

Roll. No.

Question Booklet Number

O.M.R. Serial No.

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202592

BBA (SEM.-II) (NEP) EXAMINATION, 2024
BUSINESS ADMINISTRATION
F010203T - A : Business Mathematics
F010203T - B : Advertising Management

Paper Code							
F	0	1	0	2	0	3	T

Question Booklet
Series

D

Time : 1 : 30 Hours

Max. Marks : 75

Instructions to the Examinee :

1. Do not open the booklet unless you are asked to do so.
2. The booklet contains 100 questions. Examinee is required to answer 75 questions in the OMR Answer-Sheet provided and not in the question booklet. Booklet is in two Sections : Section-A (1-50) & Section-B (51-100). Candidate should select 37 and 38 questions respectively from both Sections. All questions carry equal marks.
3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be got immediately replaced.
4. Four alternative answers are mentioned for each question as - A, B, C & D in the booklet. The candidate has to choose the correct / answer and mark the same in the OMR Answer-Sheet as per the direction :

(Remaining instructions on last page)

परीक्षार्थियों के लिए निर्देश :

1. पश्न-पुस्तिका को तब तक न खोलें जब तक आप कहा न जाए।
2. पश्न-पुस्तिका में 100 प्रश्न हैं। परीक्षार्थी को 75 प्रश्नों को केवल दी गई OMR आन्सर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। प्रश्न-पुस्तिका दो खण्डों : खण्ड-अ (1-50) तथा खण्ड-ब (51-100) में है। परीक्षार्थी को प्रत्येक खण्ड से क्रमशः 37 और 38 प्रश्न करने हैं। सभी प्रश्नों के अंक समान हैं।
3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR आन्सर-शीट को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका जिसमें कुछ भाग छपने से छूट गए हों या प्रश्न एक से अधिक बार छप गए हों या उसमें किसी अन्य प्रकार की कमी हो, उसे तुरन्त बदल लें।
4. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार सम्भावित उत्तर- A, B, C एवं D हैं। परीक्षार्थी को उन चारों विकल्पों में से सही उत्तर छँटना है। उत्तर को OMR उत्तर-पत्रक में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है :

(शेष निर्देश अन्तिम पृष्ठ पर)

SECTION -A: BUSINESS MATHEMATICS

1. Akhil purchased 70 kg vegetable at Rs. 420, then sold them at the rate of Rs. 6.50 per kg, find the profit percent.
(A) 15%
(B) 12.5%
(C) 14%
(D) None of the above
2. If a, b, c are in A.P. then :
(A) $b = a + c$
(B) $2b = a + c$
(C) $b^2 = a + c$
(D) $2b^2 = a + c$
3. The 4th term from the end of the A.P. -11, -8, -5, ..., 49 is :
(A) 37
(B) 40
(C) 43
(D) 58
4. The sum of first 16 terms of the A.P. 10, 6, 2, ... is :
(A) - 320
(B) 320
(C) - 352
(D) - 400
5. Sum of first five multiples of 3 is :
(A) 45
(B) 55
(C) 15
(D) None of the above
6. I stands for :
(A) Simple interest
(B) Compound interest
(C) Rate of interest
(D) No. of years
7. If $a : b = 3 : 7$ and $b : c = 9 : 5$. What is $a : b : c$?
(A) 3 : 15 : 5
(B) 21 : 16 : 45
(C) 3 : 7 : 5
(D) 27 : 63 : 35
8. What is 4th proportional in 9, 13 and 153?
(A) 251
(B) 181
(C) 175
(D) 221
9. 2.09 can be expressed in terms of percentage as :
(A) 2.09%
(B) 20.9%
(C) 209%
(D) 0.209%

10. If the matrix A is both symmetric and Skew-symmetric, then :
- (A) A is a diagonal matrix
(B) A is a zero matrix
(C) A is a square matrix
(D) None of the above
11. If matrix $A = \begin{pmatrix} 0 & 0 & 5 \\ 0 & 5 & 0 \\ 5 & 0 & 0 \end{pmatrix}$ then it is a :
- (A) Scalar matrix
(B) Diagonal matrix
(C) Unit matrix
(D) Square matrix
12. The sum of two skew matrices is :
- (A) Symmetric matrix
(B) Null matrix
(C) Skew-symmetric matrix
(D) Diagonal matrix
13. The set $A = \{x : x \in \mathbb{R}, \text{ and } x^2 = 9, 2x = 4\}$ is :
- (A) Empty set
(B) Singleton set
(C) Infinite set
(D) None of the above
14. Let $A = \{x : x \text{ is a letter in the word FOLLOW}\}$, $B = \{y : y \text{ is a letter in the word WOLF}\}$:
- (A) A and B are disjoint
(B) $A = B$
(C) $A \neq B$
(D) None of the above
15. If $A = \phi$ then total number of elements in $P(A)$ are :
- (A) No element
(B) Zero
(C) Two
(D) One
16. A set has n elements, then the total number of subsets are :
- (A) 2^n
(B) 2^{n-1}
(C) 2^{2n}
(D) None of the above
17. The smallest set A such that $A \cup \{4, 5\} = \{1, 2, 3, 4, 5\}$ is :
- (A) $\{3, 4, 5\}$
(B) $\{1, 2, 3\}$
(C) $\{1, 2\}$
(D) $\{1, 2, 3, 4, 5\}$

18. Abay buys a shirt marked at ₹ 800. He receives a 10 percent discount. How much does he pay for the shirt?
- (A) ₹ 540
(B) ₹ 70
(C) ₹ 720
(D) ₹ 740
19. In selling an article, a shopkeeper makes a profit of 20% on his cost price of ₹ 80. What is the selling price?
- (A) ₹ 66
(B) ₹ 96
(C) ₹ 100
(D) ₹ 106
20. In $4 : 7 :: 16 : 28$, 7 and 16 are called:
- (A) Extreme terms
(B) Middle terms
(C) Both (A) and (B)
(D) None of the above
21. If 12, 21, 72, 126 are in proportion, then:
- (A) $12 \times 21 = 72 \times 126$
(B) $12 \times 72 = 21 \times 126$
(C) $12 \times 126 = 21 \times 72$
(D) None of the above
22. The length and breadth of a rectangle are in the ratio 3 : 1. If the breadth is 7 cm, then the length of the rectangle is :
- (A) 14 cm
(B) 16 cm
(C) 18 cm
(D) 21 cm
23. Length and width of a field are in the ratio 5 : 3. If the width of the field is 42 m then its length is :
- (A) 100 m
(B) 80 m
(C) 50 m
(D) 70 m
24. A _____ is an ordered collection of objects.
- (A) Relation
(B) Function
(C) Set
(D) None of the above
25. Additive inverse of a matrix A is :
- (A) $\text{Adj } A |A|$
(B) $|A|$
(C) A^2
(D) None of the above

26. Which set is the subsets of all given sets :
- (A) $\{1\}$
 (B) $\{0\}$
 (C) ϕ
 (D) $\{0, 1\}$
27. In a Group of 300 people, 150 can speak French and 200 can speak German. How many can speak both French and German?
- (A) 40
 (B) 50
 (C) 20
 (D) None of the above
28. If A and B are two sets such that $n(A) = 15$, $n(B) = 21$, and $n(A \cup B) = 36$ then $n(A \cap B)$ equal to :
- (A) 2
 (B) 0
 (C) 4
 (D) 15
29. What is the formula to calculate permutations of n distinct objects taken r at a time?
- (A) ${}^n P_r = n!$
 (B) ${}^n P_r = \frac{n!}{(n-r)!}$
 (C) ${}^n P_r = \frac{n!}{r!}$
 (D) ${}^n P_r = \frac{n!}{(n-r)!r!}$
30. How many permutations can be formed from the letters of the word "MATH"?
- (A) 12
 (B) 24
 (C) 6
 (D) 8
31. In how many ways can 5 books be arranged on a shelf?
- (A) 120
 (B) 60
 (C) 20
 (D) 5
32. How many permutations can be formed the digits 1, 2, 3 and 4 taken 3 at a time?
- (A) 12
 (B) 24
 (C) 6
 (D) 4
33. In how many ways can the letters of the word "APPLE" be arranged?
- (A) 5
 (B) 10
 (C) 20
 (D) 60

34. Which term of A.P. 72, 70, 68, 66, ..., 40?
- (A) 16
(B) 17
(C) 18
(D) 20
35. If $1 + 6 + 11 + 16 + \dots + x = 235$ then x is equal to :
- (A) 24
(B) 36
(C) 46
(D) None of the above
36. Which term of A.P. 72, 70, 68, 66, ..., 40?
- (A) 16
(B) 17
(C) 18
(D) 20
37. 7th term of an A.P. is 40. Then the sum of first 13 terms is :
- (A) 520
(B) 53
(C) 2080
(D) 1040
38. Transpose of a row matrix is :
- (A) Zero matrix
(B) Diagonal matrix
(C) Column matrix
(D) Row matrix
39. If the first term of a G.P. is 2 and sum to infinity is 6, then $r =$ ____.
- (A) $1/3$
(B) $2/3$
(C) $3/2$
(D) $4/3$
40. If the 10th term of a geometric progression is 9 and 4th term is 4, then its 7th term is :
- (A) 6
(B) 36
(C) $4/9$
(D) $9/4$
41. The derivative of $f(x) = |x - 1| + |x - 4|$ at $x = 3$, is :
- (A) 3
(B) -3
(C) 0
(D) 1
42. Matrices A and B will be inverses of each other only if :
- (A) $AB = BA$
(B) $AB = BA = 0$
(C) $AB = 0, BA = 1$
(D) $AB = BA = 1$

43. Ramesh's salary was reduced by 10% and then the reduced salary was increased by 10%. What was his ultimate loss?
- (A) 0%
(B) 10%
(C) 1%
(D) 5%
44. The order of matrix A is $m \times p$ and the order of B is $p \times n$. Then the order of matrix AB is :
- (A) $m \times n$
(B) $n \times m$
(C) $n \times p$
(D) $m \times p$
45. If A is any square matrix, then which of the following is Skew-symmetric?
- (A) $A + A'$
(B) $A - A'$
(C) AA'
(D) $A'A$
46. If A and B are matrices of the same order, then $(AB' - BA')$ is a :
- (A) Skew-symmetric matrix
(B) Null matrix
(C) Symmetric matrix
(D) Unit matrix
47. If the sum of n terms of an A.P. is given by $S_n = 3n + 2n^2$, then the common difference of the A.P. is :
- (A) 3
(B) 2
(C) 6
(D) None of the above
48. The third term of G.P. is 4. The product of its first 5 terms is :
- (A) 43
(B) 44
(C) 45
(D) None of the above
49. If 9 times the 9th term of an A.P. is equal to 13 times the 13th term, then the 22nd term of the A.P. is :
- (A) 0
(B) 22
(C) 220
(D) 198
50. Transpose of a rectangular matrix is a :
- (A) Square matrix
(B) Diagonal matrix
(C) Rectangular matrix
(D) Scalar matrix

SECTION-B : ADVERTISING MANAGEMENT

51. Which media planning strategy focuses on the number of people exposed to an advertisement and the number of times they are exposed?
- (A) Reach and frequency
 - (B) Continuity
 - (C) Selectivity
 - (D) Exclusivity
52. What is the significance of continuity in Media Planning?
- (A) It ensures that advertising messages are delivered consistently over time
 - (B) It limits consumer engagement
 - (C) It increases production costs
 - (D) It relies on guesswork
53. Which of the following is NOT a component of advertising copy?
- (A) Visuals
 - (B) Slogans
 - (C) Target audience
 - (D) Text
54. Which advertising copy type involves directly comparing one product or brand to another?
- (A) Informative
 - (B) Persuasive
 - (C) Comparative
 - (D) Emotional
55. What is the primary purpose of Media Planning?
- (A) To decrease production costs
 - (B) To limit market research
 - (C) To ensure that advertising messages reach the target audience effectively
 - (D) To confuse consumers
56. Which advertising copy type aims to evoke strong emotions in the audience?
- (A) Informative
 - (B) Persuasive
 - (C) Comparative
 - (D) Emotional
57. HOW does advertising research contribute to the effectiveness of advertising campaigns?
- (A) By decreasing consumer trust
 - (B) By evaluating the impact of advertising messages on consumer behaviour and attitudes
 - (C) By limiting market research
 - (D) By increasing production costs
58. Which Media Planning strategy involves selecting specific media channels that best reach the target audience?
- (A) Reach and frequency
 - (B) Continuity
 - (C) Selectivity
 - (D) Exclusivity
59. What distinguishes international advertising from local advertising?
- (A) International advertising focuses only on domestic markets
 - (B) International advertising involves adapting messages for different cultures and languages
 - (C) Local advertising has no legal regulations
 - (D) Local advertising relies solely on print

60. How does the competitive parity method determine the advertising budget?
- (A) By setting the budget based on affordability
 - (B) By matching competitor's spending levels
 - (C) By setting the budget as a fixed percentage of total sales
 - (D) By setting the budget based on guesswork
61. What is the primary advantage of the affordable method?
- (A) It ensures adequate resources for promotional activities
 - (B) It provides a systematic framework for setting specific and measurable objectives
 - (C) It relies on guesswork
 - (D) It decreases consumer trust
62. Which method of establishing the advertising budget is most commonly used by small businesses?
- (A) Percentage of sales method
 - (B) Objective and task method
 - (C) Competitive parity method
 - (D) Affordable method
63. Which approach to establishing the advertising budget is based on the assumption that advertising spending drives sales?
- (A) Percentage of sales method
 - (B) Objective and task method
 - (C) Competitive parity method
 - (D) Affordable method
64. What is the main drawback of the objective and task method?
- (A) It relies on guesswork
 - (B) It does not consider market conditions or competitors' budgets
 - (C) It decreases consumer engagement
 - (D) It limits market research
65. Which approach to establishing the advertising budget is based on the company's financial capabilities?
- (A) Percentage of sales method
 - (B) Objective and task method
 - (C) Competitive parity method
 - (D) Affordable method
66. What does the objective and task method prioritize?
- (A) Market conditions
 - (B) Competitors' budgets
 - (C) Promotional objectives
 - (D) Production costs
67. Which method of establishing the advertising budget ensures that promotional efforts are aligned with marketing objectives?
- (A) Percentage of sales method
 - (B) Objective and task method
 - (C) Competitive parity method
 - (D) Affordable method
68. Which approach to establishing the advertising budget is most suitable for companies with limited resources?
- (A) Percentage of sales method
 - (B) Objective and task method
 - (C) Competitive parity method
 - (D) Affordable method

69. What are promotional objectives?
- (A) Financial goals set by the marketing team
 - (B) Specific goals to be achieved through promotional activities
 - (C) Targets for reducing production costs
 - (D) Objectives unrelated to marketing activities
70. Why is determining promotional objectives important?
- (A) To increase production costs
 - (B) To decrease consumer engagement
 - (C) To provide direction for promotional efforts
 - (D) To limit market research
71. Which approach is commonly used for setting promotional objectives?
- (A) Random selection
 - (B) Trial and error
 - (C) DAGMAR
 - (D) Guesswork
72. What does DAGMAR stand for?
- (A) Defining Advertising Goals for Marketing and Results
 - (B) Determining Advertising Goals for Market Analysis and Reporting
 - (C) Defining Advertising Goals for Measured Advertising Results
 - (D) Determining Advertising Goals for Market Awareness and Response
73. How does DAGMAR help in setting promotional objectives?
- (A) It relies on guesswork
 - (B) It provides a systematic framework for setting specific and measurable objectives
 - (C) It limits the effectiveness of promotional activities
 - (D) It decreases consumer trust
74. What is the significance of setting specific and measurable promotional objectives?
- (A) To confuse consumers
 - (B) To limit the reach of promotional activities
 - (C) To evaluate the effectiveness of promotional efforts
 - (D) To decrease consumer engagement
75. Why is determining the advertising budget important?
- (A) To decrease production costs
 - (B) To limit market research
 - (C) To ensure adequate resources for promotional activities
 - (D) To confuse consumers
76. What are the different approaches to establishing the advertising budget?
- (A) Trial and error only
 - (B) Guesswork only
 - (C) Objective and task method, percentage of sales method, competitive parity method, and affordable method
 - (D) Random selection only

77. What does testing advertising effectiveness involve?
- (A) Evaluating the quality of advertising visuals
 - (B) Assessing the creativity of advertising slogans
 - (C) Measuring the impact of advertising on consumer behaviour and attitudes
 - (D) Determining the legal compliance of advertising messages
78. What is Market testing for ads?
- (A) Conducting surveys to test consumer preferences for advertising messages
 - (B) Testing advertising messages in a controlled market environment before full-scale implementation
 - (C) Testing advertising messages for legal compliance
 - (D) Determining the cost of advertising in different markets
79. Why is international advertising important?
- (A) To limit consumer engagement
 - (B) To decrease production costs
 - (C) To reach global audiences and expand market presence
 - (D) To decrease competition among advertisers
80. What distinguishes international advertising from local advertising?
- (A) International advertising focuses only on domestic markets
 - (B) International advertising involves adapting messages for different cultures and languages
 - (C) Local advertising has no legal regulations
 - (D) Local advertising relies solely on print media
81. Which of the following is NOT a challenge in international advertising?
- (A) Language barriers
 - (B) Cultural differences
 - (C) Legal regulations
 - (D) Lack of competition
82. How does international advertising contribute to brand recognition?
- (A) By limiting consumer engagement
 - (B) By reaching global audiences and increasing brand visibility
 - (C) By decreasing production costs
 - (D) By relying solely on traditional media channels
83. What is the primary goal of advertising copy?
- (A) To confuse consumers
 - (B) To communicate the brand message effectively
 - (C) To decrease consumer engagement
 - (D) To limit market research

84. Which approach to establishing the advertising budget involves determining objectives and then estimating the costs required to achieve them?
- (A) Percentage of sales method
 - (B) Objective and task method
 - (C) Competitive parity method .
 - (D) Affordable method
85. What is the percentage of sales method?
- (A) Setting the budget as a fixed percentage of total sales
 - (B) Setting the budget based on the number of competitors
 - (C) Setting the budget based on guesswork
 - (D) Setting the budget based on random selection
86. Which approach to establishing the advertising budget involves matching competitors' spending levels?
- (A) Objective and task method
 - (B) Percentage of sales method
 - (C) Competitive parity method
 - (D) Affordable method
87. What is the affordable method of establishing the advertising budget?
- (A) Setting the budget based on affordability rather than marketing objectives or competition
 - (B) Setting the budget as a fixed percentage of total sales
 - (C) Setting the budget based on guesswork
 - (D) Setting the budget based on random selection
88. Which method of establishing the advertising budget is considered the most rational and effective?
- (A) Percentage of sales method
 - (B) Objective and task method
 - (C) Competitive parity method
 - (D) Affordable method
89. What is the primary drawback of the percentage of sales method?
- (A) It relies on guesswork
 - (B) It does not consider market conditions or promotional objectives
 - (C) It decreases consumer engagement
 - (D) It limits market research
90. Which factor is not considered when allocating the advertising budget?
- (A) Promotional objectives
 - (B) Market conditions
 - (C) Competitors' budgets
 - (D) Production costs
91. Which approach to establishing the advertising budget emphasizes the importance of setting specific and measurable objectives?
- (A) Percentage of sales method
 - (B) Objective and task method
 - (C) Competitive parity method
 - (D) Affordable method

92. What is advertising copy?
- (A) A legal document for advertising contracts
 - (B) The written or spoken content of an advertisement
 - (C) The financial statement for advertising expenses
 - (D) The physical layout of an advertisement
93. What are the components of an advertising copy?
- (A) Only visuals
 - (B) Only text
 - (C) Both visuals and text
 - (D) Only Slogans
94. Which of the following is NOT a type of advertising copy?
- (A) Informative
 - (B) Persuasive
 - (C) Subliminal
 - (D) Comparative
95. Why is creativity important in advertising?
- (A) To confuse consumers
 - (B) To decrease consumer engagement
 - (C) To grab attention and engage the audience
 - (D) To limit market research
96. What is Media Planning?
- (A) Planning the budget for advertising
 - (B) Planning the content of advertising copy
 - (C) Planning the distribution channels for advertising messages
 - (D) Planning the legal aspects of advertising
97. Why is media planning important in advertising?
- (A) To decrease production costs
 - (B) To ensure that advertising messages reach the target audience effectively
 - (C) To limit consumer engagement
 - (D) To increase competition among advertisers
98. Which of the following is NOT a media planning strategy?
- (A) Reach and frequency
 - (B) Selectivity
 - (C) Exclusivity
 - (D) Continuity
99. What is the Media Mix?
- (A) The amount of money allocated to each media channel
 - (B) The combination of different media channels used in an advertising campaign
 - (C) The legal framework for media planning
 - (D) The process of selecting media representatives
100. Why is advertising research important?
- (A) To decrease consumer trust
 - (B) To limit market research
 - (C) To evaluate the effectiveness of advertising campaigns
 - (D) To confuse consumers

Rough Work

Example :

Question :

Q.1 (A) ☒ (C) (D)

Q.2 (A) (B) ☒ (D)

Q.3 (A) ☒ (C) (D)

5. Each question carries equal marks. Marks will be awarded according to the number of correct answers you have.
6. All answers are to be given on OMR Answer Sheet only. Answers given anywhere other than the place specified in the answer sheet will not be considered valid.
7. Before writing anything on the OMR Answer Sheet, all the instructions given in it should be read carefully.
- After the completion of the examination, candidates should leave the examination hall only after providing their OMR Answer Sheet to the invigilator. Candidate can carry their Question Booklet.
9. There will be no negative marking.
10. Rough work, if any, should be done on the blank pages provided for the purpose in the booklet.
11. To bring and use of log-book, calculator, pager & cellular phone in examination hall is prohibited.
12. In case of any difference found in English and Hindi version of the question, the English version of the question will be held authentic.

Impt. On opening the question booklet, first check that all the pages of the question booklet are printed properly. If there is any discrepancy in the question Booklet, then after showing it to the invigilator, get another question Booklet of the same series.

उदाहरण :

प्रश्न :

प्रश्न 1 (A) ☒ (C) (D)

प्रश्न 2 (A) (B) ☒ (D)

प्रश्न 3 (A) ☒ (C) (D)

5. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।
6. सभी उत्तर केवल ओ०एम०आर० उत्तर-पत्रक (OMR Answer Sheet) पर ही दिये जाने हैं। उत्तर-पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।
7. ओ०एम०आर० उत्तर-पत्रक (OMR Answer Sheet) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाये।
8. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी OMR Answer Sheet उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें। परीक्षार्थी अपने साथ प्रश्न-पुस्तिका ले जा सकते हैं।
9. निगेटिव मार्किंग नहीं है।
10. कोई भी रफ कार्य, प्रश्न-पुस्तिका में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।
11. परीक्षा-कक्ष में लॉग-बुक, कैल्कुलेटर, पेजर तथा सेल्युलर फोन ले जाना तथा उसका उपयोग करना वर्जित है।
12. प्रश्न के हिन्दी एवं अंग्रेजी रूपान्तरण में भिन्नता होने की दशा में प्रश्न का अंग्रेजी रूपान्तरण ही मान्य होगा।

महत्वपूर्ण: प्रश्नपुस्तिका खोलने पर प्रथमतः जाँच कर देख लें कि प्रश्नपुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्षनिरीक्षक को दिखाकर उसी सिरीज की दूसरी प्रश्नपुस्तिका प्राप्त कर लें।