



Class- 12th

H.C.J. ACADEMY
(Affiliated to ICSE/ISC (10+2) Board, New Delhi)
Janaura, Deokali Bypass Road, Ayodhya 224001
Summer Vacation Homework 2025-26

Date:- 31-May-2025

English Language

From Roll no. 01 to 10.

- (1). While many students persevere throughout high school, others occasionally become disinterested in what they claim is the “same old routine”. What can be done to keep students motivated and keep them focused on their studies? Write a composition in which you describe how to keep things interesting in the class room in order to keep students motivated.

From Roll no. 11 to 20.

- (2). ‘Law enforcement cameras an invasion of privacy. Argue either for or against this proposition.

From Roll no. 21 to 32.

- (3). “Sitting comfortably at home, cheering for war like it’s a game. For media, it’s drama & TRP. For soldiers it’s life and death. while you want “action” they bleed in silence, far from their families is war an entertainment Express your views on this topic.

English –Literature

Make a list of Elizabethan writers. Who is the most prominent writer of that age.

1. What do you know about Banquet Scene?
2. Whose ghost appears in that scene?
3. What was its effect on Macbeth? Write in 300 words.

Hindi

1. ‘विज्ञान ने विश्व को निवास योग्य बना दिया है’- इस संदर्भ में जीवन में विज्ञान की उपयोगिता का उल्लेख कीजिए।
2. “जल ही जीवन है। जल के बिना सुनहरे कल की कल्पना करना व्यर्थ है।” वर्तमान युग में जल संकट की समस्या किस प्रकार विकराल रूप लेती जा रही है? जल संरक्षण की आवश्यकता तथा इसके विभिन्न उपायों पर प्रकाश डालते हुए अपना विचार स्पष्ट कीजिए। (350 से 400 शब्दों में लिखिए)

Maths (Do all the question in fair copy)

Q.1- Define function and write formula of number of function.

Q.2- Write principal value of all inverse trigonometric function.

Q.3- Define all types of matrix.

Q.4- Define symmetric, and anti symmetries, transpose of matrix.

Q.5- Prove every square matrix can be expressed as sum of symmetric matrix and anti-symmetric matrix with example.

Q.6- Define, cost, average cost, revenue function, marginal cost, marginal revenue, total fixed variable.

Q.7- Solve using matrix method –

$$\frac{1}{x} + \frac{1}{y} + \frac{1}{2} = 9, \frac{2}{x} + \frac{5}{y} + \frac{7}{2} = 52, \frac{2}{x} + \frac{1}{y} - \frac{1}{2} = 0$$

Q.8- Prove-

$$\begin{vmatrix} (b+c)^2 & a^2 & a^2 \\ b^2 & (a+c)^2 & b^2 \\ c^2 & c^2 & (a+b)^2 \end{vmatrix} = 2abc(a+b+c)^3$$

Q.9- Using properties of determinant . Find value of –

$$\begin{vmatrix} 1 & 1 & 1 \\ nc_1 & n+2c_2 & n+4c_2 \\ nc_2 & n+2c_2 & n+4c_2 \end{vmatrix}$$

Q.10- Find inverse by elementary row operation –

$$\begin{vmatrix} 0 & 1 & 2 \\ 1 & 2 & 3 \\ 3 & 1 & 1 \end{vmatrix}$$

Physics

Q.1- Find the current and resistance of each branch and equivalence resistance.

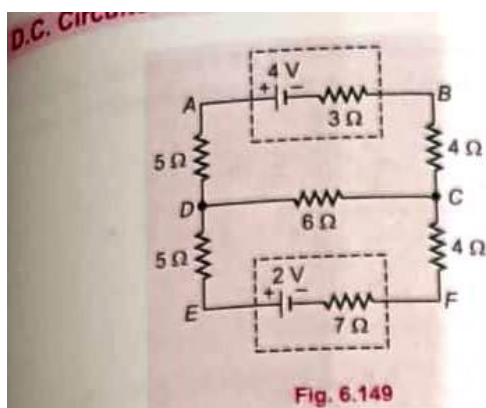


Fig. 6.149

37. Calculate I_1 , I_2 , I_3 and potential difference between points A and B in Fig. 6.150.

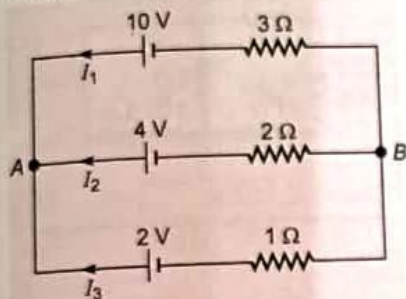
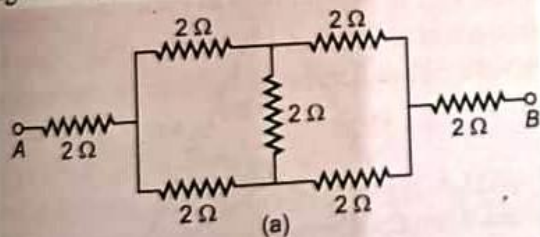


Fig. 6.150

38. Find the equivalent resistance between points A and B in Fig. 6.151(a) and (b).



(a)

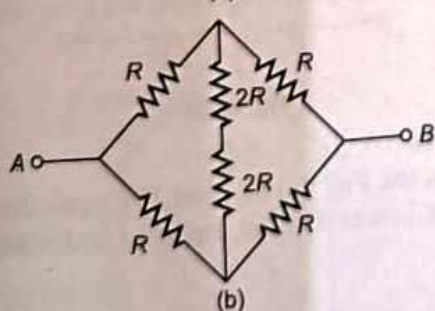


Fig. 6.151

39. In adjacent Fig. 6.152, calculate the current through 3Ω resistance.

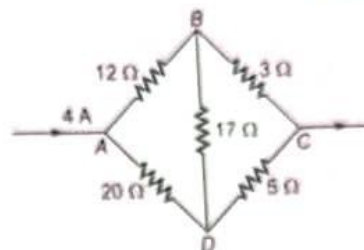


Fig. 6.152

40. Assuming internal resistance of a cell to be zero, calculate :

- Current in resistance 5Ω .
- Potential difference between points A and C .
- If the circuit is broken at B , current in arm AD .

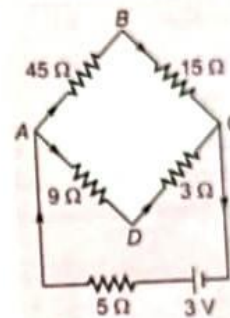


Fig. 6.153

41. For the circuit shown in Fig. 6.154, find :
- equivalent resistance between points A and C .
 - values of current i_1 and i_2 .

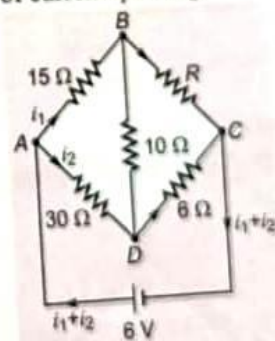
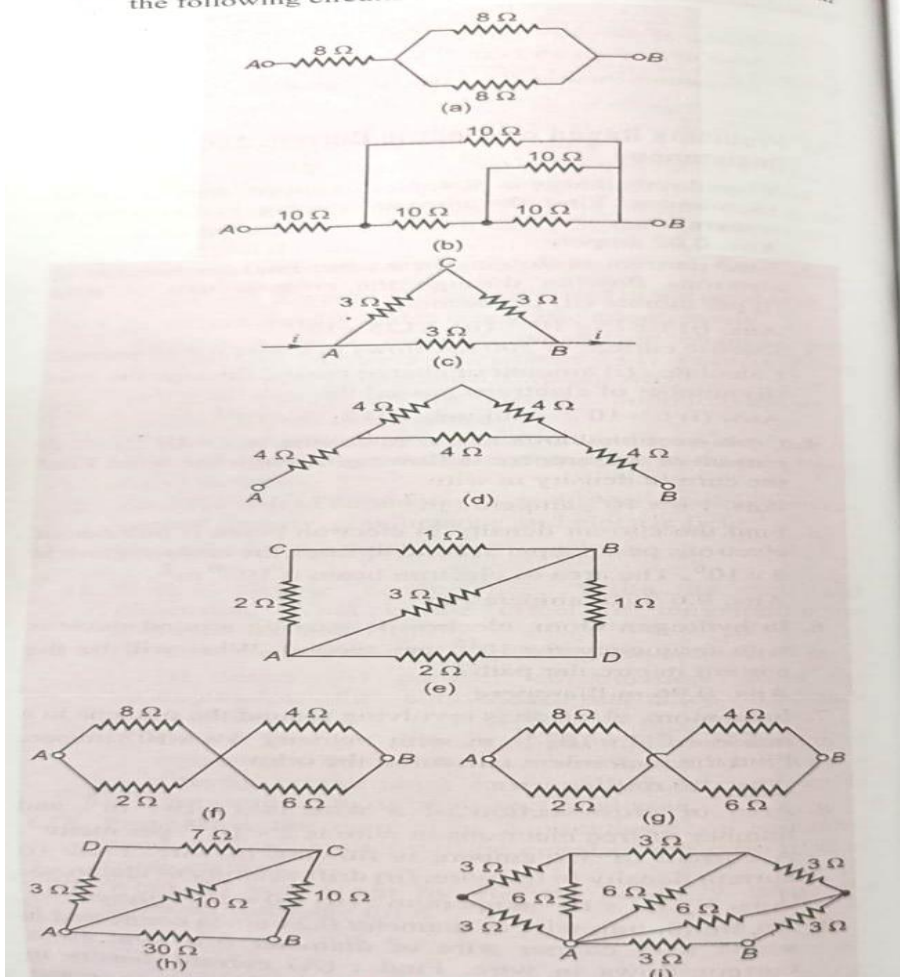


Fig. 6.154

42. Find equivalent resistance between points A and B in Fig. 6.155, when switch S is (i) closed (ii) open.

26. Find the equivalent resistance between points A and B in the following circuits :



Chemistry

- Q.1- Why does the boiling point of a solvent get raised when a non-volatile solute is dissolved in it. explain with vapours pressure-Temperature graph.
- Q.2- Define van's huff factor, How does it help in the determination of degree of dissociation or degree of association of a solute in solution.
- Q.3- Why is the unit morality preferred over morality.
- Q.4- In solution ch-colliganive properties minimum numerical salve 20.
- Q.5- Explain electrochemical cell with the help of electrochemical cell.
- Q.6- Explan commercial cells (batteries) as like loclanche cell & hydrogen cell.
- Q.7- Salve some numerical related Nernst eq. & faraday law.
- Q.8- Explain 1st order reaction and give a Derivation and solve numerical of 1st order reaction.

Bio

- Q.1.** Explain double fertilisation and trace the post-fertilisation events in sequential order leading to seed formation in a typical dicotyledonous plant.
- Q.2.** Describe the asexual and sexual phase of life cycle of plasmodium that cause malaria in human .
- Q.3.** Draw a labelled diagram to show replication HiV in human cells
- Q.4.** (a) Cancer is one of the most dreaded diseases. Explain 'Contact inhibition' and 'Metastasis' with respect to the disease.
- (b) Name the group of genes that have been identified in normal cells that could lead to cancer. How do these genes cause cancer?
- (c) Name any two techniques that are useful in detecting cancers of internal organs.

Account

- Do any five numerical problem related with fundamental of partnership.
- Mention all the method of valuation of good will through numerical.
- From A question (comprehensive) of admission of a partnership and solve that question.

Economics

Topics related to curriculum-

- 1) Write the difference b/w shift in demand & movement along the demand curve.
- 2) Explain the types of elasticity of demand, with the help of graph.
- 3) Explain floor price and ceiling price, with the help of graph.

Topics beyond curriculum:-

(search and collect the information.)

- 1) Start up India.
- 2) Make in India steps towards the bright future.
- 3) Impact of pandemics on Indian economy. (COVID-19). Example?

Commerce

Project and research work-

Visit your nearby mall and observe various aspects like the number, of shops, environment of business, nature of goods, promotional scheme and note about their source of finance and categorise them in short and long term.

History

- ✓ Make a list of repeated question of previous year from Indian history write them in your fair copy with proper presentation.
- ✓ Focus: spellings, sentence formation, grammar.

Political Science

Q.1- Make a list form of the Government-

1. Totalitarian
2. Authorities from state
3. Liberal Democracy.
4. Parliamentary and presidential state with their example.

Q.2- Which type of constitution found in different types of country. Make a list .

Physical Education

- Make any 2 out of 4 project-
- Sports psychology Essay: Write an essay on 'Role of Motivation and Goal setting in Athletic Performance'.
- Fitness Training Plan: Design a 2 –week training plan for a beginner athlete targeting a specific sport.
- Sports career Exploration: Research 3 careers in the field of sports and fitness. Include qualifications, skills, and opportunities.
- PE in School Survey: conduct a short survey among peers about the importance and quality of PE classes, and present the results in chart form.
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Computer

Q.1- Java program to create Marks Report generator using the information mentioned below.

Q.2- Java program to create library management system using the following information provided below.

Description: Simulate ATM functions like check balance, withdrawer, deposited exit.

Concept used: menu-driven program, class.

HAPPY SUMMER VACATION