S. S. T. COLLEGE OF ARTS AND COMMERCE, ULHASNAGAR – 421 004.
JUNIOR COLLEGE
XI Science – Assignment Topics

Subject	Question
English	Q1. **Report Writing**: On the occasion of a 'World Reading Day' your Junior College had organised a visit to a city library. Imagine you are an editor of your Junior College magazine. Write a report in about 100–150 words giving the details of your visit. Q2. **Compering**: Imagine, you are one of the members of the cultural committee of your college and you are given the responsibility of a *compere* at a cultural programme. You may take help of the given points: ● Welcome – lighting of the lamp ● Introduction ● Felicitation ● Cultural programme ● Presidential address ● Vote of thanks Draft the whole programme script to decide the flow of the programme. Q3. **Email Writing**: Write an email to the customer care of an online shopping website complaining about a defective product you received and requesting a replacement. Q4. **Blog Writing**: Write a blog in a proper format on the following topic in about 100 to 150 words. Save the Environment. Hints- Explain the term, give its importance in life, and suggest ways for saving the environment.
Physics	Q1. Define absolute error, mean absolute error, relative error and percentage error Q2. Define average velocity and instantaneous velocity. When are they same? Define free fall. Q3. Distinguish between: (A) Real and pseudo forces, (B) Conservative and non-conservative forces. Q4. What is ideal gas equation. Q5. What is Doppler effect? Q6. What are different types of dispersions of light? Why do they occur? Q7. Distinguish between intrinsic semiconductors and extrinsic semiconductors. Q8. State any four applications of a communication satellite
Chemistry	**Q.1** What are the consequences of Schottky defect? **Q.2** What is van't Hoff factor?How is van't Hoff factor related to degree of ionization? **Q.3** Derive the relationship between degree of dissociation and dissociation constant in weak electrolytes. **Q.4** Derive the relation pH + pOH = 14. **Q.5** State second law of thermodynamics in terms of entropy **Q.6** What are anode and cathode of H2 - O2 fuel cell ? Name the electrolyte used in it. Write electrode reactions and net cell reactions taking place in the fuel cell. **Q.7** Derive the integrated rate law for first order reaction. **Q.8** What is meant by 'shielding of electrons' in an atom?

	Q.9 . Give the reagents and conditions necessary to prepare phenol from a. Chlorobenzene b. Benzene sulfonic acid. **Q.10** Explain Gabriel phthalimide synthesis.
Biology	Q1. Explain the characteristics of living organisms. Q2. Explain the hierarchy of classification with examples. Q3. Explain structure and functions of mitochondria. Q4. Differentiate between xylem and phloem. Q5. Describe the structure of a typical flower. Q6. Explain transpiration and its types. Q7. Explain glycolysis. Q8. Explain structure of nephron.
Geography	Q1: Define Geography. Explain the major branches of Geography in detail with suitable examples. Q2: Explain the concepts of Latitude and Longitude. State their importance in locating places on the Earth. Q3: Explain the rotation and revolution of the Earth and their effects. Q4: Describe the structure of the Earth's interior with the help of a neat diagram. Q5: What are rocks? Explain the types of rocks with suitable examples. Q6: Differentiate between Weather and Climate. Explain the elements of weather in detail. Q7: Explain the structure of the atmosphere with a suitable diagram. Q8: What are natural resources? Explain their types and importance.
Maths	Paper 1: Q1. If $[a_{ij}]_{3x3}$ where $a_{ij} = 2(i-j)$. Find A and A^T. State whether A and A^T are symmetric or skew symmetric matrices ? Q2. If A(2, 0) and B(0, 3) are two points, find the equation of the locus of point P such that AP = 2BP. Q3. Obtain the equation of the line : a) parallel to the X−axis and making an intercept of 3 unit on the Y−axis. b) parallel to the Y−axis and making an intercept of 4 unit on the X−axis. Q4. Find the equation of a circle whose centre is (−3, 1) and which pass through the point (5, 2). Paper 2: Q1. If w is a complex cube root of unity, then prove that i) $\frac{1}{w} + \frac{1}{w^2} = -1$ ii) $(1+w^2)^3 = -1$ iii) $(1-w+w^2)^3 = -8$ Q2. Find the domain of $f(x) = \sqrt{6-2^x-2^{3-x}}$ Q3. Determine whether the function

	$f(x) = \frac{2x+1}{x-3}$ has inverse, if it exists find it.
IT	Q1. Write down the difference between LAN, MAN and WAN. Q2. Define the terms (1) Ethics (2) Moral Q3. Explain Operating Systems for Mobile Phones? Q4. What are the advantages of a DBMS?
Hindi	Q1. बिजली की आपूर्ति की शिकायत पर पत्र का नमुना तयार करे Q2. पर्यावरण रक्षा मे पेड का महत्व इस विषय मे निबंध लिखीए Q3. भारत की राष्ट्रीय एकात्मता मे भारत के सभी राज्यों का अपना योगदान पर निबंध लिखिए Q4. अविकारी शब्दों के भेद लिखिए
Marathi	Q1. खालील विषयांवर ब्लॉग लिहा. – फेसबुक मैत्री : आवश्यक की अनावश्यक Q2. आत्मवृत्तात्मक निबंध लिहा - मी वृक्ष बोलतोय Q3. महाराज आणि बेबी यांच्या विचारातील संघर्ष लिहा. Q4. उत्तम सूत्रसंचालनासाठीची आवश्यक असलेली कौशल्ये स्पष्ट करा.
CS I	Q1. What is a linked list? Q2. Explain the following data structures with suitable diagram. Q3. What are types of binary tree? Explain it with suitable example. Q4. What is Binary Tree? With a suitable example, explain the terminology. Q5. Linear array, b) Linked list, c) Tree Q6. Write the difference between linear search and binary search. Q7. What is operating system? Explain major services of OS. Q8. What is a record? How it differs from a linear array? Q9. What is searching? Explain binary search algorithm. Q10. What is sorting? Explain bubble sorting algorithm.
CS II	1. What is Microprocessor? Write the features/functions of 8085 2. What is the purpose of following registers in 8085 processors? · i) HL pair · ii) Stack pointer · iii) Program Counter 3. With the help of suitable examples, explain direct and immediate addressing modes in 8085. 4. Explain the following: 1. Address bus 2. Data bus 3. Control bus 5. What is the function of following register in 8085 processor? · i) Accumulator · ii) Program counter · iii) Flags · iv) stack pointer 6. Write the functions of each of the following devices in short: · a) Modem, b) router, c) hub, d) repeater 7. Define topology. Explain STAR and RING topologies with diagram.

	8. Explain WAN, MAN and LAN. 9. What do you mean by network topology? Explain in brief the two basic categories of topology. 10. Explain why wireless networks are useful?
EVS	A Project Report on “Impact of Plastic Pollution on Marine Life”
HPE	A Report of Athletics Games

For Submission

Students are required to submit the same on 04th May, 2026 between 9.30am to 1.00 pm in Room No. 101. Any query contact office :- 9321074000/9321073000