

# Mock Test

## UGC NET/JRF Paper 1

### SET – III

#### 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 details of seven companies (A-G) about

- (i) The percentage cost distribution of production of two items I and II,
- (ii) Ratio of cost of production between items I and II, and
- (iii) Percentage profit earned for items I and II.

Cost of the production (both items together) by seven companies is 50 crores.

In accordance with the data in the table, answer questions:

Company-wise Distribution of Production Cost and Profit					
Company	Percentage Cost of Production of Item I and Item II	Ratio of Production Cost		Percentage Profit Earned	
		Item I	Item II	Item I	Item II
A	15	2	3	25	20
B	11	3	2	32	35
C	22	4	1	20	22
D	8	3	5	15	25
E	27	5	3	28	30
F	5	1	4	35	25
G	12	1	2	30	24

- What is the total cost of production of item I by the Companies 'A' and 'C' together?  
(a) ₹ 12.5 Crores (b) ₹ 11.8 Crores  
(c) ₹ 7.325 Crores (d) ₹ 10.8 Crores
- What is the amount of profit earned by Company 'D' on item II?  
(a) ₹ 8.25 crores (b) ₹ 9.25 crores  
(c) ₹ 26.25 lakhs (d) ₹ 62.5 lakhs
- Cost of production of item I by company 'F' is what percent of the cost of production of item II by company 'D'?  
(a) 26%  
(b) 43.33%  
(c) 76.67%  
(d) 20%

4. What is the ratio of the cost of production of Item I by the company 'A' to the cost of production of Item I by company 'D'?
- 4 : 5
  - 1 : 2
  - 2 : 1
  - 1 : 3
5. What is the sum total of the profit earned by Company 'B' on the production of Item I and the profit earned by Company 'A' on the production of Item II?
- ₹ 1.908 lakhs
  - ₹ 1.956 crores
  - ₹ 5.28 crores
  - ₹ 62.8 lakhs
6. Which of the following are essentials while conducting an Online Examination based on objective questions for the credibility of degrees?
- Proctored Environment
  - Authentication of candidate
  - Authentication of caretakers
  - System testing
  - Answer sheet with proper numbering for writing answers
- Choose the most appropriate answer from the options given below:
- A and B only
  - B and D only
  - A, B and C only
  - A, B and D only
7. **Assertion (A):** Multiple testing instruments must be used for formative assessment.  
**Reason (R):** Formative assessments are used for providing credits.
- In light of the above statements, choose the most appropriate answer from the options given below:
- Both (A) and (R) are correct and (R) is the correct explanation of (A)
  - Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)
  - (A) is correct but (R) is not correct
  - (A) is not correct but (R) is correct
8. For building a professional environment of an educational institution
- A teacher must ask his/her students about other teachers teaching methodologies.
  - A teacher must be unbothered other teachers professional achievements.
  - Teachers must work as a team.
  - A senior teacher must encourage the junior teacher to contribute to research and other academic activities for the institution.
- Choose the correct answer from the options given below:
- A and D only
  - B and C only
  - C and D only
  - A, C and D only
9. ARPIT courses, as Online Refresher courses, are offered on the SWAYAM platform by
- UGC only
  - PMMMNTT centers only
  - National Coordinators of SWAYAM courses
  - National Resource Centres in different disciplines
10. Which of the following is NOT a characteristic of a MOOC? It can be accessed
- Anytime and Anywhere
  - From any device having an Internet browser
  - Only in the classroom
  - Anywhere
11. Given below are two statements:
- Statement I:** Developing objectives means narrowing down and focusing directly on what you want to know.
- Statement II:** A research objective does not prompt a researcher to do a literature survey.
- In light of the above statements, choose the correct answer from the options given below:
- Both Statement I and Statement II are true
  - Both Statement I and Statement II are false
  - Statement I is true but Statement II is false
  - Statement I is false but Statement II is true

12. Match List I with List II.

List-I	List-II
Data collection method	Characteristics
A. Field observation	I. Collects information from many data sources
B. Focus group	II. Gathers detailed information from a small, non-random sample
C. Intensive interviewing	III. Gathers preliminary information for a research project
D. Case study	IV. Studies the phenomenon in natural settings

Choose the correct answer from the options given below:

- (a) A-(I), B-(III), C-(II), D-(IV)  
 (b) A-(II), B -(IV), C-(III), D-(I)  
 (c) A-(III), B -(IV), C-(I), D-(II)  
 (d) A-(IV), B -(III), C-(II), D-(I)
13. Given below are two statements.  
**Statement I:** The standard deviation of a statistic's sampling distribution is often called 'standard error.'  
**Statement II:** When the number of samples taken from a population is between 50 to 60, they are called small samples.  
 In light of the above statements, choose the most appropriate 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
14. What is the full form of the Software SPSS?  
 (a) Statistical Package for Social Sciences  
 (b) Statistical package for Scientific Security  
 (c) Special Program for Social Security  
 (d) Scientific Program for Social Studies
15. Exploratory research on a small scale is called  
 (a) T test (b) Pre-test  
 (c) Pilot test (d) Formal test

16. When communication contents are purposefully adjusted to fit an ideology, the result will be  
 (a) Nationalization  
 (b) Promotion of world harmony  
 (c) Social practicability  
 (d) Power distortions
17. Which of the following can be cultural barriers in classroom communication?  
 A. Language  
 B. Sign and Emblem  
 C. Stereotypes  
 D. Individual creativity  
 E. Intercultural Orientation  
 (a) A and B only  
 (b) A and C only  
 (c) A, B, and C only  
 (d) C, D, and E only
18. Given below are two statements:  
**Statement I:** Conditioned words can be used to revive old emotions in irrelevant situations.  
**Statement II:** Stereotypes do not have emotional color related to the superior feelings of upper-class groups.  
 In 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
19. The second model of communication by Wilbur Schramm has the sequence of the following elements:  
 A. Encode  
 B. Interpret  
 C. Modify  
 D. Extend  
 E. Decode  
 Choose the correct answer from the options given below:  
 (a) A, E, B, C, D (b) A, B, C, E, D  
 (c) A, D, B, C, E (d) A, C, E, D, B

20. Match List I with List II.

List I	List II
Description	Type of Communication Grapevine
A. Silent Prayer	I. Grapevine
B. Teacher speaking to people in a public place	II. Intra-personal communication
C. Exchange of ideas with the staff of equal cadre	III. Group communication
D. Informal information exchange by employees	IV. Horizontal communication

Choose the correct answer from the options given below:

- (a) A-(III), B-(IV), C-(I), D-(II)  
 (b) A-(II), B-(III), C-(IV), D-(I)  
 (c) A-(IV), B-(I), C-(II), D-(III)  
 (d) A-(I), B-(II), C-(III), D-(IV)
21. Find the wrong term in the given series:  
 7, 28, 63, 124, 215, 342, 511, .....
- (a) 28 (b) 73  
 (c) 242 (d) 509
22. A man bought 13 chairs and 5 tables at a total cost of Rs. 8280. If the average cost of the table is Rs. 1227. What is the average cost of a chair?
- (a) Rs.165 (b) Rs.275  
 (c) Rs.105 (d) Rs.168
23. Find the next term in the series:  
 BMO, EOQ, HQS, ?
- (a) NLM (b) LMN  
 (c) KSU (d) MOW
24. A person reaches his destination 40 minutes late if his speed is 3 km/hr and reaches 30 minutes before time if his speed is 4 km/hr. What is the distance of his destination from the starting point? (In km)
- (a) 10 (b) 9  
 (c) 12 (d) 14
25. What will be a single discount equivalent to a series discount of 10%, 20% and 30%?
- (a) 60.40% (b) 49.6%  
 (c) 29% (d) 55%

26. In the classical square of opposition, if 'All S is P' is true, then which of the following could be immediately inferred from it?

- A. 'Some S is not P' is false  
 B. 'Some S is P' is true  
 C. 'Some S is not P' is undetermined  
 D. 'Some S is P' is undetermined  
 E. 'No S is P' is false

Choose the correct answer from the options given below:

- (a) A, B and E only (b) C, D and E only  
 (c) B, C and E only (d) A, D and E only
27. Which of the following is defined as a type of irrelevant conclusion fallacy in which a distracting element is introduced to obscure an opponent's position?
- (a) An Appeal to Emotion  
 (b) Argument ad hominem  
 (c) Appeal Randomly  
 (d) Red Herring

28. **Statement I:** Analogical argument involves drawing a likeness between two or more entities in one or more respects.

**Statement II:** Analogical argument is a type of substantive argument.

In light of the above statements, choose the most appropriate 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
29. Given below are two statements: One is labeled as Assertion A and the other is labeled as Reason R:  
**Assertion (A):** The Classical Indian School of Logic, namely Nyaya does not give a separate treatment of the inductive methods.  
**Reason (R):** According to Nyaya universal propositions are obtained from perception itself by one of the forms of extra-ordinary perception.
- 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

30. The argument that the fat saint must be eating secretly at night, although he does not eat during the day and claims not to eat at all is based on which of the following means of knowledge as per Classical Indian Logic?
- (a) Verbal Testimony (Sabda)  
 (b) Inference (Pratyaksha)  
 (c) Postulation (Arthapatti)  
 (d) Non-Cognition (Anupalabdhi)
31. Anil has decided to use either a DVD-RW or DVD-R. Which of the following statements are true about these storage devices?
- A. Both DVD-R and DVD-RW are read-only.  
 B. DVD-R can be written only once.  
 C. DVD-RW can be written too many times.  
 D. Both DVD-R and DVD-RW can be written only once.

Choose the correct answer from the options given below:

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

32. Match List I with List II

List I (Computer Terms)	List II (Description)
A. Linux	I. Text File Editor
B. Mozilla Firefox	II. Image File Format
C. Notepad	III. Operating System
D. JPEG	IV. Web Browser

Choose the correct answer from the options given below:

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

33. Consider the spreadsheet given below:

	A	B	C
1	Project	Number of days	
2	A	15	
3	A	20	
4	B	30	
5	A	10	
6	B	10	
7	A	5	

What is the output of the following formula in Cell C1?

=SUMIF(A2: A7 "A", B2: B7)

- (a) 100                      (b) 90  
 (c) 50                        (d) 20

34. The image, sound, and video data can be created in a number of file formats. In this context, which of the following are compressed file formats?
- A. JPEG                      B. MP3  
 C. MINI                      D. ABI  
 E. MP4

Choose the correct answer from the options given below:

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

35. Which of the following is not a mobile device?

- (a) iPad                      (b) Smartphone  
 (c) Desktop PC              (d) Kindle

36. In helping to protect people from exposure to UV radiators, Montreal Protocol contributes also to the attainment of the following Sustainable Development Goals (SDGs):

- (a) SDGs 3, 11, 14 and 15  
 (b) SDGs 4, 7, 11 and 15  
 (c) SDGs 1, 3, 5 and 11  
 (d) SDGs 3, 5, 8 and 12

37. Identify the non-recyclable wastes among the following:

- A. Paper                      B. Plastic bottles  
 C. Thermocol                D. Tetra packs  
 E. Metal

Choose the correct answer from the options given below:

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

38. A key component in Swachh Bharat Mission (Grameen), 'SLWM stands for

- (a) Solid and Liquid Waste Management  
 (b) Sanitation and Low Waste Management  
 (c) State-Level Waste Management  
 (d) Sanitation-Level Water Management

39. Match List I with List II

List I	List II
(Source / Process)	(Air Pollutant)
A. Transport Sector	I. Methane
B. Refrigeration and Airconditioning	II. Volatile Organic Carbons (VOCs)
C. Landfills	III. Dioxins
D. Incineration of Medical Waste	IV. HFCs

Choose the correct answer from the options given below:

- (a) A-(III), B-(II), C-(IV), D-(I)  
 (b) A-(II), B-(IV), C-(I), D-(III)  
 (c) A-(II), B-(IV), C-(III), D-(I)  
 (d) A-(III), B-(IV), C-(I), D-(II)
40. Arrange the following fossil fuels in increasing order of their carbon intensities (gC/MJ):  
 A. Natural gas  
 B. Coal  
 C. Petroleum

Choose the correct answer from the options given below:

- (a)  $A < C < B$                       (b)  $C < A < B$   
 (c)  $B < A < C$                       (d)  $A < B < C$
41. During the British rule in India who among the following is accredited with diverting the attention of the young Indians from Western education to Oriental education?  
 (a) Curzon                      (b) Macaulay  
 (c) Annie Besant              (d) Fergusson

42. Given below are two statements:

**Statement I:** Universities recognized as Institute of Eminence (IoE) are exempted from Government approvals for seeking academic collaborations with any foreign higher education institution.

**Statement II:** Universities with the status of IoE have complete Academic/Administrative/Financial autonomy.

In 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

43. Acronym 'NCVET' represents

- (a) National Commission for Vocational Education and Technology  
 (b) National Council for Vocational Education and Training  
 (c) National Council for Vocational Education and Testing  
 (d) National Commission for Virtual Education and Technology

44. National Education Policy (2020) envisages having a large multidisciplinary higher education institution in or near every district of the country by the year

- (a) 2035                      (b) 2030  
 (c) 2045                      (d) 2040

45. **Statement I:** Academic Bank of Credit facility is meant for credit, redemption, and degree authentication with students as account holders.

**Statement II:** Academic Bank of Credit will be a degree-awarding institution

In 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

**Read the following passage and answer the questions:**

The wastage of food is substantial in every country, but some studies have shown that it is more serious in developing countries. The UNFAO estimated that one-third of all produced food may be getting wasted. The world produces twice the amount of food that is needed, but large numbers of people are deprived of it due to wastage and other reasons. Food gets wasted at the farm when it moves to the market, is processed, stored, shifted to shops, and finally in the kitchen. Many fruits and vegetables perish soon after harvesting. There is a need to improve production and storage practices. transport infrastructure, cold chain systems, and processing techniques. Modern technologies and better packaging methods are needed. But even in countries where these facilities are available, wastage is high. So. the most important requirement is to improve popular awareness of the need to ensure that food is not wasted in any form, at any stage. Some countries have launched a clean plate campaign against the wastage of food. It is estimated that food worth at least Rs. 1 lakh crore is wasted

in India, and this does not include the wastage of cooked food. A part of that should be enough to feed the large numbers of hungry people in the country, which is ranked 94 out of 107 countries in the Global Hunger Index. Food is wasted massively at weddings and on other occasions. The UN report says that reducing food waste would also cut greenhouse gas emissions and slow the destruction of nature through land conversion and pollution. Avoiding food waste should therefore become a national mission. It will have very positive environmental, social, and economic impacts. Let us remember that millions of families go hungry every day in many parts of the world. In India, the household food waste estimate is 50 kg per capita per year, which is less than the US and China. But this may not be because of the more efficient use of food, but because overall availability is less.

46. The world produces more food, but a large number of people are deprived of it because of
- Poor marketing strategies
  - Multi-point wastage
  - Traditional farming practices
  - Transport and storage bottlenecks

47. How can we prevent food wastage?

- Through popular awareness
- By better packaging methods
- With a dedicated supply chain system
- By delivery of food to the needy

48. Preventing food wastage in India will improve its position in

- The FAO ranking
- The World Poverty Index
- The Global Hunger Index
- The Human Development Index

49. Food wastage is also responsible for

- Unequal distribution of food
- The gap between rich and poor countries
- Impact on the transport sector
- Climate change and pollution

50. The passage suggests that food wastage prevention should become

- A movement for modern technologies
- A global clean plate campaign
- A national mission in India
- A strategy for equal access to the food supply

## ANSWER KEY

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

## ANSWERS AND EXPLANATIONS

1. (b) Cost of whole company production = 50

For A, the entire production ratio is 5, item I's total production ratio is 2%, and item A total production ratio is 15%.

For C, the ratio of total production is 5, the ratio of item I's total production is 4, and the percentage of C's total production is 22%.

Required Total cost equals the sum of the costs for producing Items I and II by Companies A and C

$$= \frac{2}{5} \times \frac{15}{100} \times 50 + \frac{4}{5} \times \frac{22}{100} \times 50$$

$$= 3 + 8.8 = 11.8 \text{ crores}$$

2. (d) Total production = 50

$$D = 50 \text{ cr} \times 8\%$$

$$= 4 \text{ cr} \times \frac{5}{8} \times \frac{25}{100} = 6250000$$

or 62.5 lakhs

3. (d) Cost of production of Item I of F =  $\frac{x}{100} \times$  Cost of production item 2 of D

$$50 \times \frac{5}{100} \times \frac{1}{5} = \frac{x}{100} \times 50 \times \frac{8}{100} \times \frac{5}{8}$$

$$x = 20\%$$

4. (c) Cost of production of item 1 of A: Cost of production of item 1 of D

$$50 \times \frac{15}{100} \times \frac{2}{5} : 50 \times \frac{8}{100} \times \frac{3}{8}$$

$$2 : 1$$

5. (b) The cost of every business output is 50  
 For A, Item II, the ratio of total production is 5, Item II's total production is 3, and 15% of A's total production is created; 20% of A's profit is generated from the manufacture of Item II.

For B, the ratio of total production for the Item I is 5, the ratio of total production of Item I is 3, and the profit gained by company B from producing item I is 32%.

The required profit is equal to the sum of the profits made by companies B and A during the manufacturing of Items I and II.

$$50 \times 11/100 \times 3/5 \times 32/100 + 50 \times 3/5 \times 32/100$$

$$3/5 \times 20/100$$

$$= 1.956 \text{ cr}$$

21. (a) The following pattern is being followed in the series:

- $(2^3) - 1 = 7$
- $(3^3) - 1 = 26$
- $(4^3) - 1 = 63$
- $(5^3) - 1 = 124$
- $(6^3) - 1 = 215$  and so on.

The wrong term is = 28.

22. (a) Let's assume the cost of a chair is "x".

The total cost of the chairs is  $13 \times x = 13x$

And the total cost of the tables is  $5 \times 1227 = 6135$

So, the total cost of both chairs and tables is  $13x + 6135 = 8280$

Now, we can solve for x

$$8280 - 6135 = 2145$$

Dividing by the number of chairs:

$$2145 / 13 = 165$$

So, the average cost of a chair is 165 Rupees.

23. (c) B (+3) = E

E (+3) = H

H (+3) = K

M (+2) = O

O (+2) = Q

Q (+2) = S

O (+2) = Q

Q (+2) = S

S (+2) = U

Thus, option (c) is correct.

24. (d) Speed S1 = 3km/hr

Speed S2 = 4km/hr

Time t1 = 40min

Time t2 = 30min

Time = Distance / Speed

If the speed is 3 km/hr then reaches 40 min late

$$T + 40/60h = d/(3\text{km/hr}) \dots\dots\dots\text{eq(I)}$$

If the speed is 4 km/hr then reaches 30 min before

$$T - 30/60h = d/(4\text{km/hr}) \dots\dots\dots\text{eq(II)}$$

By solving equations 1 and 2 we get,

$$d/3 + 40/60 + 30/60 = d/4$$

$$d/3 - d/4 = 70/60$$

$$d/12 = 7/6$$

$$d = 14$$

Thus, option (d) is correct.

25. (b) A series discount is a series of parallel discounts that are applied to the item's initial cost.

We must determine the total impact of these discounts on the price of the item in order to get the corresponding single discount for a series reduction of 10%, 20%, and 30%.

Price after discount = original price × (1 – discount rate)

Let's assume that the original price is 100. The price after each discount will be:

After the first discount of 10%:  $100 \times (1 - 0.10) = 90$

After the second discount of 20%:  $90 \times (1 - 0.20) = 72$

After the third discount of 30%:  $72 \times (1 - 0.30) = 50.4$

So, the final price after all three discounts is 50.4. To find the equivalent single discount, we need to find the discount rate that results in this final price. We can use the formula:

$$\text{discount rate} = 1 - (\text{final price} / \text{original price})$$

$$\text{So, discount rate} = 1 - (50.4 / 100) = 0.496 \text{ or } 49.6\%$$

Therefore, the equivalent single discount for a series discount of 10%, 20%, and 30% is 49.6%.