ANDHRA UNIVERSITY: VISAKHAPATNAM
SCHOOL OF DISTANCE EDUCATION
APPLICATION FORM FOR ENTRANCE TEST FOR ADMISSION
Into Three Year and Two Year MBA / (Marketing / Finance / HRM) /
MBA (Hospital Administration) / MCA PROGRAMME 2015-2016

Price: Rs. 300/- (including Regn. & Test Fee)

Note: The applicant should go through instruction book-let first and then fill in the form in his/her handwriting in English.

Examination Centre: (see instructions Book-let for details)
Srikakulam / Visakhapatnam / Gajuwaka/ Kakinada / Rajahmundry / Vijayawada / Hyderabad
(Please tick(P) the examination centre)

1. Name of the Applicant in full:
   (in Block Letters)
   Surname
   Name

2. Name of the Parent / Husband:

3. Address for Communication
   (in Block Letters)

4. Date of Birth:
   (Enclose attested Certificate)
   Day Month Year

5. Do you claim reservation under any one or more of the following categories? If so, put tick mark (ü) in the appropriate box.

   SC ST BCA BCB BCC BCD OBC NCC NSS/AES SPORTS PH DEFENCE WOMEN ANYOTHER
   01 02 03 04 05 06 07 08 09 10 11 12 13 SPECIFY 14

   Enclose Xerox copies of Certificates in support of the above claim.

6. Details of Qualifying Examination Passed.
   Name of the Examination Year of Passing Name of the University

7. Work Experience: Supervisory / Managerial / Professional (Enclose the Service Certificate signed by the employer as per the proforma given in instruction book-let).
   Name of the Organization Designation Years of Service

I hereby declare that the particulars supplied by me are correct to the best of my knowledge and will be supported by original documents when called for. I have carefully gone through the instruction book-let and have become fully conversant with the eligibility criteria to be satisfied for appearing at the entrance test. I fully realise that the issue of Hall Ticket for the Entrance Test does not absolve me of the responsibility of satisfying the eligibility criteria for the entrance test and for admission into MBA/MCA Programme.

Place:

Date:

Signature of the Applicant

Note: Candidates who have put in 5 years of service after graduation as on 1st July of the year of admission or those who qualified in ICET need not appear for this test and can seek admission directly.
ANDHRA UNIVERSITY : VISAKHAPRANAM
SCHOOL OF DISTANCE EDUCATION
APPLICATION FORM FOR ENTRANCE TEST FOR ADMISSION
INTO THREE YEAR & TWO YEAR MBA (Marketing / Finance / HRM) /
Three Year MBA (Hospital Administration) / MCA PROGRAMME 2015 - 2016

Time & Date : 10.00 am to 12.30 pm  26-07-2015
Test Centre : Srikakulam / Visakhapatnam / Gajuwaka / Kakinada / Rajahmundry / Vijayawada / Hyderabad

(To be filled in by the candidate in his / her own handwriting and to be submitted along with the application)

1. Name of the Candidate   :___________________________________________
   (in Block Letters)

2. Name of the Parent / Husband  :___________________________________________

3. Identification Marks a)  ___________________________________________
   b)____________________________________________

I do hereby attest that the candidate has signed in my presence.

Signature of the Attesting Officer
With official stamp

Signature of the Candidate
INSTRUCTIONS TO THE CANDIDATE

1. Candidates are advised to be present in the test hall 15 minutes before the commencement of the test.
2. Candidates will not be admitted to the Entrance Test after 30 minutes of the commencement of the test. Candidates once admitted will not be allowed to leave the hall till half-an-hour before the closing time of the entrance test.
3. Hall Ticket shall be produced at the gate of the test centre and also in the hall at the time of the test, failing which the candidate will not be allowed to appear for the Entrance test.
4. PLEASE NOTE: YOUR SCRIPT WILL NOT BE VALUED IF YOU WRITE ANY IRRELEVANT MATTER OR SYMBOLS, INCLUDING RELIGIOUS MARKS AND SYMBOLS, PRAYERS OR ANY COMMUNICATION WHATSOEVER, ANYWHERE, EITHER ON THE COVER SHEET OR INSIDE THE SCRIPT.
5. ANSWER MUST BE WRITTEN IN BLUE/BLACK INK FOUNTAIN OR BALL PEN ONLY (SKETCH PEN, PENCIL OR INK OR ANY OTHER COLOUR IS NOT ALLOWED)
6. HALL TICKET MUST BE PRESERVED TILL THE TIME OF ADMISSION OF THE COURSE.
7. No. T.A. and D.A. will be paid for any journey undertaken by the candidate for the Entrance test.
8. Adoption of any kind of unfair means at the time of Test or any act of impersonation will result in invalidation of his / her script and forfeiture of his / her claim for taking the Test besides criminal action as per law. Decision of the Chief Superintendent of the Test Centre shall be final on these matters.
9. Issue of Hall Ticket appearance at the test, does not automatically entitle a candidate for admission.
10. Calculators or any other aids are not allowed in the Test Hall.
11. Any rough work is to be done only on the blank sheet provided for the purpose in the Test Booklet.
12. Attestation on the Application Form and Hall Tickets can be made by any Gazetted Officer / Principal of a College / A University Professor.
13. Each question will have four alternative choices with one correct / appropriate answer. Candidate has to choose correct / appropriate answer and has to write its number in the relevant question number box on the answer sheet. If any alteration is to be made, strike off the previous one and write the correct number neatly in the box.

(Cell Phones are strictly prohibited in the Examination Hall)

Answers with overwriting will be ignored while awarding marks.

INSTRUCTIONS TO THE CANDIDATE

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2. Candidates will not be admitted to the Entrance Test after 30 minutes of the commencement of the test. Candidates once admitted will not be allowed to leave the hall till half-an-hour before the closing time of the entrance test.
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(Cell Phones are strictly prohibited in the Examination Hall)

Answers with overwriting will be ignored while awarding marks.
## MBA (Marketing / Finance / HRM) / MCA / MBA (HOSPITAL ADMINISTRATION) TEST INSTRUCTIONS BOOK-LET

**Eligibility for appearing the Test:**

### A) 3 - Year MBA:
- **Hospital Administration**: Any graduate except BFA and BAOL of Andhra University or any other University recognised by Andhra University as equivalent there to, with 50 per cent marks (SC / ST / BC candidates with 45% marks) is eligible. Further, he/she must also have studied Mathematics as one of the subjects at SSC / X class / Intermediate level. The candidate, with professional qualification like BE / B.Tech / B.Pharm / Medicine / CA / ICWA / CS / AMIE / AIETE, etc. are also eligible.
- **Marketing Management**: Any graduate except BFA and BAOL of Andhra University or any other University recognised by Andhra University as equivalent there to, with 50 per cent marks (SC / ST / BC candidates with 45% marks) is eligible. Further, he/she must also have studied Mathematics as one of the subjects at SSC / X class / Intermediate level. The candidate, with professional qualification like BE / B.Tech / B.Pharm / Medicine / CA / ICWA / CS / AMIE / AIETE, etc. are also eligible.
- **Finance Management**: Any graduate except BFA and BAOL of Andhra University or any other University recognised by Andhra University as equivalent there to, with 50 per cent marks (SC / ST / BC candidates with 45% marks) is eligible. Further, he/she must also have studied Mathematics as one of the subjects at SSC / X class / Intermediate level. The candidate, with professional qualification like BE / B.Tech / B.Pharm / Medicine / CA / ICWA / CS / AMIE / AIETE, etc. are also eligible.
- **Human Resources Management**: Further, he/she must also have studied Mathematics as one of the subjects at SSC / X class / Intermediate level. The candidate, with professional qualification like BE / B.Tech / B.Pharm / Medicine / CA / ICWA / CS / AMIE / AIETE, etc. are also eligible.

### B) 2 - Year MBA:
- **Marketing Management**: Any graduate except BFA and BAOL of Andhra University or any other University recognised by Andhra University as equivalent there to, with 50 per cent marks (SC / ST / BC candidates with 45% marks) is eligible. Further, he/she must also have studied Mathematics as one of the subjects at SSC / X class / Intermediate level. The candidate, with professional qualification like BE / B.Tech / B.Pharm / Medicine / CA / ICWA / CS / AMIE / AIETE, etc. are also eligible.
- **Finance Management**: Any graduate except BFA and BAOL of Andhra University or any other University recognised by Andhra University as equivalent there to, with 50 per cent marks (SC / ST / BC candidates with 45% marks) is eligible. Further, he/she must also have studied Mathematics as one of the subjects at SSC / X class / Intermediate level. The candidate, with professional qualification like BE / B.Tech / B.Pharm / Medicine / CA / ICWA / CS / AMIE / AIETE, etc. are also eligible.
- **Human Resource Management**: Further, he/she must also have studied Mathematics as one of the subjects at SSC / X class / Intermediate level. The candidate, with professional qualification like BE / B.Tech / B.Pharm / Medicine / CA / ICWA / CS / AMIE / AIETE, etc. are also eligible.

### C) MCA:
- **Educational qualification**: Candidates should have passed Bachelor's degree in any faculty, except BFA and BAOL of Andhra University or any other University recognised by Andhra University as equivalent there to, with 50% marks (SC / ST / BC candidates with 45% marks) besides passing Intermediate or +2 examination with Maths as one of the subjects of study.
- **Course of Study**: The Course of Study for MCA Programme shall extend over a period of three Academic Years. However in case of candidates with PGDC PA of AU, the study period is two years.

**Note:** Candidates, who qualified in ICET - 2015 or the Candidates, who completed 5 years of service after graduation in the respective fields, need not appear for Entrance Examination and can seek admission directly.

### II. Schedule of dates:
- **Commencement of sale of application forms**: 18-06-2015
- **Last date for receipt of filled in application form**: 09-07-2015
- **Last date for receipt of filled in application form with a fine of Rs 300/- upto**: 20-07-2015
- **Date and time of Entrance Test**: 10.00 am to 12.30pm, 26-07-2015 (Sunday)

### III. Cost of application form for Entrance Test:
- (Inclusive of registration and test fee): Rs. 300/- (By Hand)
- Rs. 350/- (By Post)

Application must be affixed with an attested passport size photograph taken after 01/01/2015. Candidates indulging in impersonation are liable for prosecution inviting a punishment of imprisonment of 3 to 7 years with or without fine ranging from Rs.5000/- to Rs.20,000/-.

### IV. Medium of Test:
- **English only**

Hall-tickets will be issued to candidates in person one day before the commencement of the examination at the respective centres.

**Examination Centers**:
1. Govt. Arts College for Men, Srikakulam
2. School of Distance Education, A.U. Campus, Visakhapatnam.
3. TSR & TBK Degree College, Gajuwaka, Visakhapatnam.
4. PR Govt College, Kakinada
5. Govt. Arts College, Rajahmundry

The number of seats are limited. Rule of reservation will be followed as per the norms of the University. Rank obtained in the test will be valid for admission into MBA (Marketing / Finance / HRM / Hospital Administration) / MCA course offered by the School of Distance Education, Andhra University for the academic year 2015-16 only.

* Candidates can also download the application form from our website WWW.andhrauniversity.edu.in/sde. However they have to pay Rs. 300/- by way of DD drawn in favour of Registrar A.U. towards cost of application form and submit the same along with the application.
SERVICE CERTIFICATE
(To be signed by Head of the Department / Employer)
The certifying authority is solely responsible for any incorrect information)

This is to certify that Sri / Smt./Kum ________________________________________________________________
S/o D/o W/o. _____________________________ is working in our Office / Institution as ____________________________
from ________________________ to till date (Total Service: Years ________ Months __________ Days __________ as
on the last date of submission of application form. His / Her Scale of pay is Rs. ____________________ and his / her
gross salary is Rs. __________________________ PM (Rupees ______________________________________ ). His / Her
Services are found to be Good / Satisfactory during the above period.

We have no objection to Sri / Smt / Kum _________________________________________________________
joining in MBA / MCA Programme offered by School of Distance Education, Andhra University if given admission.

Place : ___________________________ Date : ___________________________ Signature : ___________________________
Designation: ___________________________ Office Seal : ___________________________

* Applicable to the candidates who are seeking admissions into two year MBA Programme.

CHECK LIST :
Enclose the following with Application form :

1. Xerox Copies of Service Certificate from Head of the Department / Employer. (incase of two year MBA Programme).
2. Degree Certificate / Provisional Certificate of qualifying examination. ( Xerox Copy Only).
2a. Intermediate or +2 examination certificate (in case of MCA Programme)
3. S.S.C. or equivalent certificate with Date of Birth
5. Two Self-Addressed envelopes of 9” x 4” size.

Note : Original Certificates are to be produced at the time of admission.
INFORMATION ABOUT THE TEST

General Information: The test is designed to measure the candidate's ability to think systematically, to employ the verbal and mathematical skills and to assess his/her aptitude for admission into MBA / MCA Programme. The Test emphasises accuracy. Therefore, the candidate is required to go through the instructions carefully. This is an objective type test and the questions are of multiple choice. Out of the given options, the candidate has to choose the correct answer. If the Candidate gives more than one answer to any question, such answers will be ignored while awarding marks.

PATTERN OF THE TEST: The test consists of 200 questions of 1 mark each in the following topics:

Section-A: Analytical Ability
   i. Problem Solving 55
   ii. Data Sufficiency 20

Section-B: Mathematical Ability
   i. Arithmetical Ability 35
   ii. Algebrical and Geometrical Ability 30
   iii. Statistical Ability 10

Section-C: Communication Ability
   i. Vocabulary 10
   ii. Business and Computer Technology 10
   iii. Functional Grammar 15
   iv. Reading Comprehension 15

Total 200

DURATION OF THE TEST:
2 1/2 HOURS (150 MINUTES)

IMPORTANT INSTRUCTIONS TO CANDIDATES:
1. Candidates are directed to carry to the examination hall the following:
   a. Ball Point Pen (Blue or Black).
   b. One or Two HB Pencils
   c. Eraser (Rubber): and
   d. Sharpener.
2. Besides the items listed above, the candidate should not bring any other material including the instructions booklet into examination hall. Candidates should not bring Papers, Cell Phones etc., into the examination hall. Any candidate found in possession of any forbidden material, will be sent out of the examination hall.
3. Candidates must remain seated in their allotted places till the completion of the examination. In no case they will be allowed to leave the examination hall till the end of the examination. Before leaving the examination hall, the candidates must return to the invigilator both the question paper booklet and the Answer Sheet.
4. Every candidate appearing for Entrance Test shall be provided with a specially designed return answer sheet on which the candidate has to mark the answers and other relevant data. The method of marking the answers is illustrated in this section.
5. Candidates shall read carefully the instructions before starting to answer the questions.
6. The question paper booklet given to the candidate shall consist of 200 multiple choice type questions in three different sections with four responses given to each question, out of which only one response is correct for the given question. Candidates shall mark the correct answer in answer sheet.
SYLLABUS AND MODEL QUESTION PAPERS

Section - A Analytical Ability : 75Q (75 Marks)
1. Data Sufficiency : 20Q (20 Marks)
   A question is given followed by data in the form of two statements labelled as I and II. If the data given in I alone is sufficient to answer the question then choice (1) is the correct answer. If the data given in II alone is sufficient to answer the question choice (2) is the correct answer. If both I and II put together are sufficient to answer the question but neither statement alone sufficient, then choice (3) is the correct answer. If both I and II put together are not sufficient to answer the question additional data is needed, then choice (4) is the correct answer.

Problem Solving 55 : Q (55 Marks)
a) Sequences and Series 25 : Q (25 Marks)
   Analogies of numbers and alphabets, completion of blank spaces following the pattern in a:b: :c:d relationship; odd thing out: missing number in a sequence or a series.

b) Data Analysis : 10 Q (10 Marks)
   The data given in a Table, Graph, Bar diagram, Pie Chart, Venn Diagram or a passage is to be analysed and the questions pertaining to the data are to be answered.

Coding and Decoding Problems 10 : Q (10 Marks)
   A code pattern of English Alphabet is given. A given word or a group of letters are to be coded or decoded based on the given code or codes.

Date, Time & Arrangement Problems : 10 Q (10 Marks)
   Calender problems, Clock Problems, blood relationships, arrivals, departures and schedules: seating arrangements, symbol notation interpretation.

Section - B: Mathematical Ability : 75 Q (75 Marks)
I. Arithmetical Ability : 35 Q (35 Marks)
   Laws of indices, ratio and proportion; surds; numbers and divisibility, 1.c.m. and g.c.d; Rational numbers.; Ordering; Percent Profit and loss; Partnerships, Pipes and cistems, time, distance and work problems, areas, and volumes, mensuration, Modular Arithmetical.

II. Algebrical and Geometrical Ability : 30 Q (30 Marks)
   Statements, Truth tables, implication, converse and inverse, Tautologies-Sets, Relations and functions, applications, Equation line in different forms. Trignometry - Trigonometric ratios, Trigonometric ratios of standard angles (0°,30°,45°,60°,90°) Trignometric identities: simple problems on heights and distances Polynomials; Remainder theorem and consequencies; equations and expressions; Progressions, Binomall Theorem, Matrices. Notion of a limit and derivative Plane geometry. Triangles, Quadrilaterals, Circles, Coordinate geometry-distance between points and

III. Statistical Ability : 10 Q (10 Marks)
   Frequency distributions, Mean, Median, Mode, Standard Deviation, Correlation, Simple Problems on Probability

Section-C : Communication Ability : 50 Q (50 Marks)

Objectives of the Test
   Candidates will be assessed on their ability to
1. Identify vocabulary used in the day-to-day communication.
2. Understand the functional use of grammar in day-to-day communication as well as in the business contexts.
3. Identify the basic terminology and concepts in computer and business contexts (letters, reports, memoranda, agenda, minutes etc.)
4. Understand written text and drawing inferences.

Part 1 : Vocabulary 10Q (10M)
Part 2 : Business and computer terminology 10Q (10 M)
Part 3 : Functional Grammer
Part 4 : Reading Comprehension (3 Passages) 15Q (15 M)
### M.B.A. / M.C.A. ENTRANCE TEST
### MODEL QUESTION PAPER

**Time:** 150 Minutes  
**Marks:** 200

**SECTION - A**  
(Analytical Ability)  
**Marks:** 75

1. **Data sufficiency:**
   Directions for questions 1 to 20: Each question is followed by two statements I and II. Answer the question using the following instructions.

   Mark choice:  
   1. If the question can be answered by the statement I alone.  
   2. If the statement II alone is sufficient to answer the question.  
   3. If both the statements I and II are sufficient to answer the question, but neither of them alone is not sufficient.  
   4. If both the statements I and II together are not sufficient to answer this question and additional data is required.

   1. What is the average of \(a, b, c, d\)?
      I. \(a + b + c = d - 24\)
      II. \(6(a + b + d) = 49\) and \(\frac{c}{2} = 5\)

   2. What is the average age of \(A, B\)?
      I. Their ages differ by 8
      II. The sum of their ages is 18

   3. How old is Mr X?
      I. The retirement age of Mr X is 62 years
      II. Mr X will retire in ten years

   4. In how many days Mr A alone can complete the work?
      I. A and B together can complete the work in 20 days
      II. A takes 30 days more than B to complete the work alone

   5. How many students in the class are left-handers?
      I. 80% of the students are right-handers
      II. 40% of left-handers are girls

   6. How much profit Mr A earns by selling 20 motorbikes?
      I. Each motor bike is sold at Rs. 49,000
      II. Each motor bike has maximum speed 100 km. p.h.

   7. What is the volume of the right circular cone?
      I. The semi-vertical angle of the cone is 30°
      II. The lateral surface area of the cone is 20 sq. units

   8. Who is tallest among \(X, Y, Z\)?
      I. \(X\) is taller than \(Y\)
      II. \(Z\) is taller than \(Y\)

   9. Does \(8\) divide \(A\)?
      I. \(A\) is divisible by \(24\)
      II. \(A\) is divisible by \(66\)
10. Is \( a^2 \) an integer?
   I. \( a^2 \) is a negative integer
   II. \( 4a^3 \) is an integer

11. What is the value of \( a^3 + b^3 \)?
   I. \( a + b = 10 \)
   II. \( a^2 + ab + b^2 = 15 \)

12. What is the value of \( \sec \theta + \tan \theta \)?
   I. \( \sec^2 \theta + \tan^2 \theta = 5 \)
   II. \( \sec \theta - \tan \theta = 5 \)

13. What is the slope of the line \( L \)?
   I. The line \( L \) is passing through the point \( (7, 5) \)
   II. The line \( L \) is perpendicular to the line \( 2x - 3y + 15 = 0 \)

14. Is \( a \) an irrational number?
   I. \( a^2 \) is a rational number
   II. \( a^2 \) is a rational number

15. What is \( A \) to \( B \)?
   I. \( B \) is a brother of \( A \)
   II. \( A \) is the father of \( Mr \) \( X \).

16. What is the area of circle \( C \)?
   I. Area of the square \( S \) is 49 sq. inches
   II. The diameter of circle \( C \) is equal to the perimeter of the square \( S \)

17. How many factors the positive integer \( X \) have?
   I. The number of factors of \( X^2 \) is 15
   II. \( X \) is not a prime number

18. Is \( x - 2y - z \)?
   I. \( x - 2y + z = 0 \)
   II. \( x^2 + y^2 + z^2 - xy - yz - zx = 0 \)

19. What is the product of the positive integers \( m \) and \( n \)?
   I. I.e.m of \( m, n \) is 36
   II. G.C.D. of \( m, n \) is 2

20. What is the first term in the sequence of numbers?
   I. The given sequence of number is in Arithmetic progression
   II. The second term in the sequence is 5 and the last term is 65
(ii) **Problem solving:**

(a) **Odd things out, sequences and series.**

In questions 21 to 25, pick the odd things out:

21. 1) 15  
2) 16  
3) 63  
4) 34

22. 1) GOAT  
2) MALE  
3) PIG  
4) WOMAN

23. 1) (4, 6, 2)  
2) (6, 9, 3)  
3) (18, 12, 6)  
4) (16, 14, 4)

24. 1) Rhombus  
2) Triangle  
3) Square  
4) Parallelogram

25. 1) 256  
2) 243  
3) 625  
4) 16

In each question numbered 26 to 35, a sequence of numbers or letters that follow a definite pattern are given. Each question has a blank space. This space has to be filled by the correct answer from the four given options to complete the sequence without breaking the pattern.

26. 1, 2, 4, 8, 

\[
\begin{array}{c}
1 \times 2 = 2 \\
2 \times 3 = 6 \\
3 \times 5 = 15 \\
4 \times 7 = 28 \\
\end{array}
\]

1) \(\frac{9}{8}\)  
2) \(\frac{12}{9}\)  
3) \(\frac{16}{11}\)  
4) \(\frac{16}{9}\)

27. ACH, HHH, CGK, ..., EKQ  
1) DJO  
2) DHP  
3) DIM  
4) DIN

28. 2, 3, 4, 27, ..., 243, 16  
1) 81  
2) 6  
3) 8  
4) 12

1) O  
2) M  
3) P  
4) N

30. 1125 : 341 : 9 : ...  
1) 31  
2) 8  
3) 7  
4) 17

31. A, Z, B, Y, ..., X  
1) E  
2) T  
3) C  
4) U

32. AB, DEF, IJKL, ...  
1) PQRS  
2) OPQRS  
3) OPQR  
4) PQRST

33. 256 : 625 : : ... : 5  
1) 2  
2) 6  
3) 4  
4) 16

34. MILL : LAMB : : ... : 28  
1) 37  
2) 38  
3) 39  
4) 30

35. EQUATION : CURVE : : 5 : ...  
1) 4  
2) 3  
3) 2  
4) 1
(b) **Coding problems:**

In a certain code A, B, C, D, ... are coded by the following rules.

(i) **Vowels** are coded as 3 times the number represented by them in the sequence 1, 2, 3, 4, ... . For example code for A is 3, E is 15 etc.

(ii) **Consonants** are coded as 2 times the number represented by them in the sequence 1, 2, 3, 4, ... . For example B is coded as 4, C as 6 and so on.

(iii) **The code number of a word is the sum of the codes of the letters involved in it.** 

Answer questions 36 to 40.

36. The code number of LION is
   1) 124  
   2) 100  
   3) 136  
   4) 144

37. The code number of FARE is
   1) 84   
   2) 61   
   3) 66   
   4) 88

38. The word with code number 99 is
   1) CAT   
   2) Tip   
   3) MEN   
   4) RUB

39. Which of the following pairs of words have same code number
   1) BEN, MAD  
   2) CAN, DET  
   3) PIG, Fj/W  
   4) LIT, JUG

40. A two letter word with code number 65 is
   1) UP   
   2) Al   
   3) GO   
   4) IS

In a contain code, the code number of a letter in the English alphabet is defined as sum of the number represented by the consonants that come before that letter when A, B, C, D, E ... are given numbers 1, 2, 3, 4, 5 ... respectively. Now answer the following questions 41 to 45.

41. The code number of the letter P is
   1) 90   
   2) 100  
   3) 110  
   4) 120

42. The code number of the letter J is
   1) 30   
   2) 36   
   3) 39   
   4) 45

43. The number of letters with code number 76 is
   1) 0   
   2) 1   
   3) 2   
   4) 3

44. The letter(s) whose code number is 180 is (are)
   1) T   
   2) T, U  
   3) U, V  
   4) W

45. The number of pairs having same code number is (both the letters in the pair have same code number)
   1) 2   
   2) 3   
   3) 4   
   4) 5
(c) Data analysis

The amount spent by a person under various heads in a month is given in the following Pie chart. Based on this information answer the following questions from 46 to 50.

![Pie chart showing percentage distribution of expenditure]

46. The amount spent on house rent is equal to the amount spent on which of the following two heads?

1) Food and savings  
2) Travel and miscellaneous  
3) Savings and miscellaneous  
4) Food and entertainment

47. If the savings of the person in a month is Rs. 8,800 then the amount spent on house rent is

1) Rs. 14,000  
2) Rs. 14,700  
3) Rs. 15,400  
4) Rs. 11,700

48. What percent of his salary is spent on Miscellaneous?

1) \( \frac{13}{9} \)  
2) \( \frac{8}{50} \)  
3) \( \frac{11}{9} \)  
4) \( \frac{13}{9} \)

49. If the monthly salary is Rs. 45,000, then the amount spent on travel and house rent put together in rupees is

1) Rs. 10,500  
2) Rs. 12,500  
3) Rs. 11,250  
4) Rs. 7,500

50. If the person has spent Rs. 4,500 on food in a month, his monthly income in rupees is

1) Rs. 22,500  
2) Rs. 18,000  
3) Rs. 24,000  
4) Rs. 27,000

Directions for questions 51 to 55:

Read the following information and answer questions 51 to 55.

In a hostel there are 500 students. Out of them, 250 students read newspaper A, 200 students read newspaper B, 210 students read newspaper C. 50 read both A and B, 60 read B and C, 70 read A and C and 20 read all three newspapers.

51. How many students read newspaper A only?

1) 250  
2) 200  
3) 150  
4) 210

52. How many students read newspaper B only?

1) 200  
2) 150  
3) 130  
4) 110

53. The number of students who read newspaper C alone is

1) 100  
2) 210  
3) 150  
4) 200

54. The number of people who read exactly two newspapers is

1) 100  
2) 120  
3) 180  
4) 140
55. How many people read at least two news papers?

1) 100        2) 120        3) 180        4) 140

**Direction for questions 56 to 60:**

Read the following information and answer questions 56 to 60.

The following table gives the details of commodities P, Q, R, S, T with their costs, required for a family in a month in the year 2010, 2014.

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Quantity required in a month in kgs</th>
<th>Rate per kg in rupees</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
<td>2014</td>
</tr>
<tr>
<td>P</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>Q</td>
<td>10</td>
<td>60</td>
</tr>
<tr>
<td>R</td>
<td>5</td>
<td>120</td>
</tr>
<tr>
<td>S</td>
<td>15</td>
<td>80</td>
</tr>
<tr>
<td>T</td>
<td>20</td>
<td>60</td>
</tr>
</tbody>
</table>

56. The total amount spent on all the commodities in the year 2014 in rupees is

1) 430        2) 5250        3) 6375        4) 6125

57. The amount spent on P, R, S in the year 2010 is how much more than the amount spent on Q, T in the year 2014 in rupees is

1) 3000       2) 2000       3) 700        4) 1200

58. The percentage of the amount spent on P and Q in the year 2010 in the total amount spent on all commodities in that year is

1) 37 $\frac{1}{2}$        2) 75        3) 22 $\frac{1}{2}$        4) 45

59. The amount spent on Q, R, T in both years put together in rupees is

1) 5250       2) 5350       3) 2900       4) 2450

60. The percentage increase of the total amount spent in the year 2014 over the same in the year 2010 is

1) \(36 \frac{7}{16}\)        2) \(31 \frac{5}{16}\)        3) \(34 \frac{9}{16}\)        4) \(32 \frac{13}{16}\)

(d) Date, time and arrangement problems:

61. If $3 \times 5 = 34$, $4 \times 2 = 20$, then $4 \times 5 =$

1) 44        2) 41        3) 48        4) 54

62. The smaller angle between the hours hand and minutes hand in a clock when the time is 9 hours 30 minutes is

1) 90$^\circ$        2) 105$^\circ$        3) 100$^\circ$        4) 95$^\circ$

63. If 23rd July 2002 is a Friday, then 28th August of 2003 is

1) Friday        2) Saturday        3) Sunday        4) Monday
64. At what time between 3 and 4 O’clock will the hands be at right angles?

1) 30 minutes past 3  
2) 27 \( \frac{3}{11} \) minutes past 3  
3) 29 \( \frac{9}{11} \) minutes past 3  
4) 32 \( \frac{8}{11} \) minutes past 3

65. If today is Monday, what day was it 69 days before?

1) Sunday  
2) Monday  
3) Tuesday  
4) Wednesday

66. If a year starts with Tuesday then what day will it be 19 April of that year, if it is given that it is not a leap year?

1) Sunday  
2) Monday  
3) Tuesday  
4) Wednesday

67. If \( a + b - a + b + \frac{ab}{3} \) and if \( k \) is a non-zero real number, then the value of \( x \) satisfying \( x + k - x \) is

1) 1  
2) 3  
3) 1  
4) -3

68. In a queue Rom is 8th from the front while Shyam is 23rd from the last and Meera is in the middle of the two. If there are 60 persons in the queue, the position of Meera from the front is

1) 23  
2) 24  
3) 25  
4) 26

69. P is the mother of Q and R. S is the husband of R. Then P is related to S as

1) Daughter-in-law  
2) Mother  
3) Father-in-law  
4) Mother-in-law

70. A and B are children of C. C is the wife of D and D is the son of E whose husband is F. Then how is F related to A?

1) Mother  
2) Father  
3) Grand-father  
4) Grand-mother

71. If P is to the North of Q and R is to the West of Q, then in what direction is P with respect to R?

1) North-East  
2) South-West  
3) North-West  
4) South-East

72. Mr. A walks 4 km towards South, then turns left and walks 5 km and then turns right and walks 8 km to reach the point B. The the distance between A and B in kilometers is

1) 4  
2) 12  
3) 13  
4) \( \sqrt{41} \)

73. If \( < \) represents -, + represents \( \times \), and \( \Delta \) represent multiplication \( \times \), then \( (9 \times 5) \Delta (3 \times 5) < 16 - \)

1) 1  
2) 2  
3) 3  
4) 4

74. If A represents division, B represents subtraction, C represents addition and D represents multiplication then

\[ [6C \{(8D4)B3\}] \Delta 15 \] is equal to

1) 3  
2) 5  
3) 7  
4) 9

75. \( 25 \div 10 + 5 \times 2 = \)

1) \( \frac{21}{2} \)  
2) 33  
3) \( \frac{31}{2} \)  
4) 13
76. By selling an article for Rs. 1980 a man gains 10%. To get a profit of 25%, the selling price of the article should be
   1) Rs. 2,100  2) Rs. 2,150  3) Rs. 2,200  4) Rs. 2,250

77. The cost price of 12 pens is same as selling price of 10 pens. Then what is the profit/loss?
   1) 20% profit  2) 30% profit  3) 15% profit  4) 12% profit

78. If an article is sold at a profit of 15% instead of a profit of 12%, the seller gets Rs. 72 more. The cost price of the article is
   1) Rs. 1,800  2) Rs. 2,100  3) Rs. 2,400  4) Rs. 2,700

79. A bicycle was sold at a loss of 10%. If it were sold Rs. 630 more he would have got a profit of 8%. The cost price of the bicycle is
   1) Rs.3,000  2) Rs. 3,500  3) Rs. 6,000  4) Rs. 7,000

80. A, B, C are partners in a business. A invests Rs. 1,800 for 9 months, B invests Rs. 2,100 for 8 months and C invests Rs. 2,400 for 6 months. If there is a profit of Rs. 1,580, what is the share of C in the profit?
   1) Rs. 480  2) Rs. 560  3) Rs. 540  4) Rs. 420

81. P started a business with capital of Rs. 7,500. After ‘X’ months Q joins the business with a capital of Rs. 10,000. At the end of the year, they shared the profit in the ratio 9:8 then X =
   1) 8  2) 4  3) 9  4) 3

82. The equation of the line passing through the point (7, -1) and perpendicular to the line 3y – 7x + 5 = 0 is
   1) 7y + 3x = 46  2) 7x + 3y = 46  3) 3x + 7y = 14  4) 7x + 3y = 14

83. The ratio of two numbers a, b is 7:11. After adding 11 to each number, the ratio is 15:22. Then 2a – 3b =
   1) 301  2) 329  3) 378  4) 252

84. If 12% of 15% of x is 54, then x =
   1) 1000  2) 1500  3) 2000  4) 3000

85. If HCF of two numbers is 8 and the product of the numbers is 896, their LCM is
   1) 116  2) 124  3) 112  4) 118

86. A and B can do a piece of work in 10 days, B and C can do it in 18 days and, C and A can complete it in 15 days. In how many days A alone can complete the work?
   1) 12  2) 15  3) 20  4) 18
87. 2 men and 3 women can complete a piece of work in 10 days, while 3 men and 2 women can complete the same work in 8 days. In how many days 2 men and one woman can complete the work?

1) 12 1/2  2) 15  3) 18  4) 21 1/2

88. \(77^2 - 63^2 = \)

1) 289  2) 196  3) 2890  4) 1960

89. The binary code of a number is 1101011, then the number in decimal code is

1) 103  2) 105  3) 91  4) 107

90. If a set \(A\) has 4 elements, then the number of bisections from \(A\) to \(A\) is

1) 16  2) 24  3) 8  4) 64

91. Let \(Z\) be the set of all integers. Define a relation \(R\) on \(Z\) by

\[R = \{(a, b) \in Z \times Z : a \text{ is a multiple of } b\}\]. Then the relation \(R\) is

1) reflexive only  2) reflexive and symmetric
3) reflexive and transitive  4) equivalence relation

92. \(\lim_{x \to 0} \frac{1 + \cos^2 x}{x^2 + x + 7} = \)

1) 2/7  2) 1/7  3) 3/7  4) does not exist

93. \(\lim_{x \to 1} \frac{x^2 - 5x + 4}{x^3 - 1} = \)

1) 3/2  2) -3/2  3) -1  4) does not exist

94. \(\lim_{x \to 0} \frac{e^{2x} - 1}{x^2 - 1} = \)

1) 7  2) 0  3) -1  4) does not exist

95. \(A\) is a \(4 \times 4\) matrix and \(\text{det } A = 3\), then \(\text{det } 2A = \)

1) 6  2) 12  3) 24  4) 48

96. \(\lim_{x \to 0} \frac{3 \sin x - \sin 3x}{x^3} = \)

1) 4  2) -4  3) 3  4) does not exist
97. If $A = \begin{bmatrix} 1 & 5 & 7 \\ 0 & 2 & 9 \\ 0 & 0 & 4 \end{bmatrix}$, then $\det A =$

1) 6 2) 8 3) 7 4) 16

98. If $y = x^x$, then $\frac{dy}{dx} =$

1) $x \cdot x^x$ 2) $x^x \cdot \log e x$ 3) $x^x (1 + \log e x)$ 4) $x^x$

99. If $y = \log e (\tan x)$, then $\frac{dy}{dx}$

1) $\frac{2}{\sin 2x}$ 2) $\frac{1}{\tan x}$ 3) $(\sec^2 x) \cdot \frac{1}{x}$ 4) $\frac{1}{\sin x \cdot \cos^2 x}$

100. If $A$ is a non singular matrix of order $n \times n$, then $(A_{adj})^{-1} =$

1) $A$ 2) $A / \det A$ 3) $A^{-1}$ 4) $A / (\det A)^2$

101. The radius of the circle $x^2 + y^2 + 8x + 6y + 9 = 0$ is

1) 3 2) 4 3) 5 4) 6

102. The image of the point $(0, -3)$ about the line $2x + 3y + 4 = 0$ is

1) $(-4, 3)$ 2) $(4, -3)$ 3) $(-4, -3)$ 4) $(4, 3)$

103. The slope of the line where intercept on co-ordinate axes are $-2, 3$ respectively, is

1) $2/3$ 2) $2/3$ 3) $-3/2$ 4) $3/2$

104. The area of the triangle with vertices $(2, 3), (0, 4), (7, 5)$ in square units is

1) $25$ 2) $15$ 3) $\frac{25}{2}$ 4) $\frac{15}{2}$

105. The orthocenter of the triangle whose vertices are $(-2, 5), (7, 5), (-2, -6)$ is

1) $(7, 5)$ 2) $(-2, 5)$ 3) $\begin{bmatrix} 5 \\ -1 \\ 2 \end{bmatrix}$ 4) $\begin{bmatrix} 5/2 \\ 5 \end{bmatrix}$

106. If $\cos \theta = -\frac{7}{25}$ and $\theta$ is not in 2nd quadrant, then $\tan \theta =$

1) $\frac{24}{7}$ 2) $\frac{-24}{7}$ 3) $\frac{7}{24}$ 4) $\frac{-7}{24}$
107. The maximum value of \(3 \sin x - 4 \cos x + 6\) is
   1) 5  2) \(\sqrt{13}\)  3) 11  4) \(\sqrt{13} + 6\)

108. The value of \(\sin 20^\circ \cdot \sin 40^\circ \cdot \sin 80^\circ\) is equal to
   1) \(\frac{\sqrt{3}}{2}\)  2) \(\frac{\sqrt{3}}{8}\)  3) \(\frac{\sqrt{3}}{4}\)  4) \(\sqrt{3}\)

109. From a point at a distance of 100 meters from a pole, the angles of elevation of the top of the pole and the top of a flag staff on the pole are respectively 30° and 60°. Then the length of the flag staff in meters is
   1) \(\frac{200}{\sqrt{3}}\)  2) \(\frac{100}{\sqrt{3}}\)  3) 100\(\sqrt{3}\)  4) 200\(\sqrt{3}\)

110. If \(x = 3 + 3^{\sqrt{3}} + 3^{2\sqrt{3}}\), then \(x^3 - 9x^2 + 18x + 5 =
   1) 12  2) 24  3) 17  4) 29

111. If \(x = \frac{7 - \sqrt{45}}{2}\), then \(x + \frac{1}{x} =
   1) 14  2) \(\sqrt{45}\)  3) 2\(\sqrt{45}\)  4) 7

112. \(3 \sqrt[3]{} + \sqrt{8} \cdot 6\sqrt{11} =
   1) 1  2) \(\sqrt{2}\)  3) 2  4) 2\(\sqrt{2}\)

113. If \(3^x = 729\), then \(\frac{2^x \cdot 6}{2^x - 4} =
   1) \frac{6}{7}  2) \frac{19}{14}  3) \frac{14}{19}  4) \frac{7}{6}\)

114. If \(y = 28224\), then the largest value of \(m\) such that \(2^m\) divides \(y\) is
   1) 3  2) 6  3) 8  4) 5

115. If \(4A - 5B\) and \(7B = 11C\) then \(A : C =
   1) 28:55  2) 35:44  3) 55:28  4) 44:35

116. If \(a : b : c = 6 : 8 : 15\) then \(\frac{1}{a} : \frac{1}{b} : \frac{1}{c} =
   1) 3 : 4 : 5  2) 8 : 15 : 20  3) 5 : 4 : 3  4) 20 : 15 : 8

117. If \(x = 120\) centimeters and \(y = 30\) meters then \(x : y =
   1) 1:25  2) 4:1  3) 25:1  4) 1:4

118. The largest perfect square with 4 digits is
   1) 9604  2) 9801  3) 9999  4) 9921
119. If a polynomial leaves remainders $-2, -3$ when divided by $x + 1, x - 1$ respectively, then the remainder we get when the same polynomial is divided by $x^2 - 1$ is

$$\begin{align*}
1) & \quad \frac{x + 5}{2} \\
2) & \quad \frac{x - 5}{2} \\
3) & \quad \frac{5 - x}{2} \\
4) & \quad \frac{-x - 5}{2}
\end{align*}$$

120. The remainder we get when $3x^2 + 7x - 5$ is divided by $2x - 3$ is

$$\begin{align*}
1) & \quad \frac{49}{2} \\
2) & \quad \frac{49}{4} \\
3) & \quad \frac{45}{2} \\
4) & \quad \frac{45}{4}
\end{align*}$$

121. The coefficient of $x^2$ in the expansion of $$\left(3x + \frac{4}{x}\right)^{11}$$ is

$$\begin{align*}
1) & \quad 11e_3 \cdot 3^8 \cdot 4^3 \\
2) & \quad 11e_4 \cdot 3^7 \cdot 4^4 \\
3) & \quad 11e_2 \cdot 3^9 \cdot 4^2 \\
4) & \quad 11e_3 \cdot 3^6 \cdot 4^5
\end{align*}$$

122. The number of terms in $(2x - 2y)^{12} + (2x + 3y)^{12}$ is

$$\begin{align*}
1) & \quad 14 \\
2) & \quad 7 \\
3) & \quad 13 \\
4) & \quad 6
\end{align*}$$

123. \(\frac{2}{3} \left( \frac{2}{3} \right)^2 + \left( \frac{2}{3} \right)^3 + \ldots\) to infinite terms is equal to

$$\begin{align*}
1) & \quad 3 \\
2) & \quad 1 \\
3) & \quad 2 \\
4) & \quad \text{infinite}
\end{align*}$$

124. The sum of the first 8 terms of the sequence 1, 3, 5, 7, \ldots is

$$\begin{align*}
1) & \quad 24 \\
2) & \quad 36 \\
3) & \quad 49 \\
4) & \quad 64
\end{align*}$$

125. If the $n^{th}$ term is the first negative term of the sequence 118, 115, 112, \ldots, then $n =$

$$\begin{align*}
1) & \quad 38 \\
2) & \quad 39 \\
3) & \quad 40 \\
4) & \quad 41
\end{align*}$$

126. The sum of all multiples of 5 between 1 and 501 is

$$\begin{align*}
1) & \quad 25250 \\
2) & \quad 5050 \\
3) & \quad 2525 \\
4) & \quad 505
\end{align*}$$

127. \(9 + 99 + 999 + \ldots\) to 10 terms is

$$\begin{align*}
1) & \quad \frac{10^{10} - 10}{9} \\
2) & \quad \frac{10^{12} - 10^2}{9} \\
3) & \quad \frac{10^{11} - 10^2}{9} \\
4) & \quad \frac{10^{12} - 10}{9}
\end{align*}$$

128. The least positive integer that is exactly divisible by 4, 6, 10, 12 is

$$\begin{align*}
1) & \quad 120 \\
2) & \quad 60 \\
3) & \quad 180 \\
4) & \quad 30
\end{align*}$$

129. If \(x - 6 + \sqrt{35}\), then \(x + \frac{1}{x} =

$$\begin{align*}
1) & \quad 12 \\
2) & \quad 2\sqrt{35} \\
3) & \quad 6 \\
4) & \quad \sqrt{35}
\end{align*}$$

130. If 20 is added to 75% of a number $x$ gives the same number $x$, then $x =$

$$\begin{align*}
1) & \quad 90 \\
2) & \quad 100 \\
3) & \quad 60 \\
4) & \quad 30
\end{align*}$$
131. Two pipes P and Q can fill a tank in 6 hours and 12 hours respectively. If both the pipes are turned on at the same time, the time taken to fill the tank is

1) 4 hours
2) \( \frac{5}{2} \) hours
3) \( 3 \frac{1}{2} \) hours
4) 3 hours

132. A pipe can fill a tank in 4 hours. Because of a hole in the tank, it takes 5 hours to fill the tank. In how much time the hole can empty the full tank?

1) 10 hours
2) 15 hours
3) 20 hours
4) 25 hours

133. A car covers a distance of 100 km in 75 minutes. If the speed of the car is reduced by 5 kmph, the time it takes to cover the same distance is

1) 80 minutes
2) 85 minutes
3) 90 minutes
4) 120 minutes

134. Two cars A, B start from the same point on perpendicular roads at a speed of 60 kmph and 80 kmph respectively. After 2 hours the shortest distance between the two cars is

1) 100 km
2) 150 km
3) 200 km
4) 250 km

135. If \( 13x \equiv 10 \) (mod 28), then \( x = \)

1) 8
2) 12
3) 16
4) 18

136. If \( 208 \equiv x \) (mod 15), then \( x = \)

1) 8
2) 13
3) 5
4) 9

137. If \( N \) is the set of all natural numbers and

\[ R = \{ (m, n) \in N \times N / m - n \text{ is an even integer} \} \]

then the relation \( R \) on \( N \) is

1) reflexive only
2) reflexive and symmetric only
3) reflexive and transitive only
4) equivalence relation

138. The ascending order of the rational numbers \( \frac{11}{12}, \frac{13}{14}, \frac{15}{16}, \frac{10}{11} \) is

1) \( \frac{15}{16} > \frac{13}{14} > \frac{11}{12} > \frac{10}{11} \)
2) \( \frac{10}{11} > \frac{11}{12} > \frac{13}{14} > \frac{15}{16} \)
3) \( \frac{11}{12} > \frac{13}{14} > \frac{10}{11} > \frac{15}{16} \)
4) \( \frac{13}{14} > \frac{15}{16} > \frac{10}{11} > \frac{11}{12} \)

139. If \( 3^{36} = x \) (mod 10) and \( 0 < x \leq 9 \), then \( x = \)

1) 3
2) 9
3) 7
4) 1

140. The remainder obtained when the product \( 74 \times 75 \times 76 \times 77 \) is divided by 13 is

1) 7
2) 9
3) 11
4) 13

141. When a year is selected at random the probability that it is a leap year is

1) \( \frac{3}{4} \)
2) \( \frac{1}{2} \)
3) \( \frac{1}{4} \)
4) \( \frac{2}{3} \)
142. When a pair of dice is thrown, the probability of getting sum 8 is

1) \( \frac{1}{6} \) 2) \( \frac{5}{36} \) 3) \( \frac{7}{36} \) 4) \( \frac{1}{12} \)

143. If 4 coins are tossed, the probability of getting at least 2 heads is

1) \( \frac{11}{16} \) 2) \( \frac{3}{4} \) 3) \( \frac{13}{16} \) 4) \( \frac{7}{8} \)

144. The median of the data
21, 19, 35, 42, 8, 7, 36, 45, 28 is

1) 21 2) 35 3) 28 4) 36

145. The mode of the data
2, 4, 5, 3, 2, 3, 4, 2, 4, 5, 3, 2, 3, 4, 5, 4, 3, 4 is

1) 3 2) 5 3) 2 4) 4

146. If a 4 digit number is framed at random using the digits 1, 2, 4, 5, 6, then the probability that it is divisible by 2 is

1) \( \frac{3}{5} \) 2) \( \frac{28}{15} \) 3) \( \frac{99}{15} \) 4) \( \frac{2}{5} \)

147. The Arithmetic mean of the squares of the first n natural numbers is

1) \( \frac{n(n+1)(2n+1)}{6} \) 2) \( \frac{n(n+1)}{2} \) 3) \( \frac{n+1}{2} \) 4) \( \frac{(n+1)(2n+1)}{6} \)

148. The probabilities of happening of 3 independent events A, B, C are respectively \( \frac{1}{2}, \frac{2}{3}, \frac{3}{5} \).

What is the probability of happening of at least one of them?

1) \( \frac{4}{5} \) 2) \( \frac{13}{15} \) 3) \( \frac{14}{15} \) 4) \( \frac{1}{5} \)

149. The mean and mode of a data are respectively, 36 and 27 respectively. Then the median of the data is

1) 31 2) 32 3) 33 4) 34

150. If the letters of the word WISDOM are arranged at random, then the probability that the vowels do not come together is

1) \( \frac{2}{3} \) 2) \( \frac{471}{61} \) 3) \( \frac{1}{3} \) 4) \( \frac{443}{61} \)
Directions for (151-155): Fill in the blanks with the most appropriate word from the given choices:

151. Scientists believed that a vaccine derived from chimpanzees may ___ a safer way to present and treat smallpox.
   1) product  2) provide  3) eliminate  4) determine

152. A/an _______ is a prisoner or captive.
   1) intern  2) internee  3) interner  4) interant

153. _______ by both financial and emotional problems, the father decided he had enough and slipped away from the house quickly at dawn.
   1) pressured  2) grid  3) beset  4) drowned

154. Contrary to popular belief, present day historians see the renaissance as an economic _______ and argue that a lot of peasants and urban poor, worsened during this period.
   1) progression  2) evolution  3) regression  4) flexibility

155. He was ordered to pay _______ charges totalling thirty million dollars last year.
   1) fine  2) punitive  3) substantial  4) huge

Directions for (156-160): Choose the word which is most nearly the same in meaning as the word or group of words given in capitals in each question.

156. CAPRICIOUSNESS
   1) general agreement  2) gullibility  3) readiness to obey  4) unpredictability

157. VIRTUOSO
   1) superfluity  2) sluggishness  3) lack of friendliness  4) expert performer

158. STUPIDITY
   1) examine  2) approve  3) reduce in intensity  4) astound

159. RESCIND
   1) drive away  2) support  3) cancel  4) waver

160. PROFLIGATE
   1) unwieldy  2) cautious  3) impudently taking liberty  4) dissolve
Choose the right answer to fill in the blanks (161-170)

161. Which multiplexing technique transmits analog signals? 
   1) FDM  2) Synchronous TDM  3) Asynchronous TDM  4) None of these

162. The speed at which the monitor accepts data is called _________.
   1) Bandwidth  2) Interlacing  3) Response  4) Scanning

163. Array is
   1) Complex data structure  2) Simple data structure  
   3) Linear data structure  4) Non-linear data structure

164. In which technique is data stored in several disk units by breaking them into smaller pieces and storing each piece in separate disk?
   1) FDI  2) RAID  3) DISK  4) FLOPPY

165. Microcomputer hardware consists the following three basic categories of physical equipment.
   1) Keyboard, monitor, hard drive  2) System unit, Input / Output, Secondary storage  
   3) System unit, Primary storage, Secondary storage  4) None of these

166. Tape Drive gives ________ access to data.
   1) Timely  2) Sporadic  3) Random  4) Sequential

167. Which of the following commands, would you use to change your password in UNIX system?
   1) pass  2) on pass  3) passwd  4) set pass

168. A scripting language similar to and which runs only on a browser is
   1) FORTRAN  2) Basic  3) FOXPRO  4) Javascript

169. Magnetic tape is not practical for applications where data must be quickly recalled because tape is
   1) A random access medium  2) Fragile and easily damaged  
   3) Read only medium  4) A sequential access medium

170. In shell programming, which of the following commands is used for character translation?
   1) tr  2) dd  3) grep  4) sed

Directions (171-175): Each of the following has four parts forming a sentence. The error will be found in one of the four parts. Identify the part in which the error occurs.

171. 1) The judge asked the man  2) if the bag he had lost  
   3) contain five thousand rupees  4) and the man replied that it did
172. 1) I trust you will       2) show forbearance to me
3) a few minutes more      4) so that I can finish this work

173. 1) The ground outside the village       2) abounding with frogs and snakes
3) the enemies of mankind      4) is soft and marshy

174. 1) We are all short-sighted       2) and very often see but one side of the matter
3) and our views are not extended      4) to all that has a connection with it

175. 1) Just laws are no restraint with       2) the freedom of the good
3) for the good man desires nothing      4) which a just law interfere with

Directions (176-180): Each of the following sentences may have one or two or three mistakes or have none at all. Mark (1) if there is one mistake, (2) if there are two mistakes, (3) if there are three mistakes and (4) if there are no mistakes.

176. The committee was divided in its opinion regarding this issue.

177. Among you and me, he is definitely in the wrong.

178. The teacher drew two radii.

179. If I were him, I would not misbehave like this.

180. Hardly the judge entered the court room, than advocates stood up and greeted him.

Directions (181-185): In the following passage there are blanks, each of which has been numbered. These numbers are printed below the passage and against each, four words are given, one of which fits the blank appropriately. Find out the appropriate word in each case.

For the past 35 years a professor of Zoology named Valerio Sbordoni has explored the caves and underground chambers of Mexico in search of new forms of life. He has found these in abundance to say the least. To date Sbordoni has discovered more than 150 species of _______ (181) unknown cave dwelling creatures. In one chamber _______ (182) be found over forty _______ (183) species of butterfly, an incredible variety for such an inhospitable environment. Many of these species, Sbordoni believes _______ (184) underground millions of years ago to avoid extinction and adapted to life beneath the earth's surface. Obviously conditions for life underground are far from ideal, and Sbordoni believes that only severe climatic changes, probably caused by shifting glaciers, could _______ (185) such a migration.

181. 1) hitherto       2) hereby       3) henceforth       4) herewith

182. 1) exclusively 2) only 3) alone 4) solely
183. 1) dissimilar  2) distinct  3) disproportionate  4) disconnected
184. 1) retired  2) shrank  3) retreated  4) departed
185. 1) conjure-up  2) account for  3) bear out  4) carry off

Directions (186-195): Read the following passage carefully and answer the questions given below it.

By the time a child is six or seven she has all the essential avoindances well enough by heart to be trusted with the care of a younger child. And she also develops a number of simple techniques. She learns to weave firm square balls from palm leaves, to make pinwheels of palm leaves or frangipani blossoms, to climb a coconut tree by walking up the trunk on flexible little feet, to break open a coconut with one firm well-directed blow of a knife as long as she is tall, to play a number of group games and sing the songs which go with them, to tidy the house by picking up the litter on the stony floor, to bring water from the sea, to spread out the copra to dry and to help gather it in when rain threatens, to go to a neighboring house and bring back a lighted faggot for the chief’s pipe or the cook-house fire.

But in the case of the little girls all these tasks are merely supplementary to the main business of baby-tending. Very small boys also have some care of the younger children, but at eight or nine years of age they are usually relieved of it. Whatever rough edges have not been smoothed off by this responsibility for younger children are worn off by their contact with older boys. For little boys are admitted to interesting and important activities only so long as their behaviour is circumstantial and helpful. Where small girls are bruisedly pushed aside, small boys will be patiently tolerated and they become adept at making themselves useful. The four or five little boys who all wish to assist at the important, business of helping a grown youth make reef eels, organize themselves into a highly efficient working team; one boy holds the bait, another holds an extra lasso, others poke eagerly about in holes in the reef looking for prey, while still another tucks the captured eels into his lavalava. The small girls, burdened with heavy babies or the care of little staggerers who are too small to adventure on the reef, discouraged by the hostility of the small boys and the scorn of the older ones, have little opportunity for learning the more adventurous forms of work and play. So while the little boys first undergo the chastening effects of baby-tending and then have many opportunities to learn effective cooperation under the supervision of older boys, the girls’ education is less comprehensive. They have a high standard of individual responsibility, but the community provides them with no lesson in cooperation with one another. This is particularly apparent in the activities of young people: the boys organize quickly, the girls waste hours in bickering, innocent of any technique for quick and efficient cooperation.

186. The primary purpose of the passage with reference to the society under discussion is to
   1) explain some differences in the upbringing of girls and boys
   2) criticize the deficiencies in the education of girls
   3) give a comprehensive account of a day in the life of an average young girl
   4) delineate the role of young girls

187. The word “brusquely” most nearly means
   1) quickly    2) gaily    3) nonchalantly    4) abruptly
188. The list of techniques in paragraph one could best be described as:
1) household duties
2) rudimentary physical skills
3) useful social skills
4) important responsibilities

189. It can be inferred that the "high standard of individual responsibility" is:
1) developed mainly through child-care duties
2) only present in girls
3) taught to the girl before she is entrusted with babies
4) actually counterproductive

190. Little girls are deprived of learning the adventurous forms of activities because:
1) they don't show interest in the outdoor activities
2) they are interested in gossiping
3) they are snubbed and not allowed to take part in the activities
4) they are interested in doing household chores

191. Young boys learn to organize quickly:
1) they are superior to girls in terms of mental and physical strength
2) they are provided with many chances to learn to coexist
3) they have formal education in these matters
4) they don't have to take care of the younger children at all

192. The expression "innocent of" is best taken to mean:
1) not guilty of
2) unskilled in
3) unsuited for
4) uninvolved in

193. It can be inferred that in the community under discussion all of the following are important except:
1) domestic handicrafts
2) well-defined social structure
3) fishing skills
4) formal education

194. Which of the following if true would weaken the author's contention about "lessons in cooperation"?
I. Group games played by younger girls involve cooperation
II. Girls can learn from watching boys cooperating
III. Individual girls cooperate with their mothers in looking after babies

1) I only
2) II only
3) I and II only
4) I, II and III
195. Which of the following is the best description of the author's technique in handling her material?
1) Both description and interpretation of observations
2) Presentation of facts without comment
3) Generalization from a particular viewpoint
4) Close examination of preconceptions

Directions: (196-200): In the following passage there are blanks each of which has been numbered. These numbers are printed below the passage and against each, four words are suggested one of which fits the blank appropriately in the context of the whole passage. Find out the appropriate words.

A combination of boredom and, increasingly, absenteeism, ensured that the standard of Eric's work declined alarmingly. Sadie, who had hoped that her son would do well at school, was too _____ (196), a mother to have remained, unaware of the problem for very long, but when the school reports started to _____ (197), just how poorly he was faring, she felt shocked and angry.

One report ______ (198) curtly that Eric was 45th out of 49 pupils. Sadie, typically, was determined that her son should arrest his dizzying decline as speedily as possible and then - she hoped - start to improve. She visited the school and offered to pay for further tuition but was told, "it would be money down the drain." This rejection only seemed to ______ (199) Sadie on in her search for a suitable career for Eric. It surprised no one who knew her that she reacted to the unendingly ______ (200) disappointment of this setback in such a remarkably spirited and positive manner.

196. 1) engrossed 2) mindful 3) riveted 4) attentive
197. 1) proclaim 2) advocate 3) denote 4) underline
198. 1) professed 2) announced 3) aired 4) uttered
199. 1) spur 2) press 3) incite 4) boost
200. 1) vivid 2) stark 3) bitter 4) hard