

NTA-UGC NET/JRF PAPER 1 (2020)

1. Match List I with List II.

List I	List II
Research concepts	Description
(A) Hypothesis	(I) It is statistical test that does not make assumptions about the parameters
(B) Sample	(II) Device using which data are collected in research
(C) Research tool	(III) A subset drawn from a larger set to represent it
(D) Non-parametric tests	(IV) A tentative statement indicating relationship between two or more than two variables

Choose the correct answer from the options given below:

- (a) A-IV B -III, C-II, D-I
- (b) A-I, B -II, C -III, D - IV
- (c) A-II, B- I, C-IV, D -III
- (d) A- III, B - IV, C- I, D-II

2. In quantitative research paradigm, which of the following sampling methods are given preference?

- A. Simple random sampling
- B. Stratified sampling
- C. Quota sampling
- D. Snowball sampling
- E. Systematic sampling

Choose the correct answer from the options given below:

- (a) A, B and C only
- (b) A, B and E only
- (c) B, C and D only
- (d) C, D and E only

3. In the cognitive domain of teaching-learning objectives, which will be categorized as a higher type of learning outcomes?

- A. Knowledge and comprehension
- B. Analysis of conceptual elements
- C. Application of acquired knowledge and skills
- D. Synthesis involving the creative organization of ideas
- E. Evaluation involving judgment using internal or external standards.

Choose the correct answer from the options given below:

- (a) A, B and C only
- (b) B, C and D only
- (c) C, D and E only
- (d) B, D and E only

4. A teacher uses a question-answer session to ensure desired learning outcomes in his/her classroom.

In this process, he/she offers the following type of comment to a few answers given by a student:

“Yes, you are right, good”

This will be considered as an example of

- (a) Positive feedback
- (b) Negative feedback
- (c) Confirmatory feedback
- (d) Corrective feedback

5. Match List I with List II.

List I Behavioural teaching competencies	List II Description
(A) Instructing	(I) Optimizing 'on task' and minimizing 'off task' activities
(B) Communicating	(II) Watching groups, behaviors and pace etc. and reacting quickly
(C) Managing	(III) Using methods and activities by the teacher to promote learning
(D) Monitoring	(IV) Transmitting thoughts and ideas verbally and non-verbally

Choose the correct answer from the options given below:

- (a) A-I, B-II, C-III, D-IV
- (b) A- IV, B - III, C - II, D -I
- (c) A-III, B-IV C-I, D-II
- (d) A-II, B-I, C-IV, D-III

6. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A): Evaluation is said to be formative when the intention is to identify scope and potential for improvement of teaching-learning system.

Reason (R): The form of such evaluation is informal and has to take place during instruction/teaching. In light of the above statements, choose the correct answer from the options given below

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

7. In which research method manipulation of 'independent variable' and control of 'extraneous variables' are neither possible nor desirable?

- (a) Experimental method
- (b) Ex post facto method
- (c) Historical method
- (d) Descriptive survey method

8. Identify those statements which describe the characteristic features of qualitative research paradigm

- A. Researchers tend to analyze their data inductively
- B. The substantive research hypothesis is tested via Null hypothesis
- C. Data take the form of words or pictures
- D. Actual settings are the direct source of data
- E. It assumes that there are social facts with a single objective reality. Choose the correct answer from the options given below:

- (a) A, B and C only
- (b) A, B and E only
- (c) B, C and E only
- (d) A, C and D only

9, Given below are two statements

Statement I: Maximum performance tests are designed to assess the upper limits of the examinees' knowledge and ability.

Statement II: Typical response tests are designed to measure specific behaviors and characteristics of examinees.

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

- (a) Both Statement I and Statement II are true
- (b) Both Statement I and Statement II are false
- (c) Statement I is correct but Statement II is false
- (d) Statement I is incorrect but Statement II is true

10. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A): A cross break is a numerical tabular presentation of data usually in frequency or percentage form in which variables are cross-partitioned to study relations between them.

Reason (R): The categories are set up according to the research hypothesis.

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

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

Comprehension Passage (for question numbers 11—15)

Much is still unknown about human behavior. Unanswered questions remain and further research is necessary. Knowledge about motivation, leadership, behavior, and change will continue to be of great concern to practitioners of management for several reasons: It can help improve the effective leadership of human resources; it can help in preventing resistance to change, restriction to output, and personnel disputes; and often it can lead to a more productive organization. Our intention has been to provide a conceptual framework that may be useful to you in applying the conclusions of the behavior sciences. The value that a framework of this kind has is not in changing one's knowledge, but in changing one's behavior in working with people.

We have discussed three basic competencies in influencing: diagnosing - being able to understand and interpret the situation you are attempting to influence; adapting - being able to adapt your behavior and the resources you control to the contingencies of the situation; and communicating - being able to put the message in such a way that people can easily understand and accept it. Each of these competencies is different and requires a different developmental approach. For example, diagnosing is cognitive or of the mind in nature and requires thinking skills; adapting is behavioral in nature and requires behavioral practice; and communicating is process-oriented and requires learning and interrelating the key steps in the process. Because these three competencies require different knowledge and skills, how do we continue the process that we started with

The key to starting the process of changing behavior is sharing what you have learned with other people in your own organization. Two things occur when people who work together all have a common language. First, they are able to give each other feedback and help in a very rational, unemotional way that effects behavior.

Second, when followers start to realize that if their manager is using situational leadership, it is not the manager, but their behavior, that determines the leadership style to be used with them.

11. What is the value outcome of applying a theoretical framework of behavioral science?

- (a) Changes in one's own knowledge
- (b) Change in one's behavior while working with others
- (c) Not understandable human behavior
- (d) Emergence of value-loaded framework

12. What prompts a change in a person's behavior?

- (a) Leadership style
- (b) Situational support to the managers
- (c) Sharing of learning outcomes with others in the organization

(d) Segregation of competencies

13. The inferences that can be drawn from the passage are

- A. Common language among people in an organization will ensure unbiased feedback
- B. People are known for fluctuating behavior
- C. People's behavior influences the leader
- D. Emotions and human behavior are separate and easily explicable. Choose the correct answer from the options given below:

- (a) A and B only
- (b) B and C only
- (c) C and D only
- (d) A and C only

14. Which of the following prohibits resistance to change?

- (a) Knowledge of leader behavior
- (b) Removing restriction on output
- (c) Personnel disputes
- (d) Non-productive organization

15 Each of the basic competencies needs

- (a) Exclusivity
- (b) Situational contingency
- (c) Inter-relation with others
- (d) A different approach in acquiring it

16. Which of the following can be considered as psychological barriers to effective communication?

- A. Descriptive message
- B. Inattentiveness
- C. Too much reliance on the written word
- D. Limited retention
- E. Logical organization
- F. Flow of thought

Choose the correct answer from the options given below:

- (a) A, B and C only
- (b) B, C and D only
- (c) C, D and E only
- (d) D, E and F only

17. A motorist travels to a place 150 kms away at an average speed of 50 km/ hour and returns at a speed of 30 km / hour. His average speed for the whole journey is

- (a) 35 km/hour
- (b) 37.5 km/hour
- (c) 40 km/hour
- (d) 42.5 km/hour

18 Given below are two statements

Statement I: Persuasive communication by a teacher in the classroom is intended to make his/her version information acceptable to students.

Statement II If it happens at the institutional level the purpose behind it is image building. In light of the above statements, choose the most appropriate answer from the options given below:

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

19. Match List I with List II.

List I Type of communication	List II Characteristics
(A) Vertical	(I) Feedback oriented
(B) Horizontal	(II) Inter-personal
(C) Circular	(III) Top-down
(D) Transactional	(IV) Rumour-oriented

Choose the correct answer from the options given below:

- (a) A-I, B-II, C-III, D-IV
- (b) A-II, B-III, C-IV, D-I
- (c) A-III, B-IV, C-I, D-II
- (d) A-IV, B-I, C-II, D-III

20 In the following letter series, the next term is BDF, EGI, HJL,

- (a) KMO
- (b) JMP
- (c) ILO
- (d) KNO

21. Given below are two statements:

Statement I: Different communities exist independent of one another but jointly somehow, they give an idea of communitarian life of a society.

Statement II: Earth exists either through a blind chance or through an inner necessity or through an external cause.

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

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

22, Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R):

Assertion (A): Human touch in communication enables students to become participatory.

Reason (R): In a technology-driven classroom environment, the communicative role of a teacher is secondary.

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

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

23. Deduction proceeds from

- (a) Particular to universal
- (b) Universal to particular
- (c) Particular to particular
- (d) Universal to universal

24. When communication meets the aims and objectives of classroom teaching, it becomes

- (a) Extra-ordinary
- (b) Personal
- (c) Functional
- (d) Obligatory

25. A man is 30 years older than his son. Five years ago, his age was 6 times the age of his son. The age of the son is

- (a) 10 years
- (b) 11 years
- (c) 12 years
- (d) 15 years

26. Match List I and List II.

List I (Concepts)	List II (Schools)
(A) Nirvana (B) Nihshreyasa (C) Apvarga (D) Moksha	(I) Sankhya (II) Jainism (III) Upanishads (IV) Buddhism

Choose the correct answer from the options given below:

- (a) A-TV B-III, C-II, D - I
- (b) A-I, B-II, C-IV, D-III
- (c) A-TI, B-I, G-II, D-IV
- (d) A -II B -IV, C - II, D - I

27. A sum of money earning compound interest annually doubles itself after 4 years. What is the rate of interest?

- (a) ~14%
- (b) ~19%
- (c) ~18%
- (d) ~15%

28. What is the next term in the following series?

4, 12, 28, 52, _____

- (a) 76
- (b) 84
- (c) 98
- (d) 104

29. Given below are two statements:

Statement I: When I look deep into myself, I always stumble with one perception or another. I can never catch myself.

Statement II: Self is the logical presupposition of all knowledge. Therefore, the concepts like substance and person cannot be applied to it.

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

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

30. Given below are two statements:

Statement I: All knowledge is a recollection. It is true on a certain account.

Statement II: All men by nature, desire understanding. In light of the above statements, choose the most appropriate answer from the options given below:

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

Comprehension Passage (for question numbers 31—35)

Study the data given in the table and answer the questions that follow

The following table shows the monthly reporting of patients for different diseases to three hospitals in a city:

Disease/ Hospital	Hospital A	Hospital B	Hospital C
Heart Attack	320	240	360
Blood Sugar	650	1350	1950
Blood Pressure	700	1400	2100
Kidney Problems	210	420	630

31. What is the average number of patients for the least reported disease?

- (a) ~ 415.2
- (b) ~ 325.4
- (c) ~ 391.7
- (d) ~ 306.6

32. What is the percentage increase in the total number of patients from hospital A to hospital C?

- (a) ~ 120 %
- (b) ~ 168.96
- (c) ~ 141 %
- (d) ~ 145 %

33. What is the percentage of number of patients reporting for blood sugar compared to the total patients in all three hospitals?

- (a) ~ 25.90%
- (b) ~ 38.24%
- (c) ~ 39.42 %
- (d) ~ 35.12 %

34. What is the percentage increase in the number of patients reporting heart attacks from hospital A to hospital C?

- (a) 12.5%
- (b) 13.2%
- (c) 11.9%
- (d) 9.2%

35. For patients reporting for kidney problems, what is the ratio of the number of patients reporting at hospital A and those reporting at hospital C?

- (a) 2:3
- (b) 3:4
- (c) 1:3
- (d) 1:5

36. Match List I with List II.

List I Categories of environmental education objectives	List II Examples of those objectives
(A) Environmental Awareness	(I) To help social groups and individuals identify and solve environmental problems
(B) Environmental Knowledge	(II) To help social groups and individuals acquire a set of values for the environment
(C) Environmental Attitude	(III) To help social groups and individuals acquire a sensitivity to the total environment
(D) Environmental Skill	(IV) To help social groups and individuals gain a variety of experience in environment and its associated problems

Choose the correct answer from the options given below:

- (a) A-II, B-I, C-III, D-IV
- (b) A-I, B-III, C-N, D -II
- (c) A-N, B -II, C-I, D -III
- (d) A - III, B - IV C - II, D - I

37. Noise pollution is measured in decibels (dB) with reference to a standard sound intensity of the following magnitude

- (a) 1 pico watt per m²
- (b) 1 milliwatt per m²
- (c) 1 nanowatt per m²
- (d) 1 microwatt per m²

38. In which year, the Union Government decided that all cases pertaining to the allocation of grants-in-aid from public funds to the Central Universities and other universities and institutions of higher learning might be referred to the University Grants Commission?

- (a) 1952
- (b) 1953
- (c) 1954
- (d) 1956

39. In a polluted urban area, which one of the following has the highest concentration (ppv) in photochemical smog?

- (a) Ozone
- (b) PAN
- (c) Hydrocarbons (without methane)
- (d) Carbon monoxide

40. Match List I with List II.

List I Environmental Protocol/ Agreement/Action	List II Provisions
(A) Montreal Protocol	(I) Integrated water resource management
(B) Paris Agreement	(II) Emissions trading
(C) Climate Action	(III) Phasing out ozone-depleting substances
(D) Kyoto Protocol	(IV) Intended Nationally Determined Contributions

Choose the correct answer from the options given below:

- (a) A-III, B -II, C-I, D-IV
- (b) A-II, B-III, C-I, D -IV

- (c)A-II, B-IV, C-III, D-I
- (d)A-III, B-IV, C-I, D-II

41. The Chinese scholars, 1-Qing and Xuan Zang visited ancient Nalanda University during

- (a) 5th century CE
- (b) 7th century CE
- (c) 10th century CE
- (d) 12th century CE

42. Using a website to pour out one's grievances is called

- (a) Cyber venting
- (b) Web hate
- (c) Web anger
- (d) Cyber abuse

43. Speed of Internet is measured in

- (a) GHz
- (b) Gbps -
- (c) GB
- (d) dpi

44. Which of the following correctly lists computer memory types from lowest to highest speed?

- (a) Main Memory, Cache Memory, Secondary Storage
- (b) Cache Memory, Secondary Storage, Main Memory
- (c) Secondary Storage, Main Memory, Cache Memory
- (d) Secondary Stage, Cache Memory, Main Memory

45. What is the full form of the abbreviation GIF?

- (a) Graphics Interchange Format
- (b) Graphics Interchange File
- (c) Global Interchange Format
- (d) Graphics Input Format

46. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R):

Assertion (A): Machine Learning requires good quality and sufficient data to train and test the algorithm.

Reason (R): For correct classification, good quality data which is free from noise, and sufficient data is required for training and testing of the algorithm.

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

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

47. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R):

Assertion (A): Lakes are considered to be more susceptible to pollution than rivers

Reason CR): Water in lakes may take decade(s) to be replaced

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

- (a) Both A and R are correct and R is the correct explanation of A

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

48. Given below are two statements

Statement I: Universities are established by Central/ State Act under 2(f) of the UGC Act, 1956.

Statement II: Deemed to be University is declared by a Notification of the Central Government, on the advice of the UGC, under section 3 of the UGC Act, 1956.

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

- (a) Both Statement I and Statement II are true
- (b) Both Statement I and Statement II are false
- (c) Statement I is correct but Statement II is false
- (d) Statement I is incorrect but Statement II is true

49. According to the International Commission on Education for the Twenty-first Century headed by Jacques Delors, which of the following main tensions will be witnessed during the 21st century;

- A. The tension between the global and the local
- B. The tension between tradition and modernity
- C. The tension between the spiritual and the material
- D. The tension between the poor and the rich
- E. The tension between the developed and the developing societies

Choose the correct answer from the options given below:

- (a) A, B and C only
- (b) B, C and D only
- (c) C, D and E only
- (d) A, D and E only

50. Thermal reactors produce energy by fission of the following nuclear fuels

- A. Uranium-235 (^{235}U)
- B. Uranium-233 (^{233}U)
- C. Uranium-238 (^{238}U)
- D. Thorium-232 (^{232}Th)
- E. Plutonium-239 (^{239}Pu)

Choose the correct answer from the options given below:

- (a) A, B, C and E only
- (b) A, B, C, D and E
- (c) A, B, D and E only
- (d) A, B and E only

ANSWER KEYS

1. (a)	2. (b)	3. (d)	4. (a)	5. (c)	6. (a)	7. (b)	8. (d)	9. (a)	10. (a)
11. (b)	12. (c)	13. (d)	14. (a)	15. (d)	16. (b)	17. (b)	18. (a)	19. (c)	20. (a)
21. (a)	22. (c)	23. (b)	24. (c)	25. (b)	26. (a)	27. (b)	28. (b)	29. (a)	30. (a)
31. (d)	32. (b)	33. (b)	34. (a)	35. (c)	36. (d)	37. (a)	38. (a)	39. (a)	40. (d)
41. (b)	42. (a)	43. (b)	44. (c)	45. (a)	46. (a)	47. (a)	48. (a)	49. (a)	50. (d)