



# THE TIMES OF INDIA

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TODAY'S EDITION

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**PAGE 2**



A Bengaluru student talks about how author and mentor Sudha Murty inspires her in life  
**PAGE 3**



India thrash New Zealand by 37 runs to win Test series 1-0  
**PAGE 4**



STUDENT EDITION  
TUESDAY, DECEMBER 7, 2021



CLICK HERE: PAGE 1 AND 2

## WHITE BLANKET



Many areas in the higher reaches of Jammu and Kashmir received fresh snowfall on Sunday, while rains lashed the plains, ending the dry spell, officials said

The minimum temperature rose across Kashmir and settled above the freezing point at most places of the valley on Sunday morning

Srinagar recorded a low of 0.6 degrees Celsius on Sunday morning. Pahalgam, which serves as the base camp for the Amarnath Yatra, recorded 2.7 degrees Celsius

## Yahoo India: PM Modi India's most-searched personality, followed by Virat Kohli; Aryan Khan top newsmaker

Yahoo India announced its 2021 Year in Review, and saw a number of new entries. Prime Minister Narendra Modi reclaimed the India's Most- Searched Personality title, a position he has held consistently since 2017. PM Modi had lost the title last year to late actor Sushant Singh Rajput. Cricketer Virat Kohli, who had

a chequered year with highs and lows, came in at No. 2. West Bengal Chief Minister Mamata Banerjee grabbed the top 3 slot with her decisive win in the state assembly election. The sudden demise of TV actor



Sidharth Shukla placed him at No. 4. This year's list had a notable new entrant, actor Shah Rukh Khan's son Aryan who came in at No. 7 on the Most-Searched Personality list, with massive interest online following his arrest by the Narcotics Control Bureau in Oct. ET

## CUT DOWN ON PROCESSED FOODS TO SAVE EARTH: STUDY

Reducing junk food consumption will not only help you to stay fit but also save the planet. A new study published in the journal 'Current Nutrition Reports' has stated interesting observations

**1** Australia and New Zealand households eat more discretionary and junk foods than recommended by dietary guidelines, contributing to food-related greenhouse gas emissions (GHGe) and other environmental impacts, states the study.

**2** University of South Australia (UniSA) dietitian Sara Forbes, who led a review examining 20 studies on the environmental impacts of food consumption in both countries, said the findings highlighted the need for more sustainable dietary choices.

**3** According to a Federal Government report released in 2020, Australia emitted an estimated 510 metric tonnes of carbon dioxide, with food-related emissions accounting for 14.2 per cent of this total. The report found that the average Australian produces the equivalent of 19.7kg of carbon dioxide each day via their diets.

**4** In New Zealand, the highest greenhouse gas emitters are meat, seafood and eggs (35 per cent), followed by highly processed foods such as pastries and ice cream (34 per cent). Other studies examined the environmental



### FOODS AND GREEN HOUSE GAS EMISSIONS

Non-core or 'discretionary' foods include sugar-sweetened drinks, alcohol, confectionery and processed meats, accounting for between 27-33 per cent of food-related GHGe. These are large amounts of avoidable energy-rich, nutrient-poor foods that does not help the environment, states study.

impacts of water use in food production. **WORLDWIDE, FOOD CONSUMPTION AND PRODUCTION ACCOUNT FOR ONE-QUARTER OF TOTAL GLOBAL EMISSIONS, STATES THE STUDY.** ANI



## Name the IMF's first female chief economist

**CLUE 1:** The 49-year-old was born in Kolkata, West Bengal.

**CLUE 2:** A naturalised American citizen, she was awarded the Pravasi Bharatiya Samman, the highest honour for a person of Indian origin, in 2019.

**CLUE 3:** The only governmental association she took up in India was as economic advisor to the Kerala CM.

Answer: **GITA GOPINATH.** The International Monetary Fund's (IMF's) high-profile chief economist who will become the No. 2 official at the Washington-based crisis lender next month. Gopinath will succeed Geoffrey Okamoto as first deputy managing director, serving under IMF chief Kristalina Georgieva – the first time two women have held the top leadership roles.



## 'You students are in a place where you can give back'

People in India are in 'extreme pain' and the economy is still below the 2019 levels, with 'small aspirations' of people becoming even smaller now, Nobel laureate economist Abhijit Banerjee said, while addressing students of the Ahmedabad University in Gujarat virtually.

"You (students) are in a place where you can give back. Society really needs it. We are in a time of extreme pain in India," he said. "I just spent some time in rural West Bengal and stories you hear about, you know, all the aspirations that have been a little bit dashed are very real...small aspirations which became smaller now," Banerjee said. "I think we are in a moment of great pain. The economy is still well below as against what it was in 2019," he said. PTI



Abhijit Banerjee

## 13-YEAR-OLD FROM DELHI PENS 'AMALGAM' OF ALL ISSUES

Anantinee Mishra, a thirteen-year-old, Delhi-based author has recently launched her new book 'Amalgam'. With her book, the author is presenting the perspective of a teenage girl who is covering a wide spectrum of subjects from book reviews, insightful articles, well-written poems to short stories.

The author has successfully published four books till now. From being the youngest author, a TED Speaker, Content Creator to Podcaster, Anantinee has been following multiple pursuits. Her first book titled 'Treasure of Short Stories' comprises 21,000 words anthology of stories. It was

also released in Hindi with the name 'Khazana Kahaniyon Ka' in September 2021. The fifth book 'Amalgam' which is a fusion of prose and poetry was launched on November 14, 2021.

Her second book, 'Manhattan to Munnar' was released on February 10, 2021 by Chief Minister of Odisha, Naveen Pattnaik. The book is also available in the Odia language.



"I am grateful to the opportunities that I've received. The biggest moment in my life till now is getting felicitated by Odisha CM Naveen Pattnaik. I will make sure to put my best foot forward to produce results that create magic in the writing industry." **ANANTINEE MISHRA**

## PRINCE WILLIAM OPENS UP ON 'FAMILY TIME'



Prince William, the second in line to Britain's throne, has opened up about sensitive topics such as coping with mental health pressures during his work as an air ambulance rescue pilot and memories of his late mother Princess Diana.

Speaking on Apple's 'Time to Walk' podcast, the 39-year-old Duke of Cambridge also reflected upon the royal family's love of long walks as well as the life lessons he has picked up over the years. "My whole family have a passion for walking – whether it's my Grandmother (Queen Elizabeth II)

Prince William recalled memories of his mother singing Tina Turner's song 'The Best' at the "top of her voice" with her sons on the way to school to help ease his anxiety

still taking her corgis out at 95; my father (Prince Charles) embarking on lengthy rambles over the summer in Scotland; or my own children making their first appearance at our annual walk to church on Christmas at Sandringham," he said.

Recalling car rides to school with his mother Princess Diana, he said, "You'd be singing and listening to music right the way up to the gates of school when they dropped you off and that's when reality kind of sunk in – you really were going back to school." PTI

## RACE TO EARTH: How fast can you skydive?

Kyle Lobprries jumps out of the airplane – backward. As he watches it fly away, he leans back and shifts his gaze toward the inverted horizon, the sky bowing before the earth. He continues to drift until he feels he is perfectly perpendicular to the planet. Then he locks his knees, points his toes, tucks his arms into his sides, shrugs his shoulders and hurls himself toward land...

### SKY DIVING AS A SPORT

This technique, developed by jumping out of a plane 5-10 times a day, is just part of the explanation for how Lobprries has propelled himself to the peak of the sport of speed skydiving. First developed in Florida in 1999, speed skydiving began gaining recognition as an international discipline in the early 2000s. The sport pits extreme thrill seekers

against each other – and the laws of physics. In October, at the US Parachute Association Nationals in Arizona, Lobprries became the fastest athlete in the sport when he reached a speed of 318.74 mph. This record blows by the top speeds of NASCAR, IndyCar and Formula 1 drivers, who have never surpassed 260 mph in official competitions

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### LAWS OF PHYSICS

In a vacuum, as you may recall from middle school science, all objects fall at the same rate. Without air resistance, anything from a feather to a fuel tanker will accelerate toward the earth at a rate of 9.8 metres per second squared. But because of the earth's atmosphere, free-falling objects eventually reach terminal velocity, in which acceleration slows to zero. For an average amateur skydiver, who departs a plane feet first and faces the earth with her belly, terminal velocity is about 120 mph. NYT



# GET CHARGED TO EXCEL IN PHYSICS



CLASS: XII - 2021-22

SUBJECT: PHYSICS (CBSE)

Maximum Marks: 35

## PRACTICE PAPER SET BY MANJU RATHEE, UDGAM SCHOOL FOR CHILDREN, AHMEDABAD

### GENERAL INSTRUCTIONS

1. You may use the following values of physical constants wherever necessary.

- $e = 1.6 \times 10^{-19} \text{ C}$
- $c = 3 \times 10^8 \text{ ms}^{-1}$
- $h = 6.6 \times 10^{-34} \text{ JS}$
- $\mu_0 = 4\pi \times 10^{-7} \text{ NA}^{-2}$
- $k_B = 1.38 \times 10^{-23} \text{ JK}^{-1}$
- $N_A = 6.023 \times 10^{23} \text{ mole}^{-1}$
- $m_e = 1.6 \times 10^{-27} \text{ kg}$

**DIRECTIONS (Q1-Q27):** Select the most appropriate option from given below each question.

**Q1.** A charge Q is enclosed by a Gaussian spherical surface of radius R. If the radius is doubled, then the outward electric flux will  
 (a) increase four times  
 (b) be reduced to half  
 (c) remain the same  
 (d) be doubled

**Q2.** The falling of a water droplet of mass 1 mg is just prevented by upward electric field of magnitude  $0.1 \text{ kN/C}$ . The charge on the droplet of water is  $[g=9.8 \text{ m/s}^2]$   
 (a)  $9.8 \times 10^{-10} \text{ C}$  (b)  $0.1 \times 10^{-11} \text{ C}$   
 (c)  $9.8 \times 10^{-9} \text{ C}$  (d)  $0.98 \text{ C}$

**Q3.** Figure shows the part of an infinite plane sheet of charge. Which of the following graphs correctly shows the behaviour of electric field intensity as we move from point O to A.

**Q4.** The work done in rotating the dipole having dipole moment p, from stable to unstable equilibrium in a uniform electric field E is  
 (a) pE (b) -pE (c) 2pE (d) -2pE

**Q5.** What can be the nature of charges  $q_1$  and  $q_2$ ?

(c)  $q_1$  is negative,  $q_2$  is positive  
 (d)  $q_1$  is positive,  $q_2$  is positive  
**Q6.** Electric field and electric potential inside a charged spherical shell:  
 (a)  $E = 0; V = 0$  (b)  $E = 0; V \neq 0$   
 (c)  $E \neq 0; V = 0$  (d)  $E \neq 0; V \neq 0$   
**Q7.** If two charged particles having a charge of  $2 \times 10^{-2} \text{ C}$  each, are brought from infinity to within a separation of 10 cm, then the increase in P.E during the process will be  
 (a) 18 J (b) 36 J (c) 10 J (d) 40 J

**Q8.** Two condenser of capacity  $C_1$  and  $C_2$  are connected in parallel. If a charge q is given to the assembly, the charge gets shared. The ratio of the charge on the condenser  $C_1$  to the charge on the condenser  $C_2$  is  
 (a)  $1/(C_1 C_2)$  (b)  $1/1$  (c)  $C_2/C_1$  (d)  $C_1/C_2$

**Q9.** The capacitor, whose capacitance is  $6 \mu\text{F}$ ,  $6 \mu\text{F}$  and  $3 \mu\text{F}$  respectively are connected in series with 20 volt line. Find the charge on  $3 \mu\text{F}$ .  
 (a)  $30 \mu\text{C}$  (b)  $60 \mu\text{C}$  (c)  $15 \mu\text{C}$  (d)  $90 \mu\text{C}$

**Q10.** If in a parallel plate capacitor, which is connected to a battery, we fill dielectrics in whole space of its plates, then which of the following increases?  
 (Q - charge, V - potential difference, E - Electric field, C - Capacitance)  
 (a) Q and V (b) V and E  
 (c) E and C (d) Q and C

**Q11.** If two identical cells are connected first in series, and then in parallel, then the ratio of balancing length in the potentiometer wire will be:  
 (a) 2:1 (b) 1:2 (c) 1:4 (d) 4:1

**Q12.** The voltage V and current I graphs for a conductor at two different temperatures  $T_1$  and  $T_2$  are shown in the figure. The relation between  $T_1$  and  $T_2$  is  
 (a)  $T_1 > T_2$  (b)  $T_1 < T_2$  (c)  $T_1 = T_2$  (d)  $T_1 = 1/T_2$

**Q13.** The internal resistance of a 2.1 V cell which gives a current of 0.2 A through a resistance of  $10 \Omega$  is  
 (a)  $0.5 \Omega$  (b)  $0.8 \Omega$  (c)  $1.0 \Omega$  (d)  $0.2 \Omega$

**Q14.** Which of the following is the correct equation when Kirchhoff's loop rule is applied to the loop BCDEB in clockwise direction?  
 (a)  $-i_1 R_1 - i_2 R_2 - i_3 R_3 = 0$   
 (b)  $-i_1 R_1 - i_2 R_2 + i_3 R_3 = 0$   
 (c)  $-i_1 R_1 + i_2 R_2 + i_3 R_3 = 0$   
 (d)  $-i_1 R_1 + i_2 R_2 - i_3 R_3 = 0$

**Q15.** AB is a wire of potentiometer with the increase in value of resistance R, the shift in the balance point J will be  
 (a) towards B (b) towards A  
 (c) remains constant  
 (d) first towards B then back towards A

**Q16.** What is the torque and force in the two cases as shown in the fig?  
 (a)  $T_a < T_b, F_a \neq 0, F_b \neq 0$   
 (b)  $T_a > T_b, F_a = F_b = 0$   
 (c)  $T_a = T_b = 0, F_a = F_b = 0$   
 (d)  $T_a = T_b, F_a = F_b = 0$

**Q17.** In a Wheatstone bridge all the four arms have equal resistance R. If the resistance of galvanometer arm is also R, the equivalent resistance of combination is  
 (a)  $2R$  (b)  $R/4$  (c)  $R/2$  (d)  $R$

**Q18.** What is the function of radial field in the moving coil galvanometer?  
 (a) to make the torque acting on the coil maximum.  
 (b) to make the magnetic field strong.  
 (c) to make the current scale linear.  
 (d) all the above.

**Q19.** Which device will have the least resistance?  
 (a) Ammeter of range 1A  
 (b) Ammeter of range 10 A  
 (c) Voltmeter of range 1 V  
 (d) Voltmeter of range 10 V

**Q20.** At a certain place, the horizontal component of the earth's magnetic field is  $\sqrt{3}$  times the vertical component. The angle of dip at the place is  
 (a)  $75^\circ$  (b)  $60^\circ$  (c)  $45^\circ$  (d)  $30^\circ$

**Q21.** A wire of length  $L$  carries a current I. It is bent in the form of a circle. The magnetic moment of current loop (in  $\text{amp-m}^2$ ) is  
 (a)  $IL^2/4\pi^2$  (b)  $1\pi L^2$  (c)  $IL^2/4\pi$  (d)  $4\pi IL^2$

**Q22.** A horizontal straight wire 10 m long extending from east to west is falling with a speed of  $5.0 \text{ m s}^{-1}$  at right angles to the horizontal component of the earth's magnetic field,  $0.3 \times 10^{-4} \text{ Wb m}^{-2}$ . What is the instantaneous value of the emf induced in the wire?  
 (a)  $1.5 \times 10^{-4} \text{ V}$  west to east  
 (b)  $1.5 \times 10^{-4} \text{ V}$  east to west  
 (c)  $1.5 \times 10^{-5} \text{ V}$  west to east  
 (d)  $1.5 \times 10^{-5} \text{ V}$  east to west

**Q23.** Identify the wrong statement.  
 (a) Eddy currents are produced in a steady magnetic field.  
 (b) Eddy currents can be minimized by using laminated core.  
 (c) Induction furnace uses eddy current to produce heat.

**Q24.** What is the direction of induced currents in metal rings 1 and 2 when current I in the wire is increasing steadily?  
 (a) clockwise in metal ring 1 and anti-clockwise in metal ring 2.  
 (b) Anti-clockwise in metal ring 1 and clockwise in metal ring 2.  
 (c) Clockwise in both  
 (d) Anti-clockwise in both

**Q25.** When 100 V dc is applied across a LR circuit, A current of 1 amp flows in it. When 100 V ac is applied across the same circuit, the current drops to 0.5 A. The impedance and the inductive reactance are  
 (a)  $200 \Omega$  and  $0.93 \Omega$   
 (b)  $100 \Omega$  and  $0.93 \Omega$   
 (c)  $200 \Omega$  and  $173 \Omega$  (d)  $100 \Omega$  and  $173 \Omega$

**Q26.** When an ac source of emf  $E = E_0 \sin 100t$  is connected across a circuit, the current is  $I = I_0 \sin(100t + \pi/4)$ . If the circuit consists possibly only of RC or RL in series, find the relationship between the two elements.  
 (a)  $R = 1k\Omega, C = 10 \mu\text{F}$   
 (b)  $R = 1k\Omega, C = 1 \mu\text{F}$   
 (c)  $R = 1k\Omega, L = 10 \text{ H}$   
 (d)  $R = 1k\Omega, L = 1 \text{ H}$

**Q27.** The transformation ratio in the step-down transformer is  
 (a) one (b) greater than one  
 (c) less than one  
 (d) the ratio greater or less than one depends on the other factor

**ASSERTION / REASON**  
 For question numbers 28 to 31, two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below.  
 (a) Both A and R are true and R is the correct explanation of A  
 (b) Both A and R are true but R is NOT the correct explanation of A  
 (c) A is true but R is false  
 (d) A is false and R is also false

**Q28. Assertion-** Faraday laws are consequence of conservation of energy  
**Reason-** In a purely resistive AC circuit, the current lags behind the emf in phase  
**Q29. Assertion-** Making and breaking of current in a coil produce no momentary current in the neighbouring coil of another circuit  
**Reason-** Momentary current in the neighbouring coil of another circuit is an eddy current

**Q30. Assertion-** A variable capacitor is connected in series with a bulb through AC source if the capacitance of variable capacitor decreases, the brightness of bulb is reduced  
**Reason-** The reactance of capacitor increases if capacitance is reduced  
**Q31. Assertion-** When capacitive reactance is smaller than the inductive reactance in LCR circuit, emf leads the current  
**Reason-** The phase angle is angle between alternating emf and alternating current of the circuit

**CASE STUDY:**  
**HELICAL MOTION OF A CHARGED PARTICLE IN A MAGNETIC FIELD**  
 If velocity has a component along B, this component remains unchanged as the motion along the magnetic field will not be affected by the magnetic field. The motion in a plane perpendicular to magnetic field is a circular one, thereby producing a helical motion.

**Q32.** The radius of the charge particle, (when v is perpendicular to B) placed in a uniform magnetic field is given by  
 (a)  $R = mv / qB$  (b)  $R = qB / mv$   
 (c)  $R = Bq / mv$  (d)  $R = mv / qB$

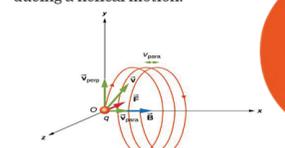
**Q33.** An electron, proton,  $\text{He}^+$  and  $\text{Li}^{++}$  are projected with the same velocity perpendicular to a uniform magnetic field. Which one will experience maximum magnetic force?  
 (a) Electron (b) Proton (c)  $\text{He}^+$  (d)  $\text{Li}^{++}$

**Q34.** The work done by the magnetic field on the charge particle moving perpendicular to a uniform magnetic field is  
 (a) Zero (b)  $q(v \times B) \cdot S$   
 (c) Maximum (d)  $qBS / v$

**Q35.** The distance moved by a charged particle along the magnetic field in one rotation, when v has a component parallel to B is  
 (a)  $2\pi v \cos\theta / qBm$  (b)  $2\pi m v \cos\theta / qB$   
 (c)  $qBm / 2\pi v \cos\theta$  (d)  $Bq / 2\pi m$

**Q30. Assertion-** A variable capacitor is connected in series with a bulb through AC source if the capacitance of variable capacitor decreases, the brightness of bulb is reduced  
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 (c)  $qBm / 2\pi v \cos\theta$  (d)  $Bq / 2\pi m$

These questions are meant for practice purpose only. Students are advised to check format, syllabus and marks for Board test papers with their teachers. Questions have been given by teachers and NIE is not responsible for them.

# Logic, the key to solving computers

## PAPER SET BY MANPREET KAUR JUDGE, AAVISHKAR ACADEMY, BENGULURU

**EXAMS Rfun**  
 MOCK PAPER  
 SUBJECT: COMPUTER APPLICATIONS  
 CLASS: X  
 MARKS: 15

### SECTION-A

#### QUESTION 1

(a) Which of the following can be omitted while using for loop? (5X1=5)  
 (i) Update statement  
 (ii) Initial value  
 (iii) Test expression  
 (iv) All of them  
 1. (i) & (ii) 2. (iv) & (i) 3. (iv) 4. (i)

**Answer: 3**  
**b)** Which one out of these is an infinite loop?  
 1. for (i=2;i<10;a++)  
 2. for (i=0;i<10; a++)  
 3. i=2; do{ i++; }while(i < 20);  
 4. for (i=0; i<=10;i-)

**Answer: 4**  
**c)** Complete the following statement. The do.....while loop repeats a set of statements \_\_\_\_\_ even if the condition is false.  
 1. at least once 2. twice  
 3. infinite times 4. not even once

**Answer: 1**  
**d)** See the syntax and name what type of loop it is?  
`a = 1; while (a<10) { }`  
 1. Infinite loop 2. Empty loop  
 3. Finite loop  
 4. User controlled loop

**Answer: 2**  
**e)** Read the following code segment properly and predict how many times the loop will be executed?  
`int a = 1, b = 2; while(++b < 6) a *= b; System.out.println(a);`  
 1. two times 2. three times  
 3. four times 4. five times

**Answer: 2**

### SECTION-B

#### QUESTION 2

Define a class named movieMagic with the following description:

DATA MEMBERS	PURPOSE
int year	To store the year of release of a movie
String title	To store the title of the movie
float rating	To store the popularity rating of the movie (minimum rating=0.0 and maximum rating=5.0)
MEMBER METHODS	PURPOSE
movieMagic()	Default constructor to initialize numeric data members to 0 and String data member to "".
void accept()	To input and store year, title and rating
void display()	To display the title of the movie and a message based on the rating as per the table given below

RATING	MESSAGE TO BE DISPLAYED
0.0 to 2.0	Flop
2.1 to 3.4	Semi-Hit
3.5 to 4.4	Hit
4.5 to 5.0	Super-Hit

Write a main method to create an object of the class and call the above member methods.  
**Answer** (6 X 1 = 6)  
`import java.util.Scanner;`

```
public class movieMagic {
    private int year;
    private String title;
    private float rating;

    public movieMagic() {
        year = 0;
        title = "";
        rating = (b) _____;
    }

    public void accept() {
        Scanner in = new Scanner(System.in);
        System.out.print("Enter Title of Movie: ");
        title = in.nextLine();
        System.out.print("Enter Year of Movie: ");
        year = in.nextInt();
        System.out.print("Enter Rating of Movie: ");
        rating = in.nextFloat();
    }

    public void display() {
        String message = "Invalid Rating";
        if (rating < 0)
            message = "Flop";
        else if (rating <= 3.4)
            message = "Semi-Hit";
        else if (rating <= 4.4)
            message = "Hit";
        else if (rating <= 5.0)
            message = (f) _____;

        System.out.println(title);
        System.out.println(message);
    }

    public static void main(String args[]) {
        movieMagic obj = new movieMagic();
        obj.accept();
        obj.display();
    }
}
```

**Q1.** MovieMagic 2. moviemagic  
**Q2.** movieMagic  
**Q3.** movieMagic  
**Q4.** 1. "0.0" 2. 0.0 3. 0  
**Q5.** 1. void 2. Void 3. int  
**Q6.** 1. sc.nextLine(); 2. in.nextLine(); 3. in.next();  
**Q7.** 1. == 2.0 2. >= 2.0 3. <= 2.0  
**Q8.** 1. "Super-Hit" 2. 'Super-Hit' 3. "SuperHit"

### QUESTION 3

Read the paragraph given below and answer the questions given below:

**Case study 1**  
 A block of statements which gets executed repeatedly unless the required work gets done is called a loop or an iterative construct. Based on the flow of control these constructs can be divided into two categories - Entry and Exit controlled loop. Entry control loop checks the condition in the beginning and exit control loop at the end or exit point of the loop. For and while loops are entry controlled loops whereas do...while is an exit controlled loop. Writing a loop requires initialization condition where we initialize the variable in use. It marks the start of a loop generally. An already declared variable can be used or a variable can be declared, local to loop only.

Testing Condition is used for testing the exit condition for a loop. It must return a boolean value. It can be entry or exit control loop. Statement execution happens once the condition is evaluated to true, the statements in the loop body are executed according to these conditions. Increment or Decrement is used for updating the variable for next iteration. Loop is terminated when the condition becomes false marking the end of its life cycle.

**Q1.** A testing condition returns a \_\_\_\_\_ value. (4 X 1 = 4)  
 1. true 2. boolean 3. false  
**Q2.** The loop executes only if \_\_\_\_\_  
 1. The testing condition is true.  
 2. The testing condition is false.  
 3. The testing condition is incremented.

**Q1.** How many types of loops are there?  
 1. Three  
 2. Two  
 3. Four  
**Q2.** What does the Initializing variable decide?  
 1. Test condition of the loop  
 2. Ending of the loop  
 3. Beginning of the loop

**KEY TIPS:** While attempting questions in Section A - thorough knowledge of theoretical concepts will help. Questions like predict the output or Q1 e) given above should always be answered after giving a dry run and not by mental calculations or guesswork. While attempting Section-B the students need to understand the logic of the program given in the paper; analyze, work with the logic and then attempt to complete it. Understanding the concepts is of utmost importance as then only the students will be able to comprehend the logic. It's also equally important to mention that writing and practically solving the program questions is of utmost importance, as that is a sure shot method of getting the right logic and syntax and making you confident to face your exams.

For case study questions reading the passage, comprehending it and then choosing the most appropriate answer is really very important. Age old proverb "Practice makes a man perfect" still holds true and there is no alternative to hard work.

These questions are meant for practice purpose only. Students are advised to check format, syllabus and marks for Board test papers with their teachers. Questions have been given by teachers and NIE is not responsible for them.

