

# UGC NET PAPER-1

# GENERAL APTITUDE

# Solved Paper June 2016

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.**

- Select the alternative which consists of positive factors contributing to effectiveness of teaching:

#### List of factors:

- Teacher's knowledge of the subject.
- Teacher's socio-economic background.
- Communication skill of the teacher.
- Teacher's ability to please the students.
- Teacher's personal contact with students.
- Teacher's competence in managing and monitoring the classroom transactions.

#### Codes:

- (a) 2, 3 and 4                      (b) 3, 4 and 6  
(c) 2, 4 and 5                      (d) 1, 3 and 6

- The use of teaching aids is justified on the grounds of
  - attracting students' attention in the class room.
  - minimising indiscipline problems in the classroom.
  - optimising learning outcomes of students.
  - effective engagement of students in learning tasks.
- Assertion (A):** The purpose of higher education is to promote critical and creative thinking abilities among students.

**Reason (R):** These abilities ensure job placements.

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.

- Match the items of the first set with that of the second set in respect of the evaluation system.

#### Choose the correct code:

Set-I	Set-II
1. Formative evaluation	(i) Evaluating cognitive and co-cognitive aspects with regularity
2. Summative evaluation	(ii) Tests and their interpretations based on a group and certain yardsticks
3. Continuous and comprehensive evaluation	(iii) Grading the final learning outcomes
4. Norm and criterion referenced tests	(iv) Quizzes and discussions

#### Codes:

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

5. A researcher intends to explore the effect of possible factors for the organization of effective mid-day meal interventions. Which research method will be most appropriate for this study?
  - (a) Historical method
  - (b) Descriptive survey method
  - (c) Experimental method
  - (d) Ex-post-facto method
6. Which of the following is an initial mandatory requirement for pursuing research?
  - (a) Developing a research design
  - (b) Formulating a research question
  - (c) Deciding about the data analysis procedure
  - (d) Formulating a research hypothesis
7. The format of thesis writing is the same as in
  - (a) preparation of a research paper/article
  - (b) writing of seminar presentation
  - (c) a research dissertation
  - (d) presenting a workshop/conference paper
8. In the qualitative research paradigm, which of the following features may be considered critical?
  - (a) Data collection with standardised research tools.
  - (b) Sampling design with probability sample techniques.
  - (c) Data collection with bottom-up empirical evidence.
  - (d) Data gathering to take place with top-down systematic evidence.
9. From the following list of statements identify the set which has negative implications for 'research ethics':
  - (i) A researcher critically looks at the findings of another research.
  - (ii) Related studies are cited without proper references.
  - (iii) Research findings are the basis for policy making.
  - (iv) Conduct of the practitioner is screened in terms of reported research evidence.
  - (v) A research study is replicated with a view to verify the evidence from other researches.
  - (vi) Both policy making and policy implementing processes are regulated in terms of preliminary studies.

**Codes:**

  - (a) (i), (ii) and (iii)      (b) (ii), (iii) and (iv)
  - (c) (ii), (iv) and (vi)      (d) (i), (iii) and (v)
10. In a research on the effect of child-rearing practices on stress-proneness of children in completing school projects, the hypothesis

formulated is that 'child rearing practices do influence stress-proneness'. At the data-analysis stage a null hypothesis is advanced to find out the tenability of the research hypothesis. On the basis of the evidence available, the null hypothesis is rejected at 0.01 level of significance. What decision may be warranted in respect of the research hypothesis?

- (a) The research hypothesis will also be rejected.
- (b) The research hypothesis will be accepted.
- (c) Both the research hypothesis and the null hypothesis will be rejected.
- (d) No decision can be taken in respect of the research hypothesis.

**Direction for questions 11 to 16:**

Read the following passage carefully and answer the question.

In terms of labour, for decades the relatively low cost and high quality of Japanese workers conferred considerable competitive advantage across numerous durable goods and consumer electronics industries (*e.g.*, machinery, automobiles, televisions, radios). Then labour-based advantages shifted to South Korea, then to Malaysia, Mexico and other nations. Today, China appears to be capitalizing best on the basis of labour. Japanese firms still remain competitive in markets for such durable goods, electronics and other products, but the labour force is no longer sufficient for competitive advantage over manufacturers in other industrializing nations. Such shifting of labour-based advantage is clearly not limited to manufacturing industries. Today, a huge number of IT and service jobs are moving from Europe and North America to India, Singapore, and like countries with relatively well-educated, low-cost workforces possessing technical skills. However, as educational levels and technical skills continue to rise in other countries, India, Singapore, and like nations enjoying labour-based competitive advantage today are likely to find that such an advantage cannot be sustained through emergence of new competitors.

In terms of capital, for centuries the days of gold coins and later even paper money restricted financial flows. Subsequently regional concentrations were formed where large banks, industries and markets coalesced. But today capital flows internationally at rapid speed. Global commerce no longer requires regional interactions among business players. Regional capital concentrations in places such

as New York, London and Tokyo still persist, of course, but the capital concentrated there is no longer sufficient for competitive advantage over other capitalists distributed worldwide. Only if an organization is able to combine, integrate and apply its resources (*e.g.*, Land, labour, capital, IT) in an effective manner that is not readily imitable by competitors can such an organization enjoy competitive advantage sustainable overtime.

In a knowledge-based theory of the firm, this idea is extended to view organizational knowledge as a resource with atleast the same level of power and importance as the traditional economic inputs. An organization with superior knowledge can achieve competitive advantage in markets that appreciate the application of such knowledge. Semiconductors, genetic engineering, pharmaceuticals, software, military warfare, and like knowledge-intensive competitive arenas provide both time-proven and current examples. Consider semiconductors (*e.g.*, computer chips), which are made principally of sand and common metals. These ubiquitous and powerful electronic devices are designed within common office buildings, using commercially available tools, and fabricated within factories in many industrialized nations. Hence, land is not the key competitive resource in the semiconductor industry.

Based on the passage answer the following questions:

11. Which country enjoyed competitive advantages in the automobile industry for decades?
  - (a) South Korea
  - (b) Japan
  - (c) Mexico
  - (d) Malaysia
12. Why labour-based competitive advantages of India and Singapore cannot be sustained in IT and service sectors?
  - (a) Due to diminishing levels of skill.
  - (b) Due to capital-intensive technology making inroads.
  - (c) Because of new competitors.
  - (d) Because of shifting of labour-based advantage in manufacturing industries.
13. How can an organisation enjoy competitive advantage and sustainable overtime?
  - (a) Through regional capital flows.
  - (b) Through regional interactions among business players.
  - (c) By making large banks, industries and markets coalesced.
  - (d) By effective use of various instrumentalities.
14. What is required to ensure competitive advantages in specific markets?
  - (a) Access to capital
  - (b) Common office buildings
  - (c) Superior knowledge
  - (d) Common metals
15. The passage also mentions about the trend of
  - (a) Global financial flow
  - (b) Absence of competition in manufacturing industry
  - (c) Regionalisation of capitalists
  - (d) Organizational incompatibility
16. What does the author lay stress on in the passage?
  - (a) International commerce
  - (b) Labour-Intensive industries
  - (c) Capital resource management
  - (d) Knowledge-driven competitive advantage
17. Imagine you are working in an educational institution where people are of equal status. Which method of communication is best suited and normally employed in such a context?
  - (a) Horizontal communication
  - (b) Vertical communication
  - (c) Corporate communication
  - (d) Cross communication
18. Identify the important element a teacher has to take cognizance of while addressing students in a classroom.
  - (a) Avoidance of proximity
  - (b) Voice modulation
  - (c) Repetitive pause
  - (d) Fixed posture
19. What are the barriers to effective communication?
  - (a) Moralising, being judgemental and comments of consolation
  - (b) Dialogue, summary and self-review
  - (c) Use of simple words, cool reactions and defensive attitude
  - (d) Personal statements, eye contact and simple narration
20. The choice of communication partners is influenced by factors of
  - (a) Proximity, utility, loneliness
  - (b) Utility, secrecy, dissonance
  - (c) Secrecy, dissonance, deception
  - (d) Dissimilarity, dissonance, deviance

21. As a teacher, select the best option to ensure your effective presence in the classroom.
- Use of peer command
  - Making aggressive statements
  - Adoption of well-established posture
  - Being authoritarian
22. Every communicator has to experience
- Manipulated emotions
  - Anticipatory excitement
  - The issue of homophiles
  - Status dislocation
23. In certain code, SELECTION is coded as QJCARGML. The code of AMERICANS will be
- YKCPGAYLQ
  - BNFSJDBMR
  - QLYAGPCKY
  - YQKLCYPAG
24. In the series  
3, 11, 23, 39, 59, .....  
The next term will be
- 63
  - 73
  - 83
  - 93
25. Two railway tickets from city A to B and three tickets from city A to C cost ₹ 177. Three tickets from city A to B and two tickets from city A to C cost ₹ 173. The fare for city B from city A will be ₹
- 25
  - 27
  - 30
  - 33
26. A person walks 10 m in front and 10 m to the right. Then every time turning to his left, he walks 5, 15 and 15 m respectively. How far is he now from his starting point?
- 20 m
  - 15 m
  - 10 m
  - 5 m
27. A is sister of B. F is daughter of G. C is mother of B. D is father of C. E is mother of D. A is related to D as
- Grand daughter
  - Daughter
  - Daughter-in-law
  - Sister
28. In the series  
AB, EDC, FGHI, ....?....., OPQRST, the missing term is
- JKLMN
  - JMKNL
  - NMLKJ
  - NMKLJ
29. Among the following propositions two are related in such a way that one is the denial of the other. Which are those propositions? Select the correct code:
- Propositions:**
- All women are equal to men
  - Some women are equal to men
  - Some women are not equal to men
  - No women are equal to men
- Codes:**
- 1 and 2
  - 1 and 4
  - 3 and 4
  - 1 and 3
30. If the proposition 'All thieves are poor' is false, which of the following propositions can be claimed certainly to be true?
- Propositions:**
- Some thieves are poor.
  - Some thieves are not poor.
  - No thief is poor.
  - No poor person is a thief.
31. Consider the following statement and select the correct code stating the nature of the argument involved in it:
- To suppose that the earth is the only populated world in infinite space is as absurd as to assert that in an entire field of millet only one grain will grow.
- Astronomical
  - Anthropological
  - Deductive
  - Analogical
32. Select the code which is not correct about Venn diagram:
- Venn diagram represents propositions as well as classes.
  - It can provide a clean method of notation.
  - It can be either valid or invalid.
  - It can provide the direct method of testing the validity.
33. Select the code which is not correct in the context of deductive argument with two premises:
- An argument with one true premise, one false premise and a false conclusion may be valid.
  - An argument with two true premises and a false conclusion may be valid.
  - An argument with one true premise, one false premise and a true conclusion may be valid.
  - An argument with two false premises and a false conclusion may be valid.

34. Given below are two premises and four conclusions are drawn from them (taking singly or together). Select the code that states the conclusions validly drawn.

**Premises:** (i) All religious persons are emotional.  
 (ii) Ram is a religious person.

**Conclusions:** (a) Ram is emotional.  
 (b) All emotional persons are religious.  
 (c) Ram is not a non-religious person.  
 (d) Some religious persons are not emotional.

**Codes:**

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

**Direction for question 35 to 37:**

The following table shows the percentage profit (%) earned by two companies A and B during the years 2011-2015. Answer the questions based on the data contained in the table.

**Profit earned by two companies**

Year	Percentage Profit (%)	
	A	B
2011	20	30
2012	35	40
2013	45	35
2014	40	50
2015	25	35

Where, percent (%) Profit

$$= \frac{\text{Income} - \text{Expenditure}}{\text{Expenditure}} \times 100$$

35. If the total expenditure of the two companies was ₹ 9 lakh in the year 2012 and the expenditure of A and B were in the ratio 2:1, then what was the income of the company A in that year?  
 (a) ₹ 9.2 lakh (b) ₹ 8.1 lakh  
 (c) ₹ 7.2 lakh (d) ₹ 6.0 lakh
36. What is the average percentage profit earned by the company B?  
 (a) 35% (b) 42%  
 (c) 38% (d) 40%

37. In which year, the percentage profit earned by the company B is less than that of company A?  
 (a) 2012 (b) 2013  
 (c) 2014 (d) 2015

**Direction for question 38 to 40:**

The following table shows the number of people in different age groups who responded to a survey about their favourite style of music. Use this information to answer the questions that follow to the nearest whole percentage.

Age/ Style of Music	Number of people		
	(Years) 15-20	(Years) 21-30	(Years) 31+
Classical	6	4	17
Pop	7	5	5
Rock	6	12	14
Jazz	1	4	11
Blues	2	3	15
Hip-Hop	9	3	4
Ambient	2	2	2

38. Approximately what percentage of the total sample were aged 21-30?  
 (a) 31% (b) 23%  
 (c) 25% (d) 14%
39. Approximately what percentage of the total sample indicates that Hip-Hop is their favourite style of music?  
 (a) 6% (b) 8%  
 (c) 14% (d) 12%
40. What percentage of respondents aged 31+ indicated a favourite style other than classical music?  
 (a) 64% (b) 60%  
 (c) 75% (d) 50%
41. The statement "the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware" refers to  
 (a) Information Technology (IT)  
 (b) Information and Collaborative Technology (ICT)  
 (c) Information and Data Technology (IDT)  
 (d) Artificial Intelligence (AI)
42. If the binary equivalent of the decimal number 48 is 110000, then the binary equivalent of the decimal number 51 is given by  
 (a) 110011 (b) 110010  
 (c) 110001 (d) 110100

43. The process of copying files to a CD-ROM is known as  
 (a) Burning (b) Zipping  
 (c) Digitizing (d) Ripping
44. An unsolicited e-mail message sent to many recipients at once is a  
 (a) Worm (b) Virus  
 (c) Threat (d) Spam
45. \_\_\_\_\_ is a type of memory circuitry that holds the computer's start-up routine.  
 (a) RIM (Read Initial Memory)  
 (b) RAM (Random Access Memory)  
 (c) ROM (Read Only Memory)  
 (d) Cache Memory
46. An ASCII is a character-encoding scheme that is employed by personal computers in order to represent various characters, numbers and control keys that the computer user selects on the keyboard. ASCII is an acronym for  
 (a) American Standard Code for Information Interchange  
 (b) American Standard Code for Intelligent Information  
 (c) American Standard Code for Information Integrity  
 (d) American Standard Code for Isolated Information
47. Identify the air pollutant in urban areas which irritates eyes and also the respiratory tract of human beings.  
 (a) Particulate matter (b) Oxides of nitrogen  
 (c) Surface ozone (d) Carbon monoxide
48. Which of the following is the largest source of water pollution in major rivers of India?  
 (a) Untreated sewage  
 (b) Agriculture run-off  
 (c) Unregulated small scale industries  
 (d) Religious practices
49. Sustainable development goals have specific targets to be achieved by  
 (a) 2022 (b) 2030  
 (c) 2040 (d) 2050
50. Indian government's target of producing power from biomass by the year 2022, is  
 (a) 50 MW (b) 25 MW  
 (c) 15 MW (d) 10 MW
51. **Assertion (A):** Conserving our soil resources is critical to human survival.  
**Reason (R):** Soil is home to many micro-organisms and contains minerals.
- 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.
52. World Meteorological Organisation's (WMO) objective has been to reduce the number of deaths due to hydrometeorological disasters over the decade 2010-2019 by (with reference to the decade 1994-2003)  
 (a) 25% (b) 50%  
 (c) 75% (d) 80%
53. Which of the following core values among the institutions of higher education are promoted by the NAAC (National Assessment and Accreditation Council)?  
 1. Contributing to national development.  
 2. Fostering global competencies among the students.  
 3. Inculcating a value system among students and teachers.  
 4. Promoting the optimum utilization of the infrastructure.
- Select the correct answer from the codes given below:  
**Codes:**  
 (a) 2, 3 and 4 (b) 1, 2 and 3  
 (c) 1, 3 and 4 (d) 1, 2, 3 and 4
54. The best way for providing value education is through  
 (a) discussions on scriptural texts  
 (b) lectures/discourses on values  
 (c) seminars/symposia on values  
 (d) mentoring/reflective sessions on values
55. The National Judicial Appointments Commission (NJAC) has been declared unconstitutional by  
 (a) The Supreme Court of India  
 (b) The High Court  
 (c) The High Court and the Supreme Court both  
 (d) The President of India
56. Which of the following statements about the Indian political system is/are correct?  
 1. The President is both Head of the State and Head of the Government.  
 2. Parliament is Supreme.

3. The Supreme Court is the guardian of the Constitution.
4. The Directive Principles of State Policy are justiciable.

Select the correct answer from the codes given below:

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

57. Which of the following are the fundamental duties?

1. To respect the National Flag.
2. To protect and improve the natural environment.
3. For a parent to provide opportunities for education to his/her child.
4. To protect monuments and places of national importance.

Select the correct answer from the codes given:

**Codes:**

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

58. Which of the following statements are correct in respect of Niti Aayog?

1. It is a constitutional body.
2. It is a statutory body.
3. It is neither a constitutional body nor a statutory body.
4. It is a think-tank.

Select the correct answer from the codes given below:

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

59. A college level assistant professor has planned his/her lectures with an intent to develop cognitive dimensions of students centered on skills of analysis and synthesis. Below, given are two sets of items Set-I consisting of levels of cognitive interchange and Set-II comprising basic requirements for promoting them. Match the two sets and indicate your answer by choosing the correct alternative from the code:

Set-I (Levels of Cognitive Interchange)	Set-II (Basic requirements for promoting cognitive interchange)
1. Memory level	(i) Giving opportunity for discriminating examples and non-examples of a point.
2. Understanding level	(ii) Recording the important points made during the presentations.
3. Reflective level	(iii) Asking the students to discuss various items of information.
	(iv) Critically analyzing the points to be made and discussed.

**Codes:**

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

60. Which set of learner characteristics may be considered helpful in designing effective teaching-learning systems? Select the correct alternative from the codes given below:

- (i) Prior experience of learners in respect of the subject.
- (ii) Interpersonal relationships of learner's family friends.
- (iii) Ability of the learners in respect of the subject.
- (iv) Student's language background.
- (v) Interest of students in following the prescribed dress code.
- (vi) Motivational-orientation of the students.

**Codes:**

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

## Answer Key

Q.No.	Answer	Topic's Name	Chapter's Name
1	d	Effective teaching	Teaching aptitude
2	c	Teaching aids	Teaching aptitude
3	b	Objectives of education	Teaching aptitude
4	a	Types of test	Teaching aptitude
5	d	Method of research	Research aptitude
6	b	Steps of research	Research aptitude
7	c	Format of thesis	Research aptitude
8	c	Types of research	Research aptitude
9	c	Research ethics	Research aptitude
10	b	Types of hypothesis	Research aptitude
11	b	Fact based	Comprehension
12	c	Inferential based	Comprehension
13	d	Fact based	Comprehension
14	c	Fact based	Comprehension
15	a	Fact based	Comprehension
16	d	Inferential based	Comprehension
17	a	Types of communication	Communication
18	b	Classroom teaching	Teaching aptitude
19	a	Effective communication	Communication
20	a	Factors affecting communication	Communication
21	c	Qualities of good teacher	Teaching aptitude
22	b	Communication process	Communication
23	a	Alphabetical series	Logical reasoning
24	c	Number series	Logical reasoning
25	d	Train and speed	Mathematical reasoning
26	d	Direction	Logical reasoning
27	a	Blood relation	Logical reasoning
28	c	Alphabetical series	Logical reasoning
29	d	Syllogism	Logical reasoning
30	b	Syllogism	Logical reasoning
31	d	Types of argument	Logical reasoning
32	c	Venn diagram	Logical reasoning
33	b	Characteristics of argument	Logical reasoning
34	c	Syllogism	Logical reasoning
35	b	Data interpretation	Data interpretation
36	c	Data interpretation	Data interpretation
37	b	Data interpretation	Data interpretation
38	c	Data interpretation	Data interpretation
39	d	Data interpretation	Data interpretation
40	c	Data interpretation	Data interpretation

41	a	Terminology in ICT	Information communication & Technology
42	a	Binary numbers	Information communication & Technology
43	a	Input-output devices	Information communication & Technology
44	d	Terminology in ICT	Information communication & Technology
45	c	Input-output devices	Information communication & Technology
46	a	Terminology in ICT	Information communication & Technology
47	c	Pollution	People and environment
48	a	Pollution	People and environment
49	b	SDGs	People and environment
50	d	Energy resources	People and environment
51	b	Natural resources	People and environment
52	b	Environment protection organizations	People and environment
53	b	Evaluation of institutions	Higher education system of India
54	d	Value education	Higher education system of India
55	a	Organization in India	People and environment
56	d	Indian political system	People and environment
57	a	Fundamental duties	People and environment
58	c	Niti ayog	People and environment
59	c	Levels of learning	Teaching aptitude
60	b	Characteristics of learner	Teaching aptitude

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1. **Option (d) is correct.**  
The factors that contribute to effectiveness of teaching are knowledge of the teacher, communication skills and how effectively the teacher can manage the class.
2. **Option (c) is correct.**  
The reason behind using teaching aid will be to optimize the learning and understanding of students.
3. **Option (b) is correct.**  
Only creative and critical thinking cannot ensure jobs for students. Subject knowledge is equally important.
4. **Option (a) is correct.**  
Formative evaluation involves using quizzes and QA sessions from time to time.  
Summative evaluation is assessing the learning of students at the end of year or semester.  
Continuous and comprehensive evaluation involves regular assessments of cognitive and other learning among students. Norm and criterion reference tests are done based on a group and certain yardsticks.
5. **Option (d) is correct.**  
Ex post facto research is an attempt to understand the effect or aftermath of something which has already occurred.
6. **Option (b) is correct.**  
Identification of research question is the primary requirement for beginning any research work.
7. **Option (c) is correct.**  
The format of writing a thesis is the same as that of writing a master's or graduate dissertation.
8. **Option (c) is correct.**  
Bottom-up approach is placing together various pieces of research to get a whole. Qualitative research is conducted using this approach only.
9. **Option (c) is correct.**  
Giving proper references is a way to ethically use the work of any other researcher as a basis for further studies. Research evidence cannot be used as a basis for screening the work style of any professionals. Preliminary studies are conducted to understand the available resources better but it cannot be used for reaching any final judgement.
10. **Option (b) is correct.**  
Research hypothesis or alternative hypothesis is- "child rearing practises do influence stress-proneness"  
So, null hypothesis is- "child rearing practises do not influence stress-proneness"  
Since the Null hypothesis is rejected at 0.01 level, hence the research hypothesis will be accepted.
11. **Option (b) is correct.**  
Japan enjoyed a competitive advantage in the automobile industry for years.
12. **Option (c) is correct.**  
The labour based competitive advantage enjoyed by India and Singapore cannot be sustained over a longer period of time due to increasing number of new competitors entering in the market.
13. **Option (d) is correct.**  
Competitive advantage can be sustained over time by combining the available resources effectively in a way that is not imitable by competitors.
14. **Option (c) is correct.**  
An organization can achieve competitive advantage in any market, if it has superior knowledge that is applicable in that market.
15. **Option (a) is correct.**  
The passage highlights the financial flow prevalent in the market from the time of gold coins and later at the time of paper money.

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

In the passage, the author has emphasized on knowledge driven competitive advantage in the global market.

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

Horizontal communication is best suited in organizations where people are working at the same level.

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

Using voice modulations while talking to an audience is the best way to hold its interest for a longer period of time.

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

The barriers to effective communication will be moralization, judging the person or giving unnecessary consolation comments.

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

The partner or receiver of communication is chosen based on proximity, utility of communication and loneliness of the sender.

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

The best way for ensuring presence in the classroom will be by adopting the well-established postures.

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

Understanding the expectations of the audience and meeting those expectations is the biggest challenge that any communicator will face.

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

The alphabets are coded in reverse with the gap of one alphabet.

- Y 1 A
- K 1 M
- C 1 E
- P 1 R
- G 1 I
- A 1 C
- Y 1 A
- L 1 N
- Q 1 S

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

By deducting the first number from the succeeding number, we get

- $11 - 3 = 8$
- $23 - 11 = 12$
- $39 - 23 = 16$
- $59 - 39 = 20$

Now the difference of 4 can be identified between the results *i.e.*, 8,12,16,20. Hence the next number in result series will be 24.

Now adding 24 to 59, we get 83.

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

Let ticket from A to B = X

Let ticket from A to C = Z

So,

$$2X + 3Z = 177$$

$$3X + 2Z = 173$$

By solving the equations, we get

$$5X = 165$$

$$X = 165/5 = 33$$

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

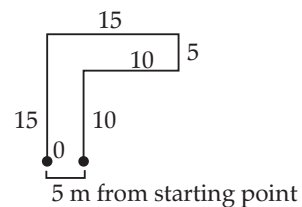
A person walks 10 m straight

Turns right and walks 10 m

Turns left and walks 5 m

Turns left and walks 15 m

Turns left and walks 15 m



By drawing this, we can find that person is at 5 m distance from starting point.

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

E is the mother of D. D is the father of C. C is the mother of B. B is the sibling of A.

Hence, A is the daughter of C and grand-daughter of D.

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

The alphabet in the series is in forward sequence and in reverse sequence alternatively. Also, the number of alphabets in each word is increasing by 1. The series will be

- AB
- EDC
- FGHI
- NMLKJ
- OPQRST

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

If the proposition "Some women are not equal to men" is true, then proposition "All women are equal to men" cannot be true.

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

If proposition "All thieves are Poor" is false, then proposition "Some thieves are certainly not Poor" is certainly true.

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

In analogical reasoning, a common basis of relationship is identified between two situations.

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

Venn diagram helps in identifying whether a statement is valid or invalid.

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

An argument with false conclusion cannot be valid.

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

From given statements, we can clearly conclude that:

Ram is emotional, because Ram is religious.

Ram is not a non-religious person.

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

Expenditure for A and B in 2012 = 9 lakhs

Ratio A:B for 2012 = 2:1

Expenditure for A =  $9 \times \frac{2}{3} = 6$  lakhs

Profit of A =  $6 \times \frac{35}{100} = 210000$

Income =  $600000 + 21000 = 810000$

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

Average percentage of profit of firm B

=  $30 + 40 + 35 + 50 + \frac{35}{5} = 38\%$

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

Profit earned by company A in 2013 = 45

Profit earned by company B in 2013 = 35

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

Total sample aged 15-20 = 33

Total sample aged 21-30 = 33

Total sample aged 31 and above = 68

Total population =  $33 + 33 + 68 = 134$

% of sample aged 21 – 30 =  $\frac{33}{134} \times 100 = 25\%$

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

Total population = 134

People who like Hip Hop =  $9 + 3 + 4 = 16$

% People who like Hip Hop =  $\frac{16}{134} \times 100 = 12\%$

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

Total sample aged 31 and above = 68

Total sample other than classical 31 and above =  $68 - 17 = 51$

% Age of sample other than classical 31 and above =  $\frac{51}{68} \times 100 = 75\%$

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

Information technology refers to using computer software and hardware to manage the electronic data.

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

By using division method, we can convert a decimal number to binary number. We need to divide number by 2 and write the remainder aside.

We divide  $51/2 = 25$  and remainder is 1

$25/2 = 12$  and remainder is 1

$12/2 = 6$  and remainder is 0

$6/2 = 3$  and remainder is 0

$3/2 = 1$  and remainder is 1

Last answer is 1.

even = 0

odd = 1

2	48	→ 0		2	51	→ 1
2	24	→ 0		2	25	→ 1
2	12	→ 0		2	12	→ 0
2	6	→ 0		2	6	→ 0
2	3	→ 1		2	3	→ 1
	1	→ 1			1	→ 1
110000				51=110011		

We write the last answer and all the remainder digits in backwards for getting binary digit.

Hence, answer is 110011

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

The process of copying data in a CD Rom through a computer system is known as Burning.

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

SPAM is an unnecessary message sent to a large bunch of email ids for marketing purposes or with the aim of phishing.

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

ROM or Read Only Memory holds and manages the start up routine of any computer system.

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

The full form of ASCII is the American Standard Code for Information Interchange.

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

Surface ozone is formed by the chemical reaction of emission from cars, industries, etc in sunlight near the surface of earth. It causes problems in eyes and respiratory tracts.

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

The largest source of pollution in rivers of India is untreated sewage released in them.

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

The sustainable development goals were set in 2015 by the General Assembly of the UN, to be achieved by 2030. These are goals to attain a sustainable future for everyone.

50. **Option (d) is correct.**  
The government of India has planned to produce 175 GW power from renewable energy by 2022. This includes production of 10 GW power from biomass.
51. **Option (b) is correct.**  
Both the given statements are correct but they are not related. Conserving Soil helps in preserving water resources and prevent climate changes as well as natural disasters.
52. **Option (b) is correct.**  
WMO's aim was to reduce the deaths to half over the decade of 2010-2019.
53. **Option (b) is correct.**  
The Aim of NACC does not include promotion of optimum utilization of infrastructure.
54. **Option (d) is correct.**  
Value education can be best promoted in students by providing effective mentorship and good reflective sessions.
55. **Option (a) is correct.**  
The supreme court of India has declared the National Judicial Appointment commission as unconstitutional.
56. **Option (d) is correct.**  
Only one statement is correct – The Supreme Court is the guardian of the constitution.
57. **Option (a) is correct.**  
To protect national monuments and places of national importance is not a fundamental duty.
58. **Option (c) is correct.**  
NITI Aayog is a think tank of the Government of India and is not a constitutional or statutory body. It assists the Government of India in economic policy related decisions.
59. **Option (c) is correct.**  
For developing memory dimension, teacher should promote habits of taking notes.  
For developing an understanding dimension, teacher should give the opportunity to differentiate between examples and non-examples.  
For developing a reflective dimension, teacher should promote critical analysis discussions of topics being discussed in lectures.
60. **Option (b) is correct.**  
For ensuring effective teaching learning process the characteristics of learners which are helpful are-  
Prior experience of learners, ability of learners, language ability of learners and motivation to learn among students.