B.M. BHARTI MODEL SCHOOL

(A Senior Secondary School)
(Recognized and Affiliated to CBSE)
Majri, Delhi – 110081
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SUMMER HOLIDAYS HOMEWORK
SESSION 2024-25
CLASS-XII

Dear Students,

- ❖ **Summer Vacation is the best and the most fruitful time for learning and nurturing creativity. Keeping this objective in mind we have planned diverse and exciting activities that will enhance your knowledge and boost your creativity.**

- ❖ **"Knowledge is Power". Therefore, read lots and lots of books to cultivate your reading habit and develop your vocabulary, and language skills, increase your attention span, and improve your spelling.**

- ❖ **"A healthy mind lives in a healthy body". So, play the sport of your choice INDOORS. It will help to instill discipline, generate sporting spirits, and channel your energies constructively.**

- ❖ **Get up early in the morning and see the rising sun. Do indoor exercises/yoga and stay healthy and fit. Spend quality time with your elders and share your thoughts and ideas with them.**

- ❖ **Eat healthy food and drink lots of water during summer.**

ECONOMICS

- Make a project on A4 size sheet about 22-25 pages according to the name and topic given below:

For Commerce Section

1.	DEEPA KUMARI	Self Help Group
2.	JAGRITI	Banking System
3.	KANIKA	Determination of Income and Employment
4.	NANDINI(J)	Determination of Income and Employment
5.	DHARYKA	Foreign Exchange Rate
6.	YASH BANSAL	Government Budget
7.	TANISHA	Rural Development
8.	SALONI SHARMA	Foreign exchange rate
9.	JAIKITA	Balance of payment
10.	VISHESH	GST
11.	VANSH SINGH	Sustainable economic development
12.	RIYA KUMARI	Banking system
13.	SIDDHARTH	Rural Development
14.	ADITYA	GST
15.	KARAN	Sustainable economic development
16.	NAKUL DABAS	Human capital Formation
17.	GEETANSHI	Demonetization
18.	NANDINI(M)	Water harvesting
19.	JITENDER	Employment
20.	RAJAT	Employment
21.	EKANSH	Water Harvesting
22.	SUKARAN	Employment
23.	SUNNY	Self help group
24.	ADITYA SINGH	Demonetization

For Humanities Section

1.	SHRUTI	Water harvesting
2.	JAISIKA	Government Budget
3.	KIRAN	Money and Banking
4.	DIMPI	Balance of payment
5.	MUSKAN	Self Help Group
6.	HIMANSHU MATHUR	आय तथा रोजगार का निर्धारण

For Humanities Section

1.	Aarushi	Self Help Group
2.	Bhavishya	GST
3.	Bhuman	Foreign exchange rate
4.	Virender	Rural Development
5.	Prachi	Balance of payment
6.	Vanshika	Sustainable economic development
7.	Mohit	Employment
8.	Harsh	Human Development

9.	Dhruv	Demonitisation
10.	Nandini	Government Budget

➢ **Learn unit- 1 (National Income and Related aggregates of macro economics).**

BUSINESS STUDIES

➢ **Make a project on A4 size sheets about 22-25 pages according to the name and topic given below:**

For Commerce Section

1.	DEEPA KUMARI	Marketing (Biscuit)
2.	JAGRITI	Marketing(Chocolate)
3.	KANIKA	Marketing(Shampoo)
4.	NANDINI(J)	Marketing(Fruit juice)
5.	DHARYKA	Marketing(Chips)
6.	YASH BANSAL	Marketing(Pen)
7.	TANISHA	Marketing(shoes)
8.	SALONI SHARMA	Marketing(coffee)
9.	JAIKITA	Marketing(nankeen)
10.	VISHESH	Principles of management
11.	VANSH SINGH	Marketing(Smart watch)
12.	RIYA KUMARI	Marketing(jeans)
13.	SIDDHARTH	Stock Exchange
14.	ADITYA	Marketing(perfume)
15.	KARAN	Principles of management
16.	NAKUL DABAS	Marketing (Tea)
17.	GEETANSHI	Marketing(Bags)
18.	NANDINI(M)	Principles of Mgt
19.	JITENDER	Principles of Mgt
20.	RAJAT	Principles of Mgt
21.	EKANSH	Principles of Mgt
22.	SUKARAN	Principles of Mgt
23.	SUNNY	Principles of Mgt
24.	ADITYA SINGH	Marketing(Mobile)

➢ **Learn:**

- **Ch-1 (Nature and significances of Management)**
- **Ch-2 (Principles of Management)**
- **Ch-3 (Marketing management)**

➢ **Do given case studies in your fair notebook.**

ENGLISH	➢ Do the given unseen passage in your notebook properly and paste the sheets of passages in notebook)
	➢ Write the character sketches of all the chapters done.
	   1. The last lesson – M.Hamel, Franz
	   2. Lost spring- Sahib ,Mukesh
	   3. The third level- Charley, Sam
	   4. The tiger king- Dewan, The Maharaja
	➢ PROJECT WORK –
	1. History and rich cultural heritage, Arts and crafts of Andaman and Nicobar Islands(roll no. 1 to 10)
	2. History, Music, Climate and Festivals of Lakshadweep (Roll no 11 to 20)
	3. History, Agriculture, Food and Languages of Andaman and Nicobar Islands (Roll no. 21 to 30)
	NOTE:
	1. Cover of file must be decorated.
	2. Project on A4 size sheet.
	3. Paste pictures of each and every part.
	4. Must be neat and clean.
	5. Include Index, Acknowledgement, sources etc.
	6. Revise PT-1 Syllabus

ACCOUNTANCY	At least one question from every topic: **Chapter 1** Interest on loan by partner to the firm (6). Profit and loss appropriaciation A/C (18) Fluctuating capital (27) Calculation of interest on partner capital(31) Calculation of interest on partners drawing, amount of drawings and rate of interest on drawing (45) Profit and loss appropriations account and partners capital account.(53) Transfer of profit to reserve.(59) Adjusting and transfer entries(60) Adjusting for incorrect appropriations.(67) Guarantee of minimum profit to a partner(88) Minimum earnings guaranteed by a partner.(97) **Chapter-2** Average method(3) Average profit methods when past adjustment are made.(7) Super profit method.(17) Calculation of average profits, normal rate of return and capital employed (19) Super profit method when past adjustment are made(24) Capitalization method (29) Capitalization of super profit **Chapter-3** Sacrificing and gaining share(4) Calculation of old profit sharing ratio on the basis of sacrificing and gaining ratio(5) Accountancy of goodwill (9) Calculations of new profit sharing ratio on the basis of adjustment of good will.(10) Accounting of reserves, accumulated profits and losses(17) Revaluation of assets and reassessment of liabilities (25) Preparation of balance sheet.(27)

	Adjustment of capital. (29) Chapter-4 Calculation of new profit sharing ratio and sacrificing ratio(10) Admission of partner and treatment of goodwill---G/W is brought in cash by the new partner retained in the business (21) Premium for G/W brought in kind(28) When new or incoming partner is not able to bring his share of premium for G/W (33) Hidden G/W (39) Revaluation of assets and reassessment of liabilities (48) Reserves and accumulated profits and losses and preparation of revaluation account(51) Preparation of revaluation account and partners capital accounts(53) Adjustment of the old partners capital on the basis of new or incoming partners capital(71) When new partner is required to bring proportional capital (75) When new partner has to bring capital on the basis of combined capital's of old partners.(77) ASSIGNMENT:2 Specific project (Practical file)
BIOLOGY	➢ **Do Experiment** • **Experiment No-1 To study flowers adapted to pollination by different agencies (wind, insect)** • **Experiment-2 to study germination stigma through a permanent slide.** • **Experiment-3 to study controlled pollination- emasculation, tagging and bagging.** • **Experiment-4 To study pollen germination on a slide.** • **Experiment-5 To study and identify stages of gamete development in T.S of testis.** • **Experiment-6 Study of T.S of blastula through permanent slide.** • **Experiment-7 To study and identify common disease causing organisms like ascaries (through specimen) and Endameba plas modium and ringworm (through permanent slide)** ➢ **Do NCERT Exercise of ch-1,2,3 in your notebook (Each and every question)** ➢ **Make a project file (according to Names)** • **Origin and evolution of man – (Pratibha, Vanshika)** • **Diseases – (Dimple, Aryan Sharma)** • **Immunity – (Rimsha, Aditya Jha)** • **HIV and AIDS – (Lakshay, Surbi)** • **Drugs and alcohol abuse and its effects – (Siddhi, Jasmine)** • **Cancer – (Pratham, Raghav)** • **Population Interactions – (Manju, Yashwardha)**
MATHEMATICS	➢ **Make a formula chart of chapter-3,4.** ➢ **Solve all examples and exercise questions from NCERT chapter-3,4 and 5 .** ➢ **Prepare lab manual (mathematics) already provided via what's app (for Math practical exam** ➢ **Prepare 15 pages project file for the graphical representation of trigonometric functions, Inverse Trigonometric function, Modules functions, Sigma function, Identity function-mention their domain and range also (for math practical exam)** ➢ **Prepare any six modal on the topic covered in lab manual (for math practical exam).** ➢ **Do 100 sums asked in board Exam (from 20 years) from the chapters taught in the class (in holidays homework notebook)**
PHYSICS	➢ **Make a formula chart of ch-1, 2 and 3.** ➢ **Write and solve previous year question from chapter- 1, 2 and 3 of the last five years.** ➢ **Prepare a project file for physics practical exam on any topic of physics in which you can easily**

	answer the questions asked by the external on the topic (Topic has discussed in the class) (Page limit 15pages) for the final practical examination including front page, index, acknowledgment, bibliography and main topics. ➤ Complete your Activity file: Six activities already provided via what's app. ➤ Complete lab manual practical file up to the experiment which has been performed in the lab. ➤ Do 100 conceptual and numerical question answer asked in board exams (from 20 years) from the chapters taught in the class (in holidays homework copy)
CHEMISTRY	➤ Make a project on any topic related to your syllabus. (15-20) Pages. Containing certificate, acknowledgement, index, introduction bibliography and conclusion. ➤ Learn the following chapters:- • Chapter 1 solutions • Chapter 4 d and f block • Chapter 6 Halo alkanes haloarens complete and also learn form pt 1 ➤ Do given worksheet.
HINDI	परियोजना कार्य काव्य खण्ड (प्राचीन) 1. तुलसीदास जी के सम्पूर्ण जीवन परिचय, रचनाएँ, भाषा शैली। 2. मलिक मोहम्मद जायसी जीवन परिचय, रचनाएँ , विशेषताएं ,भाषा शैली । गद्य खण्ड: रामचन्द्र शुक्ल:– जीवन परिचय, शिक्षा , रचनाएँ, साहितियक विशेषताएं, मृत्यु, निष्कर्ष। अभिव्यक्ति और माध्यम तथा रचनात्मक निबन्ध लेखन:–(200 शब्दों मे लेखन) 1. मोबाइल का बढ़ता प्रयोग और दुष्परिणाम 2 भ्रष्टाचार, चुनावी माहौल पर जनसंचार के विविध माध्यमों को उदाहरण देकर वर्णित करो (लगभग 150 शब्दों में) पत्र लेखन :– 1. अपने मोहल्ले में घूमने वाले आवारा कुत्तों से सुरक्षा हेतू नगर-निगम अधिकारी को पत्र । 2. आपके इलाके में असामाजिक तत्वो को नियंत्रित एवं रोकथाम के लिए पुलिस निरीक्षक को एक शिकायती पत्र लिखो।
POLITICAL SCIENCE	➤ Make a project file on the following on any one of the following topics: Section-A (roll no. vise) • NAM-1961 to present time (1-4) • SAARC (5-8) • India's Nuclear policy(9-12) • Election 2019-Rise of BJP and downfall of congress (1989-2019) (13-16) • Emergency- A blot on Indian democracy (17-20) • CIS-Central Asian Republic (21-24) • Disintegration of USSR with special focus on Gorbachdev (25-28) Section-D (roll no. vise) • United Nations and its agencies (1-4) • BRICS (5-8) • Comparison between NITI AAYOG and planning commission and their contribution in India's development (9-12) • Arab spring (13-16) • Partition of India- Theory behind it and its legacy (17-20)

	• Division of Germany with special focus on the construction and dismantling of the Berlin wall (21-24) • NOA III and NOA IV – Social and Economic welfare programs (25-29) ➢ Solve the given assignment.
GEOGRAPHY	➢ Complete the written part of geography practical file. ➢ Prepare following case studies of Ch-9 geographical perspectives pn selected issues and problems for test. • A role model to restore ecology and safeguard human health in Pauraa. • Case study of Ramesh on Rural-Urban migration. • Dharavi-Asia's largest slum • Case study of Jhabua on Land degradation. ➢ On the political map of India locate and label following and paste in notebook. • State with highest population and state with lowest population • State with highest population density and state with lowest population density (2011) ➢ On the political map of World locate and label following and paste in notebook: • Areas of subsistence gathering • Areas of nomadic herding • Areas of commercial livestock rearing • Areas of extensive commercial grain farming • Areas of mixed farming
HISTORY	➢ Prepare the given history project as per the CBSE guideline. • Some suggested topics for project Work(any one) • The Indus Valley Civilization- Archaelogical Excavation and new perspectives. • The history and legacy of Maurya Gupta • "Mahabharat"- The great epic of India • Buddha Charita • Global Legacy of Gandhian ideas • The architrctural culture of Vijanagar Temple • The Revolt of 1857- cause, planning and coordination, leadership, vision of unity • The insight into the Indian constitution • A comprehensive history of Jainism
PHYSICAL EDUCATION	➢ Write the following in PE Note book:- • Draw a knock out fixture of 21 Teams • Draw a knock out fixture of 24 Teams in which 2 Teams are special seeded. • Draw a a League fixture of 9 Teams through cyclic method. • Draw League fixture of 8 Teams by Tabular Method. ➢ Elucidate all Remedies in Postural Deformities, Mention their causes, symptoms and remedies in notebook. Also suggest at least three yogic Asanas with picture against each deformity. ➢ Prepare a flow chart of Macro and Micro nutrients in Notebook. ➢ Prepare a brief note about Paralympic, Decaflympic anal special olympic Games in Notebook (300-400) words each.

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BUSINESS STUDIES
CASE STUDY

CHAPTER-1(Nature and Significance of management)

1. Sachin determines the overall objectives and strategies for the organization. He also interacts with business environment to analyze its implications. Name the managerial level at which Sachin is working. State any four of his basic functions.
2. Success of a manger depends on the manner in which he practices the conceptual knowledge of management in combination with his own skills 'What nature of management is indicated in the statement'?
3. In X ltd, the purchase department purchased 10 tons of raw material for the production department. However, the production department needed just 7 tones, Due to this reason; goods were over produced and were not accepted by sales department. As a result, some goods remained unsold. Which aspect of management is lacking? Write its importance.(Any 3)

CHAPTER-2 (Principles of management)

1. Fast track motors (automobile company) is producing 3 different types of vehicles: cars, two-wheelers and three wheelers. All the activities of the company (purchase, production, marketing) etc with the respect to each type of vehicle are lender one common department. Due to this, company is unable to achieve its overall objectives.
   a) Which management principle is not observed by the fast track motors?
   b) What should be done so that fast track motors can achieve its overall objectives?

2. A company believes in natural growth of enterprises as per need and circumstances it as no politics to regulate the working of its staff, Therefore, the staff has become unproductive and unpunctual advice.

3. Name and explain the "Principles of Mgt".

   a) In which workers should be encouraged to developed and carry out their plans for impairment in the organization?
   b) Which requires judicious application of penalties by the management?
   c) Which points out the danger and cost of unnecessary labor turn over?
   d) Which aims at securing the loyalty and devotion of the employees to giving them kind, fair and just treatment?

CHAPTER-11 (MARKETING MANAGEMENT)

1. Which concept of marketing suggests the marketer should not offer a product to customer if it is not in the best interest of customers? Write its features.
2. Kumar ltd. Decided to produce a liquid soap for cleaning the utensils under the brand name (SHINE). State three features which are being fulfilled by the decided by this brand name.
3. Shyam bought a pain releving ointment after seeing its being displaces in the chemist's shop. The ointment tube was lacked in a cardboard box. Identify the different levels of packaging of the pain relieving medicines. When it was purchased by Shyam. Also state the functions of packaging.

POLITICAL SCIENCE
WORKSHEET

1. Discuss about the merger of Manipur to Indian union?
2. Assess the role of ASSAN as an economic association.
3. Discuss about the government approach in the integration of princely states?
4. Write a note on state reorganization commission. Also discuss the main recommendation of this commission. Also discuss the main recommendation of the commission.
5. How has a European union evolved over time from an Economic Union to an increasingly political one?
6. How did the coalition like characters of the congress party give it an unusual strength?
7. Which period was called as 'Congress System" and why.
8. Why was it not an easy task to hold a free and fair election in a country of India's size? Or 'preparing for 1st general election was a mammoth exercise'. Explain.
9. Do you think that the fall of Berlin wall was treated as the end of bipolarity?
10. Mention the causes of soviet disintegration?
11. What was shock therapy?
12. "India is rising as an important centre of power in the present world ". Justify the statement.
13. Define the planning commission and the first five year plan in brief. What were the basic outcomes of the first five year plan?
14. Discuss the planning commission in the era of globalization.
15. What do you understand by Green Revolution? Discuss its positive as well as negative aspects.
❖ Give your statement on the given question:-

Are we under one party dominance of BJP since 2014? Summarize your provision and give argument.

MULTIPLE CHOICE QUESTIONS-I

1. Which of the following units is useful in relating concentration of solution with its vapour pressure ?
   - (a) mole fraction
   - (b) parts per million
   - (c) mass percentage
   - (d) molality

2. On dissolving sugar in water at room temperature, solution feels cool to touch. Under which of the following cases dissolution of sugar will be most rapid ?
   - (a) Sugar crystals in cold water
   - (b) Sugar crystals in hot water
   - (c) Powdered sugar in cold water
   - (d) Powdered sugar in hot water

3. At equilibrium the rate of dissolution of a solid solute in a volatile liquid solvent is ....
   - (a) less than the rate of crystallisation
   - (b) greater than the rate of crystallisation
   - (c) equal to the rate of crystallisation
   - (d) zero

4. A breaker contains a solution of substance 'A'. Precipitation of substance 'A' takes place when small amount of 'A' is added to the solution. The solution is ....
   - (a) saturated
   - (b) supersaturated
   - (c) unsaturated
   - (d) concentrated

5. Maximum amount of a solid solute that can be dissolved in a specified amount of a given liquid solvent does not depend upon ....
   - (a) Temperature
   - (b) Nature of solute
   - (c) Pressure
   - (d) Nature of solvent

6. Low concentration of oxygen in the blood and tissues of people living at high altitude is due to ....
   - (a) low temperature
   - (b) low atmospheric pressure
   - (c) high atmospheric pressure
   - (d) both low temperature and high atmospheric pressure

7. Considering the formation, breaking and strength of hydrogen bond, predict which of the following mixtures will show a positive deviation from Raoult's law ?
   - (a) Methanol and acetone
   - (b) Chloroform and acetone
   - (c) Nitric acid and water
   - (d) Phenol and aniline

8. Colligative properties depend on ....
   - (a) the nature of the solute particles dissolved in solution
   - (b) the number of solute particles in solution
   - (c) the physical properties of the solute particles dissolved in solution
   - (d) the nature of solvent particles

9. Which of the following aqueous solutions should have the highest boiling point ?
   - (a) 1.0 M NaOH
   - (b) 10 M Na_2SO_4
   - (c) 1.0 M NH_4NO_3
   - (d) 1.0 M KNO_3

10. The unit of ebullioscopic constant is ....
    - (a) K kg mol^{-1} or K $(molality)^{-1}$
    - (b) mol kg K^{-1} or K^{-1} (molality)
    - (c) kg mol^{-1} K^{-1} or K^{-1} $(molality)^{-1}$
    - (d) K mol kg^{-1} or K (molality)

11. In comparison to a 0.01 M solution of glucose, the depression in freezing point of a 0.01 M $MgCl_2$ solution is ....
    - (a) the same
    - (b) about twice
    - (c) about three times
    - (d) about six times

12. An unripe mango placed in a concentrated salt solution to prepare pickle, shrivels because ....
    - (a) it gains water due to osmosis
    - (b) it loses water due to reverse osmosis
    - (c) it gains water due to reverse osmosis
    - (d) it loses water due to osmosis

13. At a given temperature, osmotic pressure of a concentrated solution of a substance ....
    - (a) is higher than that at a dilute solution

(b) is lower than that of a dilute solution

(c) is same as that of a dilute solution

(d) can not be compared with osmotic pressure of dilute solution

14. **Which of the following statements is false ?**

(a) Two different solutions of sucrose of same molality prepared in different solvents will have the same depression in freezing point

(b) The osmotic pressure of a solution is given by the equation $\Pi = CRT$ (where C is the molarity of the solution)

(c) Decreasing order of osmotic pressure for 0.01 M aqueous solutions of barium chloride, potassium chloride, acetic acid and sucrose is $BaCl_2 > KCl > CH_3COOH >$ sucrose

(d) According to Raoult's law, the vapour pressure exerted by a volatile component of a solution is directly proportional to its mole fraction in the solution

15. **The values of van't Hoff factors for KCl, NaCl and K_2SO_4, respectively, are ....**

(a) 2, 2 and 2   (b) 2, 2 and 3

(c) 1, 1 and 2   (d) 1, 1 and 1

16. **Which of the following statements is false ?**

(a) Units of atmospheric pressure and osmotic pressure are the same

(b) In reverse osmosis, solvent molecules move through a semipermeable membrane from a region of lower concentration of solute to a region of higher concentration

(c) The value of molal depression constant depends on nature of solvent

(d) Relative lowering of vapour pressure, is a dimensionless quantity

17. **Value of Henry's constant K_H ....**

(a) increases with increase in temperature

(b) decreases with increase in temperature

(c) remains constant

(d) first increases, then decreases

18. **The value of Henry's constant K_H is ....**

(a) greater for gases with higher solubility

(b) greater for gases with lower solubility

(c) constant for all gases

(d) not related to the solubility of gases

Consider the figure and mark the correct option.

(a) water will move from side (A) to side (B) if a pressure lower than osmotic pressure is applied on piston (B)

Piston (A)   SPM   Piston (B)

Fresh water (A)

Concentrated sodium chloride solution in water (B)
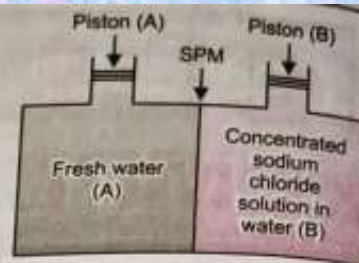
(b) water will move from side (B) to side (A) if a pressure greater than osmotic pressure is applied on piston (B)

(c) water will move from side (B) to side (A) if a pressure equal to osmotic pressure is applied on piston (B)

(d) water will move from side (A) to side (B) if pressure equal to osmotic pressure is applied on piston (A)

20. **We have three aqueous solutions of NaCl labelled as 'A', 'B' and 'C' with concentrations 0.1 M, 0.01 M and 0.001 M, respectively. The value of van't Hoff factor for these solutions will be in the order ....**

(a) $i_A < i_B < i_C$ (b) $i_A > i_B > i_C$

(c) $i_A = i_B = i_C$ (d) $i_A < i_B > i_C$

21. **On the basis of information given below mark the correct option.**

Information :

(A) In bromoethane and chloroethane mixture, intermolecular interactions of A–A and B–B type are nearly same as A–B type interactions

(B) In ethanol and acetone mixture, A–A or B–B type intermolecular interactions are stronger than A–B type interactions

(C) In chloroform and acetone mixture, A–A or B–B type intermolecular interactions are weaker than A–B type interactions

(a) Solution (B) and (C) will follow Raoult's law

(b) Solution (A) will follow Raoult's law

(c) Solution (B) will show negative deviation from Raoult's law

(d) Solution (C) will show positive deviation from Raoult's law

22. **Two beakers of capacity 500 mL were taken. One of these beakers, labelled as "A", was filled with 400 mL water whereas the breaker labelled "B" was filled with 400 mL of 2 M solution of NaCl. At the same temperature both the beakers were placed in closed containers of same material and same capacity as shown in the figure.**

Water   NaCl solution

At a given temperature, which of the following statement is correct about the vapour pressure of pure water and that of NaCl solution.

(a) vapour pressure in container (A) is more than that in container (B)

(b) vapour pressure in container (A) is less than that in container (B)

(c) vapour pressure is equal in both the containers

(d) vapour pressure in container (B) is twice the vapour pressure in container (A)

23. If two liquids A and B form minimum boiling azeotrope at some specific composition, then ....

(a) A–B interactions are stronger than those between A–A or B–B

(b) vapour pressure of solution increases because more number of molecules of liquids A and B can escape from the solution

(c) vapour pressure of solution decreases because less number of molecules of only one of the liquids escape from the solution

(d) A–B interactions are weaker than those between A–A or B–B

24. 4L of 0.02 M aqueous solution of NaCl was diluted by adding one litre of water. The molality of the resultant solution is ....

(a) 0.004   (b) 0.008

(c) 0.012   (d) 0.016

25. On the basis of information given below mark the correct option.

Information : On adding acetone to methanol some of the hydrogen bonds between methanol molecules break.

(a) At specific composition, methanol-acetone mixture will form minimum boiling azeotrope and will show positive deviation from Raoult's law

(b) At specific composition, methanol-acetone mixture forms maximum boiling azeotrope and will show positive deviation from Raoult's law

(c) At specific composition methanol-acetone mixture will form minimum boiling azeotrope and will show negative deviation from Raoult's . law

(d) At specific composition methanol-acetone mixture will form maximum boiling azeotrope and will show negative deviation from Raoult's law

26. K_H value for Ar(g), CO_2(g), HCHO (g) and CH_4(g) are 40.39, 1.67, 1.83×10^{-5} and 0.413 respectively.

Arrange these gases in the order of their increasing solubility.

(a) $HCHO < CH_4 < CO_2 < Ar$

(b) $HCHO < CO_2 < CH_4 < Ar$

(c) $Ar < CO_2 < CH_4 < HCHO$

(d) $Ar < CH_4 < CO_2 < HCHO$

MULTIPLE CHOICE QUESTIONS-II

Note : In the following questions, two or more options may be correct.

27. Which of the following factor (s) affect the solubility of a gaseous solute in the fixed volume of liquid solvent ?

(i) nature of solute   (ii) temperature

(iii) pressure

(a) (i) and (iii) at constant T

(b) (i) and (ii) at constant P

(c) (ii) and (iii) only   (d) (iii) only

28. Intermolecular forces between two benzene molecules are nearly of same strength as those between two toluene molecules. For a mixture of benzene and toluene, which of the following are not true ?

(a) $\Delta_{mix}H = $ zero   (b) $\Delta_{mix}V = $ zero

(c) These will form minimum boiling azeotrope

(d) These will not form ideal solution

29. Relative lowering of vapour pressure is a colligative property because ....

(a) It depends on the concentration of a non-electrolyte solute in solution and does not depend on the nature of the solute molecules

(b) It depends on number of particles of electrolyte solute in solution and does not depend on the nature of the solute particles

(c) It depends on the concentration of a non-electrolyte solute in solution as well as on the nature of the solute molecules

(d) It depends on the concentration of an electrolyte or non-electrolyte solute in solution as well as on the nature of solute molecules

30. Van't Hoff factor i is given by the expression ....

(a) $i = \dfrac{\text{Normal molar mass}}{\text{Abnormal molar mass}}$

(b) $i = \dfrac{\text{Abnormal molar mass}}{\text{Normal molar mass}}$

(c) $i = \dfrac{\text{Observed colligative property}}{\text{Calculated colligative property}}$

(d) $i = \dfrac{\text{Calculated colligative property}}{\text{Observed colligative property}}$

31. Isotonic solutions must have the same ....

(a) solute   (b) density

(c) elevation in boiling point

(d) depression in freezing point

32. Which of the following binary mixtures will have same composition in liquid and vapour phase ?

(a) Benzene - Toluene (b) Water-Nitric acid

(c) Water-Ethanol   (d) n-Hexane - n-Heptane

33. In isotonic solutions ....

(a) solute and solvent both are same

(b) osmotic pressure is same

(c) solute and solvent may or may not be same

(d) solute is always same, solvent may be different

34. For a binary ideal liquid solution, the variation in total vapour pressure versus composition of solution is given by which of the curves ?
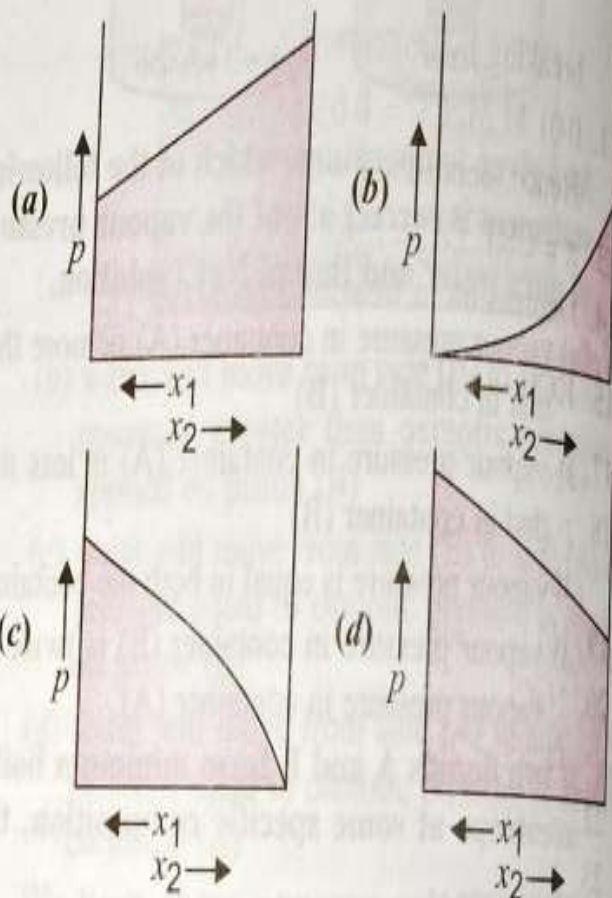
35. Colligative properties are observed when ....

(a) a non-volatile solid is dissolved in a volatile liquid

(b) a non-volatile liquid is dissolved in another volatile liquid

(c) a gas is dissolved in non-volatile liquid

(d) a volatile liquid is dissolved in another volatile liquid

MULTIPLE CHOICE QUESTIONS-I

1. Electronic configuration of a transition element X in + 3 oxidation state is [Ar] $3d^5$. What is its atomic number ?
   - (a) 25
   - (b) 26
   - (c) 27
   - (d) 24

2. The electronic configuration of Cu (II) is $3d^9$ whereas that of Cu (I) is $3d^{10}$. Which of the following is correct ?
   - (a) Cu (II) is more stable
   - (b) Cu (II) is less stable
   - (c) Cu (I) and Cu (II) are equally stable
   - (d) Stability of Cu (I) and Cu (II) depends on nature of copper salts

3. Metallic radii of some transition elements are given below. Which of these elements will have highest density ?

Element	Fe	Co	Ni	Cu
Metallic radii/pm	126	125	125	128

   - (a) Fe
   - (b) Ni
   - (c) Co
   - (d) Cu

4. Generally transition elements form coloured salts due to the presence of unpaired electrons. Which of the following compounds will be coloured in solid state ?
   - (a) Ag_2SO_4
   - (b) CuF_2
   - (c) ZnF_2
   - (d) Cu_2Cl_2

5. On addition of small amount of $KMnO_4$ to concentrated H_2SO_4, a green oily compound is obtained which is highly explosive in nature. Identify the compound from the following :
   - (a) Mn_2O_7
   - (b) MnO_2
   - (c) $MnSO_4$
   - (d) Mn_2O_3

6. The magnetic nature of elements depends on the presence of unpaired electrons. Identify the configuration of transition element, which shows highest magnetic moment.
   - (a) $3d^7$
   - (b) $3d^5$
   - (c) $3d^8$
   - (d) $3d^2$

7. Which of the following oxidation state is common for all lanthanoids ?
   - (a) + 2
   - (b) + 3
   - (c) + 4
   - (d) + 5

8. Which of the following reactions are disproportionation reactions ?
   - (i) $Cu^+ \longrightarrow Cu^{2+} + Cu$
   - (ii) $3 MnO_4^- + 4 H^+ \longrightarrow$
     $$2 MnO_4^- + MnO_2 + 2 H_2O$$
   - (iii) $2 KMnO_4 \longrightarrow K_2MnO_4 + MnO_2 + O_2$
   - (iv) $2 MnO_4^- + 3 Mn^{2+} + 2 H_2O \longrightarrow$
     $$5 MnO_2 + 4 H^+$$

   - (a) (i), (ii)
   - (b) (i), (ii), (iii)
   - (c) (ii), (iii), (iv)
   - (d) (i), (iv)

9. When $KMnO_4$ solution is added to oxalic acid solution, the decolourisation is slow in the beginning but becomes instantaneous after some time because
   - (a) CO_2 is formed as the product
   - (b) Reaction is exothermic
   - (c) MnO_4^- catalyses the reaction
   - (d) Mn^{2+} acts as autocatalyst

10. There are 14 elements in actinoid series. Which of the following elements does not belong to this series ?
    - (a) U
    - (b) Np
    - (c) Tm
    - (d) Fm

11. $KMnO_4$ acts as an oxidising agent in acidic medium. The number of moles of $KMnO_4$ that will be needed to react with one mole of sulphide ions in acidic solution is
    - (a) $\dfrac{2}{5}$
    - (b) $\dfrac{3}{5}$
    - (c) $\dfrac{4}{5}$
    - (d) $\dfrac{1}{5}$

12. Which of the following are amphoteric oxides ?
Mn_2O_7, CrO_3, Cr_2O_3, CrO, V_2O_5, V_2O_4
(a) V_2O_5, Cr_2O_3
(b) Mn_2O_7, CrO_3
(c) CrO, V_2O_5
(d) V_2O_5, V_2O_5

13. Gadolinium belongs to 4f series. Its atomic number is 64. Which of the following is the correct electronic configuration of gadolinium ?
(a) $[Xe]\ 4f^7\ 5d^1\ 6s^2$
(b) $[Xe]\ 4f^6\ 5d^2\ 6s^2$
(c) $[Xe]\ 4f^8\ 6s^2$
(d) $[Xe]\ 4f^9\ 5s^1$

14. Interstitial compounds are formed when small atoms are trapped inside the crystal lattice of metals. Which of the following is not the characteristic property of interstitial compounds ?
(a) They have high melting points in comparison to pure metals
(b) They are very hard
(c) They retain metallic conductivity
(d) They are chemically very reactive

15. The magnetic moment is associated with its spin angular momentum and orbital angular momentum. Spin only magnetic moment value of Cr^{3+} ion is ....
(a) 2.87 B.M.
(b) 3.87 B.M.
(c) 3.47 B.M.
(d) 3.57 B.M.

16. $KMnO_4$ acts as an oxidising agent in alkaline medium. When alkaline $KMnO_4$ is treated with KI, iodide ion is oxidised to ....
(a) I_2
(b) IO^-
(c) IO_3^-
(d) IO_4^-

17. Which of the following statements is not correct ?
(a) Copper liberates hydrogen from acids
(b) In its higher oxidation states, manganese forms stable compounds with oxygen and fluorine

(c) Mn^{3+} and Co^{3+} are oxidising agents in aqueous solution
(d) Ti^{2+} and Cr^{2+} are reducing agents in aqueous solution

18. When acidified $K_2Cr_2O_7$ solution is added to Sn^{2+} salts, then Sn^{2+} changes to
(a) Sn
(b) Sn^{3+}
(c) Sn^{4+}
(d) Sn^+

19. Highest oxidation state of manganese in fluoride is + 4 (MnF_4) but highest oxidation state in oxides is + 7 (Mn_2O_7) because ....
(a) fluorine is more electronegative than oxygen
(b) fluorine does not possess d-orbitals
(c) fluorine stabilises lower oxidation state
(d) in covalent compounds, fluorine can form single bond only while oxygen forms double bond

20. Although Zirconium belongs to 4d transition series and Hafnium to 5d transition series even then they show similar physical and chemical properties because ....
(a) both belong to d-block
(b) both have same number of electrons
(c) both have similar atomic radius
(d) both belong to the same group of the periodic table

21. Why is HCl not used to make the medium acidic in oxidation reactions of $KMnO_4$ in acidic medium ?
(a) Both HCl and $KMnO_4$ act as oxidising agents
(b) $KMnO_4$ oxidises HCl into Cl_2 which is also an oxidising agent
(c) $KMnO_4$ is a weaker oxidising agent than HCl
(d) $KMnO_4$ acts as a reducing agent in the presence of HCl.

MULTIPLE CHOICE QUESTIONS-II

Note : In the following questions, two or more options may be correct.

22. Generally transition elements and their salts are coloured due to the presence of unpaired electrons in metal ions. Which of the following compounds are coloured ?
(a) $KMnO_4$
(b) $Ce\ (SO_4)_2$
(c) $TiCl_4$
(d) Cu_2Cl_2

23. Transition elements show magnetic moment due to spin and orbital motion of electrons. Which of the following metallic ions have almost same spin only magnetic moment ?

(a) Co^{2+}
(b) Cr^{2+}
(c) Mn^{2+}
(d) Cr^{3+}

24. In the form of dichromate, Cr (VI) is a strong oxidising agent in acidic medium but Mo (VI) in MoO_3 and W (VI) in WO_3 are not because ....
(a) Cr (VI) is more stable than Mo (VI) and W (VI).
(b) Mo (VI) and W (VI) are more stable than Cr (VI).
(c) Higher oxidation states of heavier members of group-6 of transition series are more stable

(d) Lower oxidation states of heavier members of group-6 of transition series are more stable

25. Which of the following actinoids show oxidation states upto + 7 ?

(a) Am
(b) Pu
(c) U
(d) Np

26. General electronic configuration of actinoids is $(n - 2) f^{1-14} (n - 1) d^{0-2} ns^2$. Which of the following actinoids have one electron in 6d orbital ?

(a) U (Atomic no. 92) (b) Np (Atomic no. 93)
(c) Pu (Atomic no. 94)
(d) Am (Atomic no. 95)

27. Which of the following lanthanoids show + 2 oxidation state besides the characteristic oxidation state + 3 of lanthanoids ?

(a) Ce
(b) Eu
(c) Yb
(d) Ho

28. Which of the following ions show higher spin only magnetic moment value ?

(a) Ti^{3+}
(b) Mn^{2+}
(c) Fe^{2+}
(d) Co^{3+}

29. Transition elements form binary compounds with halogens. Which of the following elements will form MF_3 type compounds ?

(a) Cr
(b) Co
(c) Cu
(d) Ni

30. Which of the following will not act as oxidising agents ?

(a) CrO_3
(b) MoO_3
(c) WO_3
(d) CrO_4^{2-}

31. Although + 3 is the characteristic oxidation state for lanthanoids but cerium also shows + 4 oxidation state because ....

(a) it has variable ionisation enthalpy
(b) it has a tendency to attain noble gas configuration
(c) it has a tendency to attain f^0 configuration
(d) it resembles Pb^{4+}

MULTIPLE CHOICE QUESTIONS-I

1. The order of reactivity of following alcohols with halogen acids is............ .

(A) $CH_3CH_2-CH_2-OH$

(B) $CH_3CH_2-\underset{\underset{CH_3}{|}}{CH}-OH$

(C) $CH_3CH_2-\underset{\underset{CH_3}{|}}{\overset{\overset{CH_3}{|}}{C}}-OH$
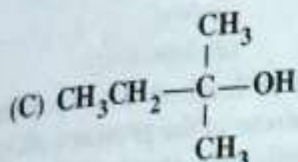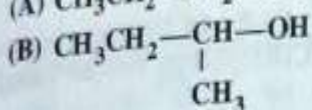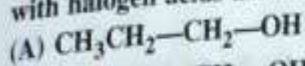
(a) (A) > (B) > (C) (b) (C) > (B) > (A)

(c) (B) > (A) > (C) (d) (A) > (C) > (B)

2. Which of the following alcohols will yield the corresponding alkyl chloride on reaction with concentrated HCl at room temperature ?

(a) $CH_3CH_2-CH_2-OH$

(b) $CH_3CH_2-\underset{\underset{CH_3}{|}}{CH}-OH$

(c) $CH_3CH_2-\underset{\underset{CH_3}{|}}{CH}-CH_2OH$

(d) $CH_3CH_2-\underset{\underset{CH_3}{|}}{\overset{\overset{CH_3}{|}}{C}}-OH$
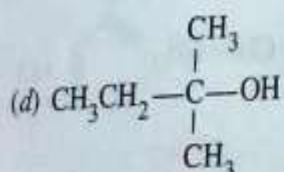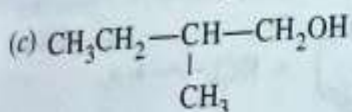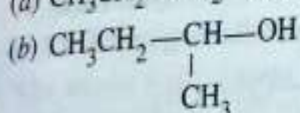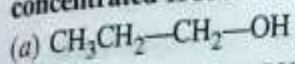
3. Identify the compound Y in the following reaction.

$\underset{}{\text{[C}_6\text{H}_5\text{]}}-NH_2 \xrightarrow[273-278K]{NaNO_2 + HCl} \underset{}{\text{[C}_6\text{H}_5\text{]}}-\overset{+}{N}_2Cl^-$

$\xrightarrow{Cu_2Cl_2} Y + N_2$

(a) [phenyl]—Cl   (b) [benzene]

(c) [3-chlorophenyl with Cl]   (d) [4-chlorophenyl with Cl]
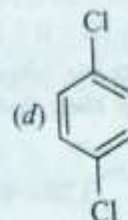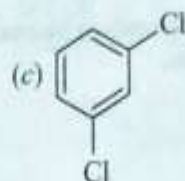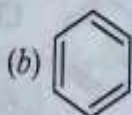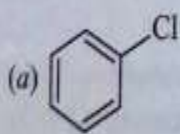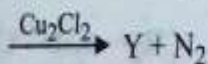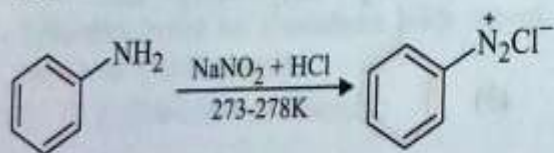
4. Toluene reacts with a halogen in the presence of iron (III) chloride giving ortho and para halo compounds. The reaction is

(a) Electrophilic elimination reaction

(b) Electrophilic substitution reaction

(c) Free radical addition reaction

(d) Nucleophilic substitution reaction

5. Which of the following is halogen exchange reaction ?

(a) $RX + NaI \longrightarrow RI + NaX$

(b) $\underset{}{>}C=C\underset{}{<} + HX \longrightarrow \underset{\underset{H}{|}}{>}C-\underset{\underset{X}{|}}{C}<$

(c) $R-OH + HX \xrightarrow{ZnCl_2} R-X + H_2O$

(d) $\underset{}{\text{[C}_6\text{H}_5\text{]}}-CH_3 + X_2 \xrightarrow[dark]{Fe} \underset{}{\text{[ortho-}CH_3\text{]}}\underset{X}{\text{}}$

$+ \underset{X}{\text{[para-}CH_3\text{]}}$
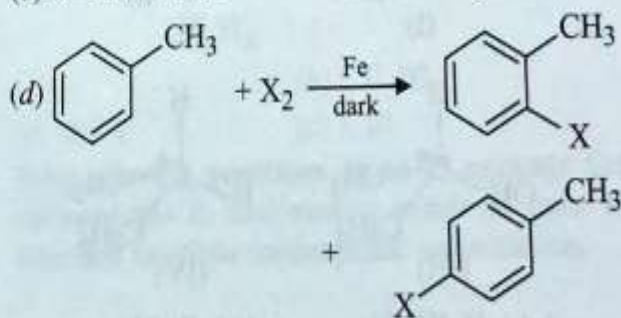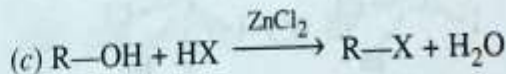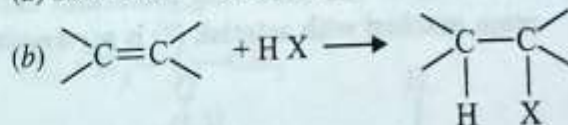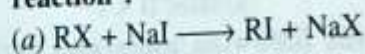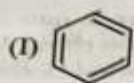
6. Which reagent will you use for the following reaction ?

$CH_3CH_2CH_2CH_3 \longrightarrow CH_3CH_2CH_2CH_2Cl$
$+ CH_3CH_2CHClCH_3$
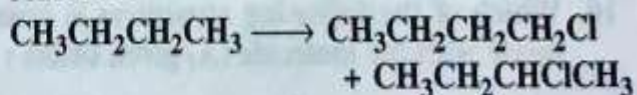
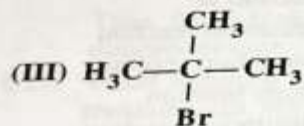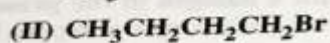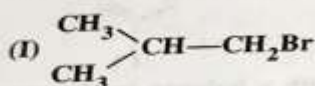(a) Cl_2/UV light   (b) $NaCl + H_2SO_4$

(c) Cl_2 gas in dark

(d) Cl_2 gas in the presence of iron in dark

7. **Arrange the following compounds in the increasing order of their densities.**

(I) [benzene ring]   (II) [benzene ring with Cl]

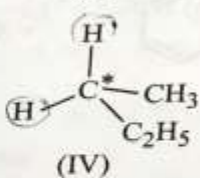(III) [benzene ring with two Cl - meta/1,3]   (IV) [benzene ring with two Cl - 1,4]
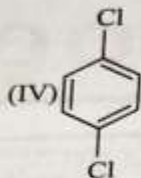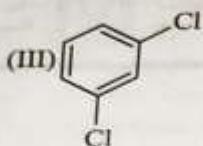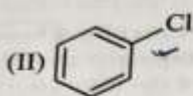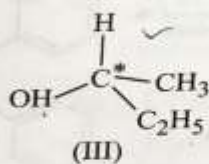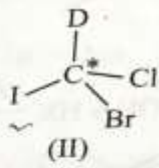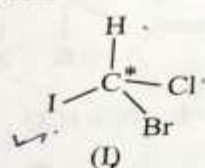
(a) I < II < III < IV   (b) I < III < IV < II
(c) IV < III < II < I   (d) II < IV < III < I

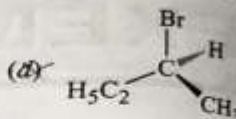**8.** Arrange the following compounds in increasing order of their boiling points.

(I) $\begin{array}{c}CH_3\\CH_3\end{array}\!\!>CH-CH_2Br$

(II) $CH_3CH_2CH_2CH_2Br$

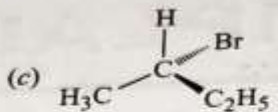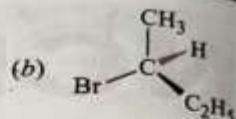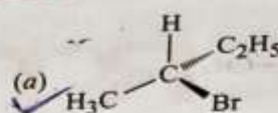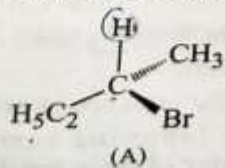(III) $H_3C-\underset{\underset{Br}{|}}{\overset{\overset{CH_3}{|}}{C}}-CH_3$

(a) II < I < III   (b) I < II < III
(c) III < I < II   (d) III < II < I

9. In which of the following molecules carbon atom marked with asterisk (*) is asymmetric ?

(I) $\underset{Br}{\overset{H}{\underset{|}{\overset{|}{I-C^*-Cl}}}}$ (II) $\underset{Br}{\overset{D}{\underset{|}{\overset{|}{I-C^*-Cl}}}}$

(III) $\underset{C_2H_5}{\overset{H}{\underset{|}{\overset{|}{OH-C^*-CH_3}}}}$ (IV) $\underset{C_2H_5}{\overset{H}{\underset{|}{\overset{|}{H-C^*-CH_3}}}}$

(a) I, II, III, IV   (b) I, II, III
(c) II, III, IV   (d) I, III, IV

10. Which of the following structures is enantiomeric with the molecule (A) given below :

$\underset{\overset{|}{H_5C_2}}{\overset{\overset{H}{|}}{C}}\!\!\begin{array}{c}CH_3\\Br\end{array}$

(A)

(a) $H_3C-\underset{Br}{\overset{H}{\underset{|}{\overset{|}{C}}}}\!\!\begin{array}{c}C_2H_5\\\end{array}$ (b) $Br-\underset{C_2H_5}{\overset{CH_3}{\underset{|}{\overset{|}{C}}}}\!\!\begin{array}{c}H\\\end{array}$

(c) $H_3C-\underset{C_2H_5}{\overset{H}{\underset{|}{\overset{|}{C}}}}\!\!\begin{array}{c}Br\\\end{array}$ (d) $H_5C_2-\underset{CH_3}{\overset{Br}{\underset{|}{\overset{|}{C}}}}\!\!\begin{array}{c}H\\\end{array}$

11. Which of the following is an example of *vic.* dihalide ?
(a) Dichloromethane   (b) 1, 2-Dichloroethane
(c) Ethylidene chloride
(d) Allyl chloride

12. The position of –Br in the compound in $CH_3CH = CHC(Br)(CH_3)_2$ can be classified as............ .
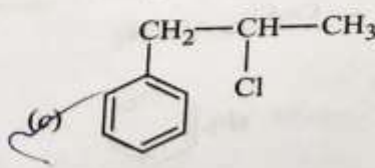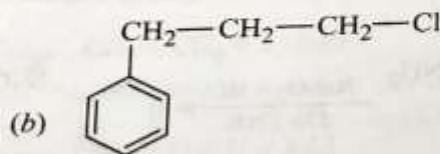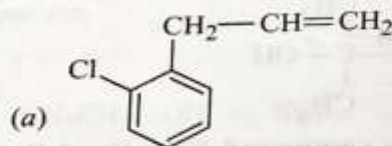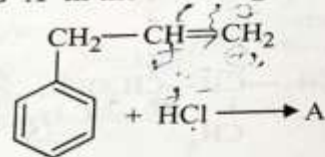(a) Allyl   (b) Aryl
(c) Vinyl   (d) Secondary

13. Chlorobenzene is formed by reaction of chlorine with benzene in the presence of $AlCl_3$. Which of the following species attacks the benzene ring in this reaction ?
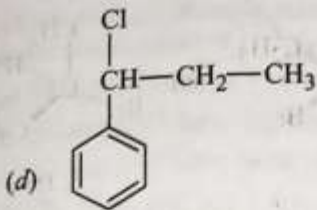(a) Cl^- (b) Cl^+
(c) $AlCl_3$ (d) $[AlCl_4]^-$

14. Ethylidene chloride is a/an............ .
(a) vic-dihalide   (b) gem-dihalide
(c) allylic halide   (d) vinylic halide

15. What is 'A' in the following reaction ?

[benzene ring with $CH_2-CH=CH_2$] $+ HCl \longrightarrow A$

(a) [benzene ring with Cl and $CH_2-CH=CH_2$]

(b) [benzene ring with $CH_2-CH_2-CH_2-Cl$]

(c) [benzene ring with $CH_2-CH-CH_3$ and Cl]

Cl
|
CH—CH$_2$—CH$_3$

(d) [benzene ring]

16. A primary alkyl halide would prefer to undergo............. .

(a) S$_N$1 reaction (b) S$_N$2 reaction

(c) α-Elimination (d) Racemisation

17. Which of the following alkyl halides will undergo S$_N$1 reaction most readily ?

(a) (CH$_3$)$_3$C—F (b) (CH$_3$)$_3$C—Cl

(c) (CH$_3$)$_3$C—Br (d) (CH$_3$)$_3$C—I

18. Which is the correct IUPAC name for
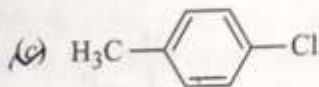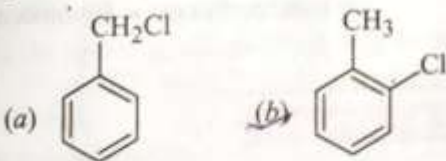
CH$_3$—CH—CH$_2$—Br ?
       |
       C$_2$H$_5$
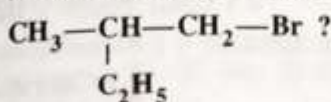
(a) 1-Bromo-2-ethylpropane

(b) 1-Bromo-2-ethyl-2-methylethane

(c) 1-Bromo-2-methylbutane

(d) 2-Methyl-1-bromobutane

19. What should be the correct IUPAC name for diethylbromomethane ?

(a) 1-Bromo-1, 1-diethylmethane

(b) 3-Bromopentane

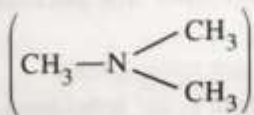(c) 1-Bromo-1-ethylpropane

(d) 1-Bromopentane

20. The reaction of toluene with chlorine in the presence of iron and in the absence of light yields............. .

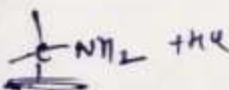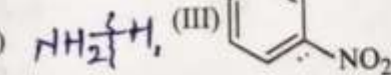(a) [benzene ring with CH$_2$Cl]

(b) [benzene ring with CH$_3$ and Cl]

(c) H$_3$C—[benzene ring]—Cl

(d) Mixture of (b) and (c)

21. Chloromethane on treatment with excess of ammonia yields mainly

(a) N, N-Dimethylmethanamine

[CH$_3$—N(CH$_3$)(CH$_3$)]

(b) N-methylmethanamine (CH$_3$–NH–CH$_3$)

(c) Methanamine (CH$_3$NH$_2$)
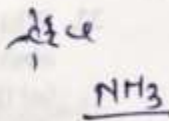
(d) Mixture containing all these in equal proportion

22. Molecules whose mirror image is non-superimposable over them are known as chiral. Which of the following molecules is chiral in nature ?

(a) 2-Bromobutane (b) 1-Bromobutane

(c) 2-Bromopropane (d) 2-Bromopropan-2-ol

23. Reaction of C$_6$H$_5$CH$_2$Br with aqueous sodium hydroxide follows............. .
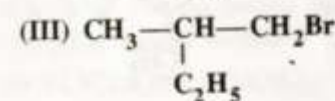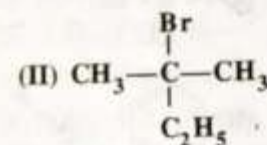
(a) S$_N$1 mechanism (b) S$_N$2 mechanism

(c) Any of the above two depending upon the temperature of reaction

(d) Saytzeff rule

24. Which of the carbon atoms present in the molecule given below are asymmetric ?

[structure showing C atoms I, II, III, IV with OH, H, O, H groups]
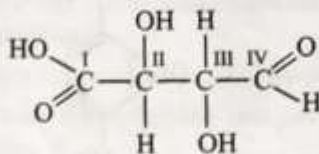
(a) I, II, III, IV (b) II, III

(c) I, IV (d) I, II, III

25. Which of the following compounds will give racemic mixture on nucleophilic substitution by OH$^-$ ion ?

(I) CH$_3$—CH—Br
          |
          C$_2$H$_5$

(II) CH$_3$—C(Br)—CH$_3$
            |
            C$_2$H$_5$

(III) CH$_3$—CH—CH$_2$Br
          |
          C$_2$H$_5$
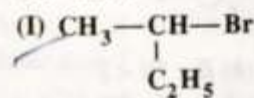
(a) I (b) I, II, III

(c) II, III (d) I, III

Note : In the questions 26 to 29 arrange the compounds in increasing order of rate of reaction towards nucleophilic substitution.
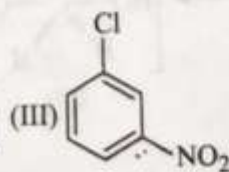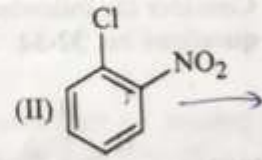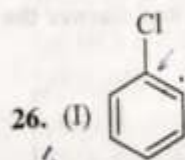
26. (I) [benzene ring with Cl]

(II) [benzene ring with Cl and NO$_2$]

(III) [benzene ring with Cl and NO$_2$]

(a) I < II < III   (b) III < II < I
(c) I < III < II   (d) III < I < II

27. (I) [structure: chlorobenzene with substituent]
(II) [structure: o-chloro toluene with CH₃]
(III) [structure: chloro with CH₃]

(a) I < II < III   (b) I < III < II
(c) III < II < I   (d) II < III < I

28. (I) [chlorobenzene structure]
(II) [p-nitrochlorobenzene, NO₂]
(III) [structure with O₂N, Cl, NO₂ and NO₂]

(a) III < II < I   (b) II < III < I
(c) I < III < II   (d) I < II < III

29. (I) [chlorobenzene structure]
(II) [p-chloro toluene, CH₃]

(III) [structure with Cl, CH₃ and (N)]
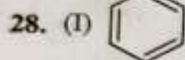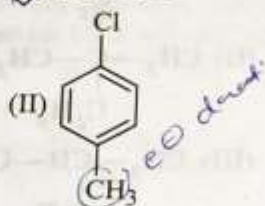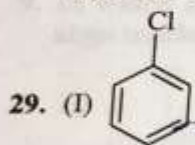
(a) I < II < III   (b) II < I < III
(c) III < II < I   (d) I < III < II

30. Which is the correct increasing order of boiling points of the following compounds ?
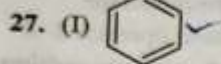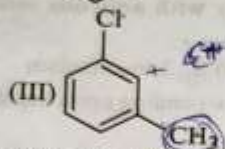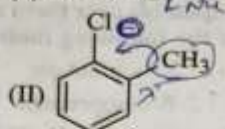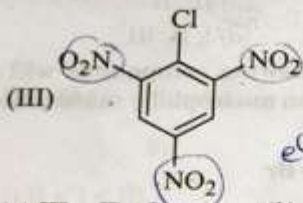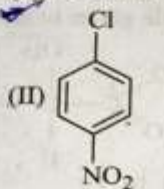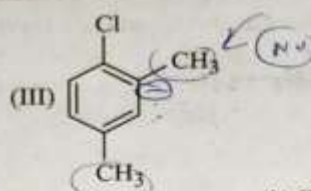1-Iodobutane, 1-Bromobutane,
1-Chlorobutane, Butane

(a) Butane < 1-Chlorobutane < 1-Bromobutane
                < 1-Iodobutane

(b) 1-Iodobutane < 1-Bromobutane
                < 1-Chlorobutane < Butane

(c) Butane < 1-Iodobutane < 1-Bromobutane
                < 1-Chlorobutane

(d) Butane < 1-Chlorobutane < 1-Iodobutane
                < 1-Bromobutane

31. Which is the correct increasing order of boiling points of the following compounds ?
1-Bromoethane, 1-Bromopropane,
1-Bromobutane, Bromobenzene

(a) Bromobenzene < 1-Bromobutane
                < 1-Bromopropane < 1-Bromoethane

(b) Bromobenzene < 1-Bromoethane
                < 1-Bromopropane < 1-Bromobutane

(c) 1-Bromopropane < 1-Bromobutane
                < 1-Bromoethane < Bromobenzene

(d) 1-Bromoethane < 1-Bromopropane
                < 1-Bromobutane < Bromobenzene

MULTIPLE CHOICE QUESTIONS-II

Note : In the following questions two or more options may be correct.

Consider the following reaction and answer the questions no. 32-34.

$$HO^- + \overset{\overset{\displaystyle H}{|}}{\underset{\overset{\displaystyle |}{H}}{C}}-Cl \longrightarrow \left[HO-\overset{\overset{\displaystyle H}{|}}{\underset{\overset{\displaystyle |}{H}}{C}}-Cl \right] \longrightarrow HO-\overset{\overset{\displaystyle H}{|}}{\underset{\overset{\displaystyle |}{H}}{C}}\cdots H + Cl^-$$

(I)   (II)   (III)   (IV)   (V)
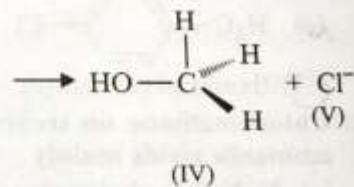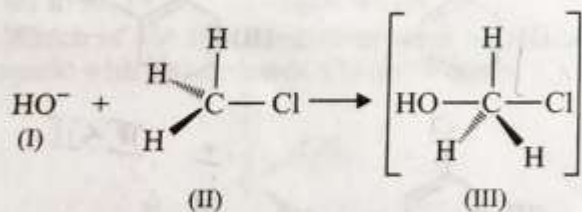
32. Which of the statements are correct about above reaction ?

(a) (I) and (V) both are nucleophiles.
(b) In (III) carbon atom is sp^3 hybridised.
(c) In (IV) carbon atom is sp^3 hybridised.
(d) (I) and (V) both are electrophiles.

33. Which of the following statements are correct about this reaction ?

(a) The given reaction follows S_N2 mechanism.

(b) (II) and (IV) have opposite configuration.

(c) (II) and (IV) have same configuration.

(d) The given reaction follows S_N1 mechanism.

34. Which of the following statements are correct about the reaction intermediate ?

(a) Intermediate (III) is unstable because in this carbon is attached to 5 atoms.

(b) Intermediate (III) is unstable because carbon atom is sp^2 hybridised.

(c) Intermediate (III) is stable because carbon atom is sp^2 hybridised.

(d) Intermediate (III) is less stable than the reactant (II).

Answer Q. No. 35 and 36 on the basis of the following reaction.

35. Which of the following statements are correct about the mechanism of this reaction ?

(a) A carbocation will be formed as an intermediate in the reaction.

(b) OH^- will attach the substrate (II) from one side and Cl^- will leave it simultaneously from other side.
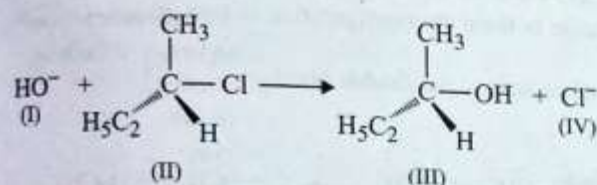
(c) An unstable intermediate will be formed in which OH^- and Cl^- will be attached by weak bonds.

(d) Reaction proceeds through S_N1 mechanism.

36. Which of the following statements are correct about the kinetics of this reaction ?

(a) The rate of reaction depends on the concentration of only (II)

(b) The rate of reaction depends on concentration of both (I) and (II)

(c) Molecularity of reaction is one

(d) Molecularity of reaction is two

37. Haloalkanes contain halogen atom (s) attached to the sp^3 hybridised carbon atom of an alkyl group. Identify haloalkane from the following compounds.

(a) 2-Bromopentane

(b) Vinyl chloride (chloroethene)

(c) 2-chloroacetophenone

(d) Trichloromethane

38. Ethylene chloride and ethylidene chloride are isomers. Identify the correct statements.

(a) Both the compounds form same product on treatment with alcoholic KOH

(b) Both the compounds form same product on treatment with alcoholic KOH

(c) Both the compounds form same product on reduction

(d) Both the compounds are optically active

39. Which of the following compounds are gem-dihalides ?

(a) Ethylidene chloride

(b) Ethylene dichloride

(c) Methylene chloride

(d) Benzyl chloride

40. Which of the following are secondary bromides ?

(a) $(CH_3)_2CHBr$

(b) $(CH_3)_3CCH_2Br$

(c) $CH_3CH(Br)CH_2CH_3$

(d) $(CH_3)_2CBrCH_2CH_3$

41. Which of the following compounds can be classified as aryl halides ?

(a) $p\text{-}ClC_6H_4CH_2CH(CH_3)_2$

(b) $p\text{-}CH_3CHCl(C_6H_4)CH_2CH_3$

(c) $o\text{-}BrH_2C\text{-}C_6H_4CH(CH_3)CH_2CH_3$

(d) $C_6H_5\text{-}Cl$

42. Alkyl halides are prepared from alcohols by treating with

(a) $HCl + ZnCl_2$ (b) Red P + Br_2

(c) $H_2SO_4 + KI$ (d) All the above

43. Alkyl fluorides are synthesised by heating an alkyl chloride/bromide in presence of............ or............ .

(a) CaF_2 (b) CoF_2

(c) Hg_2F_2 (d) NaF

1. Which of the following complexes formed by Cu^{2+} ions is most stable ?

(a) $Cu^{2+} + 4 NH_3 \rightleftharpoons [Cu(NH_3)_4]^{2+}$,

$\log K = 11.6$

(b) $Cu^{2+} + 4 CN^- \rightleftharpoons [Cu(CN)_4]^{2-}$,

$\log K = 27.3$

(c) $Cu^{2+} + 2 en \rightleftharpoons [Cu(en)_2]^{2+}$,

$\log K = 15.4$

(d) $Cu^{2+} + 4 H_2O \rightleftharpoons [Cu(H_2O)_4]^{2+}$,

$\log K = 8.9$

2. The colour of the coordination compounds depends on the crystal field splitting. What will be the correct order of absorption of wavelength of light in the visible region for the complexes, $[Co(NH_3)_6]^{3+}$, $[Co(CN)_6]^{3-}$, $[Co(H_2O)_6]^{3+}$

(a) $[Co(CN)_6]^{3-} > [Co(NH_3)_6]^{3+} > [Co(H_2O)_6]^{3+}$

(b) $[Co(NH_3)_6]^{3+} > [Co(H_2O)_6]^{3+} > [Co(CN)_6]^{3-}$

(c) $[Co(H_2O)_6]^{3+} > [Co(NH_3)_6]^{3+} > [Co(CN)_6]^{3-}$

(d) $[Co(CN)_6]^{3-} > [Co(NH_3)_6]^{3+} > [Co(H_2O)_6]^{3+}$

3. When 0.1 mol $CoCl_3 (NH_3)_5$ is treated with excess of $AgNO_3$, 0.2 mol of AgCl are obtained. The conductivity of solution will correspond to

(a) 1 : 3 electrolyte   (b) 1 : 2 electrolyte

(c) 1 : 1 electrolyte   (d) 3 : 1 electrolyte

4. When 1 mol $CrCl_3.6 H_2O$ is treated with excess of $AgNO_3$, 3 mol of AgCl are obtained. The formula of the complex is

(a) $[CrCl_3(H_2O)_3].3 H_2O$

(b) $[CrCl_2(H_2O)_4]Cl.2 H_2O$

(c) $[CrCl(H_2O)_5]Cl_2.H_2O$

(d) $[Cr(H_2O)_6] Cl_3$

The correct IUPAC name of $[Pt(NH_3)_2Cl]$ is

(a) Diamminedichloridoplatinum (II)

(b) Diamminedichloridoplatinum (IV)

(c) Diamminedichloridoplatinum (0)

(d) Dichloridodiammineplatinum (IV)

6. The stabilisation of coordination compounds due to chelation is called the chelate effect. Which of the following is the most stable complex species ?

(a) $[Fe(CO)_5]$

(b) $[Fe(CN)_6]^{3-}$

(c) $[Fe(C_2O_4)_3]^{3-}$

(d) $[Fe(H_2O)_6]^{3+}$

7. Indicate the complex ion which shows geometrical isomerism.

(a) $[Cr(H_2O)_4Cl_2]^+$

(b) $[Pt(NH_3)_3Cl]$

(c) $[Co(NH_3)_6]^{3+}$

(d) $[Co(CN)_5(NC)]^{3-}$

8. The CFSE for octahedral $[CoCl_6]^{4-}$ is 18,000 cm^{-1}. The CFSE for tetrahedral $[CoCl_4]^{2-}$ will be

(a) 18,000 cm^{-1}

(b) 16,000 cm^{-1}

(c) 8,000 cm^{-1}

(d) 20,000 cm^{-1}

9. Due to the presence of ambidentate ligands coordination compounds show isomerism. Palladium complexes of the type $[Pd(C_6H_5)_2(NCS)_2]$ and $[Pd(C_6H_5)_2(SCN)_2]$ are

(a) linkage isomers   (b) coordination isomers

(c) ionisation isomers   (d) geometrical isomers

10. The compounds $[Co(SO_4)(NH_3)_5]Br$ and $[Co(SO_4)(NH_3)_5]Cl$ represent

(a) linkage isomerism

(b) ionisation isomerism

(c) Coordination isomerism

(d) no isomerism

11. A chelating agent has two or more than two donor atoms to bind to a single metal ion. Which of the following is not a chelating agent ?

(a) thiosulphato   (b) oxalato

(c) gycinato   (d) ethane-1, 2-diamine

12. Which of the following species is not expected to be a ligand ?

(a) NO   (b) NH_4^+

(c) $NH_2CH_2CH_2NH_2$ (d) CO

13. What kind of isomerism exists between $[Cr(H_2O)_6]Cl_3$ (violet) and $[Cr(H_2O)_5Cl]Cl_2.H_2O$ (greyish-green) ?

(a) linkage isomerism   (b) solvate isomerism

(c) ionisation isomerism

(d) coordination isomerism

14. IUPAC name of $[Pt(NH_3)_2Cl(NO_2)]$ is

(a) Platinum diaminechloronitrite

(b) Chloronitrito-N-ammineplatinum (II)

(c) Diamminechloridonitrito-N-platinum (II)

(d) Diamminechloronitrito-N platinate (II)

MULTIPLE CHOICE QUESTIONS-II

Note : In the following questions, two or more options may be correct.

15. Atomic number of Mn, Fe and Co are 25, 26 and 27 respectively. Which of the following inner orbital octahedral complex ions are diamagnetic ?

(a) $[Co(NH_3)_6]^{3+}$ (b) $[Mn(CN)_6]^{3-}$

(c) $[Fe(CN)_6]^{4-}$ (d) $[Fe(CN)_6]^{3-}$

16. Atomic number of Mn, Fe, Co and Ni are 25, 26, 27 and 28 respectively. Which of the following outer orbital octahedral complexes have same number of unpaired electrons ?

(a) $[MnCl_6]^{3-}$ (b) $[FeF_6]^{3-}$

(c) $[CoF_6]^{3-}$ (d) $[Ni(NH_3)_6]^{2+}$

17. Which of the following options are correct for $[Fe(CN)_6]^{3-}$ complex ?

(a) d^2sp^3 hybridisation

(b) sp^3d^2 hybridisation

(c) paramagnetic

(d) diamagnetic

18. An aqueous pink solution of cobalt(II) chloride changes to deep blue on addition of excess of HCl. This is because............. .

(a) $[Co(H_2O)_6]^{2+}$ is transformed into $[CoCl_6]^{4-}$

(b) $[Co(H_2O)_6]^{2+}$ is transformed into $[CoCl_4]^{2-}$

(c) tetrahedral complexes have smaller crystal field splitting than octahedral complexes.

(d) tetrahedral complexes have larger crystal field splitting than octahedral complex.

19. Which of the following complexes are homoleptic ?

(a) $[Co(NH_3)_6]^{3+}$ (b) $[Co(NH_3)_4Cl_2]^+$

(c) $[Ni(CN)_4]^{2-}$ (d) $[Ni(NH_3)_4Cl_2]$

20. Which of the following complexes are heteroleptic ?

(a) $[Cr(NH_3)_6]^{3+}$ (b) $[Fe(NH_3)_4Cl_2]^+$

(c) $[Mn(CN)_6]^{4-}$ (d) $[Co(NH_3)_4Cl_2]$

21. Identify the optically active compounds from the following :

(a) $[Co(en)_3]^{3+}$ (b) trans-$[Co(en)_2Cl_2]^+$

(c) cis- $[Co(en)_2Cl_2]^+$ (d) $[Cr(NH_3)_5Cl]$

22. Identify the correct statements for the behaviour of ethane-1, 2-diamine as a ligand.

(a) It is a neutral ligand

(b) It is a didentate ligand

(c) It is a chelating ligand

(d) It is a unidentate ligand

23. Which of the following complexes show linka isomerism ?

(a) $[Co(NH_3)_5(NO_2)]^{2+}$

(b) $[Co(H_2O)_5CO]^{3+}$

(c) $[Cr(NH_3)_5SCN]^{2+}$

(d) $[Fe(en)_2Cl_2]^+$

SECTION – A : READING SKILLS

(20 Marks)

1. Read the passage given below:

(1) I know many friends of mine who drink coffee regularly but do not know that coffee exists in different forms other than instant coffee. There are many who swear by Flora café classic or Coco gold, which they consider premium coffee. I may sound offensive but instant coffee is not the only way; in fact, it's a very bad way of making coffee! Instant coffee cannot match up to brewed coffee's flavour nor does it have Arabica beans. It uses Robusta beans that are lower in flavour. Don't know the difference?! Read on...

(2) That plant might be a genius! It created a chemical that would keep pests away. Fortunately for us and unfortunately for the plant – that plan did not work the way it was intended to. The chemical might have averted a few pest attacks, but attracted a far greater threat – human beings. The plant I am talking about is coffee and the chemical is caffeine.

(3) To begin from the beginning – coffee is from a more mature part of the tree – the seed – unlike other stimulants. The ripe berry is picked and de-pulped leaving us with a seed called 'green bean' or 'green coffee'. Green bean is uncharacteristically bland with a taste nowhere close to that of coffee, but it is valued for its higher antioxidant levels.

(4) It's an interesting phenomenon to see how this bland green bean turns to a flavourful coffee bean. Coffee bean is a seed and like any other seed is rich in proteins, fats, and all necessary ingredients for giving birth to a new plant. When exposed to heat, the fats and carbohydrates in the bean turn into essential oils, which give the characteristic taste and aroma to the coffee bean. The degree of roasting depends on the need or purpose of use.

(5) These beans are ground so that the surface area of the bean is increased, which makes extraction easier. The bean can be ground or crushed but making the particles uniform will ensure equal extraction, or else the smaller particle will get over extracted and the larger one under extracted. Hence, the burr grinder is used to ensure that the coffee bean gets ground in a uniform way in which all particles are of similar sizes.

(6) Does under extraction give a lighter coffee and over extraction a stronger one? No. For lighter or stronger coffee less or more coffee powder has to be used. Why ? Under extraction will not get all the flavors of the coffee as the water runs too quickly. It will not get what you want – it will taste sour. Over-extraction will bring out all unnecessary flavours rendering the taste bitter.

On the basis of your understanding of the above passage, answer the questions given below:

$10 \times 1 = 10$

(i) Complete the sentence by choosing an appropriate option.

The author complained that his friends _____ .

    (a) consumed only Flora classics.

    (b) were not aware of different forms of coffee.

    (c) were severely addicted to drinking coffee.

    (d) considered Coco gold as premium coffee.

(ii) Comment on the writer's reference to the unique feature of the coffee plant. (paragraph 2)

(iii) List the reason why the author refers to humans as 'great threat to coffee' plants.

(iv) Select an option that conveys the same meaning as "'energiser' from words used in paragraph 3.

    (a) bland   (b) mature

    (c) antioxidant   (d) stimulants

(v) Complete the given sentence with an appropriate inference with respect to the following :

Fats and carbohydrates turn into essential oils leading to _____ .

(vi) Comment on the writer's reference to the interesting phenomenon in paragraph 4.

(vii) Over-extraction does not give a stronger coffee. Based on your understanding of paragraph 6, list one method to get stronger coffee.

(vi) The writer would not agree with the given statements based on paragraph five EXCEPT

    (a) The burr grinder grinds coffee beans uniformly.

    (b) Less surface area makes extraction easier.

    (c) Grinding gives stronger aroma.

    (d) Good coffee is a mix of smaller and bigger particles.

(ix) Why is it fair to say that the right degree of extraction of coffee is important?

(x) Select the most suitable title for the above passage.

    (a) The Art of Coffee Making

    (b) Benefits of Consuming Coffee

    (c) Green Coffee – The perfect antioxidant

    (d) The Coffee Addict

Read the passage given below.

(1) News – If you can't remember the last time, you saw a teenager reading a book, newspaper or magazine, you're not alone. In recent years, less than 20 percent of teens report reading a book, magazine or newspaper daily for pleasure. More than 80 percent say they use social media every day, according to research published by the World Psychological Association.

(2) "Compared with previous generations, teens in the 2010s spent more time online and less time with traditional media, such as books, magazines and television", said lead author of the book yGen and professor of psychology at ABC University. "Time on digital media has displaced time once spent enjoying a book or watching TV."

(3) Swaner and her colleagues analysed data concluded from an ongoing study of a nationally representative sample of approximately 50,000 eighth, tenth, and twelfth grade students annually. They looked at survey results from 1976 to 2016, representing more than 1 million teenagers. While the study started with only twelfth-graders in the 1970s, eighth- and tenth-graders were added in 1991.

(4) Use of digital media increased substantially from 2006 to 2016. Among twelfth-graders, internet use during leisure time doubled from one to two hours per day during that period. It also increased 75 percent for tenth-graders and 68 percent for eighth-graders.

(5) "In the mid-2010s, the average twelfth-grader reported spending approximately two hours a day texting, just over two hours a day on the internet – which included gaming – and just under two hours a day on social media," said Swaner. That's a total of about six hours per day on just three digital media activities during their leisure time."

(6) In comparison, tenth-graders reported a total of five hours per day and eighth-graders reported four hours per day on those three digital activities. Consequently the spent time in the digital world is seriously degrading the time they spend on more traditional media such as print book and newspapers.

(7) The decline in reading print media was especially steep. In the early 1990s, 33 percent of tenth-graders said they read a newspaper almost every day. By 2016, that number was only 2 percent. In the late 1970s, 60 percent of twelfth-graders said they read a book or a magazine almost every day; by 2016, only 16 percent did. Twelfth-graders also reported reading fewer books each year in 2016 compared to how much they read in 1976, and approximately one-third did not read a book (including e-books) for pleasure in the year prior to the 2016 survey.

(8) There's no lack of intelligence among young people. However due to over dependence on digital media they find it difficult to focus for long periods of time and to read long-form text. Subsequently, they find it challenging to understand complex issues and develop critical thinking skills.

Social Media Usage by Age

Vertical axis: Adults who use at least one social media site (%) — 0%, 25%, 50%, 75%, 100%

Bars: 18–29: 84%; 30–49: 81%; 50–64: 73%; 65+: 45% (Age)

Fig. 1
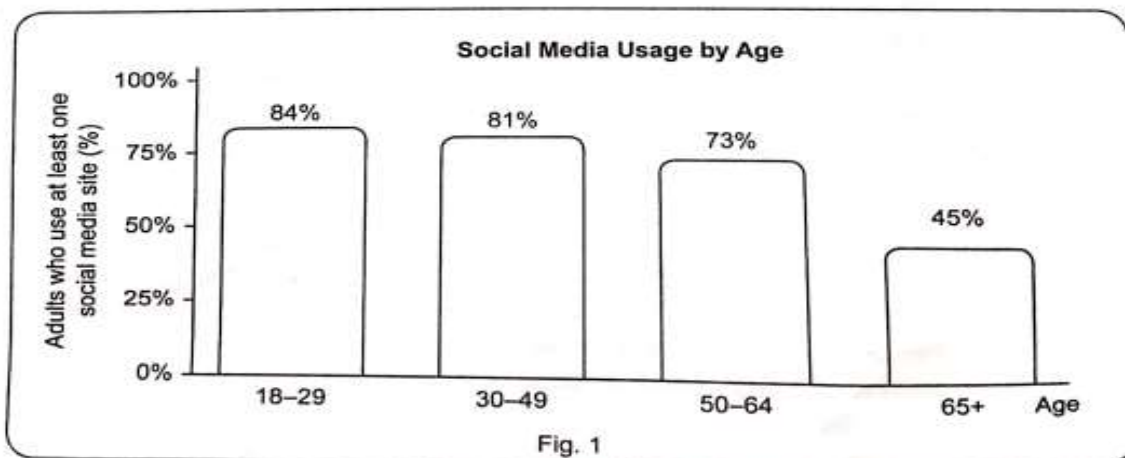
On the basis of your understanding of the passage, answer the questions given below: 10×1=10

(i) Does the following statement agree with the information given in paragraph 1?

The writer believes that very few teens indulge in reading as a pleasurable activity.

Select from the following:

True: if the statement agrees with the information.

False: if the statement contradicts the information.

Not given: if there is no information on this.

(ii) Select the option that displays the most likely reason for this research.

In order to find out...

    (a) reading choices of teenagers.

    (b) digital competency of teenagers.

    (c) speed of reading text.

    (d) the decline of time spent on traditional media.

(iii) Complete the statement based on the following statement:

Traditional media has been replaced by digital media, we can say this because_____

(iv) Do you think that the researchers of study added tenth and eighth graders to the survey deliberately?

Support your answer with reference to the text.

(v) Complete the given sentence by selecting the most appropriate option:

The concluding sentence of the text makes a clear case for _____ by listing it as a core competency for analysis and application.

    (a) following social media   (b) reading long texts

    (c) building focus and concentration   (d) developing constructive habits

(vi) Complete the given sentence by selecting the most appropriate option:

The digital activities that the twelfth-graders indulge in are_____

    (a) texting, gaming, television

    (b) texting, gaming, social media

    (c) newspaper, books, magazine

    (d) television, books, gaming

(vii) Complete the sentence appropriately with one/two words:

Teens today hardly read print media for _____ .

(viii) Based on the reading of the text, state a point to challenge the given statement:

"Time on digital media has displaced time once spent enjoying a book or watching T.V."

(ix) What does the author mean by 'degrading the time' in para 6?

    (a) spending less time   (b) waste of time

    (c) consuming more time   (d) saving time

(x) As per Fig. 1, the percentage of people above 50 yrs is _____ the percentage of teenagers using social media.

    (a) greater than   (b) less than

    (c) equal to   (d) negligible to

1. Read the following text.

(... marks)

12

1. Very often, we do not take the first step towards a good cause because we say to ourselves, "The task is so big. What can I do alone?" So nothing gets done. There is much talk about environmental protection, air pollution and saving our forests. Do we really care? If we do, here are a few things we can do to make our surroundings more pleasant.

2. It is good to adopt a two-uses-attitude! By putting an article to a second use, we are giving it a longer lease of life and using up less raw material from nature. One of the worst things we do is the abuse of paper. The clean sides of envelopes can be used to write small notes, lists and reminders around the house. The more paper we use, the more trees will have to be cut down. For the same reason, we should avoid the use of paper napkins or paper plates. Cloth napkins are just as good, for they can be washed and used over and over again.

3. Another area which needs the most urgent attention is effective garbage disposal. People who are conscious about it follow rules and laws strictly. As a result, their neighbourhoods are clean and beautiful. Similarly, each one of us can contribute to a cleaner environment. All kitchen waste should be collected separately. Those of you who have green fingers can turn this into valuable manure. Dig a pit and put the kitchen waste into it. When the pit is a little over half full, cover it up with mud. Let nature do the rest. Within three or six months, we will have a good garden manure. It can also be done as a community project by digging a large pit in the colony. Do take help of all the members, for nothing succeeds like co-operation.

4. A lot of people don't care about the environment because they don't understand the adverse effect that society has on it. It is important to convince people to care about the environment. The first step would be to convince people to change by providing simple alternative solutions and ways of doing things. The internet is a powerful tool and a group on social media of like-minded people can be formed. People can share environmental stories and issues, as well as pool in solutions and alternatives to educate one another. With the current state that our planet is in, it is imperative that people actively care about the environment and most importantly to act now.

(423 words)

Answer the following questions, based on the passage above.

(a) Select the option that classifies the reason for not taking first step towards a good cause. 1

    (i) Because we feel that the task is too big and we cannot do anything alone.

    (ii) Because we feel that nothing gets done anyhow.

    (iii) Because we feel that we are not responsible for that task.

    (iv) Because we feel that it is not our work to fulfill the task.

(b) What is the significance of two-uses attitude in the given extract? 1

    (i) Putting an article to a second person.

    (ii) Putting an article to a second use giving it a longer lease of life.

    (iii) Putting less material from nature.

    (iv) Putting the task apart itself.

(c) Share evidence from the text, in about 40 words, to support the view that the writer's writing style is descriptive in nature. 2

(d) Complete the sentence appropriately with a characteristic or description. 1

    The internet is a _____ and a group on social media of like-minded people can be formed.

(e) Select the option that is similar in meaning to the word 'succeeds'. 1

    (i) triumph   (ii) lost

    (iii) happy   (iv) sad

(f) Explain in about 40 words, what procedure should one adopt for kitchen? 2

(g) In the line, "...a lot of people don't care about the environment because they don't understand the adverse effect that society has on it." What does the word 'adverse' mean here? 1

(h) How does the following impact the reader? 2

    'There is much talk about environmental protection, air pollution and saving our forests'.

(i) Read the five options (1) – (5) given below. 1

    (1) More paper-less cutting of trees

    (2) Ineffective garbage disposal

    (3) Internet– a powerless tool

    (4) Adopt a two-uses attitude

    (5) Make unpleasant surrounding

Identify the option that DOES/DO corresponds with the passage.

    (i) (1) and (2)   (ii) Only (4)

    (iii) (3) and (4)   (iv) Only (5)

SECTION – A : READING SKILLS (22 Marks)

1. Read the following text. 12

1. Self-respect is very different than relying on one's ego or False Self persona that serves as a cover to show the world only "the good stuff" of a person's personality. It is the gift we give ourselves when we become less motivated to please others in order to get their approval and more motivated to live a life of authenticity and personal integrity despite whatever anyone else thinks about us.

2. The dismal fact is that self-respect has nothing to do with the approval of others—who are, after all, deceived easily enough; has nothing to do with reputation which is something that people with courage can do without. It is to know the difference between the price of things and their value and the courage to own your mistakes.

3. In brief, people with self-respect exhibit a certain toughness, a kind of moral nerve; they display what was once called character, a quality which, although approved in the abstract, sometimes loses ground to other, more instantly negotiable virtues. Its slipping prestige is dismissed when one sees people coveting success or money or fame at all costs. Nonetheless, character—the willingness to accept responsibility for one's own life—is the source from which self-respect springs.

4. To live without self-respect is to lie awake some night, beyond the reach of warm milk, phenobarbital, and the sleeping hand on the coverlet, counting up the sins of commission and omission, the trusts betrayed, the promises subtly broken, the gifts irrevocably wasted through sloth or cowardice or carelessness. However long we postpone it, we eventually lie down alone in that notoriously uncomfortable bed, the one we make ourselves. Whether or not we sleep in it depends, of course, on whether or not we respect ourselves.

5. To have that sense of one's intrinsic worth which, for better or for worse, constitutes self-respect, is potentially to have everything: the ability to discriminate, to love and to remain indifferent. To lack it is to be locked within oneself, paradoxically incapable of either love or indifference. If we do not respect ourselves, we are on the one hand forced to despise those who have so few

resources as to consort with us, so little perception as to remain blind to our fatal weaknesses. On the other, we are peculiarly in thrall to everyone we see, curiously determined to live out—since our self-image is untenable—their false notions of us. We flatter ourselves by thinking this compulsion to please others an attractive trait: a gift for imaginative empathy, evidence of our willingness to give.

(426 Words)

Answer the following questions, based on the passage above.

(a) Select the option that states the false self persona in a person according to the author.   1

    (i) self-respect

    (ii) a person's true personality

    (iii) unauthentic mask

    (iv) 'real good stuff'

(b) The writer would not agree with the given statements based on paragraph three, EXCEPT
_____.   1

    (i) self-respect is a virtue not appreciated in modern times.

    (ii) it used to be a non-negotiable virtue.

    (iii) self-respect has stood its ground come what may.

    (iv) it is losing ground to more instantly negotiable virtues.

(c) Why is it fair to say that the intrinsic worth of a person and self-respect have to go hand-in-hand? Answer in about 40 words.   2

(d) Complete the given sentence with an appropriate inference, with respect to the following.   1

Character– the willingness to accept responsibility for one's life is the source _____.

(e) Select the option that conveys the opposite of 'logical', from words used in paragraph two.   1

    (i) intrinsic

    (ii) paradoxical

    (iii) consort

    (iv) untenable

(f) Comment on the writer's reference to self-respect as a gift we give ourselves.   2

(g) In the line "... people with self-respect exhibit a certain toughness, a kind of moral nerve, they display what was once called character ...", What does the word 'nerve' mean here?   1

(h) Based on your understanding of paragraph four, interpret the metaphor used by the author in the given statement.   2

'However long we postpone it, we eventually lie down alone in that notoriously uncomfortable bed, the one we make ourselves.'

(i) Read the five statements (1)–(5) given below.   1

    (1) If you don't stand for something, you'll fall for anything.

    (2) Handsome is as handsome does.

    (3) Putting backbone into someone.

    (4) Neither fish, nor fowl.

    (5) Rolling stone gathers no moss.

Identify the option that displays the title/s that DOES/DO correspond with the passage.

    (i) (1) and (2)

    (ii) Only (1)

    (iii) (2) and (3)

    (iv) Only (5)

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