Mock Test

UGC NET/JRF Paper 1

SET – II

General Instructions

➲ This paper consists of 50 questions, each of which carries 2 marks.

➲ Attempt all questions.

Direction (Q1-5): The following table shows the percentage (%) breakup of

(i)   number of employees,

(ii)   number of male employees,

(iii) number of employees who recently got promoted in five different departments namely Accounts, Production, IT, HR, and Marketing of an organization, Total number of employees, male employees and recently promoted employees are 1800, 1020 and 600 respectively.

Based on the data in the table, answer the following questions.

Department wise Breakup of Employees			
	Distribution (%) of Employees		
Department	Number of Employees (1800)	Number of Male Employees (1020)	Number of recently promoted employees
Accounts	20%	5%	6%
Production	35%	50%	35%
IT	15%	20%	26%
HR	12%	10%	11%
Marketing	18%	15%	22%

1. The number of employees who got promoted from the HR department is approximately _____ % of the number of employees working in the department.
   (a) 37.10
   (b) 30.56
   (c) 40.21
   (d) 29.16

2. The total number of employees who got promoted from all the departments together is approximately _____ % of the total number of employees working in all the departments together.
   (a) 53
   (b) 20
   (c) 43
   (d) 33

3. Total number of female employees working in the Production and Marketing department together is
   (a) 334
   (b) 406
   (c) 292
   (d) 407

4. If half of the number of employees who got promoted from the IT department were males, then the approximate percentage of males who got promoted from the IT department was _____.
   (a) 62%
   (b) 27%
   (c) 64%
   (d) 38%

5. How many females work in the Accounts department?
   (a) 309
   (b) 396
   (c) 284
   (d) 313

6. The sequence of using cognitive Apprenticeship model in the classroom is _____.
   (a) Modelling, Coaching, Scaffolding, Articulation, Reflection and Exploration
   (b) Coaching, Mentoring, Assimilation, Socialisation, Effect and Retention.
   (c) Identifying, Memorisation, Socialization, Assimilation and Adaptation.
   (d) Memorisation, Retention, Remembering, Visualisation and Evaluation.

7. Which of the following statement best describes "formative Evaluation" in evaluation procedure?
   (a) A teacher awards grades to students after having completed the course work.
   (b) The teacher clarifies the doubts of the students and asks questions in the class itself.
   (c) The performance of students is reported to parents every four months.
   (d) The teacher evaluates the students in the final examination at the end of the semester

8. Match List I with List II.

List I (Strategies of congnitive Apprenticeship Model)	List II (Meaning)	
A. Modelling	I.	Helping learner in starting and gradually fading the support
B. Coaching	II.	Observing the performance of an expert (Teacher or more experienced peer)
C. Scaffolding	III.	Giving external support to learner in the process and content
D. Articulation	IV.	Giving external support to learner in the form of hints, feedback, reminders etc.

Choose the correct answer from the options given below:
   (a) A-(IV), B-(I), C-(III), D-(II)
   (b) A-(III), B-(II), C-(IV), D-(I)
   (c) A-(II), B-(IV), C-(I), D-(III)
   (d) A-(I), B-(III), C-(IV), D-(II)

9. Anant, a nine-year-old boy, was emotionally stable and performed well in school. His parents have divorced recently. Due to this, he has become a very anxious child. What can Anant's teacher do to help reduce his anxiety in the classroom?
   (a) His teacher could provide structure, organizational tools and choices
   (b) His teacher could respect Anant's emotional state
   (c) His teacher could provide Anant with counselling regarding his anxiety
   (d) His teacher could tell the other children that Anant is anxious and that should be nice to him

10. Which of the following are the key elements of cooperative learning?
   A. Group of students consist of high, average and low achievers are heterogeneous.
   B. Students are inactive
   C. Students work in groups.
   D. Reward system is individual oriented.
   E. Students receive information transmitted only from teachers.

Choose the most appropriate answer from the options given below:
   (a) B and D only   (b) A and C only
   (c) A, B and E only   (d) C, D and E only

11. The approach of accepting knowledge because people have agreed upon, following a reasonable argument is known as
   (a) Bureaucratic   (b) A -priori
   (c) Scientific   (d) Authoritarian

12. Values assigned to nominal scale of measurement are
   (a) Permanent   (b) Orderly
   (c) Temporary   (d) Meaningful

13. Use of scientific research to promote one's own cause inappropriately is described as
   (a) Improper science
   (b) Unscience
   (c) Pure Science
   (d) Natural Science

14. Which of the following are types of participants in research?

A. Cooperative participants

B. Negative participants

C. Faithful participants

D. Doubtful participants

E. Traditional participants

Choose the correct answer from the options given below:

(a) A, B, C, D Only

(b) B, C, E Only

(c) A, B, D, E Only

(d) A, C, D, E Only

15. Summative evaluation is also known as

(a) Formative evaluation

(b) Ipsative evaluation

(c) Confirmatory Evaluation

(d) Impact evaluation

16. When media create pictures in the head, they act as

(a) Agendas-setters

(b) Political groups

(c) Tools of dissonance

(d) Agents of consonance

17. Western concepts of communication are based on

(a) Democracy

(b) Individualism

(c) Impressionism

(d) Legalism

18. The three divisions of signs identified by Charles Pierce are:

A. Molecular

B. Descriptive

C. Iconic

D. Indexical

E. Symbolic

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, B and E only

19. Match List I with List II

List I (Motion picture catagery)		List II (Audience type)	
A.	High brow	I.	Those who want to escape form daily routine
B.	Middle brow	II.	Much sophisticated and have deeper understanding of the medium
C.	Low brow	III.	Intellectual satisfaction oriented
D.	Post brow	IV.	Can distinguish between good and bad films

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. Given below are two statements.

Statement I: According to some experts, communication reflects the primary group affiliation of a person.

Statement II: Communication should be understood with empathy and in the broad social process

In the light of the above statements, choose the correct 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 true but Statement II is False.

(d) Statement I is false but Statement II is True.

21. If simple interest on a certain principal amount at 5% per annum for 5 years is Rs.900 more than the simple interest on the same principal amount for 4 years at 4% per annum, then find out the principal amount.

(a) Rs.8,000   (b) Rs.11,500

(c) Rs.10,000   (d) Rs.13,000

22. Pointing towards a Picture (P), a man 'Q' says that "He is the son of only daughter of my father-in-law". How is the man 'Q' related to the person in the Picture (P)?

(a) Father-in-law   (b) Brother

(c) Son   (d) Father

23. If in a certain code language PROFESSOR is written as 'RTQHGUUQT', then in that language, how the word SCIENTIST will be written?

(a) MDJFOJTIU

(b) EUKGOVEKL

(c) UEKGPMLUV

(d) UEKGPVKUV

24. A man starts walking in the south direction from a point U. He walks 50 meters and then turns to his right and walks 30 meters. He again turns right and walks for 40 meters. Finally, he moves east wards and goes 40 meters stopping at point W. Find how far is the man from his starting point U.

(a) $5\sqrt{10}$m

(b) $2\sqrt{10}$m

(c) 10 m

(d) $10\sqrt{2}$m

25. What number should replace the question mark in the series given below.

11, 13, 29, 91, 369, **?**

(a) 1895

(b) 1860

(c) 1851

(d) 1290

26. "Organic foods sector has shown good growth in profits over past few years therefore we can conclude that each individual organic food company is making good profits". Above argument is an example of which of the following fallacies?

(a) Slippery slope

(b) Hasty generalization

(c) Begging the question

(d) The fallacy of division

27. Which of the following statements are logically equivalent?

A. No aeroplanes arc electric vehicles.

B. All non-electric vehicles are non-aeroplanes.

C. No electric vehicles are aeroplanes.

D. All aeroplanes are non-electric vehicles.

Choose the correct answer from the options given below:

(a) B, C and D only

(b) A, C and D only

(c) A and B only

(d) B and D only

28. If the statement 'No cars are electric vehicles' is given as true, then which of the following statements can be immediately inferred to be true?

(a) All cars are electric vehicles.

(b) Some cars are electric vehicles.

(c) Some cars are not electric vehicles.

(d) Some cars are not non-polluting vehicles.

29. Which of the following statements are so related that one is the denial or the negation of the other?

A. All cars are polluting vehicles.

B. No cars are polluting vehicles.

C. Some cars are polluting vehicles.

D. Some cars are not polluting vehicles.

Choose the correct answer from the options given below:

(a) C and D only

(b) B and D only

(c) A and D only

(d) A and B only

30. According to Classical Indian School of Logic (Nyaya) which of the following argument involves the fallacy of Sadharana (middle term being too wide)?

(a) The hill has smoke because it has fire.

(b) Sound 1s eternal because it is audible.

(c) The hill has fire because it is knowable.

(d) All things are non-eternal because they are knowable.

31. What exactly is cloud computing?

(a) A way to organize laptops

(b) Software that takes up a lot of space hard drive.

(c) Computing resources that can be accessed on demand, like electricity from a utility.

(d) The World Wide Web 3.

32. Given below are two statements.

Statements I: In an email system, Bcc: lets recipients to be visible to all other recipients of the message.

Statement II: VoIP is the use of Internet to make phone calls.

Choose the correct 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

33. Using broadband to connect to the Internet has many benefits. Which of the following statements are TRUE in this context?
   A. This connection does not allow you to use the landline phone at the same time as being connected to the Internet.
   B. This connection allows a wireless connection
   C. You are always connected to the Internet.

   Choose the correct answer from the options given below:
   (a) A and B Only   (b) A and C Only
   (c) B and C Only   (d) A, B and C

34. Which of the following statements about networked computers are TRUE?
   A. Network users can communicate by email and instant messenger.
   B. Files can easily be shared between users.
   C. Viruses cannot be spread to other computers throughout a computer network.
   D. It is possible for many users to access and share one printer on a network

   Choose the correct answer from the options given below:
   (a) A, B and D only   (b) A and C only
   (c) B, C and D only   (d) A and B only

35. Which of the following are features that allow you to manage the windows desktop environment?
   A. Creating shortcuts   B. Renaming folders
   C. Video conferencing   D. Creating auto shapes
   E. Adjusting icon size

   Choose the correct answer from the options given below:
   (a) C and D only   (b) D and E only
   (c) A, B and E only   (d) A and B only

36. Given below are two statements.
   Statement I: Turbulent and rapidly flowing waters are generally depleted in oxygen.
   Statement II: Adding organic materials, such as sewage or paper pulp, to water stimulates activity and oxygen consumption by decomposers.

   In the light of the above statements, choose the correct 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

37. Meaning of Tsunami is?
   (a) Sea wave
   (b) Harbour Wave
   (c) Coastal turbulence
   (d) Oceanic earthquake

38. Given below are two statements.
   Statement I: International Solar Alliance (ISA) was launched on the side-lines of COP25.
   Statement II: ISA was launched by Prime Minister Narendra Modi and President of France, Emanuel Macron.

   In the light of the above statements, choose the correct 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

39. Match List I with List II

List I (Risk assessment step)		List II (Method)
A.	Hazard Identification	I.	Determining the size and nature of the population that has been exposed to taxicants
B.	Dose response assessment	II.	Estimation of the magnitude of the public health problem
C.	Exposure assessment	III.	Characterizing the relationship between the dose receivad and the adverse health effect.
D.	Risk characterization	IV.	Process of determining whether or not a particular Chemical is linked to a particular health effect.

   Choose the correct answer from the options given below:
   (a) A-(IV), B-(III), C-(II), D-(I)
   (b) A-(IV), B-(III), C-(I), D-(II)
   (c) A-(I), B-(II), C-(III), D-(IV)
   (d) A-(I), B-(II), C-(IV), D-(III)

40. Which of the following Volatile Organic Compounds (VOCs) are emitted from anthropogenic sources only?

   A. Isoprene   B. Benzene

   C. Terpene   D. Carbolene

   E. Toluene

   Choose the correct answer from the options given below:

   (a) A, B and C only   (b) B and E only

   (c) A and C only   (d) C, D and E only

41. Which of the following education commissions of India noted that - "It is obvious that if higher education is not radically improved, our administration and technical progress our intellectual standards and social advance, will all be most seriously handicapped"?

   (a) Kothari Commission

   (b) Sadler Commission

   (c) Justice Verma Commission

   (d) University Education Commission

42. Given below are two statements.

   Statement I: Central University is established under an act of Parliament.

   Statement II: The Prime Minister of India acts as a regular supervisor of the Central University.

   Choose the correct answer from the options given below:

   (a) Both Statement I and Statement II are Correct

   (b) Both Statement I and Statement II are Incorrect

   (c) Statement I is Correct but Statement II is Incorrect

   (d) Statement I is Incorrect but Statement II is Correct

43. Which of the following major initiatives have been taken by UGC. with a mission to address ethical practices in research and publications.

   A. Jeevan Kaushal

   B. Mulya Prawah

   C. GARP - Guidance Document on Good Academic and Research Practices

   D. CARE - Consortium for Academic Research and Ethics

   E. DIKSHA - Digital Infrastructure for knowledge sharing.

   Choose the most appropriate answer from the options given below:

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

   (c) B, C and D only   (d) B and E only

44. Which commission of Education in India expressed the opinion that to avoid famine in the country, the production of Food must be doubled in the next 15 years and maintain an adequate growth thereafter?

   (a) Kothari Commission

   (b) Nation Education Commission

   (c) NPE 1986

   (d) Radhakrishnan Education Commission

45. Which among the following served as centres of learning and teaching during the ancient period in Southern parts of India?

   A. Agraharas

   B. Ghatika

   C. Brahmapuri

   D. Madrasas

   Choose the correct answer from the options given below:

   (a) A and B only

   (b) A and C only

   (c) A, B, C and D

   (d) A, B and C only

Direction (Q46-50): Read the following passage and answer the question given below:

During about a hundred years after the thirteen English colonies on the east coast of North America had won their independence from England and emerged as the United States of America, that country had attained its present territorial proportions. The westward territorial expansion of the United States took place at the cost of the American Indian Tribes which inhabited those areas. The American Indians resisted these encroachments but by 1890 this resistance finally ended in a massacre at a place called Wounded Knee in South Dakota, USA also purchased vast territories of Louisiana and Alaska from France and Russia, respectively and Seized Texas and California from Mexico after a war with that country. Between 1861 and 1865, there was a civil war when the southern States of USA, which were primarily agricultural with plantations worked by slave labour, seceded from the Union. As a result of the defeat of the southern States in the civil war, the Union was preserved, and slavery was abolished. 'Within about three decades after the end of the Civil War, USA had become the foremost industrial power in the world. By the end of the nineteenth century, she was producing about one-third of the total production of iron and steel in the world. In almost every branch of industry. She outstripped every other country in the world.

46. USA purchased vast territories from

A. France   B. England

C. Mexico   D Russia

Choose the most appropriate answer from the options given below:

(a) A and B Only   (b) A and C only

(c) B and C only   (d) A and D only

47. USA became the top most industrial power of the world by

(a) The end of eighteenth century

(b) The beginning of the nineteenth century

(c) The middle of the nineteenth century

(d) The end of the nineteenth century

48. Given below are two statements.

Statement I: The territories near the West coast of North America became part of USA much later than those near the East Coast.

Statement II: USA gained independence from England in the nineteenth century.

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

(a) Both Statement I and Statement II are Correct

(b) Both Statement I and Statement II are Incorrect

(c) Statement I is Correct but Statement II is Incorrect

(d) Statement I is Incorrect but Statement II is Correct

49. The resistance of American Indians against the territorial expansion of USA ended

(a) About 50 years after USA came into existence

(b) About 25 to 30 years after the Civil war in USA

(c) About 25 to 30 years before the Civil war in USA

(d) About 25-30 years after USA came into existence

50. Given below are statements:

Statement I: The southern states were successful in receding from the USA after the civil war.

Statement II: Abolition of slavery was one of the outcomes of civil war in USA.

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

(a) Both Statement I and Statement II are Correct

(b) Both Statement I and Statement II are Incorrect

(c) Statement I is Correct but Statement II is Incorrect

(d) Statement I is Incorrect but Statement II is Correct

ANSWER KEY

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

ANSWERS AND EXPLANATIONS

1. **(b)** Number of Employees in HR Department = 1800 × 12/100 = 216

Number of recently promoted employees in HR Department = 600 × 11/100 = 66

The number of employees who got promoted from the HR department

= 66/216 × 100

= 30.56

2. **(d)** Total number of recently promoted employees = 600

Total number of Employees = 1800

Total number of employees who got promoted from all the departments together

= 600/1800 × 100 = 33

3. **(c)** Total number of Employees in Production Department = 1800 × 35/100 = 630

Number of Male Employees in Production = 1020 × 50/100 = 510

Number of Male Employees in Production = 630 – 510 = 120

Total number of Employees in Marketing Department = 1800 × 18/100 = 324

Number of Male Employees in Marketing = 1020 × 15/100 = 153

Number of Male Employees in Marketing = 324 – 153 = 171

Total number of female employees working in the Production and Marketing department together = 120 + 171 = 291

4. **(d)** Total number of Employees in IT Department = 1800 × 15/100 = 270

Number of recently promoted employees in IT = 600 × 26/100 = 156

Half of the number of employees who got promoted from the IT department = 78 (half of 156)

Number of Male Employees in IT = 1020 × 20/100 = 204

Percentage of males who got promoted from the IT department = 78/204 × 100 = 38.2

5. **(a)** Total number of Employees in the Accounts Department = 1800 × 20/100 = 360

Number of Male Employees in Accounts = 1020 × 5/100 = 51

Number of Female Employees in Accounts = 360 – 51 = 309

21. **(c)** Let the principal amount be P.

Simple interest for 5 years at 5% per annum = (P × 5 × 5)/100 = (25P/100)

Simple interest for 4 years at 4% per annum = (P × 4 × 4)/100 = (16P/100)

According to the question, (25P/100) – (16P/100) = 900

Simplifying the above equation, we get:

(9P/100) = 900

P = (900 × 100)/9

P = Rs. 10,000

23. **(d)** We can observe that each letter in the word PROFESSOR has been replaced by the letter two places ahead of it in the English alphabet. For example, P has been replaced by R, R has been replaced by T, and so on. Using the same pattern, we can find the code for SCIENTIST:

$S + 2 = U$

$C + 2 = E$

$I + 2 = K$

$E + 2 = G$

$N + 2 = P$

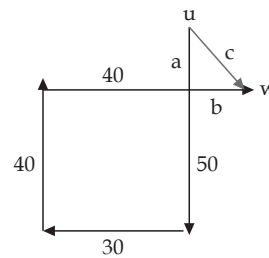$T + 2 = V$

$I + 2 = K$

$S + 2 = U$

$T + 2 = V$

24. **(d)** We have to find out the red arrow's value from the diagram

We use Pythagoras theorem,

$a^2 + b^2 = c^2$

a = side of right triangle

b = side of right triangle

c = hypotenuse

From the diagram,

a = 10, b = 10

so,

$10^2 + 10^2 = c^2$

$c = 14.14214$ or $10\sqrt{2}$ m

25. **(c)** The given series is formed by following the method starting with 11,

$13 = (11 × 1) + 2$

$29 = (13 × 2) + 3$

$91 = (29 × 3) + 4$

$369 = (91 × 4) + 5$

So, the next number in the series should be:

$1851 = (369 × 5) + 6$