

UGC NET PAPER-1
GENERAL APTITUDE

SAMPLE QUESTION PAPER-1

Answers with Explanations

1. Option (a) is correct.

Total number of employees:

In organization D = 15% of 35000 = 5,250

In organization C = 31% of 35000 = 10,850

Percentage of employees of C of D:

$$5250 \times 100/10,850 = 48.39\%$$

2. Option (b) is correct.

Number of employees in C = 31% of 35000 = 10,850 employees in organization C = 10,850

Ratio of employees in organization C to organization A 10,850:6300 = 217:126

3. Option (a) is correct.

Number of Female employees in organization D = 35000 \times 15/100 = 5,250

$$5,250 \times 3/5 = 3,150$$

Number of male employees in organization E = 35,000 \times 31% = 10,850

$$10,850 \times 1/4 = 1,225$$

$$\text{Sum} = 3,150 + 1,225 = 4,375$$

4. Option (c) is correct.

Female in all organization

$$A = 6300 \times 7/10 = 4,410$$

$$B = 7700 \times 9/20 = 3,465$$

$$C = 10,850 \times 2/5 = 4,340$$

$$D = 5,250 \times 3/5 = 3,150$$

$$E = 4,900 \times 3/4 = 3,675$$

$$\text{Total} = 4410 + 3465 + 4340 + 3150 + 3675 = 19,040$$

5. Option (b) is correct.

Number of male employees in organization D = 5,250 \times 2/5 = 2100

Number of female employees in organization B = 7,700 \times 9/20 = 3465

$$\text{Difference between them} = 3,465 - 2100 = 1,365$$

6. Option (a) is correct.

Feedforward is a term used for the information provided before sending the primary message. Brief introduction of the message is known as introduction or abstract. To do something

before sending the message is known as pre-message. Sign to convey something is known as an indicator.

7. Option (b) is correct.

Major term is the subject of premises, middle term is the reason for conclusion and minor term is the subject of conclusion. Minor and major term should be connected by the middle term to find the right conclusion but in the given statement's conclusion if driven by connecting the major term in the place of the middle term. This is called an error named Illicit Major.

In other words, conclusions should be driven with the middle term *i.e.*, mammals but here major term (dog) is used to conclude. This is called illicit major fallacy.

8. Option (b) is correct.

Let the salary of Ravi = 100

$$\text{After increasing } 100 + 20 = 120$$

20% increase in salary implies 20% increase in tax liability. But here tax is 10% higher on increased salary.

$$\text{Hence, Tax liability} = 20 + 10\% \text{ of } 20 = 20 + 2 = 22\%$$

9. Option (b) is correct.

A. Cholera	III. Ingestion of polluted water
B. Trachoma	I. Lack of water to maintain cleanliness
C. Schistosomiasis	II. Involves water contact but not ingestion
D. Dengue	IV. Requires host

10. Option (c) is correct.

From the total energy consumption, Portion of Non-renewable energy used in India is 63%. Major energy source which is consumed in India is Coal energy with a portion of 56.09% of

total energy consumption.

11. Option (c) is correct.

People use non-verbal cues more than verbal cues. Body language, gestures and many more things form non-verbal cues. Non-verbal cues are more believable than verbal cues because words can be manipulated. Hence, both the statements are false.

12. Option (b) is correct.

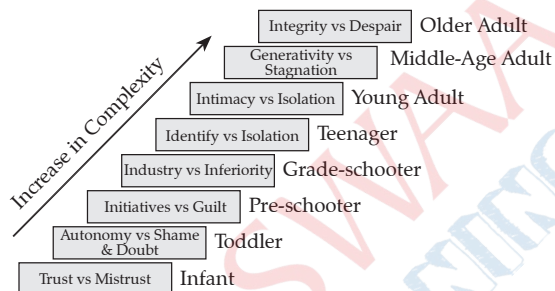
A competent communicator should be culturally neutral. Being culturally sensitive will bring biases and other barriers. He/She should be totally ethical every time, not situationally ethical.

13. Option (c) is correct.

BITS Pilani, Techno India University and Jaipur National University are private universities whereas Guru Nanak Dev University is a state university of Punjab.

14. Option (a) is correct.

Stages of Psychosocial Development



15. Option (c) is correct.

SDG-1: No poverty

SDG-2: Zero hunger

SDG-3: Good health and well being

SDG-4: Quality education

To convert humans into a capital, a country has to focus on education, health and training facilities. SDGs 1 to 4 are related to the factors which are related to the human capital formation.

16. Option (b) is correct.

Open learning refers to a learning method which focuses on the following:

- Open access to learning and training provisions.
- Making learners independent of time and place of learning.

C. Learning and evaluation with a specified curriculum.

D. Offering flexible learning opportunities to individuals and groups of learners.

17. Option (b) is correct.

Idealism is a philosophy which does not believe in the material world. In Rationalism, learning with the help of logic is the focus point. Pragmatism philosophy believes in solving problems in a practical way not only by theory or ideas. Conservatism promotes cultural and traditional beliefs and does not focus on changes.

18. Option (c) is correct.

- The Kyoto Protocol was signed in 1998-99.
- Its first commitment period was over on 31st December, 2012.
- Its second commitment period was over on 31st December, 2020.
- The Kyoto protocol was an extension of the 1992 UNFCCC.
- The aim of this protocol is to reduce greenhouse gasses.
- 5 main elements of the Kyoto protocol are: 1. Carbon dioxide, 2. Methane, 3. Nitrous Oxide, 4. Hydrofluorocarbons, 5. Sulphur Hexafluoride.

19. Option (a) is correct.

For statement 1: Let the principal amount be 100.

Simple interest rate = 5%

Time = 20 years

$SI = P \times T \times R/100$

$100 \times 20 \times 5/100$

Simple interest in 20 years = 100

Total amount = $100 + 100 = 200$ (double of invested amount)

Hence, statement 1 is correct.

For statement 2: Let the principal amount be 100.

Rate = 20%

Time = 10 years

$SI = P \times T \times R/100$

$100 \times 10 \times 20/100$

SI = 200 (Double of the principal amount).

For statement 3:

P = 1000

Amount = 1331

Rate = 10%

Time = 3 years.

Formula of compound interest can be tough to calculate. This can be calculated by simple interest.

10% of 1000 = 100

Amount at the end of 1st year = 1100

For 2nd year = 1100 + 110 = 1210

For 3rd year 1210 + 121 = 1331

By compound interest for 3 years at the rate of 10%, the amount will be 1331. Hence, statement 3 is also correct.

20. Option (d) is correct.

A good computer network solution is not a barrier for any business because it makes every aspect work efficiently.

Hence, the assertion is incorrect.

21. Option (a) is correct.

Application software: Anti-virus

Processor: Pentium

Networking Device: Router

22. Option (b) is correct.

Non-Verbal communication is useful for the following:

- To get an understanding of the emotional meaning of the sender.
- For knowing behaviour to generate meaning.
- For better understanding of the message.
- It is a non-clear system of rules

Hence, only D and E are inappropriate here.

23. Option (c) is correct.

The AEIO syllogism can be defined as follows:

A type: statements which are universally positive. Example- All cats are red, Most of the mangoes are yellow etc.

E type: universal negative statements. Example- no man is an adult, most of the mangoes are not green etc.

I type: Particular positive statements. Example- Some M are P.

O Type: Particular negative statements. Example- some M are not P.

Relation among these statements can be designed as follows:

If 'A' is False	IV. 'E' and 'I' are Undetermined
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If 'E' is True	I. 'A' and 'I' are False
If 'I' is False	III. 'E' and 'O' are True
If 'O' is True	II. 'E' is False; 'I' is True

24. Option (a) is correct.

Tablet computers have touch screens but do not have keyboards separately. Not having other hardware devices makes tables easily bearable. Hence, both statements are correct but R is not elaborating or explaining A.

25. Option (b) is correct.

Blue ray > CD-ROM > DVD

26. Option (c) is correct.

Imitation is to remind something by repetition of reading like kids do at primary or elementary level. This results in the Ripple effect.

Random effect refers to the findings of uncorrelated variables. For example, while reading about the Taj Mahal, a student found some interesting variables or facts of the Mughal Empire.

Scripted effect is removing or reducing the duplications which are not necessary.

Norm effect is also called conditioning. Which means to correlate two situations.

27. Option (b) is correct.

A researcher who is involved in a case study method of research should not be negatively oriented; he/she should always have a positive attitude which prevents biasness. He/She should not be only appreciation oriented only. This also brings biases if we only appreciate all the things.

28. Option (a) is correct.

Speed = 54 km/h

Time = 10 sec

Distance to be covered = 60 + 90 = 150 m

Speed = Distance/time

Speed = 150/10

Speed = 15 m/s

To convert m/s in km/h, it will be multiplied by 3600/1000

$15 \times 3600/1000 = 54 \text{ km/h}$

For statement 2, it is not compulsory that the ratio of speeds of two trains will be equal to the ratio of time taken by them to cover the same distance. Hence, the statement is wrong.

29. Option (b) is correct.

All the given statements are correct regarding desktop computers except statement C because all desktop computers do not have inbuilt touchpads in them.

30. Option (a) is correct.

Providing a framework for ranking of higher educational institutions.

The major function of NIRF or National Institutional Ranking Framework is to provide a framework or standards for ranking the institutions providing higher education.

31. Option (d) is correct.

A. Arbitrary Scale	IV. Questions are selected on an a priori basis
B. Thurstone Scale	I. Attitude statements are decided by judges
C. Likert Scale	II. Summated ratings
D. Semantic Differential	III. Consists of seven spaces between two bipolar adjectives

32. Option (a) is correct.

If the speed of wind increases from 4.0 m/s to 5.0 m/s, the power output from an ideal windmill will increase by a factor of ~ 2 .

33. Option (c) is correct.

In CBCS, two courses included for enhancement of ability is:

1. Ability Enhancement Compulsory Courses
2. Skill Enhancement Courses

34. Option (b) is correct.

Weight of the man = 75% of his weight + 39

Total weight = 100%

$39 = 100\% - 75\%$

$39 = 25\%$

Total weight = $39/25 \times 100$

Total weight = 100% = 156 lbs

60% of his weight = $156 \times 60/100$

= 148 lbs

35. Option (d) is correct.

Viruddha fallacy is a fallacy where two contradictory things are present in one sentence.

It is a universal truth that anything that is caused or generated comes to an end at a point of time but in the given sentence sound

is eternal because it is caused by contradictory qualities.

36. Option (a) is correct.

The reason which are demotivating foreign students are:

- A. Lack of residential accommodation for foreign students
- B. Difficulties in recognition of international qualifications

37. Option (a) is correct.

A. Samanyalaksana Pratyaksa	IV. The perception of a whole class of objects through a generic property
B. JñanaLaksana Pratyaksa	III. Perception of an object which is in contact with sense through previous knowledge of itself
C. YogajPratyaksa	I. Intuitive perception of all objects- past, distant and future due to supernormal powers generated by meditation
D. AlaukikaPratyaksa	II. When objects are not actually present to sense but are conveyed to it through a special medium

38. Option (a) is correct.

In every interaction a message is sent and a message is received which is called a two-way communication process. Sender's body language, gesture and many non-verbal communication convey many other messages too which are understood by the receiver.

Hence, statement I is correct.

For security purposes, parents should be encouraged to keep computers in a place where everyone can have access to it so that the children don't fall victims of cyber-bullying.

Hence, statement II is incorrect.

39. Option (a) is correct.

Media kits refers to a package of information, assembled by a company to provide basic information about itself to the reporters.

40. Option (b) is correct.

Qualitative research is not objective but subjective as it consists of various aspects which are totally based on perceptions and assumptions of the researcher. Hence, statement I is incorrect.

Qualitative research has lower chances of being generalized because it consists of subjectivity and depends on beliefs of the researcher. Hence, statement I is correct.

41. Option (b) is correct.

Following are the components which needs to be possibly included in the framework to evaluate the learning process:

- (a) Confidence level
- (b) Frame blindness
- (c) Reliability of the framework
- (d) Valid results measurement capacity of the framework
- (e) Taking shortcuts

42. Option (d) is correct.

Following are the techniques which are used in qualitative research:

- (a) Holsti's constant
- (b) Chronbach's alpha

43. Option (d) is correct.

Pratijña, Hetu, Udaharana, Upanaya, Nigamana

Following is the process of inference (Anumana)
This process can be learnt by mnemonic PHUUN.

Pratijna (the subject of inference): The hill has fire

Hetu (the reason): Because it has smoke

Udaharana (the example): Kitchen has smoke because it has fire.

Upnayan (comparison): And kitchen has smoke because of fire that is as hill has fire because of smoke.

Nigmana (the conclusion): Hill has fire.

44. Option (c) is correct.

5, 12, 23, 50, 141, ?

$$12 - 5 = 7$$

$$23 - 12 = 11$$

$$50 - 23 = 27$$

$$141 - 50 = 91$$

$$11 - 7 = 4$$

$$27 - 11 = 16$$

$$91 - 27 = 64$$

(Numbers are in multiple of 4)

$$(4 \times 1 = 4, 4 \times 4 = 16, 4 \times 16 = 64)$$

Next term can be get as follows:-

$$64 \times 4 = 256$$

$$256 + 91 = 347$$

$$347 + 141 = 488$$

45. Option (c) is correct.

If the measurements are completely accurate and error free, this type of score measurement scale is called true score.

46. Option (a) is correct.

According to the passage, excessive hours of artificial light negatively affect our sleep cycle, moods and health.

47. Option (a) is correct.

According to the passage, excess or increased outdoor light during night time which has no use is called light pollution intensity.

48. Option (b) is correct.

Illuminated advertising is one of the major pollutants as per the passage suggests.

49. Option (c) is correct.

The loss of night, as mentioned in the passage, leads to the altered activities of the nocturnal creatures.

50. Option (a) is correct.

As mentioned in the passage, the light pollution map is related to the adverse effects of outdoor artificial light.