

**SANSKAR SCHOOL**  
**SUMMER HOLIDAY ASSIGNMENTS**  
**2018-19**  
**Class XI**

SUMMER VACATIONS are generally the happiest period in a student's calendar year. It is that time of the year when the children are ready to relax, unwind, meet their friends and relatives and gear up for some new pursuits and activities. Summer vacations provide ample time for the children to enjoy family time together and create memorable moments visiting different places, exploring new interest areas or honing their skills. This time period is also ideal for inculcating good reading habits wherein children enjoy and appreciate the pleasure of reading books that will enhance their expression, vocabulary, general awareness and develop a basic interest in reading.

Alongside all the fun and activities, the children should stay connected with academics too. To enable this, we have chalked out some simple and interesting assignments for the children as per their subjects and class. A mental workout is as important as a physical one, after all. The children should complete assignments in their notebooks with the guidance and support of their elders, if and where needed.

**ENGLISH**  
**WORKSHEET 1**

Q1. Write an article for your school magazine about "Problems of a Girl Child, and suggestions for Women Empowerment". You are Madhur or Madhumita.

Q2. Write an article in about 200 words for a newspaper on "Terrorism-A Threat to Peace". Sign yourself as Shivam or Shalini.

Q3. Write an article for your school magazine on "Good Manners" in about 150-200 words.

**WORKSHEET 2**

Q1. You are Ashok living at 49, S-block, Model Town, Allahabad. You came across the following advertisement:

Homeo Postal Class Eng/Hindi. Practicals arranged. Prospectus free. Contact Director, Homeo Mission, P.B. 1015, Delhi

Write a letter to the Director asking for detailed information of the courses, duration, fee structure, assignments, local contact programmes, etc. Request for a prospectus and enclose a self-addressed envelope along with your letter.

Q2. Write a reply to the above enquiry.

Q3. As Avinash, Librarian, you had ordered two sets each of World History in Pictures (5 vols.), Nature Study (16 vols.) and The Story of Science (16 vols.) from Ms Universal Book Suppliers, Delhi.

Unfortunately, on receiving the books you found that some volumes were missing in the sets and some were damaged. Write a letter complaining about the defective, deficient supply and ask them to correct the situation. This order had been placed by you for the library of your school.

Q4. You are the Manager of “The Chef”. Write a letter to the Manager of “The Cottage India Emporium” placing your order for furnishings and upholstery items for your restaurant.

## ACCOUNTANCY WORK SHEET

### *INTRODUCTION OF ACCOUTING*

- Q. 1 What do you mean by the term accounting?  
Q.2 briefly states the characteristics (feature/attributes) of accounting.  
Q.3 Distinguish between bookkeeping and accounting.  
Q.4 what is meant by accountancy? How does it differ with accounting?  
Q.5 Explain any three objective of accounting.  
Q.6 Explain any three limitation of accounting.  
Q.7 Name the qualitative characteristics of accounting and any two of them.  
Q.8 Differentiate between reliability and relevance of accounting information.  
Q.9 which qualitative feature of accounting is reflected in the following cases:  
a. Free from personal bias                      b. Information is clearly presented  
c. Information about department’s      d. Consistent use of accounting policies and conventions

#### Basic Terms

- Q.1 Distinguish between long term liabilities and current liabilities (Short term liabilities).  
Q.2 Distinguish between tangible and intangible assets.  
Q.3 Differentiae between capital expenditure and revenue expenditure.  
Q.4 Differential between capital receipts and revenue receipts.  
Q.5 Distinguish between debtors and creditors.  
Q.6 Fill in the blanks :  
    The amount invested by the owner of the business is called .....  
1. A persons to whom goods is sold on credit is called a .....  
2. A person from whom goods is bought on credit is called .....  
3. The amount withdrawn by the owner of the business for personal use is called.....  
4. Liabilities payable within a period of one year are ..... liabilities.  
5. Goods withdrawn by the proprietor of the business for use is called .....  
6. Assets which have no physicals appearance are known as ..... assets.  
7. Assets which are physicals appearance are known a ..... assets.  
8. Assets which are converted into cash with in a period of 4 year are called ..... assets.  
9. Bank overdraft is a current.....  
10. .... discount is never recorded in the book of accounts.  
11. Money received from sale of fixed assets is a ..... receipt.

### **3 THEORY BASE OF ACCOUTING, ACCOUTING STANDARDS AND INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS)**

Q.1 Explain:

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| (i) Business Entity Principle     | (ii) Money Measurement Principle |
| (iii) Accounting Period Principle | (iv) Full disclosure Principle   |

Q.2 Explain:

- |                                 |                            |
|---------------------------------|----------------------------|
| (i) Revenue Recognition Concept | (ii) Accrual Assumption    |
| (iii) Going Concern Assumption  | (iv) Materiality Principle |

Q.3 Different between principle of consistency and conservatism assumption.

Q.4 Fill in blanks:

1. According to ..... concept, business is considered distinct from its owner.
2. .... principles require that same accounting method be used year after year.
3. Revenue is recognized from the date of ..... and not from the date of ..... of money.
4. As per dual aspect assets= capital + .....
5. Receipts of order for supply of goods will not be considered as sale as per ..... concept.
6. .... convention state that same method of depreciation be used over a period of time.
7. Closing stock is valued at cost or market price whichever is less as per ..... principle.
8. Provision of loss must be made even if you anticipate it as per ..... principle.
9. Financial statement are drawn as per ..... period concept.
10. Expense is recognised on date of ..... of goods and not on the date of its payment.

Q.5 Select the correct answer:

1. Stoke is valued at cost price or market price whichever is less as per principle of consistency/conservatism.
2. Revenue is recognised from the date of sale of goods/receipt of money.
3. Assets=(Liabilities + Capital) or (Liabilities - Capital)
4. Assets are recorded at their purchase price as per cost concepts/recognition concepts.
5. According to going concern concepts, life of business entity is assumed as limited/long life.
6. The proprietor of the business is treated as creditor of the firm as per cost concept/business entity concepts.
7. Cost or market prices whichever is less represents principle of conservatism/matching concept.
8. Convention of conservatism considers all probable profit/losses.
9. Expenses are recognised when incurred paid.
10. Purchase of machine is expenditure/expenses.

**ACCOUNTING EQUATION AND RULES OF DEBIT AND CREDIT**

Q.1 Prepare accounting equation from the following transaction:

1. Sumit started business with cash RS. 10,000; goods Rs. 30,000 and machinery worth Rs. 50,000.
2. Goods purchased from Ram on credit Rs. 15,000.
3. Sold goods costing Rs. 20,000 for Rs. 25,000 to Ruchi and received rs. 10,000 in cash.
4. Paid Rs. 14,500 to Ram in full statement of his account.
5. Ruchi returned goods for Rs. 5000 being defective.
6. Ruchi settled her account at a discount of Rs. 200.
7. Withdrew cash Rs. 2,000 and goods for Rs. 3000 for personal use by sumit.
8. Charge depreciation on machinery @ 10% for the year.

Q.2 Show that accounting equation is satisfied in all the following transaction of Sumit:

1. Started business with cash Rs. 40,000, goods Rs. 50,000 and furniture Rs. 10,000.
2. Purchased goods from Sohan Rs. 20,000.
3. He sold goods Rs. 25,000 to Ram.
4. He paid Sohan in full settlement of his account Rs. 19,500
5. Received cash from Ram in full statement Rs. 24,200.
6. Paid Rent Rs. 3,000 but Rs. 800 is still outstanding.
7. Charge depreciation on furniture Rs.1000.
8. Received commission Rs. 2,000 including Rs. 5,00 as advance.
9. Charge interest on capital Rs. 8,000.

Q.3 Remesh started business with a capital of Rs. 1,00,000. Following transaction took place during the year:

1. Deposit Rs. 60,000 in bank.
2. Purchased goods from Amit Rs. 30,000.
3. Sold goods costing Rs. 20,000 for Rs. 25,000 to Mohan out of which Rs. 7,000 received in cash.
4. Paid salary Rs. 5,000 but salary still unpaid Rs. 1000.
5. Received commission Rs. 2,000 including Rs. 500 as advance.
6. Sold goods costing Rs. 5,000 at a loss of Rs. 500 in cash.
7. Received Rs. 17,400 from Mohan in full settlement of his account by cheque.
8. Returned goods to Amit Rs. 2,000 in full settlement of his account.
9. Issued a cheque of Rs. 27,000 to Amit in full settlement of his account.

Use accounting equation to give effect to above transaction.

Q.4 show the accounting equations are satisfied in the following cases:

1. Commenced business with cash Rs. 40,000 and goods Rs. 20,000.
2. Sold half the goods at a profit of 25% to Ram.
3. Bought goods from Rakesh Rs. 25,000 and paid Rs. 9,000 in cash.
4. Sold half the goods at a loss of 10% for cash.
5. Brought furniture Rs. 7,000 for office use and for Rs.3,000 for domestic purpose.
6. Paid insurance premium Rs.1,000 of which Rs. 200 is prepaid.

Q.5 Ram started a business on 1<sup>st</sup> Jan 2009 with a capital of Rs. 1,00,000. During the year ending 31<sup>st</sup> December 2009, he introduced father capital of Rs. 20,000 and withdraws goods and cash worth rs. 15,000 for personal use. On 31<sup>st</sup> Dec,2009, his assets include cash Rs.30000 stock Rs. 80,000 debtor Rs. 40,000 and furniture Rs. 30,000 and liabilities include bank loan Rs.30,000 and creditors Rs. 20,000.

Q.6 Find the opening capital of the firm from the following information given at the end of the year:

Total assets Rs.1,30,000; external liabilities Rs. 40,000. During the year, proprietor introduced capital of Rs. 20,000, withdraw Rs.15,000 for personal use and earned a profit of Rs.25,000.

Q.7 Ram commenced business on 1<sup>st</sup> Jan 2009 with a capital of Rs. 60,000. At the end of the year, his assets were worth Rs. 1,10,000 and liabilities were Rs.40,000. Find his capital at the end of the year and profit earned.

Q.8 X started business on 1<sup>st</sup> April 2009 with a capital of Rs.1,20,000. He took bank loan Rs.40,000, on 31<sup>st</sup> March 2010, his assets were Rs. 2,40,000 and creditor was Rs.30,000. Loan has not been paid so far. Determine his capital at the end of the year and profit.

Q.9 X started business with a capital of Rs.1,20,000. During the year, he introduced further capital Rs.30,000 but withdrew Rs.25,000 during the year for personal use. At the end of the year, his assets worth Rs. 2,00,000 and liabilities amounting to rs. 30,000.

Q.10 Ram commenced business with a capital of rs. 2,00,000. At the end of the year his assets including cash Rs.40,000, stock Rs.70,000,debtor Rs.85,000,furniture Rs.25,000 and liabilitiesRs.30,000.

Q.11 Find the opening capital of X from the following information:

Total assets Rs.1,40,000, outside liabilities Rs. 30,000. During the year, he introduced Rs.30,000 as further capital and withdrew Rs.20,000 for personal use and earned a profit of Rs.30,000 during the year.

## GEOGRAPHY

**Activity 1:-** Make a list of major Himalayan peaks from the west to the east with the help of an atlas and mark them on the map of India. (Minimum 10 peaks)

**Activity 2:-** Mark any 10 important River systems of the country on the map of India.

**Activity 3:-** Mark any 10 important Passes on the map of India.

**Activity 4:-** Mark any 5 important Plateaus on the map of India.

## ECONOMICS

Project : What's Going Around Us

*Scope of the project:* You may work upon the following lines:

- Introduction
- Details of the topic
- Pros and Cons of the economic event/happening
- Major criticism related to the topic (if any)
- own views/perception/ opinion and learning from the work
- Any other valid idea as per the perceived notion of the student who is actually working and presenting the Project-Work.

Suggestive List

1. Micro and small scale industries
2. Food supply channel in India
3. Contemporary employment situation in India
4. Disinvestment policy
5. Health expenditure (of any state)
6. Goods and Services Tax Act
7. Inclusive growth strategy
8. Human Development Index
9. Self-help groups
10. Privatization
11. Disinvestment
12. Inflation
13. Poverty
14. Sustainable development
15. Indian agriculture
16. Tax reforms
17. Import substitution v/s export promotion
18. Banking sectors reforms

Suggestive List

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11. Disinvestment
12. Inflation
13. Poverty
14. Sustainable development
15. Indian agriculture

**BIOLOGY**  
**Worksheet 1**  
**Chapter 1: The living World**

- Q 1. Define the following terms:
- a. Growth
  - b. Metabolism
  - c. Biodiversity
  - d. Nomenclature
  - e. Systematics
  - f. Species
  - g. Taxonomic hierarchy
  - h. Monograph
  - i. Catalogue
  - j. Phylum
  - k. Class
  - l. Order
  - m. Genus
  - n. Species
  - o. Family
- Q 2. Name two animals, which do not reproduce at all.
- Q 3. Name the three fields of systematics.
- Q 4. Give the two name system of organisms?
- Q 5. Give the unit of classification?
- Q 6. Who gave binomial names in classification?
- Q 7. What is meant by identification of a species?
- Q 8. Write the correct order of sequence of taxonomical categories?
- Q 9. What are the advantages of giving scientific names of the organisms?
- Q 10. Describe the role of museums in studying systematics?
- Q 11. Give the role of botanical gardens?
- Q 12. Plants and animals grow by mitotic cell divisions. What differences do they exhibit in their growth?
- Q 13. Amoeba multiplies by mitotic cell division. Is this phenomenon growth or reproduction? Explain.
- Q 14. Why are living organisms classified?
- Q 15. Differentiate between taxon and category.
- Q 16. Differentiate between taxonomy & systematics.
- Q 17. "Botanical gardens are living herbaria". Comment.
- Q 18. Differentiate between species & taxon?
- Q 19. What is Biological classification? What is the need of classification?
- Q 20. Write the following:
- a. Order to which human beings belong to.
  - b. Family of cats and dogs.
  - c. Animals included in family Felidae.
  - d. Order to which family Solanaceae and Convolvulaceae belong.
  - e. Person who proposed system of binomial nomenclature.
- Q 21. How does herbarium, key and botanical garden help in classification? Explain.

- Q 22. Explain the utility of systematics in classification.
- Q 23. Describe the universal rules for binomial nomenclature.
- Q 24. Explain the taxonomical hierarchy with an example of Plant and Animal.
- Q 25. Museums and Zoological Parks are both taxonomic aids. How do they differ?
- Q 26. How do Biologists solve the problems of organisms having different names in different countries? Explain.
- Q 27. What are the major divisions of classification? Classify man.
- Q 28. Why are living organisms classified?
- Q 29. Why are the classification systems changing every now and then?
- Q 30. What different criteria would you choose to classify people that you meet often?
- Q 31. What do we learn from identification of individuals and populations?
- Q 32. What is a taxon? Illustrate the taxonomical hierarchy with a suitable example?
- Q 33. What are taxonomic aids? Mention some of the taxonomic aids for identification.
- Q 34. Differentiate between classical taxonomy & Modern taxonomy.
- Q 35. Given below is the scientific name of Mango. Identify the correctly written name:
- Mangifera Indica
  - Mangifera indica
- Q 36. Define a taxon. Give some examples of taxa at different hierarchical levels.
- Q 37. How would you set up a herbarium?
- Q 38. Can you specify the correct sequence of taxonomic categories?
- a. Species , Order, Phylum, Kingdom
  - b. Genus, Species, Order, Kingdom
  - c. Species, Genus, Order, Phylum
- Q 39. How is a key helpful in the identification and classification of an organism?
- Q 40. Illustrate the taxonomical hierarchy with suitable examples of a plant and an animal?

## Worksheet 2

### **Chapter 2: Biological Classification**

- Q 1. Name the following:
- a. Domain which includes prokaryotes
  - b. Specialized cells of trichomes of cyanobacteria.
  - c. Most common method of reproduction in Bacteria.
  - d. Monerans which do not possess a cell wall.
  - e. Chemical which is present in cell wall of diatoms and fungi.
  - f. Two phases in life cycles of plants.
  - g. Scientist who discovered viruses.
  - h. Disease caused by a virioids.
  - i. Fungus extensively used in genetic and biochemical studies.
  - j. Genetic material of TMV and Bacteriophage.
  - k. Who introduced the five kingdom classification of organisms.
  - l. Kingdom to which the multicellular decomposers belong.
- Q 2. Name the five kingdoms in which the organisms are grouped together.
- Q 3. Which organisms are known as “Jokers of plant kingdom”?
- Q 4. In which class of fungi sexual reproduction does not occur?
- Q 5. Explain phylogenetic system of classification?
- Q 6. What is the basis of Whittaker’s system of classification?
- Q 7. Differentiate between the following:
- a. Phototropic and Chemotropic Bacteria
  - b. Chrysophytes and Dinoflagellates
  - c. Ascomycetes and Deuteromycetes

- d. Viruses and Viroids
  - e. Zoospore and sporangiospore
  - f. Gametophyte and sporophyte
  - g. Systems of classification
  - h. Bacteria and cyanobacteria
- Q 8. Explain the various methods of asexual & sexual reproduction in fungi.
- Q 9. Describe the economic importance of fungi.
- Q 10. Describe the characteristic features of Fungi.
- Q 11. Describe the different classes of fungi (At least five points each that should include habitat, types of reproduction, morphology of mycelium, types of spores, sexual reproduction).
- Q 12. Draw a well labelled diagram of Bacteriophage and Euglena.
- Q 13. Describe the characteristic features of Protista.
- Q 14. Who proposed the five kingdom classification? Give its outline classification.
- Q 15. Expand PPLO.
- Q 16. Describe the characteristic features of Viruses.
- Q 17. Explain sexual reproduction in bacteria?
- Q 18. Discuss how classification systems have undergone several changes over a period of time?
- Q 19. State two economically important uses of:
- a. Heterotrophic bacteria
  - b. Archaeobacteria
- Q 20. What is the nature of cell-walls in diatoms?
- Q 21. What is the basis of modern classification?
- Q 22. Give one example of a fungus as a source of antibiotics.
- Q 23. Find out what do the terms 'algal bloom' and 'red-tides' signify.
- Q 24. How are viroids different from viruses?
- Q 25. Describe briefly the four major groups of Protozoa.
- Q 26. Plants are autotrophic. Can you think of some plants that are partially heterotrophic?
- Q 27. What do the terms phycobiont and mycobiont signify?
- Q 28. Give a comparative account of the classes of Kingdom Fungi under the following terms:
- a. Mode of nutrition
  - b. Mode of reproduction
- Q 29. What are the characteristic features of Euglenoids?
- Q 30. Give a brief account of viruses with respect to their structure and nature of genetic material. Also name four common viral diseases.
- Bring Laminated Sheet of One Animal and Plant Specimen of your choice.

### **BUSINESS STUDIES**

- 1) Complete the exercises of the NCERT of chapter 1 i.e Nature and Purpose of business in the subject register.
- 2) Visit a local business firm and identify its nature of business activity . Find out the problems faced by it and the steps taken to handle them.
- 3) Visit the website of a reputed company(eg. HCL, Dabur, TISCO) and find out the objectives pursued by it. Identify the areas in which the company has set up its objectives . How does it help the society at large ?
- 4) Visit to a Wholesale Market: Vegetables/ fruits/flowers /grains/garments etc.  
The students are required to observe the following:
  - a) Sources of merchandise.
  - b) Local market practices.



- c) Any linked up businesses like transporters, packagers, moneylenders, agents, etc.
- d) Nature of the goods dealt in
- e) Types of buyers and sellers.
- f) Modes of the goods dispersed, minimum quantity sold, type of packaging employed.
- g) Factors determining the price fluctuations.
- h) Seasonal factors (if any) affecting the business.
- i) Weekly/monthly non- working days.
- j) Strikes, if any-causes thereof.
- k) Mode of payments.
- l) Wastage and disposal of dead stock.
- m) Nature of price fluctuations, reasons thereof.
- n) Warehousing facilities available/availed.
- o) Any other aspect.

**NOTE: The students are suppose to submit the answers to Q-2, Q-3 and Q-4 in one single file folder .The above information should be supported with adequate facts, photos of the place visited also indicating your physical presence, people with whom interacted etc. to prove that the submission is an original piece of work.**

### **ENTREPRENEURSHIP**

Do a case-study of any entrepreneur by taking his personal interview and make a hand-written file (at least 15 pages) of it. Any entrepreneur you can choose who is easily accessible. Following set of questions should be considered while taking the interview:

- **Background and the basic information of the entrepreneur:** Name, business name, location, type of business, family, birth place, education, vision and ambitions in life.
- **Role Model of the entrepreneur:** Who and Why, Did your option change with time? Give reason.
- **Experiences:** With how much capital did you start your business? From where did you get that capital and how did you invest that capital? Why did you select this business only? Was it technical knowhow or hands on experience? What role did education play in the whole process?
- **Turning Point:** Road to success, cost of success.
- **Achievements and Acknowledgements:** if any, specify.
- **Changing Times:** Market and Market trends; technology; environment factors (political, legal, socio cultural, economic). Business then and now; Local to global transformation; presence of competition; how to face competition. Plans for expansion: growth parameters; identifying the hurdles and finding solutions.
- **Future:** Vision for the time to come; next generations.
- **Self-Actualization:** Contentment in life; giving back to the society (social welfare, environment concerns).
- **In Retrospect:** Three decisions you wish to change. Give reasons.
- **Business Mantra:** What according to you is the reason of success?
- **Message to our youth:** A few words of motivation or guidance for the young people.

The above information should be supported with adequate facts, photos of the enterprise you will visit also indicating your physical presence, photograph of the entrepreneur with whom you will interact, visiting card of the entrepreneur, etc. to prove that the submission is an original piece of work.

## PHYSICS

### WORK SHEET 1

- Q.1. What is science? Write down the steps of a scientific method.
- Q.2. How is science ever dynamic? Given one example.
- Q.3. Does speculation and conjecture have a place in science? If yes, give one example.
- Q.4. What is physics?
- Q.5. Explain the terms unification and reduction in science with example.
- Q.6. Name a branch of physics that deals with the microscopic science?
- Q.7. What are microscopic and macroscopic sciences? Name few branches of physics falling into the category of microscopic and macroscopic science.
- Q.8. How science and technology help each other in growing?
- Q.9. How is society related to science and technology?

### WORK SHEET 2

- Q.1. What is measurement?
- Q.2. Define the followings;
  - a) Unit
  - b) Magnitude
- Q.3. How is a measurement expressed?
- Q.4. Write down any two desirable characteristics of a unit.
- Q.5. Why should a unit be internationally accepted?
- Q.6. What are fundamental and derived physical quantities?
- Q.7. Are there any physical quantities other than length, mass and time which can be taken as base quantities?
- Q.8. Can one choose arbitrarily any three physical quantities as fundamental quantities?
- Q.9. Define base and derived unit.
- Q.10. What is SI? How many quantities are used as base quantities in SI? Write all the base quantities with their units.
- Q.11. Name the fundamental physical quantities which were added later on to cover the entire physics.
- Q.12. What is the SI unit of solid angle?
- Q.13. What is the SI unit of luminous intensity?
- Q.14. What are the advantages of SI?
- Q.15. What is the sub-multiple for nano?
- Q.16. What is the sub-multiple for milli?
- Q.17. Write down all the conventions for writing the units and their symbols.
- Q.18. Write down any three conventions for writing the units and their symbols.
- Q.19. Which is correct 1000 cc or 1000 c.c.?
- Q.20. Which is correct 14 meters or 14 m?
- Q.21. Which is correct 50 N or 50 Newton?
- Q.22. What is wrong in writing 25m?
- Q.23. What do you mean by direct method of measuring length? Mention few devices used for measuring length by direct method.
- Q.24. What do you mean by indirect method of measuring length?
- Q.25. Explain two differences between direct and indirect methods of measuring length.
- Q.26. Explain parallax method of determining distance of a planet from earth.
- Q.27. Describe the method of finding diameter of molecule of oleic acid by indirect method.
- Q.28. What is parallax? How is parallax used to measure length in physics?

- Q.29. What is a light year?  
 Q.30. Which physical quantity is measured in light year?  
 Q.31. What is AU? How many meters are there in 1 AU?

### WORK SHEET 3

- Q.1. Can a quantity have dimensions but still have no units?  
 Q.2. Can a quantity have different dimensions in different system of units?  
 Q.3. Can a quantity have units but still be dimensionless?  
 Q.4. Can there be a physical quantity that has no units and no dimensions?  
 Q.5. Find the dimensional formulae of (i) Charge (ii) Potential (iii) Resistance  
 Q.6. Taking the velocity, time and force as the fundamental quantities, find the dimensions of mass.  
 Q.7. Calculate the dimensions of force and impulse taking velocity ( $v$ ), density ( $\rho$ ) and frequency ( $\nu$ ) as basic quantities.  
 Q.8. Deduce the dimensional formulae of the following physical constants;  
 (i) Coefficient of viscosity [ $F = \eta A \frac{dv}{dx}$ ]  
 (ii) Young's modulus [ $Y = \frac{\text{Longitudinal stress}}{\text{Longitudinal strain}} = \frac{Fl}{A\Delta l}$ ]  
 (iii) Planck's constant [ $E = h\nu$ ]  
 Q.9. If the density of mercury is  $13.6 \text{ g/cm}^3$ , convert its value in  $\text{kg/m}^3$ , using dimensional equation.  
 Q.10. Find the value of 100 J on a system which has 20 cm, 250 g and half minute as fundamental units of length, mass and time.  
 Q.11. Test by using dimensional analysis the accuracy of the relation,  

$$\lambda = \frac{h}{mv}$$
 Where  $\lambda$  is wavelength,  $h$  is plank's constant,  $m$  is mass and  $v$  is velocity.  
 Q.12. Write down three applications of dimensional analysis.

### WORK SHEET 4

- Q.1. Round off the following numbers as indicated:  
 (i) 18.35 up to 3 digits (ii) 143.45 up to 4 digits (iii) 18967 up to 2 digits  
 (iv) 12.653 up to 3 digits (v) 248337 up to 3 digits (vi) 321.135 up to 5 digits  
 (vii)  $101.55 \times 10^6$  up to 4 digits (viii)  $31.325 \times 10^{-5}$  up to 4 digits  
 Q.2. Add 7.21, 12.141 and 0.0028, and express the result to an appropriate number of significant numbers.  
 Q.3. Add  $6.75 \times 10^3 \text{ cm}$  and  $4.52 \times 10^2 \text{ cm}$ .  
 Q.4. Subtract 36.8 km from 97 km.  
 Q.5. A jeweler puts a diamond weighing 5.42 g in a box 1.2 kg. Find the total weight of the box and the diamond to correct no of sig figs.  
 Q.6. Compute the following w.r.t. significant figures.  
 (i)  $4.6 \times 0.128$  (ii)  $\frac{0.9995 \times 1.53}{1.592}$   
 Q.7. The diameter of a sphere is 2.78 m. Calculate its volume with due regard to sig figs.

- Q.8. A thin wire has a length of 21.7 cm and radius 0.46 mm. Calculate the volume of the wire to correct sig figs.
- Q.9. Which quantity in a given formula should be measured most accurately?
- Q.10. Which of the following length measurements is (i) most precise and (ii) least precise? Give reason.  
 (i) 5 cm      (ii) 5.00 cm      (iii) 5.000 cm      (iv) 5.00000 cm
- Q.11. Which of the following measurement is most precise?  
 (i) 4.00 mm      (ii) 4.00 cm      (iii) 4.00 m      (iii) 40.00 m
- Q.12. Which of the following measurement is most accurate?  
 (i) 4.00 cm      (ii) 0.004 mm      (iii) 40.00 m
- Q.13. Which of the following reading is most accurate:  
 (i) 5000 m      (ii)  $5 \times 10^2$  m      (iii)  $5 \times 10^3$  m
- Q.14. Which of the following measurement is more accurate and why?  
 (i) 0.0002 g      (ii) 20.0 g

### CHEMISTRY

Q 1. How many significant figures are there in each of the following numbers?

- i. 6.005      ii.  $6.022 \times 10^{23}$   
 iii. 8000      iv. 0.0025  
 v. the sum is  $18.5 + 0.4235$   
 vi. the product  $14 \times 6.345$

Q 2. Express the following to four significant numbers:

- i. 6.45372      ii. 48.38250      iii. 70000  
 iv.  $2.65986 \times 10^3$       v. 0.004687

Q 3. The isotopic molar masses and the abundances of naturally occurring argon are given below:

Isotope	Isotopic molar mass	Abundance
$^{36}\text{Ar}$	35.96755 g mol <sup>-1</sup>	0.337%
$^{38}\text{Ar}$	37.96272 g mol <sup>-1</sup>	0.063%
$^{40}\text{Ar}$	39.9624 g mol <sup>-1</sup>	99.600%

Calculate the molar mass of naturally occurring argon.

Q 4. Calculate the mass of (i) an atom of silver (ii) a molecule of carbon dioxide.

Q 5. How many atoms and molecules of Sulphur are present in 64.0 g of Sulphur (S<sub>8</sub>)?

Q 6. Calculate the number of molecules present

- (i) In 34.20 grams of cane sugar (C<sub>12</sub>H<sub>22</sub>O<sub>11</sub>)  
 (ii) In one litre of water assuming that the density of water is 1 g/cm<sup>3</sup>  
 (iii) In one drop of water having mass 0.05 g.

Q 7. Calculate the number of atoms of the constituent elements in 53 g of Na<sub>2</sub>CO<sub>3</sub>.

Q 8. (a) Calculate the volume occupied at STP by

- (i) 16.0 g of Oxygen      (ii) 1.5 moles of oxygen and  
 (iii)  $6.022 \times 10^{23}$  molecules of carbon dioxide

Q 9. (i) How many grams of H<sub>2</sub>S are contained in 0.40 mole of H<sub>2</sub>S?

(ii) How many gram atoms of H and S are contained in 0.40 mole of H<sub>2</sub>S?

(iii) How many molecules of H<sub>2</sub>S are contained in 0.40 mole of H<sub>2</sub>S?

(iv) How many atoms of H and S are contained in 0.40 mole of H<sub>2</sub>S?

- Q 10. You are supplied with a gas containing 0.32 g of oxygen, Calculate the number of moles and number of molecules present in it.
- Q 11. What is the mass of carbon present in 0.5 mole of  $K_4 [Fe (CN)_6]$ ?
- Q 12. How many moles and how many grams of sodium chloride (NaCl) are present in 250  $cm^3$  of a 0.500 M NaCl solution?
- Q. 13. How many grams of barium chloride ( $BaCl_2$ ) are needed to prepare 100  $cm^3$  of 0.0250 M  $BaCl_2$  solution?
- Q 14. In a reaction vessel, 0.184 g of NaOH is required to be added for completing the reaction. How many milli litres of 0.150 M NaOH solution should be added for this requirement?
- Q 15. Find the percentage composition of potassium chlorate ( $KClO_3$ ).
- Q 16.  $Fe(SO_4)_3$  is used in water and sewage treatment to aid the removal of suspended Impurities. Calculate the mass percentage of iron, Sulphur and oxygen in this compound.
- Q 17. The percentage composition of ferrous ammonium sulphate is 14.32%  $Fe^{2+}$  ; 9.20%  $NH_4^+$  ; 49.0%  $SO_4^{2-}$  and 27.57%  $H_2O$ . What is the empirical formula pf the compound?
- Q 18. An oxide of nitrogen gave the following percentage composition:  
N = 25.94 and O = 74.06  
Calculate the empirical formula of the compound.
- Q 19. What mass of slaked lime would be required to decompose completely 4 grams of ammonium chloride and what would be mass of each product?
- Q 20. 1.0 g of mixture of carbonates of calcium and magnesium gave 240  $cm^3$  of  $CO_2$  at STP. Calculate the percentage of composition of the mixture.
- Q 21. One litre of oxygen at STP is made to react with three litres of carbon monoxide at STP. Calculate the weight of each substance found after the reaction. Which one is the limiting reactant?

## MATHS

### CHAPTER 3 (TRIGONOMETRIC FUNCTIONS)

#### Short Answer Type

- Q1. Prove that  $\frac{\tan A + \sec A - 1}{\tan A - \sec A + 1} = \frac{1 + \sin A}{\cos A}$
- Q2. If  $\frac{2 \sin \alpha}{1 + \cos \alpha + \sin \alpha} = y$ , then prove that  $\frac{1 - \cos \alpha + \sin \alpha}{1 + \sin \alpha}$  is also equal to y.
- Q3. If  $m \sin \theta = n \sin(\theta + 2\alpha)$ , then prove that  $\tan(\theta + \alpha) \cot \alpha = \frac{m+n}{m-n}$ .
- Q4. If  $\cos(\alpha + \beta) = \frac{4}{5}$  and  $\sin(\alpha - \beta) = \frac{5}{13}$ , where  $\alpha$  lie between 0 and  $\frac{\pi}{4}$ , find the value of  $\tan 2\alpha$ .
- Q5. If  $\tan x = \frac{b}{a}$ , then find the value of  $\sqrt{\frac{a+b}{a-b}} + \sqrt{\frac{a-b}{a+b}}$ .
- Q6. Prove that  $\cos \theta \cos \frac{\theta}{2} \cos 3\theta \cos \frac{9\theta}{2} = \sin 7\theta \sin 8\theta$ .
- Q7. If  $a \cos \theta + b \sin \theta = m$  and  $a \sin \theta - b \cos \theta = n$ , then show that  $a^2 + b^2 = m^2 + n^2$
- Q8. Find the value of  $\tan 22^\circ 30'$ .
- Q9. Prove that  $\sin 4A = 4 \sin A \cos^3 A - 4 \cos A \sin^3 A$ .
- Q10. If  $\tan \theta + \sin \theta = m$  and  $\tan \theta - \sin \theta = n$ , then prove that  $m^2 - n^2 = 4 \sin \theta \tan \theta$ .
- Q11. If  $\tan(A + B) = p$ ,  $\tan(A - B) = q$ , then show that  $\tan 2A = \frac{p+q}{1+pq}$ .
- Q12. If  $\cos \alpha + \cos \beta = 0 = \sin \alpha + \sin \beta$ , then prove that  $\cos 2\alpha + \cos 2\beta = -2 \cos(\alpha + \beta)$ .
- Q13. If  $\frac{\sin(x+y)}{\sin(x-y)} = \frac{a+b}{a-b}$ , then show that  $\frac{\tan x}{\tan y} = \frac{a}{b}$ .
- Q14. If  $\tan \theta = \frac{\sin \alpha - \cos \alpha}{\sin \alpha + \cos \alpha}$ , then show that  $\sin \alpha + \cos \alpha = \sqrt{2} \cos \theta$ .

- Q15. If  $\sin\theta + \cos\theta = 1$ , then find the general value of  $\theta$ .
- Q16. Find the most general value of  $\theta$  satisfying the equation  $\tan\theta = -1$  and  $\cos\theta = \frac{1}{\sqrt{2}}$ .
- Q17. If  $\cot\theta + \tan\theta = 2 \operatorname{cosec}\theta$ , then find the general value of  $\theta$ .
- Q18. If  $2\sin^2\theta = 3\cos\theta$ , where  $0 \leq \theta \leq 2\pi$ , then find the value of  $\theta$ .
- Q19. If  $\sec x \cos 5x + 1 = 0$ , where  $0 < x \leq \pi/2$ , then find the value of  $x$ .

### Long Answer Type

- Q20. If  $\sin(\theta + \alpha) = a$  and  $\sin(\theta + \beta) = b$ ,  
then prove that  $\cos 2(\alpha - \beta) - 4ab \cos(\alpha - \beta) = 1 - 2a^2 - 2b^2$ .
- Q21. If  $\cos(\theta + \phi) = m \cos(\theta - \phi)$ , then prove that  $\tan \theta = \frac{1-m}{1+m} \cot \phi$ .
- Q22. Find the value of the expression :  
 $3[\sin^4\left(\frac{3\pi}{2} - \alpha\right) + \sin^4(3\pi + \alpha)] - 2[\sin^6\left(\frac{\pi}{2} + \alpha\right) + \sin^6(5\pi - \alpha)]$ .
- Q23. If  $a \cos 2\theta + b \sin 2\theta = c$  has  $\alpha$  and  $\beta$  as its roots, then prove that  $\tan \alpha \tan \beta = \frac{2b}{a+c}$ .
- Q24. If  $x = \sec \phi - \tan \phi$  and  $y = \operatorname{cosec} \phi + \cot \phi$  then show that  $xy + x - y + 1 = 0$
- Q25. If  $\theta$  lies in the first quadrant and  $\cos\theta = 8/17$ , then find the value of  $\cos(30^\circ + \theta) + \cos(45^\circ - \theta) + \cos(120^\circ - \theta)$ .
- Q26. Find the value of the expression  $\cos^4 \pi/8 \cos^4 3 \pi/8 \cos^4 5 \pi/8 \cos^4 7 \pi/8$ .
- Q27. Find the general solution of the equation  $5\cos^2\theta + 7\sin^2\theta - 6 = 0$
- Q28. Find the general solution of the equation  
 $\sin x - 3\sin 2x + \sin 3x = \cos x - 3\cos 2x + \cos 3x$
- Q29. Find the general solution of the equation  $(\sqrt{3} - 1) \cos\theta + (\sqrt{3} + 1) \sin\theta = 2$ .

### Objective Type Questions

Choose the correct answer from the given four options in the Exercises 30 to 59 (M.C.Q.).

- Q30. If  $\sin \theta + \operatorname{cosec} \theta = 2$ , then  $\sin^2 \theta + \operatorname{cosec}^2 \theta$  is equal to  
(A) 1 (B) 4 (C) 2 (D) None of these
- Q31. If  $f(x) = \cos^2 x + \sec^2 x$ , then  
(A)  $f(x) < 1$  (B)  $f(x) = 1$  (C)  $2 < f(x) < 1$  (D)  $f(x) \geq 2$
- Q32. If  $\tan \theta = 1/2$  and  $\tan \phi = 1/3$ , then the value of  $\theta + \phi$  is  
(A)  $\pi/6$  (B)  $\pi$  (C) 0 (D)  $\pi/4$
- Q33. Which of the following is not correct?  
(A)  $\sin \theta = -1/5$  (B)  $\cos \theta = 1$  (C)  $\sec \theta = 1/2$  (D)  $\tan \theta = 20$
- Q34. The value of  $\tan 1^\circ \tan 2^\circ \tan 3^\circ \dots \tan 89^\circ$  is  
(A) 0 (B) 1 (C)  $1/2$  (D) Not defined
- Q35. The value of  $\frac{1 - \tan^2 15^\circ}{1 + \tan^2 15^\circ}$  is  
(A) 1 (B)  $\sqrt{3}$  (C)  $\sqrt{3}/2$  (D) 2
- Q36. The value of  $\cos 1^\circ \cos 2^\circ \cos 3^\circ \dots \cos 179^\circ$  is  
(A)  $\frac{1}{\sqrt{2}}$  (B) 0 (C) 1 (D) -1
- Q37. If  $\tan \theta = 3$  and  $\theta$  lies in third quadrant, then the value of  $\sin \theta$  is  
(A)  $\frac{1}{\sqrt{10}}$  (B)  $-\frac{1}{\sqrt{10}}$  (C)  $-\frac{3}{\sqrt{10}}$  (D)  $\frac{3}{\sqrt{10}}$
- Q38. The value of  $\tan 75^\circ - \cot 75^\circ$  is equal to  
(A)  $2\sqrt{3}$  (B)  $2 + \sqrt{3}$  (C)  $2 - \sqrt{3}$  (D) 1
- Q39. Which of the following is correct?  
(A)  $\sin 1^\circ > \sin 1$  (B)  $\sin 1^\circ < \sin 1$  (C)  $\sin 1^\circ = \sin 1$  (D)  $\sin 1^\circ = \frac{\pi}{180} \sin 1$
- Q40. If  $\tan \alpha = \frac{m}{m+1}$ ,  $\tan \beta = \frac{1}{2m+1}$ , then  $\alpha + \beta$  is equal to  
(A)  $\frac{\pi}{2}$  (B)  $\frac{\pi}{3}$  (C)  $\frac{\pi}{6}$  (D)  $\frac{\pi}{4}$

- Q41. The minimum value of  $3 \cos x + 4 \sin x + 8$  is  
 (A) 5 (B) 9 (C) 7 (D) 3
- Q42. The value of  $\tan 3A - \tan 2A - \tan A$  is equal to  
 (A)  $\tan 3A \tan 2A \tan A$  (B)  $-\tan 3A \tan 2A \tan A$   
 (C)  $\tan A \tan 2A - \tan 2A \tan 3A - \tan 3A \tan A$  (D) None of these
- Q43. The value of  $\sin(45^\circ + \theta) - \cos(45^\circ - \theta)$  is  
 (A)  $2 \cos \theta$  (B)  $2 \sin \theta$  (C) 1 (D) 0
- Q44. The value of  $\cot\left(\frac{\pi}{4} + \theta\right) \cot\left(\frac{\pi}{4} - \theta\right)$  is  
 (A) -1 (B) 0 (C) 1 (D) Not defined
- Q45.  $\cos 2\theta \cos 2\phi + \sin^2(\theta - \phi) - \sin^2(\theta + \phi)$  is equal to  
 (A)  $\sin 2(\theta + \phi)$  (B)  $\cos 2(\theta + \phi)$  (C)  $\sin 2(\theta - \phi)$  (D)  $\cos 2(\theta - \phi)$
- Q46. The value of  $\cos 12^\circ + \cos 84^\circ + \cos 156^\circ + \cos 132^\circ$  is  
 (A)  $1/2$  (B) 1 (C)  $-1/2$  (D)  $1/8$
- Q47. If  $\tan A = 1/2$ ,  $\tan B = 1/3$ , then  $\tan(2A + B)$  is equal to  
 (A) 1 (B) 2 (C) 3 (D) 4
- Q48. The value of  $\sin \frac{\pi}{10} \sin \frac{13\pi}{10}$  is  
 (A)  $1/2$  (B)  $-1/2$  (C)  $-1/4$  (D) 1
- Q49. The value of  $\sin 50^\circ - \sin 70^\circ + \sin 10^\circ$  is equal to  
 (A) 1 (B) 0 (C)  $1/2$  (D) 2
- Q50. If  $\sin \theta + \cos \theta = 1$ , then the value of  $\sin 2\theta$  is equal to  
 (A) 1 (B)  $1/2$  (C) 0 (D) -1
- Q51. If  $\alpha + \beta = \pi/4$ , then the value of  $(1 + \tan \alpha)(1 + \tan \beta)$  is  
 (A) 1 (B) 2 (C) -2 (D) Not defined
- Q52. If  $\sin \theta = -4/5$  and  $\theta$  lies in third quadrant then the value of  $\cos \theta/2$  is  
 (A)  $\frac{1}{5}$  (B)  $-\frac{1}{\sqrt{10}}$  (C)  $-\frac{1}{\sqrt{5}}$  (D)  $\frac{1}{\sqrt{10}}$
- Q53. Number of solutions of the equation  $\tan x + \sec x = 2 \cos x$  lying in the interval  $[0, 2\pi]$  is  
 (A) 0 (B) 1 (C) 2 (D) 3
- Q54. The value of  $\sin \frac{\pi}{18} + \sin \frac{\pi}{9} + \sin \frac{2\pi}{9} + \sin \frac{5\pi}{18}$  is given by  
 (A)  $\sin \frac{7\pi}{18} + \sin \frac{4\pi}{9}$  (B) 1 (C)  $\cos \frac{\pi}{6} + \cos \frac{3\pi}{7}$  (D)  $\cos \frac{\pi}{9} + \sin \frac{\pi}{9}$
- Q55. If A lies in the second quadrant and  $3 \tan A + 4 = 0$ , then the value of  $2 \cot A - 5 \cos A + \sin A$  is equal to  
 (A)  $-53/10$  (B)  $23/10$  (C)  $37/10$  (D)  $7/10$
- Q56. The value of  $\cos^2 48^\circ - \sin^2 12^\circ$  is  
 (A)  $\frac{\sqrt{5}+1}{8}$  (B)  $\frac{\sqrt{5}-1}{8}$  (C)  $\frac{\sqrt{5}+1}{5}$  (D)  $\frac{\sqrt{5}+1}{2\sqrt{2}}$
- Q57. If  $\tan \alpha = 1/7$ ,  $\tan \beta = 1/3$ , then  $\cos 2\alpha$  is equal to  
 (A)  $\sin 2\beta$  (B)  $\sin 4\beta$  (C)  $\sin 3\beta$  (D)  $\cos 2\beta$
- Q58. If  $\tan \theta = a/b$ , then  $b \cos 2\theta + a \sin 2\theta$  is equal to  
 (A) a (B) b (C)  $a/b$  (D) None
- Q59. If for real values of x,  $\cos \theta = x + 1/x$ , then  
 (A)  $\theta < 90^\circ$  (B)  $\theta = 90^\circ$  (C)  $\theta > 90^\circ$  (D) None

**Fill in the blanks in Exercises 60 to 67 :**

- Q60. The value of  $\sin 50^\circ / \sin 130^\circ$  is \_\_\_\_\_.
- Q61. If  $k = \sin(\pi/18) \sin(5\pi/18) \sin(7\pi/18)$ , then the numerical value of k is \_\_\_\_\_.

- Q62. If  $A = \frac{1-\cos B}{\sin B}$ , then  $\tan 2A =$  \_\_\_\_\_.
- Q63. If  $\sin x + \cos x = a$ , then  
 (i)  $\sin^6 x + \cos^6 x =$  \_\_\_\_\_ (ii)  $|\sin x - \cos x| =$  \_\_\_\_\_.
- Q64. In a triangle ABC with  $\angle C = 90^\circ$  the equation whose roots are  $\tan A$  and  $\tan B$  is \_\_\_\_\_.
- Q65.  $3(\sin x - \cos x)^4 + 6(\sin x + \cos x)^2 + 4(\sin^6 x + \cos^6 x) =$  \_\_\_\_\_.
- Q66. Given  $x > 0$ , the values of  $f(x) = -3 \cos \sqrt{3 + x + x^2}$  lie in the interval \_\_\_\_\_.
- Q67. The maximum distance of a point on the graph of the function  $y = \sqrt{3} \sin x + \cos x$  from x-axis is \_\_\_\_\_.

**In each of the Exercises 68 to 75, state whether the statements is True or False?**

**Also give justification.**

- Q68. If  $A = \frac{1-\cos B}{\sin B}$ , then  $\tan 2A = \tan B$
- Q69. The equality  $\sin A + \sin 2A + \sin 3A = 3$  holds for some real value of A.
- Q70.  $\sin 10^\circ$  is greater than  $\cos 10^\circ$ .
- Q71.  $\cos(2\pi/15) \cos(4\pi/15) \cos(8\pi/15) \cos(16\pi/15) = 1/16$ .
- Q72. One value of  $\theta$  which satisfies the equation  $\sin^4 \theta - 2\sin^2 \theta - 1$  lies between 0 and  $2\pi$ .
- Q73. If  $\operatorname{cosec} x = 1 + \cot x$  then  $x = 2n\pi, 2n\pi + \pi/2$
- Q74. If  $\tan \theta + \tan 2\theta + 3 \tan \theta \tan 2\theta = \sqrt{3}$ , then  $\theta = \frac{n\pi}{3} + \frac{\pi}{9}$ .
- Q75. If  $\tan(\pi \cos \theta) = \cot(\pi \sin \theta)$ , then  $\cos\left(\theta - \frac{\pi}{4}\right) = \pm \frac{1}{2\sqrt{2}}$ .
- Q76. In the following match each item given under the column  $C_1$  to its correct answer given under the column  $C_2$  :

**Column C<sub>1</sub>**

- (a)  $\sin(x+y) \sin(x-y)$   
 (b)  $\cos(x+y) \cos(x-y)$   
 (c)  $\cot\left(\frac{\pi}{4} + \theta\right)$   
 (d)  $\tan\left(\frac{\pi}{4} + \theta\right)$

**Column C<sub>2</sub>**

- (i)  $\cos^2 x - \sin^2 y$   
 (ii)  $\frac{1-\tan \theta}{1+\tan \theta}$   
 (iii)  $\frac{1+\tan \theta}{1-\tan \theta}$   
 (iv)  $\sin^2 x - \sin^2 y$

### POLITICAL SCIENCE

- Explain in detail the following fundamental rights (with their Articles) –  
 RIGHT TO EQUALITY  
 RIGHT TO LIBERTY AND PERSONAL FREEDOMS  
 RIGHT TO FREEDOM OF RELIGION  
 RIGHT AGAINST EXPLOITATION  
 CULTURAL AND EDUCATIONAL RIGHTS OF MINORITY GROUPS  
 RIGHT TO CONSTITUTIONAL REMEDY
- Which of the fundamental right is in your opinion the most important right? Summarize its provisions and give arguments to show why it is most important.
- Explain the Directive principles of state policy.
- Write a short note on fundamental duties.



## **PSYCHOLOGY**

Make a Project on any one topic given below:-

- . Dream Analysis
- . Work of any one Psychologists
- . Memory
- . Learning
- . Motivation
- . Emotion
- . ADHD (Attention Deficit Hyperactivity Disorder)
- . PTSD (Post Traumatic Stress Disorder)
- . Stress
- . Cognition
- . Behaviour
- . Learning Disabilities
- . Adolscence
- . Functions of Brain

## **HISTORY**

Prepare Project file on any one of the topic :-

1. Anthropological research based on Darwin's Theory.
2. Making and unmaking of Mesopotamia.
3. Paradigms of Greco-Roman civilization.
4. Paths to Modernization of Japan/china.
5. Piecing together the past of Genghis Khan.
6. An exploratory study into the making of America.
7. Learning about global Sufism.
8. History of aborigines-America/Australia.

## **PHYSICAL EDUCATION**

Q.1 Draw a neat diagram of Badminton/Tennis and its specifications.

Q.2 Role of Yoga in Daily life.

Q.3 What is sport injuries? Explain in briefly.