DESIGN OF THE QUESTION PAPER
Class : X

2 ½ Hrs **Subject : Science** **Max. Marks : 65**

The weight or the distribution of marks over different dimensions of the question paper shall be as follows :

1. Weight to Learning Outcomes :

Sr.No	Learning Outcomes	Marks	Percentage of Marks
1.	Knowledge	20	30
2.	Understanding	26	40
3.	Application	13	20
4.	Skill	06	10
	Total	65	100

2. Weight to Content/Subject Units :

Sr.No.	Units	Marks	Deletions
1.	Chemical Reactions and Equations	3	No deletion
2.	Acids, Bases and Salts	5	No deletion
3.	Metals and Non metals	4	3.1.1, 3.1.2
4.	Carbon and its Compounds	4	4.4.1, 4.4.2, 4.5
5.	Periodic Classification of Elements	4	5.1, 5.1.1., 5.1.2
6.	Life Processes	7	6.1, 6.2, 6.2.1, 6.2.2, 6.2.3, 6.4.2
7.	Control and Co-ordination	4	7.2, 7.2.1, 7.2.2
8.	How do Organisms Reproduce?	5	8.1, 8.1.1
9.	Heredity and Evolution	4	9.1, 9.5, 9.5.1, 9.5.3, 9.6, 9.6.1
10.	Light-Reflection and Refraction	6	10.3.2
11.	Human Eye and Colourful world	4	11.1, 11.6.3
12.	Electricity	5	No deletions
13.	Magnetic Effect of Electric Current	4	13.4, 13.5, 13.6 **(Principle and use of motor and generator for evaluation)**
14.	Sources of Energy	3	14.3.2, 14.3.3, 14.3.4, 14.4,14.5
15.	Our Environment	3	No deletion
16.	Management of Natural Resources		Deleted
	Total	**65**	

Weight to Forms of Questions :

Sr.No.	Form of Questions	Marks for each question	Number of questions	Total Marks
1.	Long Answer Type (LA)	4	3	12
2.	Short Answer Type (SA-I)	2	12	24
3.	Short Answer Type (SA-II)	3	03	09
4.	Very Short Answer Type (VSA)	1	20	20
	Total		**38**	**65**

The expected time for different types of question would be as follows :

S.No.	Form of Questions	Approx. time for each Question in mins (t)	Number of questions (n)	Approx. time for each form of Questions in mins (n x t)
1	Long Answer Type (LA)	12	03	36
2	Short Answer Type (SA-I)	05	12	60
3	Short Answer Type (SA-II)	08	03	24
4	Very Short Answer Type (VSA)	1 1/2	20	30
	Total			**150**

As the total time is calculated on the basis of the number of questions required to be answered and the length of their anticipated answers, it would, therefore, be advisable for the candidates to budget their time properly by cutting out the superfluous words and be within the expected time limits.

4. Scheme of Options

(There will be no overall choice, However, there is an internal choice in 2 sub questions of 4 marks category and 2 sub question of 3 marks category.)

5. Weightage to Difficulty level of questions :

S.No.	Estimated difficulty level of question	Percentage
1	Easy	20%
2	Average	60%
3	Difficult	20%

A question may vary in difficulty level from individual to individual, As such, the assessment in respect of each question will be made by the paper setter on the basis of general anticipation from the group as a whole taking the examination. This provision is only to make the paper balanced in its weightage, rather than to determine the pattern of marking at any stage.

6. Number of Main Questions :

There will be 05 main questions of 13 marks each.

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Assignments

(Marks : 4)

1. Writing of word equations, chemical equations, state the type of reaction. (Student should write 20 reactions)
2. Poster showing preparation, properties, use of salts. (Any two)
3. Poster showing samples of metals and nonmetals with their physical properties and uses. (Any four samples)
4. Poster on physical properties, chemical properties and uses of any two metals.
5. Poster on physical properties, chemical properties and uses of any two non metals.
6. Poster on alloys (constituents, properties and uses.)
7. Chart on hydrocarbons (structures, properties and uses - any four)
8. Chart of Modern periodic table and Mendeleev Periodic table.
9. Chart showing digestive/respiratory/excretory system/circulatory system. (Labeling, writing functions – Any one)
10. Chart on endocrine glands (label and state functions.)
11. Chart showing different types of mirrors/lenses and formation of images.
12. Poster on defects of eye or any other problems.
13. List the different methods of irrigation followed in Goa. Collect/draw the pictures of different ----------
14. Poster to explain sexual reproduction in flowering plants.
15. Prepare cards to show food chains in four different eco system.
16. Make a list of various fuels used in your locality (minimum four) state their advantages and disadvantages.
17. Study electric connection used in a battery torch and draw its circuit diagram on a chart paper.
18. Study the electric connections in your classroom and draw its circuit diagram on a chart paper.
19. Find power rating of all the electric gadgets in your house and make a list.
20. Study the connection in 'Fairy light Series' and draw its circuit diagram on a chart paper.
21. Study the different part of an electric motor and sketch the main parts and diagram on a chart paper.
22. Study the different parts of cycle dynamo and sketch its main part and circuit on a chart paper.
23. Collect information on the process of earthing and write a short note along with appropriate diagram.

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PROJECTS (MARKS – 6)

1. Models :

A) Bonding in Carbon compounds
(chains, branches or rings – Any one type)

B) Digestive, Respiratory, Excretory, Circulatory system.
(Any one system)

C) Brain

D) Sexual Reproduction in flowering plants

E) Human eye

F) Hydro electric power plant

G) Thermoelectric production

H) Working model of electric motor

I) Working model of electric generator (Dynamo)

J) Biogas plant

K) Solar cooker