

SET - A

GSEB Batch : 10 th Std. Eng. Medium	MAHESH TUTORIALS SUBJECT : Science & Technology(011) First Preliminary Exam Question Paper	Date: Marks : 50 Time: 1 Hrs.
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PART - A	
Instructions :	[1] All 1 to 50 objective questions are compulsory. (Write your answer in the OMR Answer Sheet given separately.) [2] All objective questions carry equal marks. Each of 1 mark . [3] A O, B O, C O, D O are given for each questions in the given separate OMR Answer Sheet. You have to dark compulsory ● the circle(O) with pen to the correct answer from the given alternatives.
1.	Which instrument is used to manipulate atoms ? (a) Compound microscope (b) Electron microscope (c) ATM (d) AFM
2.	The full form of GPS is (a) Global Positioning System (b) Ground position system (c) Gross position system (d) None of these
3.	The magnification of a plane mirror is..... (a) always less than one (b) always greater than one (c) 1 (d) 0
4.	At what distance should the object be placed from a convex lens in order to obtain an image of the same size as the object? (a) F (b) 2F (c) Between F and 2F (d) R/2
5.	In case of near-sightedness defect of eye... (a) distant object can be seen clearly. (b) distant and near by object can be seen clearly. (c) nearby object cannot be seen clearly. (d) distant object cannot be seen clearly.
6.	How will a red shirt appear under red light ? (a) Black (b) White (c) Green (d) Red
7.	Which is the complementary colours of blue colour ? (a) Red (b) Yellow (c) Green (d) Magenta
8.	A resistor of 3 Ohm has a potential difference of 6v. How much current will flow through the resistor? (a) 1.5 A (b) 0.5 A (c) 2 A (d) 18 A
9.	How much electric charge is present on a proton? (a) 6.25×10^{-19} C (b) 6.25×10^{-18} C (c) 1.6×10^{-19} C (d) 1.6×10^{-18} C
10.	What will be the equivalent resistance of the three resistors 1 MΩ, 100kΩ and 10kΩ connected in a series arrangement ? (a) R = 1.11M Ω (b) R = 1.11k Ω (c) R = 1.11 Ω (d) R = 111 k Ω
11.	The formula for the heat energy produced in a conductor is _____. (a) $W = R^2It$ (b) $W = I^2Vt$ (c) $W = V^2Rt$ (d) $W = I^2Rt$

- 45. Where are genes located?**
(a) With Muscles (b) On bones
(c) On chromosomes (d) With nerve fibres
- 46. In which animal did the eyes originate first?**
(a) Paramecium (b) Plasmodium (c) Planaria (d) Peripatus
- 47. Edaphic factors are included in _____.**
(a) Abiotic components (b) Biotic components
(c) Producers (d) Consumers
- 48. Which of the following are environment friendly practices ?**
(a) Carrying cloth-bags to purchases in while shopping
(b) Switching off unnecessary lights and fans
(c) use reusable razors, nappies and pens.
(d) All of given.
- 49. In Gujarat on which river is Dharoi dam built.**
(a) Sabarmati (b) Sarasvati (c) Narmada (d) None
- 50. A resin is a _____ .**
(a) Man-made product (b) Forest's product
(c) Wildlife's product (d) Microbial product



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PART - B		
Instructions :	[1] There are four sections in this question paper and total 18 questions. [2] All questions are compulsory. [3] Take care of internal options in the question paper. [4] Draw neat, clean and labelled diagram as directed. [5] The number on the right-hand indicates marks. [6] Write the answer of questions according to the section.	
SECTION - A		
Answer the following questions : [2 marks]		10
1.	Write a short note on Nanotechnology and Healthcare. OR	
1.	Explain the meaning of Nanotechnology?	
2.	There resistance 5Ω, 10Ω and 30Ω are joined in parallel with a battery of 12 V. Find out (a) Current Passing through each resistance (b) The total current of the Equivalent resistance of the circuit.	
3.	Explain preparation of ethene in laboratory by drawing figure. OR	
3.	Explain occurrence of methane and its preparation.	
4.	How can an artificial satellite be used for communication ?	
5.	Write products of reaction of acid with metal.	
SECTION - B		
Answer the following questions : [2 marks]		10
6.	Draw a labelled structure of human heart.	
7.	Difference between Central nervous system and Autonomous nervous system	
8.	What are the main factors responsible for depletion of ozone layer ?	
9.	Name the ancestor of the following : Broccoli, Kohlrabi, Kale OR	
9.	Difference between Artificial selection and Natural selection	
10.	What are the differences between sanctuaries and national parks ?	
SECTION - C		
Answer the following questions : [3 marks]		15
11.	Discuss about the experiment of scattering of light through colloidal solution OR	
12.	Mention the usefulness of a fuse in a domestic electrical circuit.	
12.	What precautions should we take while using electricity?	
13.	Write short note on Allotropes of sulphur.	
14.	Explain industrial production of ethanol by fermentation process. OR	
14.	Write short note on nomenclature of alcohol.	
15.	Describe briefly intensive steps taken to prevent the spread of AIDS.	
SECTION - D		
Answer the following questions : [5 marks]		15
16.	For concave mirror, derive $f = \frac{R}{2}$ and derive the mirror formula $\frac{1}{u} + \frac{1}{v} = \frac{1}{f}$ from it.	
17.	What is an alloy ? Mention its advantages. Mention the name of three alloys and also Mention the components in them, properties and uses. OR	
17.	Explain the refining of copper by electrolysis.	
18.	Explain nutrition in Amoeba. OR	
18.	Explain the whole digestion of food in the body of Human with diagram.	