

**SCIENCE AND TECHNOLOGY
CLASS X (THEORY)**

TIME: $2\frac{1}{2}$ Hrs.

MAX. MARKS: 60

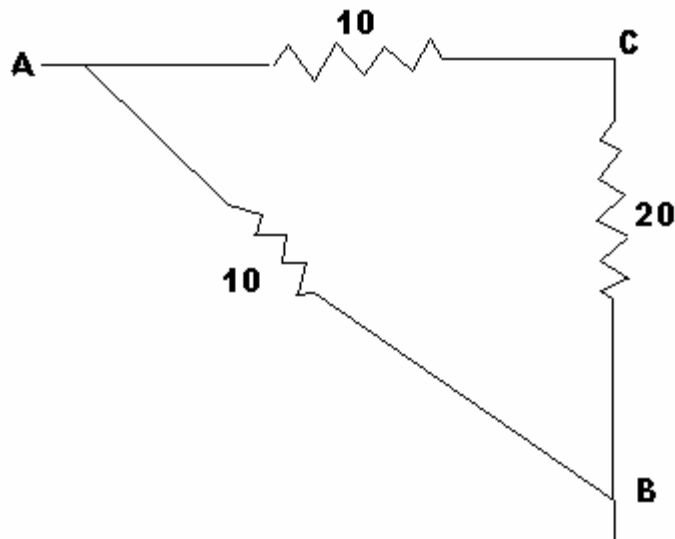
GENERAL INSTRUCTIONS:

- 1. The question paper consists of two Sections A and B. You are to attempt both the sections.*
- 2. The candidates are advised to attempt all the questions of section-A separately and Section –B separately.*
- 3. All questions are compulsory.*
- 4. There is no overall choice. However, internal choice has been provided in two questions of five marks category and one question of 3 marks category in Section A and one question of 2 marks category and one question of three marks category in Section-B.*
- 5. Marks allocated to each question are indicated against it.*
- 6. Questions 1 to 4 in Section A and 17, 18 in Section-B are very short answer questions. These are to be answered in one word or one sentence. One mark questions*
- 7. Questions 5 to 8 in Section A and 19, 20 in Section-B are short answer questions. These are to be answered in 30-40 words each. Two mark questions*
- 8. Questions 9 to 14 in Section A and 21 to 23 in Section-B are also short answer questions. These are to be answered in 40-50 words each. Three mark questions*
- 9. Questions 15, 16 in Section A and 24 in Section-B are Long answer questions. These are to be answered in about 70 words each. Five mark questions*

Section - A

1. Give an example of reaction which takes place at moderate rate?
2. What is the percentage of carbon in the steel? What will happen if the percentage of carbon increases?
3. Why some substances are conductors whereas some are insulators?
4. What is solar constant?
5. What is an isotope? What is the importance of uranium isotopes in nuclear reaction?
6. Why we call the artificial satellites as the “eyes in the sky”?
7. What is a functional group? Draw a molecular structure of ketonic and carboxylic acid functional group?
8. How is lead crystal glasses made? What are its uses?

9. a) What is electromagnetic induction? Also explain the rule through which current induced in a circuit by the changing of magnetic flux due to the motion of a magnet?
b) What are primary and secondary colors?
10. Explain briefly the two opposing theories for the origin for the origin of universe?
11. a) What is corrosion? Is it always harmful?
12. b) How the instantaneous rate of reaction will be affected by the addition of catalyst in a reaction? (BY:- VIDHUR, LUDHAIANA, 09915089502)
c) What is liquor ammonia?
13. On the basis of energy change, classify the reactions?
14. a) An object is placed at a distance of 15 cm from convex mirror of focal length of 20 cm. find the position and size of the object?
b) What is real and virtual image?
15. a) What happens when bleaching powder is exposed in a n air?
b) What is gypsum? How it is prepared?
c) what is metallurgy?
16. a) in the circuit below



- 1) Find the total resistance.
 - 2) Find the current and voltage at points AC and AB
- b) Explain the concept of electroplating with a simple diagram?
17. a) How is the process of magnetic separation carried out?
- b) Differentiate between roasting and calcinations?
- c) What are the uses of allotropes of sulphur?

Section – B

18. Give two examples of vestigial organs?
19. What is DDT? What is its use?
20. What are the functions of vertebrate nervous system?
21. How can we detect abnormality in the heart beat? How it can be corrected?
22. How is water transported in plants?
23. What is respiration? Explain its types?
24. What do you understand by renal failure? Why it happens? Can a person live after renal failure? If yes how?
25. a) How can we control particulate emission?
- b) How is sex determined in humans?