

Holiday Home Work (2019-20)

(Class – 12)

English

1. Read the poem given below

The Road Not Taken

Two roads diverged in a yellow wood,
And sorry I could not travel both
And be one traveller, long I stood
And looked down one as far as I could
To where it bent in the undergrowth ;
Then took the other, as just as fair,
And having perhaps the better claim,
Because it was grassy and wanted wear;
Though as for that the passing there
Had worn them really about the same,

And both that morning equally lay
In leaves no step had trodden black.
Oh, I kept the first for another day!
Yet knowing how way leads on to way,
I doubted if I should ever come back.
I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I-
I took the one less travelled by,
And that has made all the difference.

(Robert Frost)

1.1 On the basis of your understanding of the above poem, choose the most appropriate option:

(a) What does the poet mean when he says about another road that it wanted wear ?

- i. It was full of grass ii. Nobody had used it ever
iii. It looked cleaner iv. It was an intelligent guess

(b) Why did the poet want to take the less travelled road ?

- i. To avoid the bumpy ride of another road
ii. To get lost in the unknown
iii. In the hope of discovering something new
iv. He liked puzzles

(c) What kind of men usually take the road less travelled ?

- i. Fools ii. Curious iii. Wise. iv. Confident

(d) Where was the poet?

- i Home ii Forest iii Garden iv. School

1.2 Answer the following questions briefly :

- a. Why could the poet not travel both roads ?
b. What is the theme of the poem ?
c. What did the poet doubt about coming back ?
d. Why was the other road 'as just as fair' ?
e. What did the poet know about 'passage'(path/road) ?
f. Explain-'And that has made all the difference'

1.3 Find words in the poem similar in meaning as :

- a. Separated b. Damage

Writing Section

1. Meera Ranjan is a resident of Kerala. She writes a letter to the editor of a local newspaper giving her strong views on the disadvantages of setting up a chemical factory project and makes an appeal to the Central Government to consider its decision, as it will worsen the environment of the city. Add your own ideas and write this letter.
2. Failures and setbacks are a normal part of life. They make us aware of our shortcomings and encourage us to conquer them. Write an article in 150-200 words on "Failure is a Stepping Stone to Success". You are Gopal Kumar/Gopika Kumar.
3. Keeping in view the frequent occurrences of earthquakes, floods and torrential rains in different parts of the country, Your school arranged a talk on disaster management. The speakers explained the precautionary measures to be taken by the public and the government in case of emergency. As a student reporter, Ravi Kumar/Ritika Kumar prepare a report on the talk. (150-200 words)

Literature

Extract based questions:

<p>(i) "but after the airport's security check, standing a few yards away, I looked again at her, wan, pale as a late winter's moon and felt that old familiar ache, my childhood's fear, but all I said was, see you soon, Amma, all I did was smile and smile and smile."</p> <p>(a) What did the poet do after the security check ? (b) Why did the poet compare her mother's face to a late winter's moon? (c) What is her childhood fear ? (d) Find words from the extract which mean: (i) Colourless (ii) Pang</p>	<p>ii. "Surely Shakespeare is wicked, the map a bad example, With ships and sun and love tempting them to steal For lives that slyly turn in their cramped holes From fog to endless night? On their slag heap, the children Wear skins peeped through by bones and spectacles of steel With mended glass, like bottle bits on stones."</p> <p>i) Why is Shakespeare called wicked? ii) What does 'from fog to endless night' refer to? iii) Explain : slag heap. iv) How do these children live?</p>	<p>iii "There is no school in my neighbourhood, When they build one, I will go." i) Who is 'I' in the extract ? ii) What will the speaker do when the iii) school gets opened ? iv) Who has given the dreams to the eyes of the speaker ?</p>
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Short Answer Questions :

- a. The paradoxes of the society that we live in are aptly featured in 'Lost Spring'. Comment.
b. Whom does Anees Jung blame for the sorry plight of the bangle-makers?
c. The manner of his (the Tiger King's) death is a matter of extraordinary interest. Comment.
d. What measures did the Tiger King take to achieve his target of killing one hundred tigers ?
e. Franz's attitude towards the little school as well as M. Hamel changes when he comes to know about the takeover of his village by Prussians. Do you agree? Discuss with reference to "The Last Lesson".
f. People tend to ignore important things until they are denied those things. When they realize the importance, it is too late. Elucidate the statement with reference to the story 'The Last Lesson'.
g. Why does Charley want to travel to Galesburg, Illinois, in "The Third Level"?
h. What do you infer from Sam's letter to Charley?

Mathematics

Chapters 1. Continuity and Differentiability, 2. Applications of Derivatives.

- Find the constants a and b , so that the function f defined below is continuous.
$$f(x) = \begin{cases} 1, & \text{if } x \leq 3 \\ ax + b, & \text{if } 3 < x < 5 \\ 7, & \text{if } x \geq 5 \end{cases}$$
- Find the values of a and b so that the function $f(x) = \begin{cases} x^2 + 3x + a, & x \leq 1 \\ bx + 2, & x > 1 \end{cases}$ becomes differentiable at each $x \in \mathbb{R}$.
- If $f(x)$, defined by the following, is continuous at $x = 0$, find the values of a , b and c .
$$f(x) = \begin{cases} \frac{\sin(a+1)x + \sin x}{x}, & x < 0 \\ c, & x = 0 \\ \frac{\sqrt{x+bx^2} - \sqrt{x}}{bx^{3/2}}, & x > 0 \end{cases}$$
- If $x\sqrt{1+y} + y\sqrt{1+x} = 0$, then prove that $\frac{dy}{dx} = -\frac{1}{(1+x)^2}$
- If $x^m y^n = (x+y)^{m+n}$, prove that $\frac{dy}{dx} = \frac{y}{x}$ and hence find whether $\frac{dy}{dx}$ is a function of x and y both or it is a constant.
- If $\sqrt{1-x^6} + \sqrt{1-y^6} = a(x^3 - y^3)$, then prove that $\frac{dy}{dx} = \frac{x^2}{y^2} \sqrt{\frac{1-y^6}{1-x^6}}$. Q7. If $x = a(\cos\theta + \theta\sin\theta)$ and $y = a(\sin\theta - \theta\cos\theta)$. Find $\frac{d^2y}{dx^2}$ at $2\pi/3$.
- Verify Rolle's theorem for the function $x^2 - 5x - 6$ in the interval $[-1, 6]$.
- Using Lagrange's mean value theorem, find the co-ordinates of a point on the curve $y = \sqrt{x-2}$ at which the tangent drawn is parallel to the chord joining the points $(2, 0)$ and $(3, 1)$.
- If $2ay = x(b + a\frac{dy}{dx})$, show that $\frac{d^2y}{dx^2}$ is constant.
- Differentiate the following function w.r. to x : $x^{\sin x} + (\sin x)^{\cos x}$.
- If $(\cos x)^y = (\sin y)^x$, find $\frac{dy}{dx}$.
- Differentiate w.r. to x : $\sin^{-1} \left[\frac{2^{x+1} \cdot 3^x}{1+(36)^x} \right]$
- If $x = a\cos^3\theta$, $y = a\sin^3\theta$, then find the value of $\frac{d^2y}{dx^2}$ at $\theta = \pi/6$.
- What is dripping out from a conical tunnel of semi-vertical angle $\frac{\pi}{6}$ at the uniform rate of $6\text{ cm}^2/\text{sec}$, in its curved surface area through a tiny hole of vertex in the bottom. When slant height of water is 4 cm, find the rate of decrease of slant height of water.
- Find the intervals on which the following function is strictly increasing or strictly decreasing. $f(x) = \frac{3}{10}x^4 - \frac{4}{5}x^3 - 3x^2 + \frac{36}{5}x + 101$.
- Show that the curves $2x = y^2$ and $2xy = k$ cut at right angles if $k^2 = 8$.
- Find the points on the curve $9y^2 = x^3$, where the normal to the curve makes equal intercepts with the axes.
- Show that the height of the right circular cylinder of maximum volume that can be inscribed in a given right circular cone of height h is $\frac{h}{3}$.
- Prove that the volume of the largest cone that can be inscribed in a sphere of radius R is $\frac{8}{27}$ of the volume of the sphere.
- Prove that the semi vertical angle of a cone of given curved surface area and maximum volume is $\sin^{-1} \left(\frac{1}{\sqrt{3}} \right)$.
- The cost of fuel for running a bus is proportional to the square of the speed generated in km/h. It costs Rs. 48 per hour when the bus is moving with a speed of 20 km/h. What is the most economical speed, if the fixed charges are Rs. 108 for 1 hr. over and above the running charges?
- A point on the hypotenuse of a right triangle is at a distances a and b from the sides. Show that the length of hypotenuse is least and it is equal to $(a^{2/3} + b^{2/3})^{3/2}$.
- Use differentials, find the approximate value of $\log_e(4.04)$, if $\log_{10}4 = 0.6021$ and $\log_{10}e = 0.4343$.
- Find the intervals in which the function $f(x) = \sqrt{3} \sin x - \cos x$ will increase monotonically in $\left[-\frac{\pi}{4}, \frac{5\pi}{2} \right]$.
- Find P^{-1} , if it exists, given $P = \begin{bmatrix} 10 & -2 \\ -5 & 1 \end{bmatrix}$, using elementary row transformations.
- Let $A = \begin{bmatrix} 0 & 1 \\ 0 & 0 \end{bmatrix}$, show that $(aI + bA)^n = a^n I + n a^{n-1} b A$, where I is the identity matrix of order 2 and $n \in \mathbb{N}$.
- If A and B are symmetric matrices, prove that $AB - BA$ is a skew symmetric matrix.
- Show that $B'A B$ is symmetric or skew symmetric as A is symmetric or skew symmetric.
- Find the values of x, y, z if the matrix $A = \begin{bmatrix} 0 & 2y & z \\ x & y & -z \\ x & -y & z \end{bmatrix}$ satisfy the equation $A'A = I$
- For what values of x : $\begin{bmatrix} 1 & 2 & 0 \\ 2 & 0 & 1 \\ 1 & 0 & 2 \end{bmatrix} \begin{bmatrix} 0 \\ 2 \\ x \end{bmatrix} = 0$?
- Find the matrix X so that $X \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix} = \begin{bmatrix} -7 & -8 & -9 \\ 2 & 4 & 6 \end{bmatrix}$
- A is a square matrix such that $A^2 = A$, then simplify $(I + A)^3 - 7A$
- If $A = \begin{bmatrix} 1 & 2 \\ 4 & 2 \end{bmatrix}$, then show that $|2A| = 4|A|$
- If $A = \begin{bmatrix} 1 & 0 & 1 \\ 0 & 1 & 2 \\ 0 & 0 & 4 \end{bmatrix}$, then show that $|3A| = 27|A|$
- If $\begin{vmatrix} x & 2 \\ 18 & x \end{vmatrix} = \begin{vmatrix} 6 & 2 \\ 18 & 6 \end{vmatrix}$, then find the value of x .
- Using properties of determinants prove that $\begin{vmatrix} a & a+b & a+b+c \\ 2a & 3a+2b & 4a+3b+2c \\ 3a & 6a+3b & 10a+6b+3c \end{vmatrix} = a^3$
- Using properties of determinants prove that $\begin{vmatrix} b+c & a & a \\ b & c+a & b \\ c & c & a+b \end{vmatrix} = 4abc$
- If x, y, z are different and $\Delta = \begin{vmatrix} x & x^2 & 1+x^3 \\ y & y^2 & 1+y^3 \\ z & z^2 & 1+z^3 \end{vmatrix} = 0$, then show that $1 + xyz = 0$
- Solve $\sin(\tan^{-1} x)$, $|x| < 1$
- Solve $\tan^{-1} 2x + \tan^{-1} 3x = \frac{\pi}{4}$ \oplus

42. Prove that $\cot^{-1} \left(\frac{\sqrt{1+\sin x} + \sqrt{1-\sin x}}{\sqrt{1+\sin x} - \sqrt{1-\sin x}} \right) = \frac{\pi}{2}$, $x \in \left(0, \frac{\pi}{4}\right) \oplus$
43. Prove that $\tan^{-1} \left(\frac{\sqrt{1+x} - \sqrt{1-x}}{\sqrt{1+x} + \sqrt{1-x}} \right) = \frac{\pi}{4} - \frac{1}{2} \cos^{-1} x$, where $-\frac{1}{\sqrt{2}} \leq x \leq 1 \oplus$
44. Prove that $\frac{9\pi}{8} - \frac{9}{4} \sin^{-1} \left(\frac{1}{3}\right) = \frac{9}{4} \sin^{-1} \frac{2\sqrt{2}}{3}$
45. Prove that $\tan^{-1} x + \tan^{-1} 2x = \tan^{-1} \left(\frac{3x-x^3}{1-3x^2} \right)$, where $|x| < \frac{1}{\sqrt{3}} \oplus$
46. Prove that $2 \tan^{-1} \frac{1}{2} + \tan^{-1} \frac{1}{7} = \tan^{-1} \frac{31}{17}$
47. Simplify $\tan^{-1} \left[\frac{a \cos x - b \sin x}{b \cos x + a \sin x} \right]$, if $\frac{a}{b} \tan x > -1$
48. Show that $\sin^{-1} \frac{12}{13} + \cos^{-1} \frac{4}{5} + \tan^{-1} \frac{63}{16} = \pi$

Physics

1. For driving a current of 3 A for 5 minutes in an electric circuit, 1350 J of work is to be done. Find the emf of the source in the circuit.

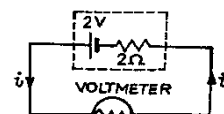
2. A battery of emf 10 V and internal resistance 3Ω is connected to a resistor. The current in the circuit is 0.5 A. what is the resistance of the resistor? What is the terminal voltage of the battery when the circuit is closed?

3. (a) A car has a fresh storage battery of emf 12 V and internal resistance $5.0 \times 10^{-2} \Omega$. The starter motor draws a current of 90 A. find the terminal voltage of the battery when the starter is on.

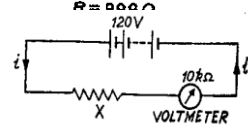
(b) After long use, the internal resistance of the battery increases to 500 Ω. What maximum current can be drawn from the battery?

(c) If the discharged battery is charged by an external emf source, is the terminal voltage of battery during charging greater or less than 12 V?

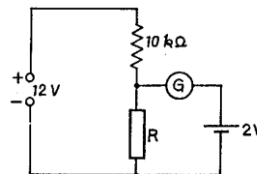
4. A voltmeter of resistance 998 Ω is connected across a cell of emf 2 V and internal resistance 2Ω. Find the p.d. across the voltmeter, that across the terminals of the cell and percentage error in the reading of the voltmeter.



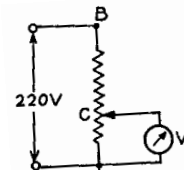
5. A d.c. supply of 120 V is connected to a large resistance X. A 10-kΩ resistance voltmeter placed in series in the circuit reads 4 V. find the value of X. Why voltmeter has been used, instead of an ammeter, to determine the large resistance X?



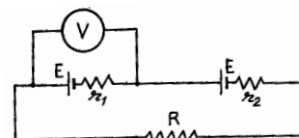
6. If the galvanometer in the given circuit read zero, find the value of the resistor R. the 12-V source is resistance free.



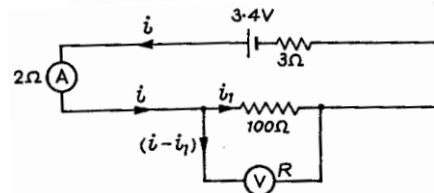
7. In the circuit given on page, a p.d. of 220 Vis applied across a 12000-Ω rheostat AB. A 6000-Ω voltmeter is connected between A and appoint C, where $AC = (1/4) AB$. What does the voltmeter read?



8. Two cells of same emf E, but different internal resistances r_1 and r_2 are connected to an external resistance R, as shown. The voltmeter V reads zero. Obtain an expression for R in terms of r_1 and r_2 . Calculate the voltage across the cell of internal resistance r_2 . (Assume that the voltmeter V is of infinite resistance).

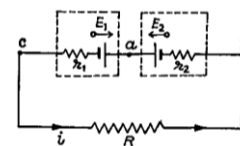


9. A cell of emf 3.4 V and internal resistance 3Ω is connected to an ammeter having resistance 2Ω and to an external resistance of 100Ω. When a voltmeter is connected across the 100 Ω resistance, the ammeter reading is 0.04 A. Find the voltage read by the voltmeter and its resistance. Had the voltmeter been an ideal one, what would have been its reading?

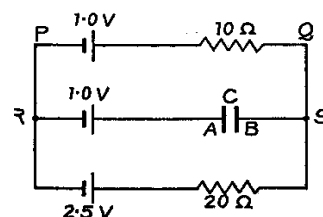


10. Six lead accumulators, each of emf 2.0 V and internal resistance 0.015 Ω are joined in series to supply current to an external resistance of 8.5 Ω. find the current drawn from the supply and its terminal voltage.

11. A battery is made of 12 cells connected in series, each cell having an emf E and internal resistance r. some of the cells are connected with wrong polarity. This battery is connected to another source of emf 2 E and internal resistance 2r. An ammeter in the circuit reads 3 a when the battery and the source aid each other and 2 A when they oppose each other. How many cells in the battery are connected with wrong polarity?

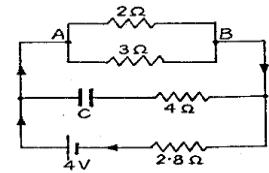


12. In the given circuit, E_1 and E_2 are respectively 2.1 V and 4.4 V and the resistances r_1 , r_2 and R are respectively 1.8Ω, 2.3 Ω and 5.5 Ω. Calculate the current in the circuit. Also calculate (i) potential difference between the points and b, (ii) potential difference between a and c.

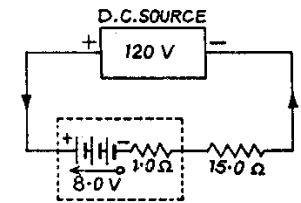


13. Compute, in the adjoining circuit, the p.d. between the plates A and B of the capacitor C. Assume internal resistances of all cells negligible.

14. Calculate the steady-state current through 2- Ω resistor in the given circuit. The Internal resistance of the battery is negligible and $C = 2\mu\text{F}$.

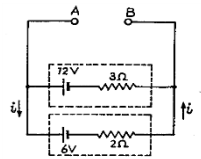


15. A storage battery of emf 8.0V and internal resistance 0.5 Ω is being charged by a 120-V d.c. source, using a series resistor of 15.5 Ω . Calculate (i) in the circuit, (ii) terminal voltage across the battery during charging, and (iii) chemical energy stored in the battery in 5 minutes. What is the purpose of the series resistor in the charging circuit?

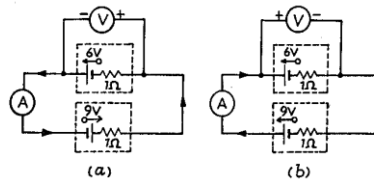


16. A battery of e.m.f. 2 V and internal resistance 0.1 Ω is being charged by a current of 5 A. What will be the direction of current inside the battery? What is the potential difference between the terminals of the battery.

17. In the diagram are given the emf and the internal resistance of each cell. Calculate the potential difference across the points A and B.

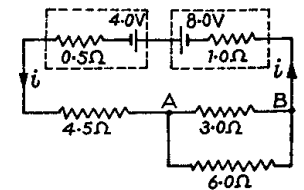


18. Write down the reading of the ideal ammeter A and the ideal voltmeter V in the given circuits (a) and (b).

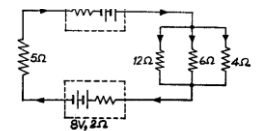


19. Two identical cells of emf 1.5 V each, and joined in parallel, provide supply to an external circuit consisting of two resistors of 17 Ω each joined in parallel. A high-resistance voltmeter reads the terminal voltage of the cells to be 1.4 V. Find the internal resistance of each cell.

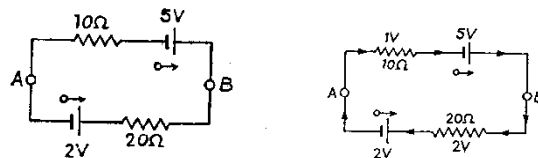
20. The Given circuit carries two cells opposing each other and a number of resistors. Find Current in each resistor and potential difference across each cell.



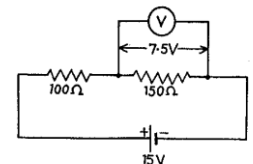
21. A 20-V battery of internal resistance 1v Ω is connected to three coils of 12, 6 and 4 Ω in parallel. A resistor of 5 Ω and a reversed battery (e.m.f. = 8 V and internal resistance =2 Ω), as shown in fig. calculate the current in each resistor and the terminal potential difference across each battery.



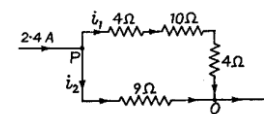
22. Find out the potential difference between the points A and B in the adjoining diagram. Internal resistances of cells are negligible.



23. A 15-V D.C. source is connected across the series combination of a 100 Ω and a 150 Ω resistor, as shown in Fig. A voltmeter reads 7.5 V when connected across the 150 Ω resistor. What would it read when connected across the 100V resistor?

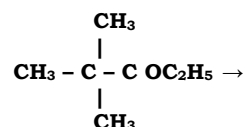
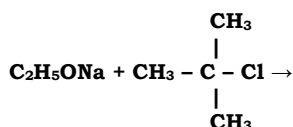


24. There is a combination of four resistances 4 Ω . , 10 Ω .,4 Ω .,and 9 Ω .,as show. Calculate the potential difference between the points P and Q, and the values of currents flowing in the different resistances



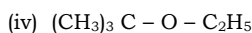
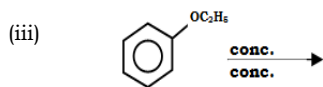
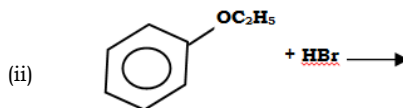
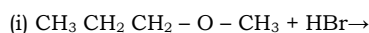
Chemistry

1. The following is not an appropriate reaction for the preparation of tert-butyl ethyl ether.



- (i) What would be the major product of this reaction?
 (ii) Write a suitable reaction for the preparation of tert-butyl ethyl ether.

2. Predict the products of the following reactions:

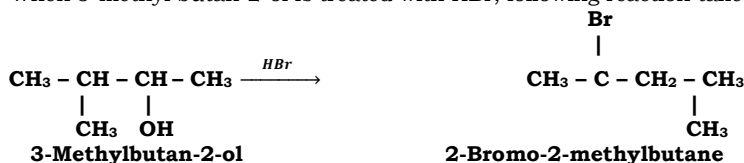


3. (a) Write the mechanism of hydration of ethene to yield ethanol.
 (b) Write the mechanism of acid dehydration of ethanol to yield ethene.

4. Write the equations of the reaction of hydrogen iodide with:

- (i) 1-Propoxypropane
 (ii) Methoxybenzene
 (iii) Benzyl ethyl ether

5. When 3-methyl butan-2-ol is treated with HBr, following reaction takes place:



Give a mechanism for this reaction.

6. How will you convert:

- (a) Phenol to Aspirin.
 (b) Methylmagnesium bromide to 2-methyl propan-2-ol
 (c) Phenol to anisole
 (d) Toluene to benzyl alcohol
 (e) Ethanol to ethyl fluoride

7. Show the stereochemical aspects of $\text{S}_\text{N}1$ mechanism mentioning Retention, Inversion and Racemic mixture.

8. Primary alkyl halide (A) $\text{C}_4\text{H}_9\text{Br}$ reacted with alcoholic KOH to give compound (B). Compound (B) is reacted with HBr to give (C) which is an isomer of (A). When (A) is reacted with sodium metal it gives compound (D), C_8H_{18} which is different from the compound formed when n-Butyl bromide was reacted with sodium. Give the structural formula of (A) and write the equations for all the reactions.

9. Give equations for the following reactions:

- (i) Oxidation of propan-1-ol with alkaline KMnO_4 solution.
 (ii) Bromine in CS_2 with phenol.
 (iii) Dilute HNO_3 with phenol.
 (iv) Treating phenol with chloroform in presence of aqueous NaOH.

10. (a) Give the equations of reactions for the preparation of phenol from cumene.
 (b) Write the chemical reaction for the preparation of phenol from chlorobenzene.
 (c) What is meant by hydroboration-oxidation reaction? Illustrate it with an example.

11. (a) Explain why is ortho nitrophenol more acidic than ortho methoxy phenol?
 (b) Show how will you synthesise?

- (i) 1-phenylethanol from a suitable alkene.
 (ii) Cyclohexylmethanol using an alkyl halide by an $\text{S}_\text{N}2$ reaction.

12. (a) How does the presence of double bonds in rubber molecules influence their structure and reactivity?
 (b) Discuss the main purpose of vulcanization of rubber.

13. (a) How is dacron obtained from ethylene glycol and terephthalic acid?
 (b) What is a biodegradable polymer? Give an example of a biodegradable aliphatic polyester.

14. Arrange the following polymers in increasing order of their intermolecular forces.

- (i) Nylon-6,6, Buna-S, Polythene
 (ii) Nylon-6, Neoprene, Polyvinyl chloride

15. Write the names and structures of the monomers of the following polymers:

- (i) Dacron
 (ii) Neoprene
 (iii) Buna-S
 (iv) Glyptal
 (v) Nylon-2-Nylon-6

16. Predict all the alkenes that would be formed by dehydrohalogenation of the following halides with sodium ethoxide in ethanol and identify the major alkene.

- (i) 1-Bromo-1-methylcyclohexane
 (ii) 2-Chloro-2-methylbutane
 (iii) 3-Bromo-2,2,3-trimethylpentane

Accountancy

1. Why the capital account of a partner does not show a 'Debit balance' in spite of regular and consistent losses year after year?
 2. How does the market situation affect the goodwill of a firm?
 3. List any two situations which may result in the reconstitution of a firm.
 4. State any two reasons for the preparation of 'Revaluation Account' on the admission of a partner.
 5. A, B and C are partners sharing profits and losses in the ratio of 5:4:1. Calculate new profit sharing ratio if C acquires $1/10^{\text{th}}$ share of A and $1/2$ share of B.
 6. The average net profit expected in future by XYZ firm is Rs.36,000 per year. Average capital employed in the business by the firm is Rs.2,00,000. The normal rate of return from capital invested in this class of business is 10%. Remuneration of the partners is estimated to be Rs.6,000 p.a. Find out the value of goodwill on the basis of two years' purchase of super profit.

7. X, Y and Z are in partnership firm sharing profits in the ratio of 2:3. With effect from 1st April 2016 they agreed to share profits in the ratio of 1:2. For this purpose goodwill of the firm is to be valued at two years' purchase of the average profits of last 3 years which were Rs.1,50,000; Rs.1,60,000 and Rs.2,00,000 respectively. The reserves appear in the books at Rs.1,10,000. Partners decide to continue showing reserve in the books. You are required to give effect to the change by passing a single journal entry.
8. P, Q and R were partners in a firm sharing profits in the ratio of 1:2:2. After division of the profits for the year ended 31st March, 2015 their capitals were P Rs.1,50,000 ; Q Rs.1,80,000 and R Rs.2,10,000. During the year they withdrew Rs.20,000 each. The profit for the year was Rs.60,000. The partnership deed provided that the interest on capital will be allowed @10% p.a. While preparing final accounts interest on capital was not allowed. You are required to calculate capital of P,Q and R as at 1st April 2014 and pass necessary adjustment entry for providing interest on capital. Show your working clearly.
9. **From the following information calculate value of goodwill of the firm**
 (a) On the basis of Capitalisation of Super Profit
 (b) On the basis of Capitalisation of Average Profit
Information:-
 (i) Average capital employed is Rs.6,00,000
 (ii) Net profit/loss of the firm for the last three years ended are :-
 31st March 2017 – Rs. 2,00,000
 31st March 2016 – Rs. 1,80,000
 31st March 2015 - Rs. 1,60,000
 (iii) Normal Rate of Return in similar business is 10%.
 (iv) Remuneration of Rs.1,00,000 to partners is to be taken as a charge against profit.
 (v) Assets of the firm (excluding goodwill and non trade investments) is Rs.7,00,000 whereas partner's capital is Rs.6,00,000 and outside liabilities Rs.1,00,000.
10. **X, Y and Z are partners in a firm sharing profits and losses as 5:4:3. Their Balance Sheet as at 31st March 2017 was:-**

Liabilities	Amount	Assets	Amount
Sundry Creditors	40,000	Cash at bank	40,000
Outstanding Expenses	15,000	Sundry Debtors	2,10,000
General Reserve	75,000	Stock	3,00,000
Capital A/c		Furniture	60,000
X 4,00,000		Plant and Machinery	4,20,000
Y 3,00,000			
Z 2,00,000	9,00,000		
Total	10,30,000	Total	10,30,000

From 1st April, 2017 they agree to alter their profit sharing ratio as 4:3:2. It is also decided that

- (a) Furniture to be depreciated by 20%.
 (b) Stock to be appreciated by 20%.
 (c) Plant and machinery be valued at Rs.4,00,000.
 (d) Outstanding expenses be increased by Rs.13,000.
 Partners agreed that altered values are not to be recorded in the books and they do not want to distribute the general reserve. You are required to pass a single journal entry to give effect to the above. Also prepare Balance Sheet of the new firm.

11. Renu, Menu and Tinu were partners in a firm sharing profits in the ratio of 3:2:1. In the beginning of 2012, the following errors and omissions were detected :
- i) Commission due to Menu Rs. 9,000 was not recorded.
 ii) Interest on Capital was allowed @ 10% per annum instead of 12% per annum.
 iii) Interest on drawings @ 9% per annum was not recorded . During the year drawings of partners were Rs. 6,000, Rs. 5,000 and Rs. 4,000 respectively.
 iv) Salary of Rs. 18,000 per annum to Renu and Rs. 14,400 per annum to Tinu was omitted.
 v) Profits were to be distributed among the partners in the ratio of 2:2:1.
 Capitals of the partners as on 1.1.2011 were Rs. 1,60,000, Rs. 1,20,000 and Rs. 20,000 respectively. Profits of Rs. 90,000 has already been credited in the accounts of partners in which they share profits.
 Pass a single adjustment entry to rectify the above errors and omissions showing the workings clearly.
12. **A and B are partners in a firm sharing profits in the ratio of 3:1 contributing Rs.1,10,000 each as their capital on 1st January 2012. The partnership deed provides for the following :**
- (i) Partners are allowed interest on capital @5% p.a. and are charged interest on drawings @6% p.a.
 (ii) A is entitled to remuneration of 10% of net profit for securing contracts from customers.
 (iii) B is also entitled to a commission of 10% of net profit after charging clause (ii) of deed.
 (iv) A is entitled to rent of Rs.1,000 per month for the use of his premises by the firm.
 (v) During the year A withdrew Rs.350 at the beginning of every month and B withdrew Rs.550 at the end of every month.
 The profit of the firm during 2012 before making above adjustments was Rs.1,11,000.
 Prepare Profit and Loss Appropriation Account for the year 2012.

Business Studies

- Which force is considered as the essence of management?
- 'In order to be successful, an organization must change its goals according to the needs of the environment. Which characteristics of management are highlighted in this statement?
- Name the function of management which establishes organization structure and establishes authority and responsibility relations.

4. Departmental manages are included at which level of management?
5. 'Survival profit and growth are essential target of any business' which objectives of management is referred here?
6. Which principle of management suggests that a subordinate should receive orders from and be accountable to one superior?
7. Which principle of management is violated when a manager grants one month medical leave to a superior with pay and only one week medical leave to an accountant?
8. Mohan a manager, expects his colleagues to get work out of subordinates without giving them any powers. Which principle of management is being overlooked and why?
9. Which principle of management aims at securing the loyalty and devotion of the employees by giving them fair and just treatment?
10. If an organization does not provide the right place for physical and human resources in the organization, which principle is violated? What are its consequences?
11. Banking sector reforms have led to easier credit terms and better services. This is an example of a key component of the "Business Environment" name this component?
12. Demand for reservation in jobs for minorities refers to an example of key component of general environment of business. Name this component.
13. It is the process by which government control over the industry is being loosened. Give the term to which this statement is trying to indicate.
14. State the economics reforms since 1991 or new Economics policy.
15. State the difference between general and specific environment with example.

Economics

Q1) Calculate the value Added by Firm A & B from the following data:

	(Amount in Lakhs)
1. Purchase by Firm A from rest of the World	30
2. Sales by Firm B	90
3. Purchases by Firm A from firm B	50
4. Sales by Firm A	110
5. Exports by Firm A	30
6. Opening Stock of Firm A	35
7. Closing Stock of Firm A	20
8. Opening stock of Firm B	30
9. Closing Stock of Firm B	20
10. Purchases by Firm B from Firm A	50

Q2) Calculate the value Added by Firm X & Y from the following data:

	(Amount in Lakhs)
1. Sales by Firm Y to General Government	100
2. Sales by Firm X	500
3. Purchases by households from firm Y	300
4. Exports by firm Y	50
5. Change in Stock of firm X	20
6. Change in Stock of firm Y	10
7. Imports by Firm X	70
8. Sales by Firm Z to firm X	250
9. Purchases by firm Y from firm X	200

Q3) From the following data calculate Value added by Firm X & Y:-

	(Amount in Lakhs)
1. Closing Stock of Firm X	20
2. Closing Stock of Firm Y	15
3. Opening Stock of Firm Y	10
4. Opening Stock of Firm X	5
5. Sales by Firm X	300
6. Purchases by Firm X from Firm Y	100
7. Purchases by Firm Y from Firm X	80
8. Sales by Firm Y	250
9. Import of Raw Material by firm X	50
10. Exports by firm Y	30

Q4) Calculate Value Added by Firm P & Q from the following data:-

	(Amount in Lakhs)
1. Sales by Firm P	80
2. Sales by Firm Q to Firm P	40
3. Sales by Firm Q to households	60
4. Imports by Firm P	20
5. Exports by Firm Q	30
6. Opening Stock of firm P	25
7. Closing Stock of firm P	15
8. Opening Stock of Firm Q	35
9. Closing Stock of Firm Q	50
10. Purchases by Firm Q	100

Q5) An economy has only two firms A & B. On the Basis of the following information about these firms find out:

Value added by firms A & B.

Gross Value Added at Market Price.

	(Amount in Lakhs)
1. Exports by Firm A	20
2. Imports by Firm A	50
3. Sales to households by Firm A	90
4. Sales to Firm B by Firm A	40
5. Sales to Firm A by Firm B	30
6. Sales to households by firm B	60

Q6) On the basis of the following data about an economy which constitutes of only two firms, find out:

Value Added by Firms A & B.

Gross Value Added at Factor Cost.

	(Amount in Lakhs)
1. Sales by Firm A	300
2. Purchases from firm B by firm A	120
3. Purchases from firm A by firm B	180
4. Sales by firm B	600
5. Closing Stock of firm A	60
6. Closing Stock of firm B	105
7. Opening Stock of firm A	75
8. Opening Stock of firm B	135
9. Indirect Taxes paid by both the firm	90

Q7) From the following data find out value added by firm X:

	(Amount in Lakhs)
1. Sales by Firm Y to Firm X	400
2. Sales by Firm X to Households	500
3. Purchases by Firm Z from firm X	300
4. Opening stock of firm X	25
5. Closing stock of Firm X	75

Q8) From the following data relating to the firm calculate:-

Net Domestic Product at Market Price.

Net Domestic Product at Factor Cost.

	(Amount in Lakhs)
1. Salaries and Wages	120
2. Interest Payments	90
3. Dividend	30
4. Undistributed Profits	20
5. Rent Payments	15
6. Increase in Stocks	40
7. Imports of Raw Materials	20
8. Indirect Taxes	10
9. Depreciation of Fixed Capital	15
10. Domestic Sales	360
11. Exports	40
12. Purchase of Raw Material and other inputs	120

Q9) Calculate Value added by firm X from the following data:

	(Amount in Lakhs)
1. Sales	600
2. Purchase of Raw Material	200
3. Import of raw Material	100
4. Import of Machines	200
5. Closing stock	40
6. Opening Stock	10

Q10) Calculate GDP at MP from the following:-

	(Amount in Lakhs)
1. Intermediate Cost	8
2. Closing Stock	5
3. Sales	30
4. Net Indirect Tax	6
5. Subsidy	1
6. Depreciation	3
7. Opening Stock	4

Q11) Calculate NDP at MP from the following:-

	(Amount in Lakhs)
1. Opening Stock	10
2. Net Indirect Tax	7
3. Subsidy	2
4. Intermediate cost	12
5. Closing Stock	8
6. Depreciation	5
7. Sales	40

Q12) Calculate Net Value Added at Factor Cost from the following:-

	(Amount in Lakhs)
1. Purchase of Materials	30
2. Depreciation	12
3. Sales	200
4. Excise Tax	20
5. Opening Stock	15
6. Intermediate Consumption	48
7. Closing Stock	10

Q13) From the following data about a firm 'X' calculate GVA at FC.

	(Amount in Lakhs)
1. Sales	500
2. Opening Stock	30

3.	Closing Stock	20
4.	Purchase of Intermediate products	300
5.	Purchase of Machinery	150
6.	Economic Assistance	40

Q14) From the following data about a firm 'A', Calculate Net Value Added at Market Price.

	(Amount in Lakhs)	
1.	Sales	700
2.	Change in Stock	40
3.	Depreciation	80
4.	Net Indirect Taxes	100
5.	Purchase of Machinery	250
6.	Purchase of Intermediate Products	400

Sociology :

Refer to chapter 7 of Sociology part 1 and do a research and make a project on any of the given topics.

POWER POINTS:

- (i) Use all the parameter given as guidelines. (ii) Do not use only internet. Extensive research should be done.

History

1. Explore the facts and important material for any of the given topics.

1. An Exploratory study to know the women who created History.
2. Mahatma Gandhi-a legendary soul.
3. The emerald city of colonial era-Bombay.
4. The process behind the framing of the Indian Constitution.

Political Science

Make a project on any one of the topics discussed

1. Make it presentable and exploratory
2. Use internet only for facts and data collection
3. Don't make a plagiarized work
