ENGLISH

ADVANCED WRITING SKILLS
Please attempt atleast two from each section.
NOTICE WRITING
1. Every year in the central park of the city a flower show is held in the month of February. Your school has received a circular from the District Collector inviting your students to visit it. Write a notice in about 50 words informing the students about the show and advising them to go and enjoy it. You are Navtej/Navita, Head Boy/Head Girl Sunrise Public School, Surat.   (4 Marks)

2. Sarvodaya Education Society, a charitable organisation is coming to your school to distribute books among the needy students. As Head Boy/Head Girl, Sunrise Public School, Surat, write a notice in about 50 words asking such students to drop the lists of books they need in the box kept outside the Principal's office. You are Navtej/Navita.   (4 Marks)

3. Your club is going to organise an interclass singing competition. Write a notice in about 50 words inviting names of the students who want to participate in it. Give all the necessary details. You are Navtej/Navita, Secretary, Music Club, Akash Public School, Agra.

4. Chennai Book Society is going to organise a week-long book fair in the city during the coming autumn vacation. It has requested your school for volunteers to manage various counters. As Secretary, Cultural Club, Chennai Public School, write a notice in about 50 words inviting the names of those who want to help. You are Lalith/Latha.

5. Very soon your school is going to be a centre for CBSE examinations. You have seen that during lunch break students of junior classes keep going around the examination rooms and make all kinds of noises. You are Navtej/Navita, Head Boy/Head Girl, Akash Public School, Ajmer. Write a notice in about 50 words warning such students not to go near the examination rooms.

ADVERTISEMENT
1. Your school, Akash Public School, Agra needs a canteen manager. On behalf of the Principal, write an advertisement in about 50 words to be published in the classified columns of a local daily. Mention the educational and professional qualifications, other qualities required in the manager, who to apply to and the last date for the receipt of applications.   (4 Marks)

LETTER WRITING
1. Recently you went to your native village to visit your grandparents. You saw that some of the children in the age group 5 – 14 (an age they should have been at school) remained at home, were working in the fields or simply loitering in the streets. Write a letter in 120-150 words to the editor of a national daily analyzing the problem and offering solutions to it. You are Navtej/Navita, M-114 Mount Kailash, Kanpur.   (6 Marks)
2. When cricket teams go abroad the members are allowed to take their wives, even friends along with them. Does this fact distract them or help them to focus on their game in a better way? If it is good, why don't we allow our athletes to enjoy the same privilege? Write a letter to editor of a national daily in 120-150 words giving your views on the issue. You are Navtej/Navita, M-114 Mount Kailash, Kanpur.

3.You are Navtej/Navita, Secretary, Environment Club, Akash Public School, Agra. You, along with a group of students, went on a 3-day tour through Corbett National Park. You found how the tourists abuse the available facilities and thus endanger the environment. Write a letter in 120 – 150 words to the editor of a national daily highlighting the situation. Suggest ways through which the environment of the Park can be saved.

4.On Teacher's Day, you read in a newspaper that privately owned and managed schools in small towns or even in the suburbs of metropolitan cities exploit their teachers by paying them just a fraction of their authorised salaries. This affects their performance in the classroom and thus the lives of their students. Write a letter in 120 – 150 words to the editor of a national daily raising your voice against such exploitation. Suggest ways to solve this problem. You are Navtej/Navita, 112 Taj Road, Agra.

5. You are the Principal, Akash Public School, Ajmer. Yesterday you received a letter of enquiry from Mr. P.L. Sharma resident of 12, Abu Bakr Road, Dubai who wants his daughter, Navita, at present studying in class VIII, Indian School, Dubai to be admitted to your school next year in class IX. He wants to know all about your school. Write a letter in 120 – 150 words to Mr. Sharma.

6. You are Navtej/Navita, 114, Mount Kailash, Kanpur. Write an application along with a personal résumé in 120 – 150 words in response to the following advertisement. WANTED a trained PGT (English) at least second class M.A. Preference to those with public school experience. Apply to Manager, Akash Public School, Ajmer by 15th March, 2015.

SPEECH- WRITING

1. Mobile phone of today is no longer a mere means of communication. Music lovers are so glued to it that they don't pay attention even to the traffic while crossing the roads. This leads to accidents sometimes even fatal ones. Write a speech in 150-200 words to be delivered in the morning assembly advising the students to be careful in the use of this otherwise very useful gadget. Imagine you are Principal of your school.

2. Power shortage has become a norm even in the metropolitan cities. One way to face this situation is by preventing the wastage of power. Write a speech in 150-200 words on the importance of power in our daily life and how to save power at school and at home. Imagine that you are the Principal of your school.

3. On Teacher's Day, your Principal has asked you to deliver a speech in the morning assembly on 'The role of a teacher in society'. Write your speech in 150 – 200 words. You are Navtej/Navita.

ARTICLE WRITING:

1.In the year to come (if you have not already done this year) you are going to celebrate your 18th birthday. Write an article in 150-200 words on the joys and responsibilities of being eighteen. You are Navtej/Navita. 10

2.Write an article in 150-200 words on how we can make India a carefree and enjoyable place for women when they can go wherever they like to without any fear of being stared at, molested or discriminated against. You are Navtej/Navita.

3.Ragging has raised its ugly head again. A recent incident at a prestigious school has shown that this evil has not yet come to an end. Write an article in 150 – 200 words on 'Ragging, an Evil'. You are Navtej/Navita. 10 * a practice from the British era * original aim, respect for hierarchy * enforcing traditions, discipline * Prefect – a teacher substitute * misuse of authority * vulgar aspect * fatalities * solution

4.India is a tourist's dream destination. Give your views on the tourism potential of India in an article in 150 – 200 words. You are Navtej/Navita. * places of worship – religious tourism * foreigners – places of historical interest * the rich – hill stations during summers – the sun-kissed beaches in winters – leisure tourism * medical tourism – world class hospitals

5.The life of a student has become more sedentary than earlier. Pressure of studies, indulgence in internet, games on mobile phones — there is no time for him to play games in the field. Write an article in 150 – 200 words on 'Importance of games and sports in the life of a student'. You are Navtej/Navita.

6. Prices of food articles are rising. Floods, droughts, extremes of temperature cause shortages. Greed of the middlemen, wastage at the farm and spoilage during transit all add to the misery of the common man. Write an article in 150 – 200 words on 'Rising food prices and how to control them'. You are Navtej/Navita.

7. The number of cars that a country produces every year is one way of measuring its prosperity. At the same time what the vehicles lead to are traffic jams, air pollution, road rage, an unhealthy competition in the middle class to own more and newer cars. What are your views on the issue — Private cars or Public transport ? Describe them in an article in 150 – 200 words. You are Navtej/Navita.

8. Students of class XII, not only do they prepare for Board examination but also for entrance examinations. For the sake of preparation they have to divide their time between the two. How to manage their time, caught between the two goals, becomes a problem for them. Write an article in 150 – 200 words on 'How should a student manage his time?' You are Navtej/Navita.

DEBATE

1. The government has banned the use of animals in the laboratories for the purpose of dissection. Write a debate in 150 – 200 words either for or against this decision.

2. Some people feel that electronic media (TV news) will bring about the end of print media (newspapers). What are your views on the issue? Write a debate in 150 – 200 words either for or against this view.
* use of visuals on TV * authentic and fast * not enough news for 24-hour telecast * may fabricate news * become repetitive and dull * even scandals become news * print media – time tested * analysed, verified news * editorial comments * cater to all interests

3. More industrial production means availability of more goods, better life style, lower prices, more jobs, etc. However, a higher standard of living can be achieved only at a cost — depletion of raw materials and air and water pollution. Write a debate in 150 – 200 words either for or against the motion — 'Standard of living can be raised, but only at a great cost'. You are Navtej/Navita.

ACCOUNTANCY

Students are required to give Journal Entries from the following transactions and prepare ledger from the Journal Entries and Trial Balance from the same.

The following are the transactions of M/s Vijay Lakshmi & Co.

Date	Particulars
2017	
April 1	Vijay started his business with cash Rs.10,00,000.
April 5	Vijay opened and account in a bank with cash Rs.5,00,000.
April 10	Purchased goods from Shyam on credit Rs.1,20,000 and paid carriage of Rs.5,000.
April 14	Purchased goods on cash for Rs.70,000 and paid Rs.6,000 for freight.
April 20	Sold goods to Amarnath for Rs.50,000
April 23	Amarnath returned goods for Rs.5,000
April 30	Paid Rent of Rs.10,000
May 05	Purchased Furniture for Cash for Rs.15,000.
May 14	Paid Shyam Rs.47,000 through cheque and received a discount of Rs.3,000.
May 20	Paid Salary to staff by cheque for Rs.50,000.
June 01	Purchased Machinery by cheque for Rs.1,60,000 and paid installation expenses for Rs.20,000 in cash.
June 15	Cash withdrawn for personal use Rs.25,000.

June 25	Goods given as charity for Rs.5,000.
June 30	Sold goods for cash Rs.40,000.
July 16	Paid for Advertisement Rs.24,000.
Aug 27	Purchased goods from Pramod for Rs.90,000.
Oct 22	Sold goods to Anil for Rs.30,000.
Nov 30	Wages paid Rs.13,200.
Dec 21	Received Rs.18,000 from Amarnath and allowed a discount of Rs.2,000.
2018	
Jan 15	Given Rs. 49,000 to Shekhar as loan.
Feb 10	Given goods as free samples costing Rs.7,500.
Mar 26	Paid Pramod Rs.30,000.
Mar 31	Interest received from Bank Rs.14,500
Mar 31	Salary Outstanding Rs.30,000
Mar 31	Amarnath became insolvent and 60 paise in a rupee were recovered from him.

ECONOMICS

1. **Project Assignment**
   Banking system in India
   The assignment will follow the following framework
   1. Cover Page
   2. Acknowledgment
   3. Table of content
   4. Chapter 1
      a) History of RBI
      b) How many banks were there when banking system started in India? How did they get nationalised?
      c) How many banks nationalised after 1991?
      d) Functions of RBI
      e) Credit creation by RBI
   5. Chapter 2
      a) Functions of Commercial Banks
      b) Credit creation by Commercial Banks
   6. Chapter 3
      Conclusion – Positive and Negative comments on the banking system in India
   7. Reference
   8. Appendix
   9. Bibliography
2. **Revision Assignment**
   1. Explain the following terms in 50 words each
      a) Joint supply
      b) Price discrimination
      c) Equilibrium
      d) Diseconomies of scale
      e) Cross-price elasticity of demand
      f) Homogeneous products
      g) Free market
      h) Diamond-water Paradox
      i) Incentives

j) Money supply
k) Hidden cost
l) Marginal utility
m) Constant returns to scale
n) Games theory

BUSINESS STUDIES

Prepare a project report of 30-35 pages on the topic GST **(Goods and Service Tax.)**

MATHEMATICS

1. Find the value of $\sqrt{3}\csc 20° - \sec 20°$
2. Prove that $\frac{\sec 8\theta - 1}{\sec 4\theta - 1} = \frac{\tan 8\theta}{\tan 2\theta}$
3. If $\cos(\alpha + \beta) = \frac{4}{5}$ and $\sin(\alpha - \beta) = \frac{5}{13}$, where α lie between 0 and $\frac{\pi}{4}$, find the value of $\tan 2\alpha$.
4. Prove that $\cos\theta \, \cos\frac{\theta}{2} - \cos 3\theta \, \cos\frac{9\theta}{2} = \sin 7\theta \, \sin 8\theta$
5. Prove that $\sin 4A = 4\sin A\cos^3 A - 4\cos A\sin^3 A$.
6. If $\tan A = \frac{1}{2}$, $\tan B = \frac{1}{3}$, then find the value of $\tan(2A + B)$.
7. Find the value of:
    $\cos 12° + \cos 84° + \cos 156° + \cos 132°$
8. Find the value of:
    $\sin 50° - \sin 70° + \sin 10°$
9. If $\alpha + \beta = \frac{\pi}{4}$ then find the value of $(1 + \tan\alpha)(1 + \tan\beta)$
10. Let A = {-1,2, 5,8} and B={0,1,3,6,7} and R be the relation "is one less than" from A to B, then how many elements will R contain?
11. What is the value of $\tan 15° + \cot 15°$.
12. What is the modulus of $\frac{1+2i}{1-(1-i)^2}$ equal to?
13. If C(n,12) = C(n,8), then what is the value of C(22,n)?
14. What is the value of $\left(-\sqrt{-1}\right)^{4n+3} + (i^{41} + i^{-257})^9$
15. In a football championship 153 matches were played. Every team played one match with each other team. How many teams participated in the championship?
16. If n(A) = 115 , n(B)=326, n(A-B)=47, then what is the value of n(A∪B) ?
17. If $A = \frac{41\pi}{12}$, then what is the value of $\frac{1-3\tan^2 A}{3\tan A - \tan^3 A}$?
18. If $\cot\alpha = 2\cos\alpha$, where α lies between $\pi/2$ and π, then what is the value of α ?
19. What is the value of $\cos\left(\frac{\pi}{9}\right) + \cos\left(\frac{\pi}{3}\right) + \cos\left(\frac{5\pi}{9}\right) + \cos\left(\frac{7\pi}{9}\right)$
20. What is the value of $\sqrt{3}\csc 20° - \sec 20°$
21. If z is a complex number such that z + z⁻¹ =1,then what is the value of z⁹⁹ + z⁻⁹⁹
22. How many times does the digit 3 appear while writing the integers from 1 to 1000?
23. Let A={x:x is a square of a natural number and x is less than 100} and B is a set of even natural numbers. What is the cardinality of A∩B?
24. If the latus rectum of an ellipse is equal to half of the minor axis, then what is its eccentricity?
25. Find the value of $\tan\left(\frac{\pi}{12}\right)$
26. What is the value of $\sin 1920°$
27. Find the value of the term independent of x in the expansion of $\left(x^2 - \frac{1}{x}\right)^9$.
28. What is the number of ways that 4 boys and 3 girls can be seated so that boys and girls are alternate?

29. If $A+iB = \frac{4+2i}{1-2i}$, then find the value of A?

30. Find the argument of $z = \frac{-2(1+2i)}{3+i}$

31. The hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$ passes through the point $(3\sqrt{5}, 1)$ and the length of its latus rectum is 4/3 units. Find the length of its conjugate axis?

32. What is the square root of 3+4i ?

33. If $C(28,2r) = C(28, 2r-4)$ then what is the value of r?

34. Find the radius of the circle $x^2 + y^2 + x + c = 0$ passing through the origin?

35. What is the value of $tan9° - tan27° - tan63° + tan81°$

36. There are 4 candidates for the post of a lecturer in Mathematics and one is to be selected by votes of 5 men. What is the number of ways in which the votes can be given?

37. If tan A =1/2 and tan B=1/3 then what is the value of 4A + 4B

38. In a random arrangement of the letters of the word UNIVERSITY , what is the number of permutations that two I's do not come together.

39. What is the ratio of coefficient of x^{15} to the term independent of x in $\left(x^2 + \frac{2}{x}\right)^{15}$

40. How many 7 digit numbers can be formed using the digits 1,2,0,2,4,2 and 4?

41. Find the number of permutations of the letters of the word ALLAHABAD?

42. In how many ways can the letters of the word COMBINE be arranged so that :
   a) The vowels are never separated.
   b) All the vowels never come together.
   c) Vowels occupy only the odd places.

43. If the letters of the word AGAIN be arranged in a dictionary, what is the fiftieth word?

44. Find the number of arrangements of the letters of the word BANANA in which two N's do not appear adjacently.

45. The 2nd, 3rd and 4th terms in the expansion of $(x + y)^n$ are 240, 720 and 1080 respectively, find the values of x, y and n.

46. The coefficients of (2r+1)th and (r+2)th terms in the expansions of $(1+x)^{43}$ are equal. Find the value of r.

47. Find the fourth term from the end in the expansion of $\left(\frac{3}{x^2} - \frac{x^3}{6}\right)^7$.

48. Find the equation of the straight line passing through (1,2) and perpendicular to the line $x + y + 7 = 0$.
   Ans. $x - y - 1 = 0$

49. Find the equation of the straight line passing through point of intersection of the lines $5x - 6y - 1 = 0$ and $3x + 2y + 5 = 0$ and perpendicular to the line $3x - 5y + 11 = 0$.   Ans. $5x + 3y + 8 = 0$.

50. Find the coordinates of the foot of the perpendicular from the point (2,3) on the line $x + y - 11 = 0$.
   Ans. (5,6)

51. Find the equation of the line which passes through the point (3,4) and cuts off intercepts from the coordinate axes such that their sum is 14.

52. If the line $\frac{x}{a} + \frac{y}{b} = 1$ passes through the points (2,-3) and (4,-5) , find the values of a and b.

53. Find the inclination of the line $x - y + 3 = 0$ with the positive direction of x-axis.

54. Find the equation of the line which passes through the point (2,3) and makes an angle of 30° with the positive direction of x- axis.

55. The intercept cut off by a line from y-axis is twice than that from x-axis, and the line passes through the point (1,2). Find the equation of the line.

56. Find the reflection of the point (4,-13) about the line $5x + y +6 = 0$.

57. Find the equation of the straight line passing through (1,2) and perpendicular to the line $x + y + 7 = 0$.
   Ans. $x - y - 1 = 0$

58. Find the equation of the straight line passing through point of intersection of the lines $5x - 6y - 1 = 0$ and $3x + 2y + 5 = 0$ and perpendicular to the line $3x - 5y + 11 = 0$.   Ans. $5x + 3y + 8 = 0$.

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65. Find the reflection of the point (4,-13) about the line $5x + y + 6 = 0$.

66. Find the point on x-axis which is equidistant from the point A(3,2,2) and B(5,5,4).

67. Find the point on y-axis which is at a distance $\sqrt{10}$ from the point (1,2,3)

68. Let A(3,2,0) , B(5,3,2) , C(-9,6,-3) be three points forming a triangle. AD, the bisector of ∠BAC, meets BC in D. Find the coordinates of the point D.

69. Determine the point in yz-plane which is equidistant from three points A(2,0,3) , B(0,3,2) and C(0,0,1).

70. Show that the three points A(2,3,4) , B(-1,2,-3) and C(-4,1,-10) are collinear and find the ratio in which C divides AB.

71. If the distance between the points (a,2,1) and (1,-1,1) is 5, then find the value of a.

72. Find the equation of the straight line passing through the point of intersection of the lines $5x - 6y - 1 = 0$ and $3x + 2y + 5 = 0$ and perpendicular to the line $3x - 5y + 11 = 0$.

73. Find the angle between the lines $y - 2x = 9$ and $x + 2y = -7$.

74. If the lines $2x + 3ay - 1 = 0$ and $3x + 4y + 1 = 0$ are mutually perpendicular, then find the value of a.

75. Find the length of perpendicular from (3,1) on line $4x + 3y + 20 = 0$.

76. If the radius of the circle $x^2 + y^2 - 18x + 12y + k = 0$ is 11, find k.

77. Find the equation of the circle which passes through the points (2,3) and (4,5) and the centre lies on the straight line $y - 4x + 3 = 0$.

78. Find the eccentricity of the ellipse $25x^2 + 16y^2 = 400$.

79. Find the latus rectum of the hyperbola $16x^2 - 9y^2 = 144$.

80. Express $\frac{(1+i)^3}{4+3i}$ in the form $x + iy$.

81. Determine the domain and range of the relation $R = \{(x,x^3): x \text{ is a prime number less than } 10\}$.

82. Find the principal solutions of $\sec x = 2$.

83. Find the equation of the parabola with vertex at origin, symmetric with respect to y-axis and passing through (2,-3).

84. Solve:
$$\frac{x}{2} < \frac{5x - 2}{3} - \frac{7x - 3}{5}$$

85. Find the number of 4-digit odd numbers, when repetition of digits is not allowed?

86. Given that $sinx = -\frac{3}{5}$, $cosy = -\frac{5}{13}$ and x is in the same quadrant as y, evaluate tan(x+y).

87. Find the value of $sin\left(-\frac{41\pi}{4}\right)$.

88. If $f(x) = x - \frac{1}{x}$, prove that $(f(x))^3 = f(x^3) + 3f\left(\frac{1}{x}\right)$.

89. Find the modulus of $\frac{2+i}{4i+(1+i)^2}$.

90. Find the domain of the following functions:
    a) $\sqrt{16 - x^2}$
    b) $|x + 2|$
    c) $\frac{2x}{3x+5}$
    d) $\frac{3}{\sqrt{x+2}}$

91. If cos (α+β) $= \frac{4}{5}$ and sin (α - β) $= \frac{5}{13}$, where α lies between 0 and $\frac{\pi}{4}$, find the value of tan2α.

92. Given the hyperbola with equation $49y^2 - 16x^2 = 784$, find the coordinates of foci, the vertices, the lengths of transverse axis, conjugate axis, latus-rectum and the eccentricity.

PHYSICAL EDUCATION

Make a project file on the topic- "Main Sports and Circuit Training."
Length- Minimum 15 pages- Maximum 40 pages