

UGC NET PAPER-1
GENERAL APTITUDE

SOLVED QUESTION PAPER-2

Answers with Explanations

1. Option (a) is correct.

Number of vacant seats:

$$2016 = 24 + 6 + 8 + 8 = 46$$

$$2017 = 10 + 4 + 6 + 3 = 23$$

$$2018 = 12 + 5 + 7 + 6 = 30$$

$$2019 = 16 + 3 + 4 + 12 = 19$$

Hence, maximum vacant seats from the given years are in 2016.

2. Option (c) is correct.

Vacant seats in:

$$\text{MBA} - 2016 = 8$$

$$2017 = 3$$

$$2018 = 6$$

$$2019 = 4$$

$$2020 = 12$$

$$\text{Average vacant seats in MBA} = 8 + 3 + 6 + 4 +$$

$$12 / 5 = 6.6$$

$$\text{M.Phil.} - 2016 = 8$$

$$2017 = 6$$

$$2018 = 7$$

$$2019 = 5$$

$$2020 = 4$$

$$\text{Average vacant seats} = 8 + 6 + 7 + 5 + 4 / 5 = 6$$

$$\text{Difference of average vacant seats of MBA and M.Phil.} = 6.6 - 6 = 0.6$$

3. Option (d) is correct.

Enrollments:

$$2017 = 110 + 26 + 14 + 57 = 207$$

$$2018 = 108 + 25 + 13 + 54 = 200$$

$$2019 = 112 + 28 + 15 + 56 = 211$$

$$2020 = 104 + 27 + 16 + 48 = 195$$

Hence, 2020 has the lowest enrollments among the given options.

4. Option (b) is correct.

Enrollments	B.Tech.	M.Phil.	MBA	M.Tech.
2016	96	12	52	24
2017	110	14	57	26
Difference	14	2	5	2
Percentage change	$14 \times 100/96$	$2 \times 100/12$	$5 \times 100/52$	$2 \times 100/24$
Percentage change	14.58%	16.67%	9.62%	8.33%

Highest percentage change in enrollments between 2016-17 is in the course M.Phil.

5. Option (c) is correct.

Non-Vacant (Admissions) seats of MBA:

$$2016 = 52$$

$$2017 = 57$$

$$2018 = 54$$

$$2019 = 56$$

$$2020 = 48$$

$$\text{Average of non-vacant seats} = 52 + 57 + 54 + 56 + 48 / 5 = 53.4$$

6. Option (b) is correct.

New Education Policy of 2020 or NEP 2020 has following key points for higher education:

1. Quality universities and colleges
2. Making the students a human as well as a social well-being
3. Social, professional and economical contribution to the country
4. Increasing enrollment ratio
5. Catalyzing quality academic research through a new National Research Foundation
6. Value education
7. Vocational and professional education
8. Quality teaching through teacher education and training

9. Changing regulatory system of higher education

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

A. Central Institute of English and Foreign Languages	II. Hyderabad
B. Gramodaya Vishwa Vidyalaya	I. Chitrakoot
C. Central Institute of Tibetan Studies	IV. Dharamshala
D. Indian Institute of Science	III. Bengaluru

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

List I Security threats	List II Meaning
A. Hacking	IV. Illegal use of personal data
B. Phishing	III. Identity fraud
C. Spyware	II. Gives the originator access to all data entered by the keyboard
D. Spam	I. 'Clog-up' a user's inbox with unwanted emails

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

Grapevine communication is a type of informal communication. This includes informal, unofficial and quick communication among the employees working in the same organization. This may in the form of gossip, rumor, etc.

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

Intrapersonal communication refers to the conversation or communication which a person does with himself/herself. This can be done with the purpose of practicing dialogs, presentation practice, increasing communication skills, boosting confidence, deciding or comparing some things etc.

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

Qualitative research is the research which is usually used in social science or descriptive research. These types of researchers usually collect data with surveys and such kinds of means. Thus, it is not possible to decide everything before starting. So, qualitative research designs are commonly of unstructured nature.

On the other hand, quantitative data research is usually structured in nature.

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

National Knowledge Commission or NKC was constituted on 13th June, 2005 with the object of improving by considering possible improvement policies for the higher education system of India. NKC is the Think-tank of India for preparing proposals of higher education policies for taking advantage in the knowledge intensive service sectors.

Following are the objectives of NKC:

1. Build quality in Indian education system
2. To get competitive advantages in field of knowledge of 21st century
3. Radical improvement in existing systems of knowledge
4. Creating avenues for generating new forms of knowledge

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

Statement 1: First 6 multiples of 8 are = 8, 16, 24, 32, 40, 48.

$$\text{Average} = \frac{8 + 16 + 24 + 32 + 40 + 48}{6} = 28$$

Hence, statement 1 is incorrect.

Statement 2: There are 25 prime numbers between 10 and 100. Hence, statement 2 is incorrect.

Statement 3: Let the principle amount be 100

$$\text{Simple interest} = 100 \times 15 \times 10/100 = 150$$

Amount after 15 years = 150 + 100 = 250 (more than double). Hence, statement 3 is incorrect.

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

Statement 1: Let the MRP be 100

$$\text{After first discount} = 100 - 10\% = 90$$

$$\text{After second discount} = 90 - 30\% = 63$$

$$\text{After final discount} = 63 - 50\% = 31.5$$

$$\text{Total or total equivalent discount} = 100 - 31.5 = 68.5\%$$

Hence, statement 1 is incorrect.

Statement 2: Let the MRP be 100

$$\text{After first discount} = 100 - 10\% = 90$$

$$\text{After second discount} = 90 - 20\% = 72$$

$$\text{After third and final discount} = 72 - 30\% = 50.4$$

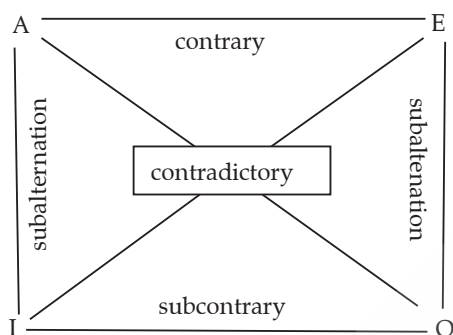
$$\text{Total discount} = 100 - 50.4 = 49.6$$

Hence, statement 2 is also incorrect.

15. Option (b) is correct.

Hazardous waste	Characteristic feature
A. Ignitable	II. Catches fire under some conditions
B. Corrosive	IV. Very high PH value (25 or more)
C. Reactive	I. Very unstable under normal conditions
D. Toxic	III. Harmful when absorbed

16. Option (d) is correct.



With reference to the image, only statements B and D are correct.

Following can be understood by the image:

1. A and E are contrary.
2. E and O are sub alternation.
3. A and I are sub alternation.
4. I and O are subcontrary.
5. A and O are contradictory.
6. I and E are contradictory.

17. Option (a) is correct.

David Ausubel is associated with the theory of meaningful verbal learning.

This theory emphasizes that before delivering a new knowledge to the student, previous knowledge should be connected and recalled. Cognitive ability of the students should be strengthened by verbal delivery of knowledge which is more effectively presented and learnt.

18. Option (a) is correct.

Classroom communication is not the only function of the ability of the teacher. It depends on various factors like student interaction, teaching methodology, physical environment etc. Hence, the assertion is not correct.

19. Option (b) is correct.

ICT initiatives	Purpose
A. E-Pathshala	IV. Educational e-resources developed by NCERT in 2015
B. ShodhGanga	I. Repository of theses and dissertations
C. Shodhgangotri	III. Synopsis of research topic submitted to the universities in India by research scholars
D. E-Gyankosh	II. Digital repository of learning resources developed by ODL

20. Option (a) is correct.

NVivo is a well-known software which is used to analyze qualitative data. It includes various non parametric tests which make analyzing very quick, accurate and easy.

21. Option (a) is correct.

Macaulay came to India in 1835 to recommend a policy on how to spend the budget of one lac which was allotted by the present government for education in India.

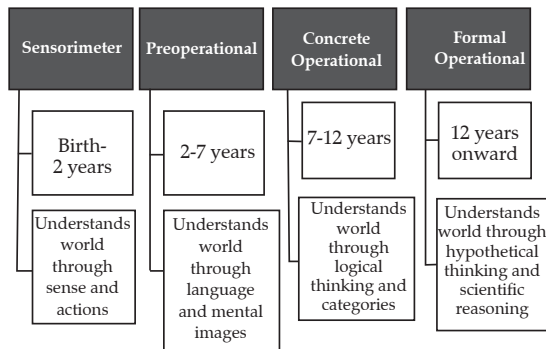
He believed that English literature was great and Hindi and Sanskrit literature was worthless. He gave a theory of filtration which says that only some people should be educated and other people will become educated by these people. Education and knowledge will get filtered and reach the common people.

Wood's Report came after Macaulay' Minutes of 1835. In 1854, it gave emphasis on Hindi as well as English education and gave support to women's education and teachers' training as well.

Hence, all statements are correct.

22. Option (a) is correct.

Data bus is a data centric software which consists of various wires or connections which is used for transformation of data within the computer network.

23. Option (a) is correct.

As per Piaget's stages of cognitive development, a child learns a language and begins to use symbols to represent objects during the pre-operational stage. As per Piaget's stages of cognitive development, a child learns through reflexes, senses and movement-actions on the environment during the formal operational stage.

24. Option (a) is correct.

AICTE or All India Council for Technical Council covers standards and various aspects of the following areas of education or technical education course:

1. Engineering
2. Town planning
3. Pharmacy
4. Management
5. Architecture
6. Hotel management
7. Technology
8. Catering technology

25. Option (c) is correct.

Effective learning or effective teaching depends on the skills of the teacher to make an active and interactive classroom environment. This gets affected by the physical environment as well. For making the teaching effective and learning permanent, a teacher must try to make their students participate as much as he/she can because learning by doing or by connecting with normal life makes learning long lasting and permanent.

26. Option (d) is correct.

In the last line of the last paragraph, the author has mentioned the real meaning as to how a war should be. According to the author, a war should be on the basis of right and wrong things, not on the basis of hate and feelings of the enemy.

27. Option (d) is correct.

Those who won the greatest number of battles against other countries.

According to the given passage, people believe that those countries who have won most wars against other countries are the greatest countries.

28. Option (c) is correct.

Possibly the greatest in some sense but not the most civilized.

As per the given passage, the author says that winning most of the wars does not make a country the most civilized one. They may be the greatest in some ways but not the most civilized.

29. Option (c) is correct.

The figure of some conqueror or general or soldier.

According to the given passage, in all the great countries of the world statues of some conqueror, general or soldier can be found who found for their countries.

30. Option (b) is correct.

History books tell us far more about conquerors and soldiers than about those who helped civilization forward.

In the given passage, in the first line, the author says, "most gloriously in the history books are great conquerors, generals and soldiers, whereas the people who really helped civilization forward are often never mentioned at all."

31. Option (a) is correct.

Based on some predefined standards, assessment of the students how well he/she performed.

Criteria based tests are based on some criteria or standards which are predefined. These types of tests are usually used for shortlisting candidates for various purposes but also used in academic courses for practice or to reach predefined benchmarks.

32. Option (b) is correct.

Anaerobic digestion of sewage sludge is a process of sewage treatment and a widely used method for the same.

- It is a slow process.
- It gives methane as its last product.
- As it is a slow process, it requires large size reactors.

- This process reduces the quantity of the mixture as it degrades impurities.

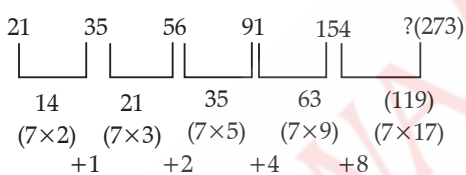
33. **Option (a) is correct.**

The word communication is derived from Latin words- 'communis' or 'communicare' which means to make the information available to all or to make it common.

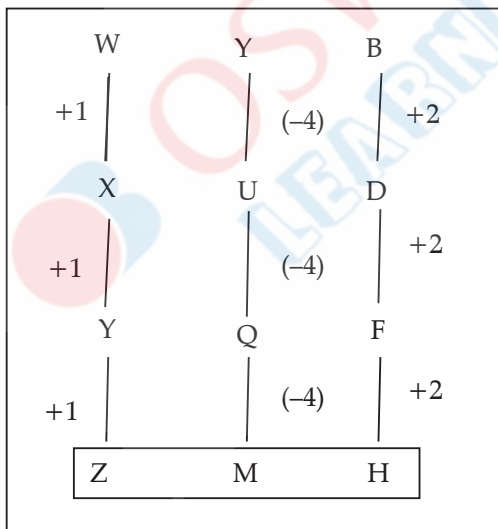
The major characteristics of communication are:

1. This is a two-way process.
2. It is done for mutual understandings.
3. It is a continuous process.
4. It is required everywhere and at all levels.
5. Sender and receiver must have a common language whether verbal or non-verbal.
6. It can also be conducted through gestures.
7. Meeting of minds are necessary.
8. Exchange of ideas are based of complementary and symmetry.
9. It always has a context.
10. It includes encoding and decoding.

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



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



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

Pratyaksha is the means of knowledge acquired with senses or directly. If a young child feels the heat and concludes that the object is hot, here the cognition is through pratyaksha.

Anumana or inference is to connect the present condition with the previous knowledge. Example: A person after seeing smoke on a hill, a person concludes that the hill has fire on the basis of fire and smoke seen by him in the kitchen of his house.

Anupalabdhi is to get knowledge in the absence of anyone or anything. Example: There is no jar on the ground, means there was a jar earlier on the ground.

Shabda: Shabda or verbal is to get knowledge with the means of words.

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

Trojan Horse is a type of malicious code or software that looks legitimate but can control a computer system.

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

Sustainable development goal number	Goal
(a) SDG 7	IV. Affordable and clean energy
(b) SDG 17	II. Partnerships for the goals
(c) SDG 8	I. Decent work and economic growth
(d) SDG 5	III. Gender equality and women empowerment

SDG goals stands for sustainable development goals which were accepted for sustainable environmental development with contribution of all the countries of the world. These were adopted in UN Sustainable Development Summit on the completion of MDGs in 2015 and aimed at achievements for 2030. Hence, these are called '2030 Agenda'.

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

In the sentence-Hill has fire because it has smoke as it is in kitchen, Smoke is the Hetu or the reason,

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

Communication barrier which gets created due to difference in languages is called the linguistic barrier.

Physical barrier refers to the barriers caused due to the physical environment, such as low voice of teacher in the class, noise coming from outside the class etc.

Psychological barriers are barriers caused due to psychological factors like anger, sadness, demotivation etc.

41. Option (b) is correct.

Admission in higher education in the Buddhist education system is called Upasampada.

Upnayan sanskar was the process or rituals of beginning of education for a child.

42. Option (b) is correct.

Statement is tested true or false and being valid and invalid is a feature of argument. Given sentences are written with the opposite qualities. Hence, both the statements are wrong.

43. Option (a) is correct.

Let the principal amount be 100

rate = x

time = 4 years

Simple interest = 100 (same as the principal because amount will be doubled)

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

$100 = 100 \times 4 \times x/100$

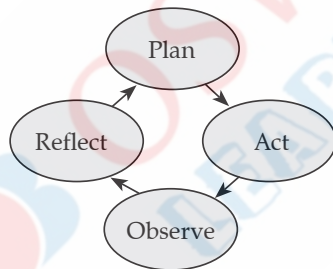
$4x = 100$

$r = 25\%$

44. Option (a) is correct.

Action research is a sub-part of applied research which is solution oriented. This is done for an immediate solution and is cyclic in nature.

Process of action research is



45. Option (b) is correct.

- Reliability may or may not have validity but validity always has reliability.
- Reliability means same results every time
- Validity means right results every time.

46. Option (a) is correct.

Type I error or alpha error is the error when we reject the true null hypothesis.

Type II error or beta error is when we accept the false null hypothesis.

47. Option (a) is correct.

Financial budget of 2021-22 was India's first digital budget which was presented in the Lok Sabha by the honourable Finance Minister Mrs. Nirmala Sitharaman.

It has various new and digital initiatives for the higher education system and other levels of education as well.

48. Option (d) is correct.

IMPRINT stands for Impacting Research Innovation and Technology. It is a joint initiative of IIT and IIS for motivating research and development in the field of technologies, engineering and science. Till yet, 142 supportive projects of IMPRINT have been launched.

49. Option (a) is correct.

- .docx - Word file
- .ppt - PowerPoint file
- .pdf - pdf file
- .xlsx - excel file

50. Option (a) is correct.

Vidyadaan 2.0 was launched by DIKSHA platform and is a type of digital initiative for education. This aimed at providing e-resources for learning of the school level as well as of high-level courses.