

UGC (NET) EXAMINATION PAPER

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Directions : Study the Pie-diagram below and then answer the question Nos. 1 to 3.



- What is the percentage of total expenditure incurred on accommodation and clothing together?
 - $37\frac{1}{2}$
 - 50
 - $33\frac{1}{3}$
 - 25
- What per cent of the total expenses was incurred on accommodation?
 - 90
 - $33\frac{1}{3}$
 - 25
 - 15
- The expenditure incurred on food is as much as on
 - education and accommodation
 - education and other expenses
 - accommodation and clothing
 - other expenses and clothing
- Which of the following sequences of operations will result in the same starting number, 20?
 - $+2 - 6 \times 3 + 6$
 - $\div 5 + 8 - 7 + 14$
 - $\times 2 - 5 \div 9 + 15$
 - $10 \times 1 - 8 \div 4$

Directions (Qs. Nos. 5 to 7) : Which of the following numbers given against four answers choices completes the number series.

- 512, 256, 128, ?, 32, 16, 8
 - 52
 - 64
 - 64
 - 55
- 2, 7, 17, 32, 52, 77, ?
 - 107
 - 91
 - 101
 - 92

- 3, 5, 9, 15, 23, 33, 45, 59, ?
 - 60
 - 75
 - 72
 - 81

8. Evaluate the following statements in terms of whether each is a fact, opinion, prejudice or advice.

- Women are not suitable for Police Service.
- In democracy, no party should be in power for too long.
- Have proper rest, even during the examination time.
- Obesity is a risk factor for coronary heart disease.

Which of the following is the correct alternative:

	Opinion	Prejudice	Fact	Advice
(a)	B	C	D	A
(b)	B	A	D	C
(c)	C	A	D	B
(d)	B	D	C	A

9. Given below are two Statements—I and II, followed by two Conclusions—A and B. Considering the statements to be true, indicate which of the following Conclusions logically follow from the given statements by selecting one of the four response alternatives given below.

Statements :

- Some teachers are women
- No teacher is absent

Conclusions :

- There are no male teachers
- All women teachers are present
- Only A is true
- Only B is true
- Both A and B are true
- Neither A nor B is true

10. Considering the proposition given below to be true, indicate which of the following conclusions can be drawn validly.

Proposition : No teacher is on time for the class.

Conclusions :

- (a) No persons who are on time for their classes are teachers
 (b) Some teacher are not late for their classes
 (c) Most teacher come to their classes on time
 (d) Few teachers come on time for their classes
11. Facing towards South, Neha walked 50 metres. She then turned to her right and walked 30 metres. She again turned right and walked 50 metres. How far was she from his original point and in which direction she is now?
 (a) 30 metres and in the East
 (b) 30 metres and in the West
 (c) 50 metres and in the West
 (d) 30 metres and in the North
12. Six boys are standing in a row. D is to the left of E. C is between A and E but not near to B. B is to the right of E and a neighbour of D. Who are on the extremes?
 (a) C and D (b) A and E
 (c) F and C (d) E and B
13. In a month there are five Saturdays. The first day of the month would be
 (a) Sunday (b) Friday
 (c) Wednesday (d) Monday
14. If we assume $64 \times 52 = 17$; $48 \times 56 = 23$ and $74 \times 35 = 19$. What can 84×37 be
 (a) 22 (b) 20
 (c) 31 (d) 18
15. If $ABC = 144$, which of the following cannot be the value of C
 (a) 8 (b) 4
 (c) zero (d) 2
16. If LACK is coded as 396 what will be the code for BACK
 (a) 56 (b) 72
 (c) 66 (d) 86
17. In a military code writes TARGET as RATTEG. Using the same code BRIDGE should be written as
 (a) DOEBRI (b) IRBDGE
 (c) BRIEGD (d) IRBEGD
18. Complete the following series
 D Q L L
 (a) W (b) C
 (c) L (d) N

19. Which of the following operations will not give the same number as the first one

- (a) $54 + 6 - 3 \times 4 + 8 - 7 \times 2 \div 4 + 2 - 2$
 (b) $54 - 7 \times 1 + 8 \times 2 - 12 \times 2 + 18 \div 3 + 3 \times 3$
 (c) $54 + 5 \times 2 - 30 \div 3 + 7 \times 4 - 40 - 3 \times 4$
 (d) $54 - 16 + 7 \times 3 - 18 \div 2 + 5 \times 2 - 4$

20. Fill in the missing number in the following arrangement based on some principle

8	6	4
3	?	7
14	16	18

- (a) 4 (b) 5
 (c) 6 (d) 8

21. Pointing to a lady Ramu said: "Her mother's husband's sister is my aunt." How is he related to the lady?

- (a) Brother (b) Brother-in-law
 (c) Uncle (d) Husband

22. The sum of age of a man and his son is 100 yrs. 30 yrs. ago the man was three times as old as his son. Find the age of his son at present

- (a) 35 (b) 40
 (c) 50 (d) None of these

23. In an examination 40% students fail in Maths, 30% in English and 15% in both. Find the Pass percentage

- (a) 50% (b) 65%
 (c) 30% (d) 45%

24. To fill in the cells in the columns and rows of the figure shown below, four operations are given. Find out which operation will result in 16 in all the three diagonal cells as shown in the figure :

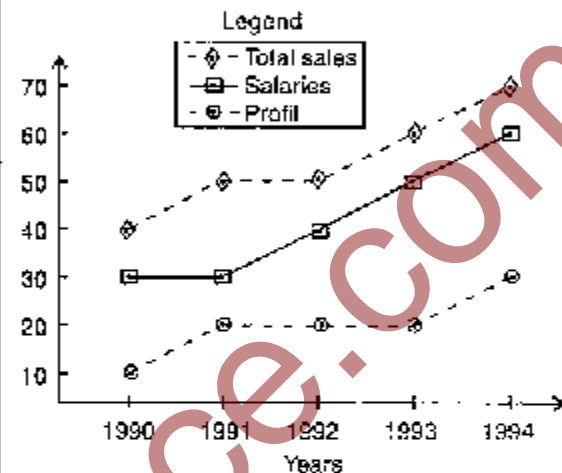
16		
	16	
		16

Operation :

- | Column | Row |
|-----------------------------------|-------------------------------|
| (a) multiply by 2.
divide by 4 | multiply by 4.
divide by 2 |
| (b) add 5, subtract 10 | add 10, subtract 5 |
| (c) multiply by 4.
divide by 2 | divide by 4,
multiply by 2 |
| (d) subtract 4.
multiply by 2 | divide by 4, add 10 |

25. Which of the following teachers will you like most
 (a) a loving teacher
 (b) a teacher of highly idealist philosophy
 (c) a teacher who often amuses his students
 (d) a disciplined teacher
26. Which of the following is not a successful communicator?
 (a) One who presents material in a precise and clear way
 (b) One who is able to adopt himself according to the language of the communicatee
 (c) One who knows a lot but is some what reserve in his attitude
 (d) One who sometimes becomes informal before the receiver and develops rapport
27. Which of the following teachers will you like most
 (a) one who uses board occasionally
 (b) one who uses chart and maps
 (c) one who uses film projector along with the proper use of the board
 (d) one who uses motion picture as a last resort
28. A train runs for 2 hrs at the speed of 35 km/h, it runs for $3\frac{1}{2}$ hrs at the speed of 60 km/h and then runs for $2\frac{1}{2}$ hrs. at the speed of 70 km/h. Find the average speed of the train.
 (a) 50 km/h (b) 55 km/h
 (c) 80 km/h (d) 56.87 km/h
29. A train completed half a trip at 30 miles per hour and the other half at 60 miles per hour. If the whole trip was 20 miles, how many minutes did the train take to complete the trip
 (a) 90 minutes (b) 60 minutes
 (c) 45 minutes (d) 30 minutes
30. In Prakash's family there are four sisters. Each sister has a brother. How many male members are there in the family?
 (a) 4 (b) 5
 (c) 6 (d) 2
31. If the direction North-East becomes South-East, how will other directions change?
 (a) West to North
 (b) South to South-West
 (c) North-West to East
 (d) East to South-West

Directions (Qs. Nos. 32 to 35) : In the graph given below, the total sales, profit and details of salaries of employees of a firm have been given. On the basis of this graph, answer the questions that follow it.



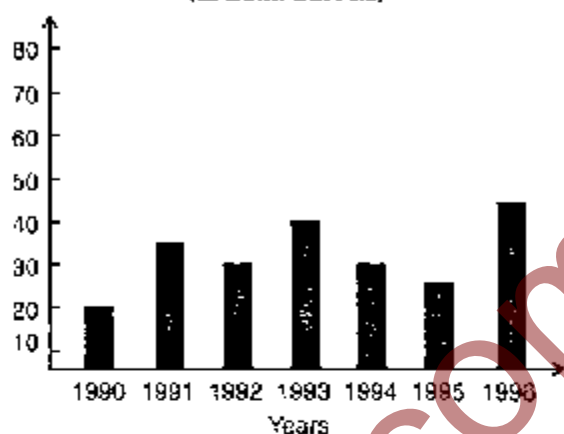
32. In the year 1991 what was the percentage increase in profit as compared to the year 1990?
 (a) 78% (b) 100%
 (c) 90% (d) 85%
33. In the year 1991 by what amount were the salaries paid to the employees less than the total income?
 (a) 16.80 lakh (b) 17.00 lakh
 (c) 20.00 lakh (d) 25.00 lakh
34. During the three years (during which, profit was constant), what was the average of total income?
 (a) 53.33 lakh (b) 16.70 lakh
 (c) 52.00 lakh (d) 80.00 lakh
35. In the year 1993, by what percentage, are the total salaries paid to employees less than total sales?
 (a) 76.02% (b) 16.66%
 (c) 80.23% (d) 15.01%
36. The oldest news paper is
 (a) Times of India
 (b) Hindu
 (c) Maharashtra Gajram
 (d) Statesman
37. On matters of academics (knowledge) a researcher should consider himself as
 (a) entirely dependent on the teacher
 (b) open minded and radical

- (c) a status quo maintainer
(d) fairly knowledgeable
38. Which of the following should a teacher adopt in his lecture?
(a) Precise and low tone
(b) Elongated tone
(c) Precise and high tone
(d) Moderate tone
39. A new teacher to start with will have to
(a) enforce discipline in the class
(b) establish rapport with the students
(c) cut jokes with the students
(d) tell the students about his qualifications
40. An effective teacher will ensure
(a) cooperation among his students
(b) laissez-faire role
(c) competition among students
(d) competition or cooperation as the situation demands
41. If students do not understand what is taught in the classroom, the teacher should feel
(a) terribly bored
(b) to explain it in a different way
(c) that he is wasting time
(d) pity for the students
42. Which of the following will not hamper effective communication in the class.
(a) A lengthy statement
(b) An ambiguous statement
(c) A precise statement
(d) A statement which allows the listener to draw his own conclusions
43. The average age of a father and his 6 children is 12 years. If father is removed from this group, then the average age of the group is reduced by 5. So, the age of father is
(a) 40 years (b) 42 years
(c) 48 years (d) None of these
44. In a mixture of 80 litres, the ratio of milk and water is 3 : 2. How much more water should be added to the mixture so that the ratio of milk and water becomes 2 : 3?
(a) 40 litres (b) 25 litres
(c) 35 litres (d) None of these

Directions (Qs. Nos. 45 to 49) : Study the graph given below very carefully and answer the questions that

follow it.

Crude Oil Import by India in Various Years
(in Lakh Barrels)



45. From the year 1991 to 1992, what was the nearest percentage of reduction in import of crude oil?
(a) 22 (b) 18
(c) 8 (d) 14
46. By what percentage, was the combined imports of the years 1994 and 1995 more than the import of 1993?
(a) 140 (b) 120
(c) 160 (d) None of these
47. From the year 1995 to the year 1996 what was the percentage increase in import of crude oil?
(a) 180 (b) 60
(c) 90 (d) None of these
48. If the rate of one barrel of crude oil was Rs 25.60 in 1995 then what was the total value of import (in Rupees) in that year?
(a) Rs. 64 crore (b) Rs. 64 lakh
(c) Rs. 6.4 crore (d) Rs. 8.2 crore
49. In how many years, were the imports higher than the average value of imports?
(a) 1 (b) 2
(c) 3 (d) 4
50. I went due North and covered a distance of 30 metres, then turned to West and walked for 20 metres. Then, I turned to South and walked for 10 metres and finally, turned to East and walked for another 10 metres. In which direction I am vis-a-vis my point of starting?
(a) Northern (b) Western
(c) Southern (d) Eastern

EXPLANATORY ANSWERS

1. (a) : 2. (c) :

3. (a) : Expenditure on food $\left(37\frac{1}{2}\right)$ = Expenditure on accommodation (25%) + Expenditure on education $\left(12\frac{1}{2}\%\right)$.

4. (c) :

5. (c) : Numbers are becoming halved at every step i.e.,

$$512 \div 2 = 256$$

$$256 \div 2 = 128$$

$$128 \div 2 = 64$$

$$64 \div 2 = 32 \text{ and so on}$$

6. (a) : $2 + 5 = 7$

$$7 + 10 = 17$$

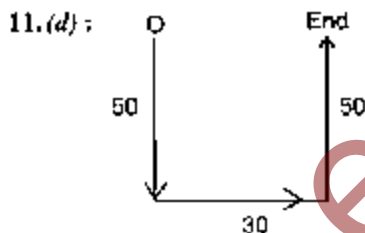
$$17 + 15 = 32$$

$$32 + 20 = 52$$

it means number are increasing with an interval of 5, 10, 15, 20, 25, 30 etc.

7. (b) : Numbers are increasing with the interval of 2, 4, 6, 8, 10, 12 and 14.

8. (b) : 9. (d) : 10. (d) :



12. (b) : A C E B D F is the row.

13. (b) : In such case in the first day of the month may be Thursday, Friday or Saturday.

14. (a) : Add all the four digits such as

$$6 + 4 + 5 + 2 = 17$$

$$4 + 8 + 5 + 6 = 23$$

$$7 + 4 + 3 + 5 = 19$$

$$\text{and } 8 + 4 + 3 + 7 = 22$$

15. (c) : 16. (c) : 17. (d) : 18. (c) : 19. (b) :

20. (b) : Make the second number double and then add it with the first.

21. (a) : 22. (b) : 23. (d) :

24. (c) : Here column is multiplied by 4 and row is divided by 4. In the same way column is divided by 2 and row is multiplied by 2. Thus no change in the numerical figure is taking place.

25. (a) : 26. (c) : 27. (c) : 28. (d) : 29. (d) :

30. (d) : Each sister has a brother means one male member and Prakash is another male member. So, $1 + 1 = 2$.

31. (a) :

32. (b) : Percentage increase in profit

$$= \frac{20 - 10}{10} \times 100 = 100\%$$

33. (c) : In the year 1991, difference between the salaries and income = $50 - 30 = 20$ lakh.

34. (c) : Average of income

$$= \frac{50 + 50 + 60}{3} = \frac{160}{3} = 53.33.$$

35. (b) : Percentage of reduction of salaries when compared to total sales

$$= \frac{60 - 50}{60} \times 100 = 16.66\%$$

36. (a) :

37. (b) : A researcher is always open minded and radical free from biases and prejudices antagonistic to status quo and relies on his own finding.

38. (a) :

39. (b) : Rapport between a teacher and students is a must for effective communication. It is the first step for a newly teacher.

40. (d) : 41. (b) : 42. (c) :

43. (b) : Total of the ages of father and 6 children = $7 \times 12 = 84$ years

$$\text{Total of the age of 6 children} = 6 \times (12 - 5) = 42 \text{ years}$$

$$\text{So, age of father} = 84 - 42 = 42 \text{ years.}$$

44. (a) : Quantity of milk in the original mixture =

$$\frac{3 \times 80}{3 + 2} = 48 \text{ litres}$$

$$\text{Quantity of water in the original mixture} = 80 - 48 = 32 \text{ litres}$$

If x extra litres of water are added to the mixture, then :

$$\frac{48}{32+x} = \frac{2}{3}$$
$$\Rightarrow 64 + 2x = 144$$
$$\Rightarrow 2x = 144 - 64 = 80$$

$$\text{Hence } x = \frac{80}{2} = 40 \text{ litres.}$$

45. (d) : Required percentage reduction

$$= \frac{5}{35} \times 100 = 14.28\% = 14\%$$

46. (d) : Total imports of 1994 and 1995
= 55 lakh barrels

Import of 1993 = 40 lakh barrels

Hence, required percentage

$$= \frac{55 \times 100}{40} = 137.5\%$$

47. (d) : Required percentage increase

$$= \frac{20}{25} \times 100 = 80\%$$

48. (c) : Total value of imports = 2500000×25.60
= Rs. 6.4 crore.

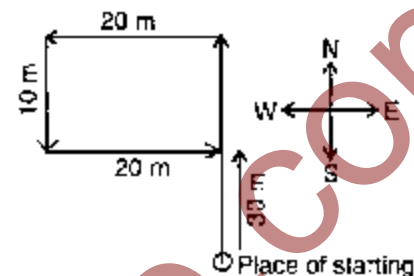
49. (c) : Average import of given years

$$= \frac{20 + 35 + 30 + 40 + 30 + 25 + 45}{7}$$

$$= 32.14 \text{ lakh barrels.}$$

Hence, the imports of crude oil during the years 1991, 1993 and 1996 are more than the average value of all the imports. So, the total number of these years is 3.

50. (a) :



It is clear from this figure that I am on the northern side vis-a-vis my place of starting.