.
 (c) Indian literature does not have a marked landscape.
 (d) Literature has no relation with war and independence.
13. Effective communication pre-supposes
 (a) Non-alignment (b) Domination
 (c) Passivity (d) Understanding
14. When verbal and non-verbal messages are contradictory, it is said that most people believe in
 (a) indeterminate messages
 (b) verbal messages
 (c) non-verbal messages
 (d) aggressive messages
15. The typical feature of an information-rich classroom lecture is in the nature of being
 (a) Sedentary (b) Staggered
 (c) Factual (d) Sectoral
16. Expressive communication is driven by
 (a) Passive aggression
 (b) Encoder's personality characteristics
 (c) External clues
 (d) Encoder-decoder contract
17. Positive classroom communication leads to
 (a) Coercion (b) Submission
 (c) Confrontation (d) Persuasion
18. Classroom communication is the basis of
 (a) Social identity (b) External inanities
 (c) Biased passivity (d) Group aggression
19. The missing term in the series 1, 4, 27, 16,?, 36, 343, ... is
 (a) 30 (b) 49
 (c) 125 (d) 81
20. The next term in the following series YEB, WFD, UHG, SKI will be
 (a) TLO (b) QOL
 (c) QLO (d) GQP
21. If A is coded as C, M as I, N as P, S as O, I as A, P as N, E as M, O as E and C as S, then the code of COMPANIES will be
 (a) SPEINMOAC (b) NCPSEIOMA
 (c) SMOPIEACN (d) SEINCPAMO
22. Among the following, identify the continuous type of data:
 (a) Number of languages a person speaks
 (b) Number of children in a household
 (c) Population of cities
 (d) Weight of students in a class
23. Ali buys a glass, a pencil box and a cup and pays ₹ 21 to the shopkeeper. Rakesh buys a cup, two pencil boxes and a glass and pays ₹ 28 to the shopkeeper. Preeti buys two glasses, a cup and two pencil boxes and pays ₹ 35 to the shopkeeper. The cost of 10 cups will be
 (a) ₹ 40 (b) ₹ 60
 (c) ₹ 80 (d) ₹ 70
24. Out of four cities given below three are alike in some manner while the fourth one is different. Identify the odd one
 (a) Lucknow (b) Rishikesh
 (c) Allahabad (d) Patna
25. Given below are some characteristics of reasoning. Select the code that states a characteristic which is not of deductive reasoning:
 (a) The conclusion must be based on observation and experiment.
 (b) The conclusion should be supported by the premise/premises.
 (c) The conclusion must follow from the premise/premises necessarily.
 (d) The argument may be valid or invalid.
26. If two standard form categorical propositions with the same subject and predicate are related in such a manner that if one is undetermined the other must be undetermined, what is their relation?
 (a) Contrary (b) Subcontrary
 (c) Contradictory (d) Sub-altern
27. Men and women may have different reproductive strategies but neither can be considered inferior or superior to the other, any more than a bird's wings can be considered superior or inferior to a fish's fins. What type of argument is it?
 (a) Biological (b) Physiological
 (c) Analogical (d) Hypothetical
28. Among the following propositions two are related in such a way that they cannot both be true but can both be false. Select the code that states those two propositions.

Propositions:

- Every student is attentive.
- Some students are attentive.

3. Students are never attentive.
 4. Some students are not attentive.

Codes:

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

29. Given below are two premises ((a) and (b)). From those two premises four conclusions (i), (ii), (iii) & (iv) are drawn. Select the code that states the conclusions validly drawn from the premises (taking singly or jointly.)

Premises: (a) Untouchability is a cursed.
 (b) All hot pans are untouchable.

Conclusions: (i) All hot pans are curse.
 (ii) Some untouchable things are hot pans.
 (iii) All curses are untouchables.
 (iv) Some curses are untouchability.

Codes:

- (a) (i) and (ii) (b) (ii) and (iii)
 (c) (iii) and (iv) (d) (ii) and (iv)

30. If the statement 'None but the brave wins the race' is false, which of the following statements can be claimed to be true?

Select the correct code:

- (a) All brave persons win the race.
 (b) Some persons who win the race are not brave.
 (c) Some persons who win the race are brave.
 (d) No person who wins the race is brave.

Direction for questions 31 to 33:

The table below embodies data on the sales revenue (₹ in lakh) generated by a publishing house during the years 2012-15 while selling books, magazines and journals as three categories of items. Answer the questions based on the data contained in the table.

Year Items	Sales Revenue (₹ in lakh)			
	2012	2013	2014	2015
Journals	46	47	45	44
Magazines	31	39	46	51
Books	73	77	78	78
Total				

31. In 2015, approximately what percent of total revenue came from books?
 (a) 45% (b) 55%
 (c) 35% (d) 25%

32. The number of years in which there was an increase in revenue from at least two categories of items, is

- (a) 0 (b) 1
 (c) 2 (d) 3

33. If the year 2016 were to show the same growth in terms of total sales revenue as the year 2015 over the year 2014, then the revenue in the year 2016 must be approximately:

- (a) ₹ 194 lakh (b) ₹ 187 lakh
 (c) ₹ 172 lakh (d) ₹ 177 lakh

Direction for questions 34 & 36:

A University professor maintains data on MCA students tabulated by performance and gender of the students. The data is kept on a computer hard disk, but accidentally some of it is lost because of a computer virus. Only the following could be recovered:

Performance/ Gender	Number of MCA Students			
	Average	Good	Excellent	Total
Male			10	
Female				32
Total		30		

Panic buttons were pressed but to no avail. An expert committee was formed, which decided that the following facts were self evident:

- (a) Half the students were either excellent or good.
 (b) 40% of the students were females.
 (c) One-third of the male students were average.

Answer questions 34-36 based on the data given above.

34. How many female students are excellent?
 (a) 0 (b) 8
 (c) 16 (d) 32
35. What proportion of female students are good?
 (a) 0 (b) 0.25
 (c) 0.50 (d) 0.75
36. Approximately, what proportion of good students are male?
 (a) 0 (b) 0.73
 (c) 0.43 (d) 0.27
37. Which of the following statement(s) is/are TRUE?
 S1: The decimal number 11 is larger than the hexadecimal number 11.
 S2: In the binary number 1110.101, the fractional part has the decimal value as 0.625.
 (a) S1 only (b) S2 only
 (c) Both S1 and S2 (d) Neither S1 nor S2

38. Read the following two statements:

I: Information and Communication Technology (ICT) is considered a subset of Information Technology (IT).

II: The 'right to use' a piece of software is termed as copyright.

Which of the above statement(s) is/are CORRECT?

- (a) Both I and II (b) Neither I nor II
 (c) II only (d) I only
39. Which of the following correctly lists computer memory types from highest to lowest speed?
- (a) Secondary Storage; Main Memory (RAM); Cache Memory; CPU Registers
 (b) CPU Registers; Cache Memory; Secondary Storage; Main Memory (RAM)
 (c) CPU Registers; Cache Memory; Main Memory (RAM); Secondary Storage
 (d) Cache Memory; CPU Registers; Main Memory (RAM); Secondary Storage
40. Which of the following is a characteristic of Web2.0 applications?
- (a) Multiple users schedule their time to use Web2.0 applications one by one.
 (b) Web2.0 applications are focused on the ability for people to collaborate and share information online.
 (c) Web2.0 applications provide users with content rather than facilitating users to create it.
 (d) Web2.0 applications use only static pages.
41. With regard to a word processing software, the process of combining static information in a publication together with variable information in a data source to create one merged publication is called
- (a) Electronic mail (b) Data sourcing
 (c) Mail merge (d) Spam mail
42. DVD technology uses an optical media to store the digital data. DVD is an acronym for
- (a) Digital Vector Disc
 (b) Digital Volume Disc
 (c) Digital Versatile Disc
 (d) Digital Visualization Disc
43. **Assertion (A):** Sustainable development is critical to the well being of human society.
- Reason (R):** Environmentally sound policies do not harm the environment or deplete the natural resources.

Choose the correct code:

- (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 true and (R) is false.
 (d) (A) is false and (R) is true.
44. The dominant source of pollution due to oxides of nitrogen (NO_x) in urban areas is
- (a) road transport
 (b) commercial sector
 (c) energy use in industry
 (d) power plants
45. Which of the following is not a water-borne disease?
- (a) Typhoid (b) Hepatitis
 (c) Cholera (d) Dengue
46. Indian government's target for power production from small hydro projects by the year 2022 is
- (a) 1 Giga-Watt (b) 5 Giga-Watt
 (c) 10 Giga-Watt (d) 15 Giga-Watt
47. In which country, the recent international agreement on phasing out Hydro Fluoro Carbons (HFCs) was signed?
- (a) Rwanda (b) Morocco
 (c) South Africa (d) Algeria
48. Which of the following natural hazards is not hydro-meteorological?
- (a) Snow avalanche (b) Sea erosion
 (c) Tropical cyclone (d) Tsunami
49. Which of the following are the demerits of globalisation of higher education?
1. Exposure to global curriculum
 2. Promotion of elitism in education
 3. Commodification of higher education
 4. Increase in the cost of education
- Select the correct answer from the codes given below:
- Codes:**
- (a) 1 and 4 (b) 1, 3 and 4
 (c) 2, 3 and 4 (d) 1, 2, 3 and 4
50. Which of the following statements are correct about deemed universities?
1. The Governor of the State is the chancellor of deemed universities.
 2. They can design their own syllabus and course work.

3. They can frame their own guidelines regarding admission and fees.
4. They can grant degrees.

Select the correct answer from the codes given below:

Codes:

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

51. The purpose of value education is best served by focussing on

- (a) Cultural practices prevailing in the society.
- (b) Norms of conduct laid down by a social group.
- (c) Concern for human values.
- (d) Religious and moral practices and instructions.

52. Which of the following statements are correct?

1. Rajya Sabha is a permanent House which can be dissolved only during national emergency.
2. Rajya Sabha does not represent the local interests of the States.
3. Members of the Rajya Sabha are not bound to vote at the dictates of the states they represent.
4. No Union territory has a representative in the Rajya Sabha.

Select the correct answer from the codes given below:

Codes:

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

53. Which of the following are not necessarily the immediate consequences of the proclamation of the President's Rule in a State?

1. Dissolution of the State Assembly.
2. Removal of the Council of Ministers in the State.
3. Takeover of the State administration by the Union Government.
4. Appointment of a new Chief Secretary.

Select the correct answer from the codes given below:

Codes:

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

54. Instead of holding the office during the pleasure of the President, who among the following hold(s) office during good behaviour?

1. Governor of a State
2. Attorney General of India
3. Judges of the High Court
4. Administrator of a Union Territory

Select the correct answer from the codes given below:

Codes:

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

55. Which of the following sets of statements represents acceptable propositions in respect of teaching-learning relationships? Choose the correct code to indicate your answer.

- (i) When students fail the test/fail test, it is the teacher who fails.
- (ii) Every teaching must aim at ensuring learning.
- (iii) There can be teaching without learning taking place.
- (iv) There can be no learning without teaching.
- (v) A teacher teaches but learns also.
- (vi) Real learning implies rote learning.

Codes:

- (a) (ii), (iii), (iv) and (v)
 (b) (i), (ii), (iii) and (v)
 (c) (iii), (iv), (v) and (vi)
 (d) (i), (ii), (v) and (vi)

56. **Assertion (A):** Learning is a life long process.

Reason (R): Learning to be useful must be linked with life processes.

Choose the correct answer from the following code:

- (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.

57. Effectiveness of teaching has to be judged in terms of

- (a) Course coverage
- (b) Students' interest
- (c) Learning outcomes of students
- (d) Use of teaching aids in the classroom

58. In which teaching method is the learner participation made optimal and proactive?
- (a) Discussion method
 - (b) Buzz session method
 - (c) Brainstorming session method
 - (d) Project method
59. One of the most powerful factors affecting teaching effectiveness is related to the
- (a) Social system of the country
 - (b) Economic status of the society
 - (c) Prevailing political system
 - (d) Educational system
60. **Assertion (A):** Formative evaluation tends to accelerate the pace of learning.

Reason (R): As against summative evaluation, formative evaluation is highly reliable.

Choose the correct answer from the following code:

- (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.

□□□

Answer Key

Q.No.	Answer	Topic's Name	Chapter's Name
1	c	Type of research	Research aptitude
2	b	Type of research	Research aptitude
3	c	Steps of research	Research aptitude
4	b	Methods of research	Research aptitude
5	c	Research ethics	Research aptitude
6	a	Thesis writing	Research aptitude
7	d	Inference based	Comprehension
8	b	Fact based	Comprehension
9	c	Fact based	Comprehension
10	c	Inference based	Comprehension
11	d	Fact based	Comprehension
12	b	Inference based	Comprehension
13	d	Effective communication	Communication
14	c	Verbal and non-verbal communication	Communication
15	c	Classroom communication	Communication
16	b	Expressive communication	Communication
17	d	Effective communication	Communication
18	a	Classroom communication	Communication
19	c	Number series	Mathematical terms and reasoning
20	b	Letter series	Logical reasoning
21	d	Codes	Logical reasoning
22	b	Mathematical aptitudes	Mathematical terms and reasoning
23	d	Mathematical aptitudes	Mathematical terms and reasoning
24	a	Odd one out	People, development and Environment
25	a	Arguments	Logical reasoning
26	c	Propositions	Logical reasoning
27	c	Analogies	Logical reasoning
28	b	Syllogism	Logical reasoning
29	d	Premises & Conclusions	Logical reasoning
30	b	Syllogism	Logical reasoning
31	a	Data interpretation	Data interpretation
32	c	Data interpretation	Data interpretation
33	d	Data interpretation	Data interpretation
34	a	Data interpretation	Data interpretation
35	b	Data interpretation	Data interpretation
36	b	Data interpretation	Data interpretation
37	b	Binary numbers	Information and computer technology
38	b	Terminology	Information and computer technology
39	c	Types of memories	Information and computer technology

40	b	Basics of internet	Information and computer technology
41	c	Terminology	Information and computer technology
42	c	Abbreviations	Information and computer technology
43	b	Development and environment	People, development and environment
44	a	Environmental issues	People, development and environment
45	d	Impact of pollutant	People, development and environment
46	b	Natural resources	People, development and environment
47	a	International agreement	People, development and environment
48	d	Natural hazards	People, development and environment
49	c	Higher education system	Higher education system
50	b	Governance	Higher education system
51	c	Value education	Higher education system
52	b	Governance	Higher education system
53	a	Governance	Higher education system
54	b	Governance	Higher education system
55	b	Factors affecting teaching	Teaching aptitude
56	b	Learners	Teaching aptitude
57	c	Factors affecting teaching	Teaching aptitude
58	d	Methods of teaching	Teaching aptitude
59	d	Factors affecting teaching	Teaching aptitude
60	c	Evaluation system	Teaching aptitude

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2017****ANSWERS WITH EXPLANATIONS**

1. **Option (c) is correct.**
Action research is conducted within the duration of a job, to evaluate any prevalent situation and suggest corrections.
2. **Option (b) is correct.**
The steps for conducting action research are plan, act, observe and reflect.
3. **Option (c) is correct.**
The accurate sequence of research is:
 1. Identification of problem
 2. Formulation of hypothesis
 3. Developing research design
 4. Data collection
 5. Analysis of data
 6. Generalization of findings
 7. Conclusion of the study
4. **Option (b) is correct.**
 1. Experimental method of research involves conducting few standardized tests.
 2. The Ex-Post facto method is conducted after any incident has happened to understand the various characteristics and factors.
 3. Descriptive survey method involves using questionnaires to collect data from predefined population.
 4. Historical methods of research involve studying already existing secondary data about any concept and using primary data for better insight.
5. **Option (c) is correct.**
Research ethics is most important at the stage of data collection, analysis and interpretation.
6. **Option (a) is correct.**
While writing a doctoral level thesis, the researcher has to follow a strict pre-defined format of report writing.
7. **Option (d) is correct.**
The impact of the last great war further deepens the hatred towards violence and strengthens the support towards western world. This was described in the poems of Tagore and in his last documentary crisis in civilization.
8. **Option (b) is correct.**
In his last documentary, Tagore exposed the misconception about western world.
9. **Option (c) is correct.**
Indian intellectual society expected creativity from confused loyalties.
10. **Option (c) is correct.**
The creative energy in India after partition was vanished because of partition and losses of human lives due to it.
11. **Option (d) is correct.**
The enthusiasm and confidence that was left after partition was channelled towards economic development and reconstruction of the nation.
12. **Option (b) is correct.**
The passage highlights the idea that great literature is developed on the foundation of a series of convulsions.
13. **Option (d) is correct.**
The basis of good communication is the ability to understand on the part of the learner.
14. **Option (c) is correct.**
It is believed that non verbal communication is often more trustworthy than what is being conveyed verbally.
15. **Option (c) is correct.**
Any lecture is more impactful and lasting when it is based on the facts.
16. **Option (b) is correct.**
The personality traits of the encoder enhance the effective delivery of the message.

17. Option (d) is correct.

Good classroom communication will persuade the audience to engage in the process of teaching and learning.

18. Option (a) is correct.

Good classroom communication with peers will help learners get a positive social identity.

19. Option (c) is correct.

The numbers in the series are square and cubes of consecutive numbers alternatively.

$$(1)^3 = 1$$

$$(2)^2 = 4$$

$$(3)^3 = 27$$

$$(4)^2 = 16$$

$$(6)^2 = 36$$

$$(7)^3 = 343$$

Hence, the missing number will be cube of 5 i.e., $(5)^3 = 125$

20. Option (b) is correct.

The first terms in all series are alternate alphabets in backwards.

Y-W-U-S

The second term in all the series is in the forward sequence but the gap is increasing by one number.

E-F-1-H-2-K

The third term in all the series is in the forward sequence but the gap is by 1 or by 2 in an alternate manner.

B-1-D-2-G-1-I

Hence, the next term will be QOL

21. Option (d) is correct.

C is coded as S

O is coded as E

M is coded as I

P is coded as N

A is coded as C

N is coded as P

I is coded as A

E is coded as M

S is coded as O

22. Option (b) is correct.

Continuous data can have any value within the predefined range. This type of data can be in decimal like height 5'2, weight 5.5 kg etc.

23. Option (d) is correct.

Let assume, Price of glass = A

Price of Box = B

Price of Cup = C

Now putting it in equations,

$$\text{Equation 1: } A + B + C = 21$$

$$\text{Equation 2: } A + 2B + C = 28$$

By solving this equation, $B = 7$

$$\text{Equation 3: } 2A + 2B + C = 35$$

By putting values of B in equation 3, we get

$$2A + C = 21$$

$$A = 21 - C/2$$

Now A and B in Equation 1, we get

$$21 - C/2 + 7 + C = 21$$

$$C (\text{Price of cup}) = 7$$

Hence, price of 10 cups = 70

24. Option (a) is correct.

Rishikesh, Allahabad and Patna are located on the banks of river Ganga. Lucknow is located on the banks of river Gomti.

25. Option (a) is correct.

Deductive reasoning goes from general to specific. First we have a theory than arguments are given to support the premises.

26. Option (c) is correct.

Contradictory propositions are related in such a manner that if one statement is true than the other must be false.

27. Option (c) is correct.

Analogical arguments compare one situation to another similar situation, in such a manner that if one is true than the other is also assumed to be true. For example- Fire has smoke so where there is smoke, there is fire.

28. Option (b) is correct.

Every student is attentive.

Students are never attentive.

Perfectly positive and perfectly negative statements can not be true together but can be false.

29. Option (d) is correct.

Some untouchable things are hot pans and Some curses are untouchables that can be validly drawn.

30. Option (b) is correct.

If the statement "None but the brave wins the race" is false, then the statement "Some persons who win the race are not brave" will be true.

- 31. Option (a) is correct.**
 Total sales in 2015 = 173 lacs
 Sales of Books in 2015 = 78 lacs
 Percentage of sales revenue from books = $78/173 \times 100 = 45\%$
- 32. Option (c) is correct.**
 Sales of Journal increased in the year 2012-2013
 Sales of Magazines increased in the year 2012-2013, 2013-2014 and 2014-2015.
 Sales of books increased in the year 2012-2013 and 2013-2014.
- 33. Option (d) is correct.**
 Total revenue in 2014 = 169 lacs
 Total revenue in 2015 = 173 lacs
 Growth rate in 2014-2015 = 4 lacs
 If growth rate is same in 2015-2016 also, then it will be = $173 + 4 = 177$ lacs
- 34. Option (a) is correct.**
 If 40% students are Female, which is = 32
 Total students = 80
 Total Male students = 48
 Since half of students are good or excellent, it is = 40
 If 30 students are good, then 10 students are Excellent.
 Since 10 Male students are excellent, 0 Female students are excellent.
- 35. Option (b) is correct.**
 Average male students ($1/3^{\text{rd}}$ of total) = 16
 Good male students = 22
 Good Female students = 8
 Proportion of Good female students = $8/32 = 0.25$
- 36. Option (b) is correct.**
 Total good students = 30
 Good male students = 22
 Proportion = $22/30 = 0.73$
- 37. Option (b) is correct.**
 Same number in decimal number is always greater than same number in Hexadecimal. As decimal number has base 2 and hexa has base 6.
- 38. Option (b) is correct.**
 ICT is a part of IT. IT is not a part of ICT. Copyright is the right of not to be copied. Hence, both statements are wrong.
- 39. Option (c) is correct.**
 According to the speed, the CPU register is fastest, followed by cache. RAM is slower than Cache and it is faster than secondary memory.
- 40. Option (b) is correct.**
 Web2.0 includes websites and applications through which anyone can develop and share data created by them with other users.
- 41. Option (c) is correct.**
 By using word software, a document can be combined with the data file in such a way that every person receiving the mail will receive a customized document.
- 42. Option (c) is correct.**
 The full form of DVD is digital versatile disc.
- 43. Option (b) is correct.**
 Both the statements are true, but they cannot be related.
- 44. Option (a) is correct.**
 Passenger vehicles are the major source of nitrogen oxides and carbon monoxides.
- 45. Option (d) is correct.**
 Dengue is caused by mosquitoes. It is normally spread by female mosquitoes.
- 46. Option (b) is correct.**
 The target of Indian government is to produce 5 giga watt power production will be through small hydro projects.
- 47. Option (a) is correct.**
 In the Montreal Protocol, Rwanda 197 countries decided to reduce the consumption of hydro Fluoro carbon.
- 48. Option (d) is correct.**
 Tsunamis are caused by earthquakes and are not hydro meteorological disasters.
- 49. Option (c) is correct.**
 The demerits of globalization of higher education include elitism, commodification and increase in cost of education.
- 50. Option (b) is correct.**
 Deemed universities can frame their own syllabus, can give degrees and can frame their own rules. Governor is not the chancellor of deemed universities.

51. **Option (c) is correct.**
Value education should be based on the concern for the wellbeing of people and human values.
52. **Option (b) is correct.**
Rajya Sabha does not look after the welfare of the state and members of Rajya Sabha are not bound to vote according to the state they represent.
53. **Option (a) is correct.**
The President's rule will result in the removal of the council of ministers and take over by the central government.
54. **Option (b) is correct.**
The Attorney general of India holds the office during the pleasure of the president of India and compensation is decided by the president only.
55. **Option (b) is correct.**
We can eliminate options 4 & 6. Learning can occur without teaching and Rote learning will never result in understanding.
56. **Option (b) is correct.**
Learning is a life long process and learning should be related to life processes for better understanding. But these two statements cannot be related.
57. **Option (c) is correct.**
Effectiveness of teaching can only be judged by the understanding of students and the outcome of the process.
58. **Option (d) is correct.**
In the project method of learning, learners are more proactively involved.
59. **Option (d) is correct.**
The education system and policies being followed affect the effectiveness of the teaching learning process.
60. **Option (c) is correct.**
The purpose of summative and formative evaluations is different and can be used in combination for a better learning process.