



ST. VIVEKANAND LOTUS VALEY PUBLIC SCHOOL
CLASS -XI
SESSION 2024-25



ACCOUNTANCY

Select the Correct Alternative

Solve these MCQ

Q1. Bookkeeping an accounting

- A) means same and are used. Interchangeably C) doesn't mean same and are not used. Interchangeably
B) means both a and b D) none of the above

Q2. Which of the following is not a recorded in the books of accounts

- A) Sales of goods B) Payment of salary C) Quality of staff. D) Purchase of goods.

Q3. Which of the following is not Subfield of accounting

- A) bookkeeping B) management accounting C) financial accounting cost accounting

Q4. which is the last step of accounting as a process of information

- A) Recording the transaction C) Preparation of financial statements
B) communication of information. D) Analysis and interpretation of information.

Q5. Basic function of financial accounting is to

- A) record all business transactions. C) Interpret financial data
B) assist the management. D) All of these

Q6. Transactions are posted into ledger account from.

- A) Vouchers B) journal book C) bank statement. D) None of the above

Q7. which one is the advantage of accounting

- A) Replacement of memory C) shows the present value of business
B) accounting does not record price level changes. D) Accounting is not not fully exact

Q8. Which is the important objective of accounting

- A) to keep systematic record of financial transactions C) to ascertain the net profit or loss of business
B) to ascertain the financial position of a business D) all of the above

Q9. which of the following is a limitation of accounting?

- A) Assistance to management B) replaces memory. C) Unrealistic information D) evidence in court

Q10. Capital is

- A) internal liability B) external liability C) internal as well as external liability. D) None of these

Q11. Goodwill is a/an

- A) Tangible Assets B) Intangible Assets C) Current Assets D) Fictitious Assets

Q12. Goods taken by the proprietor for personal use is

- A) Sale B) drawings. C) Purchase D) none of these

Q13. The amount invested by proprietor in a business is called

- A) Capital B) cash C) revenues. D) Loan,

Q14. The nature of capital is

- A) an asset. B) A liability C) An income D) An expense

Q15. which of the following is a liability

- A) furniture B) Rent payable C) interest received D) stock.

Q16. A person to whom money is owned by a firm for purchase of goods on credit is called a

- A) Creditors B) Debtor C) Both D) none of these.

Q17. Which Of the following equation is correct

- A) Assets + capital = liabilities C) Assets - liabilities = capital
B) assets + liabilities = capital. D) None of these

Q18 Under the cash basis of accounting, expenses are recorded

- A) On payment B)on being incurred C)either a or b. D)None of these

Q19. under the accrual basis of accounting expenses are recorded

- A) on payment B)on being incurred C)either a or b. D)None of these

Q20. Accrual basis of accounting.

- A) Does not give a true and fair view of profit and financial position
B) gives a true and fair view of profit and financial position
C) may or may not give a true and fair view of profit and financial position.
D) None of the above.

Q21. The liabilities of a firm are ₹3000 the capital of a proprietor is ₹,7000 the total assets are

- A) 7000 B)10000 C)4000 D)none of these

Q22. Journal is called

- A) a book of primary entry, C)a book of secondary entry,
B) a book of final entry, D)both secondary entry and final entry,

Q23. Ledger Folio in the journal is filled. At the time of

- A) journalising B)Balancing C)posting D)costing

Q24. recording of transaction in a journal is called

- A) posting B) journalising C)Transfer D)ruling.

Q25. Which of the following accounts will be credited on giving cash donation

- A) cash A/c B)donation A/c C)purchase A/c D)discount received A/c

Q26. sale of good to Ram for cash is debited to

- A) Ram B)cash A/c C)Stock A/c D)Sales A/c

Q27. Withdrawal of cash from business by the proprietor is credit to.

- A) Drawings A/c B) capital A/c C)cash A/c D)bank A/c

Q28. Bad debts earlier written off and now received are credited to

- A) Bad debt A/c B)Bad Debt recovered A/c C)Miscellaneous income A/c D)Debtor A/c

Q29. With in the state purchase of goods, which of the following is levied?

- A) CGST B)SGST C)CGST And SGST D)SGST And CGST

Q30. Outside the state purchase of goods, which of the following GST is levied?

- A) IGST B)IGST AND CGST C)CGS D)SGST

Solve these Questions in your note book

Q31. Use accounting equation to show the effect of the following transactions of M/S royal traders

- A) started business with cash rupees. 1,20,000 D) purchase goods for cash rupees. 10000
B) Rent received ₹5000 E)salary outstanding ₹,2000.
C) Sold goods for cash costing (₹5000) ₹7000 F)goods destroyed by fire ₹,500

Q32. accounting equation from the following

- A) started business with cash ₹ 100000 purchase goods for cash ₹,20000. And on credit ₹,30000
B) Sold goods for cash costing ₹,10000 and on credit costing ₹,15000 both at a profit of 20%
C) paid salaries ₹, 8000.

Q33. Calculate the amount of external equities as 31st March 2023 in the following cases.

- A) On 31st, March 2023 total assets and capital were ₹,1500000 and 10,50,000 respectively.
B) On 1st April 202 Mukesh started business with a capital of ₹,300000 and a loan of ₹,300000 borrowed from a friend. During the year, he earned a profit of ₹,150000 on 31st March 2023, the total assets were 1500000.
C) On 1st April 2022 Ramesh started business with the capital of ₹, 3,00,000 and a loan of ₹3Lakh borrowed from a friend during the year. He earned a profit of ₹150000. Introduced a additional capital of ₹,180000 and had withdrawn ₹90000 for his personal use. On 31st March 2023 total assets were ₹,1500000.

Q34. Journalise the following transactions. A) purchase goods of the list price of ₹,20000 from Vishal at 20% trade discount against cheque payment

B) purchase goods of the list price of ₹20000 from Naman at 15% trade discount against cash.

C) purchase of the list price of ₹,30000 from Amrit at 20% trade discount.

D) Goods purchased from Amrit of the list price ₹,10000 returned.

Q35. Journalise the following Transactions

A) Goods costing ₹500 given away as charity

B) received ₹,975 from Harikrishna in settlement office account of ₹,1000

C) Received dividends of ,60 paise in a ₹, from the official receiver of Rajan, who owned us ₹1000.

D) Charge interest on drawing rupees. 1500

E) Sold, goods to Anil costing ₹40000 for cash at a profit of 25% on cost less 20%trade discount

F) Paid Cartage of ₹100 for free delivery of goods

G) paid income tax ₹,15000.

Q36. Pass journal entries for the following transactions of Akhil(CGST AND SGST @9%)

A) goods costing ₹5000 were taken by the proprietor for personal Use

B) Goods costing ₹2000 were given as donatio

C) Goods costing ₹ 3000 were given as sample.

D) Goods costing ₹5000 were lost in fire

E) commission Paid ₹9000

F) commission received ₹18000 by cheque.

Q37. Open a 'T' shape account of a creditor Mohan, and write the following transaction on the proper side:

A) Purchased Goods from Mohan on credit ₹,50000

B) Paid to Mohan ₹,30000

C) goods returned to Mohan 3000

D) Again Purchase goods from Mohan on credit 10000

Q38. Open a 'T' account of Gurman, a debtors the following transactions.

A) Good sold to to Gurman ₹ 80000

B) cash received from Gurman ₹ 30000

C) discount allowed to Gurman ₹ 2000

D) Goods sold for cash to Gurman 10000

E) Cheque received from Gurman ₹20000

F) Sales return by Gurman ₹ 50

BUSINESS STUDIES

Q1. What do you mean by Business. Explain. with their characteristics?

Q2. What do you mean by Profession Explain with their characteristics?

Q3. What do you mean by Employment . Explain with their characteristics?

Q4. Explain the Objectives of Business?

Q5. What do you mean by primary industry? Explain with their types?

Q6. What do you mean by Secondary industry? Explain with their types?

Q7. What is Auxiliary to trade?

Q8. Explain the stages of history of commerce?

Q9. Explain the indigenous banking system and explain the methods of indigenous banking system?

Q10. How business risk is created?

Q11. What do you mean by partnership? Explain the types of partnership.

Q12. What Sole proprietorship explain with their merits and limitations?

Q13. What joint family business with their merits and limitations?

Q14. Explain the characteristics of cooperative societies?

Q15. What do mean by partnership deed? Explain with their contents?

MUSIC

1. Draw a diagram of Sangeet and its types on A4 sheets.
- 2 Writing of alankar on A3 sheets.
3. Make a diagram of Tanpura with its parts on A4 sheet
4. Writing a notation of Ek taal on with its introduction on A4 sheet
5. Make a project report on Tansen with his life sketch and achievements in Indian music with his coloured pictures on A4 sheets.
6. Revise all the topics we have done in the music note book.

HISTORY

- Ques 1 what do ancient stories tell us about the civilisation of Mesopotamia?
- Ques 2 what is the importance of division of labour in urban life?
- Ques 3 Give main geographical features of Mesopotamia.
- Ques 4 Describe the main characteristics of the city of Ur.
- Ques 5 Describe the major sources of Roman history
- Ques 6 Discuss the expansion of the Roman and Iranian empires.
- Ques 7 Discuss the main features of family life in the Roman society
- Ques 8 what was the role of slaves and hired labour in the Roman economy?
- Ques 9 who were the Mongols? Discuss their life.
- Ques 10 Discuss the political activities of the Mongols after Genghis Khan.
- Ques 11 who was Genghis Khan? How did he become the Great Khan of the Mongols?

ENGLISH

1. Write each of the following questions in 100-120 words.
 - i) Explain the reasons of changing relationship between the Grandmother and the Author?
 - ii) Character sketch of Grandmother.
 - iii) Identify the poetic devices used in the poem of a photograph and discuss their meanings.
 - iv) Human life is short lived in contrast to nature. Comment on the statement in the light of the poem A Photograph.
 - v) Can the act of stealing be ever justified? Give your views in the context of reading of The Summer of the Beautiful White Horse.
 - vi) Why do you think people undertake such adventures expeditions in spite of the risks involved? Evaluate in the context of your understanding of “We ‘re not afraid to die.... If we can all be together.”
2. Prepare a scrap book / file with various kinds of classified ads (situation vacant, situation wanted, property for sale, for purchase, services offered) and display or commercial ads. (One each).
3. Write articles of 150-200 words on the following topics.
 - i) Child Labour
 - ii) Adult Literacy
 - iii) Global Terrorism /A threat to World peace)
4. **Grammar**
Do practice of following topics
 1. Tenses
 2. Sentence Re- ordering
 3. Error Editing , Gap Filling

5 . Pickup any one lesson from the books ‘Hornbill’ or ‘Snapshot’ and prepare a project file on any one lesson covering the following points.

- Information about the author.
- Period in which the story was written and its relevance in relation with those times.
- Brief hint about the plot.
- Theme.
- Characterization
- Message

6. Make a model and chart on any topic of your syllabus including poetry, prose and language.

ECONOMICS

Ques 1 Explain the scope of statistics

Ques 2 Statistics is defined as aggregate of numerical facts. Give a few examples

Ques 3 what are primary data ? Enumerate the various methods of collecting primary data with merits and Demerits

Ques 4 what are the secondary data ? Discuss various sources of collecting secondary data

Ques 5 What are important types of data as published in Census of India and Reports and publications of NSSO

Ques 6 Explain the meaning of sampling survey. What are its advantages and disadvantages

Ques 7 compare the census and sample methods with reference to reliability,time involved and cost.

Ques 8 Describe the various methods of sampling.How is random sampling better than systematic sampling

Ques 9 What do you mean by classification? Explain its various objectives

Ques 10 Explain with examples two ways of presenting cumulative frequency series

Ques 11 What is tabulation? Describe functional parts of a statistical table

Ques 12 Draw a flow chart of different kinds of tables. Explain it

Political Science

1. Complete your notebook.

2. Create ppt on Ch – Rights & Ch- Liberty.

3. Learn below chapter with case study & source based.

- Rights
- Constitution
- Liberty
- Equality
- Legislature
- Elections& Representation

4. Make model on legislature & Constitution

5. Prepare map given in the chapter(India+ World)

6. Prepare assignment on each chapter above (minimum 10 pages)

CHEMISTRY

- Prepare the assigned model.
- Solve all the unsolved numericals of mole concept, methods of expressing concentration, percentage composition and molecular and empirical formula in your notebook.
- Solve the given assignment.

Assignment

1. How many number of atoms are present in 52u of He.
2. How many significant figures are present in i) 0.0025 ii) 600
3. What is the mass of 1 L of mercury in grams and kilograms if density of liquid mercury is 13.6 gram per cm³.
4. Vitamin C is known to contain 1.29×10^{24} hydrogen atoms. Calculate the number of moles of hydrogen atoms.
5. Express the following in scientific notation
i) 0.0048 ii) 234000. iii) 8008 iv) 500.0. v) 6.0012
6. How many electrons are present in 16 gram of Methane.

7. How many atoms are present in 1 ml of ammonia (NH₃) at STP.
8. Calculate the number of nm in 5839 Å°.
9. Calculate the volume of 34 g of ammonia at STP.
10. An organometallic compound on analysis was found to contain carbon= 64.4% hydrogen= 5.5% iron= 29.9% determine its empirical formula. (Atomic mass of iron is 56u)
11. Calculate mass percent of different elements present in sodium sulphate (Na₂SO₄).
12. Compound contain 4.07% hydrogen 24.27% carbon and 71.65% chlorine its molar mass is 98.96 g. Calculate its empirical and molecular formula.
13. What is the concentration of sugar (C₁₂H₂₂O₁₁) in mole per litre if its 20 g are dissolved in enough water to make final volume of 2 L.
14. Calculate mole fraction of glucose in 30% of aqueous solution of glucose by mass.
15. Match the following prefixes with their multiples

| | Prefix | Multiples |
|---|--------|-------------------|
| 1 | Micro | 10 ⁶ |
| 2 | Deca | 10 ⁹ |
| 3 | Mega | 10 ⁻⁶ |
| 4 | Giga | 10 ⁻¹⁵ |
| 5 | Femto | 10 |

16. Read the passage given below and answer the following questions.

Concentration of solution can be expressed in terms of mass percentage, volume percentage and mass by volume percentage. Molarity and mole fractions are also used to express concentration of solution. Molality can be converted to Molarity and vice versa if density of solution is given. Mole fraction of solute can be converted into Molality and vice versa if we know the molar mass of solvent.

a) Define molality.

b) what is the unit of molarity.

c) 1m solution of NaNO_3 has density 1.25 gram per centimetre cube calculate its molality if molecular weight of NaNO_3 is 85 g mole⁻¹.

d) if mole fraction of solute in aqueous solution is 0.02, what is the molality of solution?

HINDI

1. निम्नलिखित विषयों पर 100 से 120 शब्दों में रचनात्मक लेख लिखिए-

- (क) परीक्षा तनाव के कारण व इसे रोकने के उपाय
- (ख) उच्च शिक्षा हेतु छात्रों का विदेशों को पलायन
- (ग) दुर्घटना से देर भली
- (घ) भारतीय संस्कृति में अतिथि का स्थान
- (ङ) आजादी के 75 वर्षों बाद भारत की स्थिति

2. निम्नलिखित विषयों पर औपचारिक पत्र लिखिए-

- (क) यातायात के नियमों का उल्लंघन करने वालों के विरुद्ध कड़ी कार्रवाई करने तथा दो अन्य सुझाव देते हुए यातायात पुलिस आयुक्त को लगभग 120 शब्दों में पत्र लिखिए।
- (ख) आपका नाम सौरभ कुमार है। आप कक्षा ग्यारहवीं के छात्र हैं। आपकी अंग्रेजी विषय की पढ़ाई समय पर पूरी न होने के कारण विषय की अतिरिक्त कक्षाएं लगवाने हेतु प्रधानाचार्य जी को पत्र लिखिए।
- (ग) समाचार-पत्रों में विज्ञापनों की भरमार को कम करने और समसामयिक विषयों पर लेखन की आवश्यकता को दर्शाते हुए किसी दैनिक समाचार-पत्र के संपादक को पत्र लिखिए।
- (घ) समस्त औपचारिकताएं पूर्ण करने के बाद भी अभी तक आपको अपना पहचान पत्र (आधार कार्ड) नहीं मिला है। इस समस्या के समाधान हेतु संबंधित अधिकारी को पत्र लिखिए।
- (ङ) आप अजय जैन, गर्ग एंड संस कंपनी के मालिक हैं। उपभोक्ता द्वारा मंगवाए गए सामान की सूचना देते हुए पत्र लिखिए।

3. निम्नलिखित प्रश्नों के उत्तर पाठ्य पुस्तक आरोह (भाग 1) के आधार पर दीजिए-

- (क) 'नमक का दारोगा' कहानी से हमें क्या संदेश मिलता है?
- (ख) 'नमक का दारोगा' पाठ के आधार पर वंशीधर का चरित्र-चित्रण कीजिए।
- (ग) पंडित अलोपीदीन ने वंशीधर को नौकरी पर क्यों रखा? पाठ के आधार पर उत्तर दीजिए।
- (घ) मियां नसीरुद्दीन ने नानबाई का काम किससे और कैसे सीखा था?
- (ङ) मियां नसीरुद्दीन की अखबार वालों के प्रति क्या राय थी?
- (च) कोई भी कार्य छोटा नहीं होता, उस कार्य को करने की भावना श्रेष्ठ होनी चाहिए। 'मियां नसीरुद्दीन' पाठ के आधार पर उत्तर दीजिए।
- (छ) गुरु और शिष्य का रिश्ता अनूठा होता है। एक शिष्य तभी सफल होता है जब वह अपने गुरु के प्रति श्रद्धा एवं आदर भावना रखें और मेहनत एवं सत्यनिष्ठ भावना से कार्य करे। इस कथन की पुष्टि पाठ के आधार पर कीजिए।
- (ज) कबीर के अनुसार सभी तत्वों और प्राणियों का जन्म किससे हुआ है?
- (झ) मीरा ने किसको अपना पति मान लिया है? उसके स्वरूप का वर्णन करें।
- (ञ) कल्पना करके लिखिए कि प्रेम प्राप्ति के लिए मीरा को किन-किन कठिनाइयों का सामना करना पड़ा होगा?

4. Activities-

- (क) जनसंचार के प्रमुख माध्यमों पर एक सुंदर आकर्षक मॉडल तैयार कीजिए।
- (ख) पानी की समस्या से निपटने के लिए कारगर उपाय A4 शीट पर दर्शाएं।
- (ग) किन्हीं 10 नारों का संकलन करके A4 शीट पर लिखिए।
- (घ) प्राचीन और वर्तमान गुरु शिष्य संबंधों में क्या अंतर आ गया है? चित्रों सहित विस्तार पूर्वक बताइए।
- (ङ) 'लता मंगेशकर' जी का जीवन परिचय देते हुए परियोजना कार्य तैयार कीजिए।

टिप्पणी-

जुलाई लघु परीक्षा के लिए निम्नलिखित पाठ्यक्रम याद कीजिए-

गद्य भाग- नमक का दारोगा, मियां नसीरुद्दीन।

पद्य भाग- कबीर के पद, मीरा के पद।

अपठित गद्यांश, अपठित पद्यांश।

PHYSICAL EDUCATION

- 1) Prepare 5 yoga poses on chart & their benefit.
- 2) Prepare volleyball ground on chart paper.
- 3) Write 1 & 2 chapters in notebook
4. Assignment. Concept of balanced diet and nutrition.
5. Food sources and functions

BIOLOGY

- REVISE ALL THE WORK DONE IN YOUR NOTEBOOK
- MAKE ANY THREE POSTER ON A3 SHEET ON THE GIVEN TOPIC .

1. Human heart
2. Biomolecules
3. Level of organization
4. Mitosis cell division
5. Plasma membrane

- MAKE ANY WORKING MODEL ON THE MENTIONED ROLL NO. BELOW:

- | | |
|-----------------------------|-------------------|
| 1. WATER PURIFICATION PLANT | ROLL NO.(1,2 &13) |
| 2. HYDROPONIC FARMING | ROLL NO.(3,4 &14) |
| 3. FLUID MOSAIC MODEL | ROLL NO.(5,6) |
| 4. AQUARIUM FOUNTAIN | ROLL NO.(7,8) |
| 5. FROG DIGESTIVE SYSTEM | ROLL NO.(9,10) |
| 6. HUMAN RESPIRATORY SYSTEM | ROLL NO.(11,12) |

1. Chapter: Animal Kingdom, Plant kingdom Assignment

- i. Two common characters found in centipede, cockroach and crab are
 - a) Jointed legs and chitinous exoskeleton
 - b) Green gland and tracheae
 - c) Book lungs and antennae
 - d) Compound eyes and anal cerci
- ii. The lips of *Ascaris* are-
 - (a) Bony li
 - (b) Smooth
 - (c) Cartilagenous
 - (d) Denticulate
2. *Ascaris* male is:
 - (a) Didelphic
 - (b) Monodelphic
 - (c) Polydelphic
 - (d) None of the Above
3. Mosquito (*Anopheles*) is
 - (a) Exogenous host for Plasmodium
 - (b) Endogenous host for Plasmodium
 - (c) Initial host
 - (d) None of the above
4. Which plant kingdom can survive both on land and in the water?
 - (a) Tracheophyta
 - (b) Pteridophyta
 - (c) Thallophyta
 - (d) Bryophyta
5. A plant that has seeds but no flowers and fruits?
 - (a) Bryophytes
 - (b) Gymnosperms
 - (c) Mosses
 - (d) Pteridophytes
6. Pteridophytes differ from mosses in
 - (a) Independent gametophyte
 - (b) Dependent gametophyte
 - (c) Flagellate antherozoids
 - (d) Independent and dominant sporophyte
7. Plants reproducing by spores are grouped under
 - (a) Bryophytes
 - (b) Sporophytes
 - (c) Cryptogams
 - (d) Thallophytes
8. Plants having vascular tissue without seeds
 - (a) Angiosperm
 - (b) Pteridophytes
 - (c) Bryophytes
 - (d) Gymnosperms
9. Pick the mismatched pair
 - (a) Cycas – Dioecious
 - (b) Equisetum – Homosporous
 - (c) Salvinia – Heterosporous
 - (d) Pinus – Dioecious

10. What is open and closed type of circulatory system?
11. Which type of symmetry do the following animals have, explain the symmetry also:- sponges, echinoderms, annelids.
12. Give single terms for:-
13. Animals which have ectoderm & endoderm only.
14. Animals which ectoderm, mesoderm and endoderm.
15. Define coelom. Give e.g. of animals who are coelomates.
16. Give flowchart of classification of animals.
17. Explain the terms of Phylum Porifera: - Water canal system, coenocytes & types of skeleton sponges have.
18. (a) In which phylum do you find endoblasts? What is its function?
19. (b) Give differences between polyp & medusa.
- Q10. What is bioluminescence?
20. What is the function of flame cells? In which phylum are they found?
21. Which phylum has the characteristic – bilaterally symmetrical, triploblastic, pseudocoelomates animal?
22. Q13. What are the functions of parapodia & nephridia?
23. Which is the largest phylum of Animalia?
24. Describe the following features of an arthropod (a) Body exoskeleton (b) appendages (c) organs of respiration, balance organs & organs of excretion.
25. Give characteristic features of Phylum Mollusca.
26. Which are the most distinctive features of an Echinoderm?
27. List the features of Vertebrata & give its flowchart.
28. Define phylogenetic classification systems, numerical taxonomy, cytotaxonomy and chemotaxonomy.
29. Name two algae from which agar is obtained. give commercial use of agar.
30. Name two unicellular algae rich in proteins & which are used as protein supplements by spacetravelers.
31. List the name divisions of kingdom Algae & give their characteristics.

Banking

Learn all these questions

- Q1. State the objectives of nationalization of public sector banks ?**
- Q2. Give the full form of a x e m bank but function does it perform?**
- Q3. What do you mean by the principle license given by the RBI and how important is it?**
- Q4. Write a short note on**
 - 1. RRB**
 - 2. Cooperative banks**
 - 3. History of banks in India**
- Q5. State any three initiatives taken by RBI in improving the payment mechanism?**
- Q6. What are the different types of loans required by the corporate?**
- Q6. What is nomination and advantages to the customers?**
- Q7. Explain the advantages and disadvantages of saving accounts, current accounts, recurring accounts and fixed deposit accounts from the customer point of view?**
- Q8. What is the difference between partnership and corporate accounts?**
- Q9. What are the steps recommended by RBI in the KYC guideline?**
- Q10. What are the special types of customers of the bank and how do banks address their needs?**

Project Work

- 1. Prepare a chart on the functions of RBI**
- 2. Prepare a specimen of bank form for saving account, current account, and fixed deposit account**

Maths

Assignment - 1

- The inequality $|z - 6| < |z - 2|$ represents the region given by
 - $\operatorname{Re}(z) > 4$
 - $\operatorname{Re}(z) < 2$
 - none of these.
 - $\operatorname{Re}(z) > 2$
- Find Argument of the complex number $(0 + 0i)$
 - $-\pi$
 - π
 - none of these.
 - 0
- The least value of n for which $\left(\frac{1+i}{1-i}\right)^n$ is a positive integer is
 - 8
 - 1
 - 2
 - 4
- If z is any complex number, then $\frac{z-\bar{z}}{2i}$ is
 - either 0 or purely imaginary
 - purely imaginary
 - purely real
 - none of these
- The points $z = x + iy$ which satisfy the equation $|z| = 1$ lie on
 - the line $x = 1$
 - the line $y = 1$
 - the line $x + y = 1$
 - the circle whose centre is origin and radius = 1
- Fill in the blanks:
The roots of the equation $x^2 + 4 = 0$ are . ____
- Fill in the blanks:
 $5(\cos 270^\circ + i \sin 270^\circ)$ is written in cartesian form as ____
- Evaluate $\frac{1}{i^7}$.
- Express $(5 + 4i) + (5 - 4i)$ in the form of $a + ib$.
- Solve the inequalities: $2 \leq 3x - 4 \leq 5$
- If z_1, z_2 and z_3, z_4 are two pairs of conjugate complex numbers, then find $\arg\left(\frac{z_1}{z_4}\right) + \arg\left(\frac{z_2}{z_3}\right)$
- If $\arg(z - 1) = \arg(z + 3i)$, then find $x - 1: y$.
- Find the square root of $3 - 4\sqrt{7}i$
- Find the real numbers x and y if $(x - iy)(3 + 5i)$ is the conjugate of $-6 - 24i$.
- Express the complex number $3(\cos 300^\circ - i \sin 30^\circ)$ in polar form.

Assignment - 2

- The complex numbers $z = x + iy; x, y \in \mathbf{R}$ which satisfy the equation $\left|\frac{z-3i}{z+3}\right| = 1$ lies on
 - the y axis
 - the x axis
 - the line $x + y = 0$
 - the line parallel to y axis
- If $(\sqrt{3} + i)^{10} = a + ib; a, b \in \mathbf{R}$, then a and b are respectively :
 - 64 and $-64\sqrt{3}$
 - 512 and $-512\sqrt{3}$
 - 128 and $128\sqrt{3}$
 - none of these
- $z + \bar{z} \neq 0$ if and only if
 - $z \neq 0$
 - $\operatorname{Re}(z) \neq 0$
 - $\operatorname{Im}(z) \neq 0$
 - $|z| \neq 0$
- If $\alpha = \frac{z}{\bar{z}}$, then $|\alpha|$ is equal to :
 - 1
 - 0
 - 1
 - none of these
- $1 + i^2 + i^4 + i^6 + i^8 + \dots$ up to 1001 terms is equal to
 - none of these
 - 0
 - 1
 - 1
- Fill in the blanks:
The modulus and argument of $z = 1 + itan \alpha$ is \$ \quad \$ and \$ \quad \$ respectively.
- Fill in the blanks:
The value of $\frac{1}{i^7}$ is ____.
- Solve $x^2 + 3 = 0$
- Express the complex numbers $(1 + i) - (-1 + i6)$ in standard form
- Find the difference of the complex numbers $(6 + 5i), (3 + 2i)$.
- Express the complex numbers $\left(\frac{1}{5} + \frac{2}{5}i\right) - \left(4 + \frac{5}{2}i\right)$ in standard form
- Solve: $ix^2 + 4x - 5i = 0$.
- Find the square root of $1 - i$.
- If $\operatorname{Re}(z^2) = 0, |z| = 2$, then prove that $z = \pm\sqrt{2} \pm i\sqrt{2}$.
- Find all non-zero complex numbers of z satisfying $\bar{z} = iz^2$.

Assignment - 3

- Let A and B be two sets such that $n(A) = 35$, $n(B) = 42$ and $n(A \cap B) = 17$, find $n(A - B)$
a. 25 b. 19 c. 18 d. 17
- If $A = \{2, 3, 4, 8, 10\}$, $B = \{3, 4, 5, 10, 12\}$ and $C = \{4, 5, 6, 12, 14\}$, then $(A \cup B) \cap (A \cup C)$ is equal to
a. $\{4, 5, 8, 10, 12\}$ b. $\{2, 4, 5, 10, 12\}$
c. $\{3, 8, 10, 12\}$ d. $\{2, 3, 4, 5, 8, 10, 12\}$
- If A , B and C are non - empty sets , then $(A - B) \cup (B - A)$ equals :
a. $(A \cap B) - B$ b. $(A \cap B) \cup (A \cup B)$
c. $(A \cup B) - B$ d. $(A \cup B) - (A \cap B)$
- If A and B are two sets then $A \cap (A \cap B')$ = ...
a. ϕ b. A c. ϕ d. B
- Sets A and B have 3 and 6 elements respectively. What can be the maximum number of elements in $A \cup B$.
a. 3 b. 9 c. 18 d. 6
- Fill in the blanks:
If $A = \{e, f, g\}$ and $B = \phi$, then $A \cap B$ is _____.
- Fill in the blanks:
The total number of subsets and a proper subset of a finite set containing ' n ' element is _____ and _____ respectively
- If $A = \{3, 5, 7, 9, 11\}$, $B = \{7, 9, 11, 13\}$, $C = \{11, 13, 15\}$ and $D = \{15, 17\}$ find: $A \cap C$
- Describe $\{x \in R: x > x\}$ set in Roster form.
- Is set $C = \{x: x - 5 = 0\}$ and $E = \{x: x \text{ is an integral positive root of the equation } x^2 - 2x - 15 = 0\}$ are equal?
- Show that $A \cap B = A \cap C$ need not imply $B = C$?
- Write the set of all natural numbers x such that $4x + 9 < 50$ in roster form.
- In the following, state whether $A = B$ or not: $A = \{a, b, c, d\}$ $B = \{d, c, b, a\}$
- If $X = \{a, b, c, d\}$ and $Y = \{f, b, d, g\}$, then find
i. $X - Y$ ii. $Y - X$ iii. $X \cap Y$ iv. $X \cup Y$
- In a group of 100 people, 65 like to play Cricket, 40 like to play Tennis and 55 like to play Volleyball. All of them like to play at least one of the three games. If 25 like to play both Cricket and Tennis, 24 like to play both Tennis and Volleyball and 22 like to play both Cricket and Volleyball, then
i. how many like to play all the three games?
ii. how many like to play Cricket only?
iii. how many like to play Tennis only?
iv. Represent the above information in a Venn diagram.

Assignment - 4

- Let U be the universal containing 700 elements. If A and B are subsets of U such that $n(A) = 200$, $n(B) = 300$ and $n(A \cap B) = 100$ then $n(A' \cap B')$ = ...
a. 400 b. 300 c. 500 d. 800
- If $A = \{1, 2, 3, 4\}$, $B = \{4, 5, 6, 7\}$, $A \cap B =$
a. $\{4\}$ b. $\{1, 2, 3, 4\}$ c. $\{6, 7\}$. d. $\{1, 2\}$
- If $n(A) = 3$ and $n(B) = 6$ and $A \subseteq B$, then $n(A \cup B) = ?$
a. 9 b. 3 c. 6 d. none of these
- The number of proper subsets of the set $\{1, 2, 3\}$ is :
a. 6 b. 7 c. 8 d. 5
- If A class has 175 students . The following data shows the number of students offering one or more subjects.
Mathematics 100 ; Physics 70 ; Chemistry 40 ; Mathematics and Physics 30 ; Mathematics and Chemistry 28 ; Physics and Chemistry 23 ; Mathematics, Physics and Chemistry 18 . How many students have offered Mathematics alone?
a. 35 b. 22 . c. 48 d. 60
- Fill in the blanks:
If $A = \{1, 3, 5, 7, 9\}$ and $B = \{2, 3, 5, 7, 11\}$, then $A \Delta B$ is _____
- Fill in the blanks:
A set, consisting of a single element, is called a ____.
- List all the elements of set $\{x: x \text{ is a month of a year not having 31 days }\}$.
- State whether the statement is true or false: $\{a, e, i, o, u\}$ and $\{a, b, c, d\}$ are disjoint sets.
- If $U = \{a, b, c, d, e, f, g, h\}$, find the complement of the set: $D = \{f, g, h, a\}$
- Let $A = \{1, 2, 4, 5\}$ $B = \{2, 3, 5, 6\}$ $C = \{4, 5, 6, 7\}$. Verify:
 $A - (B \cup C) = (A - B) \cap (A - C)$

12. If A is any set, prove that: $A \subseteq \phi \Leftrightarrow A = \phi$

13. In a survey of 60 people, it was found that 25 people read newspaper H, 26 read newspaper T, 26 read newspaper I, 9 read both H and I, 11 read both H and T, 8 read both T and I, 3 read all three newspapers.

Find: the number of people who read at least one of the newspaper.

14. For any two sets A and B prove that: $P(A \cap B) = P(A) \cap P(B)$.

15. If $U = \{a, b, c, d, e, f\}$, $A = \{a, b, c\}$, $B = \{c, d, e, f\}$, $C = \{c, d, e\}$ and $D = \{d, e, f\}$, then tabulate the following sets:

i. $A \cap D$ ii. $A \cap C$ iii. $U \cap D$ iv. $A \cup \phi$ v. $(U \cap \phi)'$ vi. $(U \cup A)'$

Information Technology

1. What is a computer? What are its strengths and weakness?

2. Briefly explain IPO Cycle

3. What is CPU? Explain its components in detail.

4. Give FULL form of

a. KB b. GB. c. TB d. PB e. CPU f. ALU g. CU h. MICR I OMR
j. OCR K. HLL

5. Fill in the blanks:-

a. 1 Byte = _____ bits

b. 1 nibble = _____ bits

c. 1 KB = _____ bytes

d. 1 MB = _____ KB = _____ bytes

e. 1 GB = _____ MB = _____ KB = _____ bytes

f. 1 TB = _____ GB = _____ MB = _____ KB = _____ Bytes

g. 1 PB = _____ TB = _____ GB = _____ MB = _____ KB = _____ bytes

6. What is an operating system? What are its functions

7. What is the significance of

a. Recycle bin b. Window explorer c. Task bar d. Shortcut menu

8. What do you understand by booting? Explain the booting process in detail

9. What is the difference between copying, moving and deleting a file?

10. Define the following terms

a) Input device

B) output device

iii) USB PORT

11. Difference between

a) RAM & ROM

b) Internal & external memory

c) Floppy disk and hard disk

d) Application & system software

e) Lan & Wan

12. Create a PPT on any topic

a) Computer fundamental

b) Networking

c) Topology

Physics

Do competitive questions of chapter units and dimensions and motion in one dimension and motion in plane from book (errorless physics universal) and work on projects assigned according to your roll number

