

GSEB Batch : 10 th Std. Eng. Medium	MAHESH TUTORIALS SUBJECT : Science & Technology(011) Third Preliminary Exam Question Paper	Date: Marks : 50 Time: 1 Hrs.
---	---	-------------------------------------

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. **The properties of a substance depend upon**
 - (a) Arrangement of atoms
 - (b) Number of atoms
 - (c) Mass of atoms
 - (d) Density of atoms
2. **Most important property of nano material is.....**
 - (a) Force
 - (b) Friction
 - (c) Pressure
 - (d) Temperature
3. **Light waves are waves.**
 - (a) non-mechanical
 - (b) mechanical
 - (c) longitudinal
 - (d) none of these
4. **Which of the following has highest refractive index?**
 - (a) Glass
 - (b) Water
 - (c) Pearl
 - (d) Diamond
5. **Which colour of light has the least velocity in the prism?**
 - (a) Red
 - (b) Yellow
 - (c) Indigo
 - (d) Violet
6. **..... mixture method is used for preparing pigments of different colours.**
 - (a) Additive
 - (b) Subtractive
 - (c) Both
 - (d) None
7. **Far sightedness is caused due to of light rays.**
 - (a) Excessive convergence
 - (b) Less Convergence
 - (c) Less divergence
 - (d) None of A, B, C
8. **_____ electric charges are responsible for the electric current in a conductor.**
 - (a) Positive
 - (b) Negative
 - (c) Both
 - (d) None
9. **1 A = _____ mA**
 - (a) 100
 - (b) 10³
 - (c) 10⁻³
 - (d) 10⁻⁶
10. **Silicon is _____.**
 - (a) A conductor
 - (b) An insulator
 - (c) A semiconductor
 - (d) A super conductor
11. **The distilled water acts as _____ for the electricity.**
 - (a) Conductor
 - (b) Insulator
 - (c) Semiconductor
 - (d) None of them
12. **The direction of magnetic field lines in a region outside the bar magnet is _____.**
 - (a) From the N pole towards the S pole of a magnet.
 - (b) From the S pole toward the N pole of a magnet.
 - (c) In the direction coming out from both the poles of magnet.
 - (d) In the direction entering in both the poles of magnet.

- 13. Which type of current is obtained from a battery ?**
 (a) DC current (b) AC current.
 (c) Current of AC and DC both (d) Depends upon type of battery.
- 14. What is the frequency of 220 V DC voltage?**
 (a) 50Hz (b) 60Hz (c) 220Hz (d) Zero
- 15. What is the peroidic time of Halley's comet ?**
 (a) 67 yrs (b) 76 yrs (c) 86 yrs (d) 100 yrs
- 16. Venus spins _____ to _____.**
 (a) East, West (b) North, South (c) South, North (d) West, East
- 17. The sun takes _____ crore years to complete one revolution.**
 (a) 22 (b) 13.6 (c) 22.5 (d) 23
- 18. How much is the area covered by one nakshatra on ecliptic?**
 (a) $13^{\circ} 20'$ (b) $20^{\circ} 12'$ (c) $13^{\circ} 30'$ (d) $23^{\circ} 20'$
- 19. Which of the following solutions is basic?**
 (a) Lemon juice (b) Tamarind solution
 (c) Buttermilk (d) Detergent solution
- 20. What donates proton in Bronsted Lowry theory?**
 (a) Acid (b) Base (c) Water (d) Salt
- 21. What is correct for acidic aqueous solution?**
 (a) $[H_3O^+] = 10^{-7} M$ (b) $[H_3O^+] < 10^{-7} M$ (c) $[H_3O^+] > 10^{-7} M$ (d) $[H_3O^+] < [OH^-]$
- 22. Which food nutrient induces acidity?**
 (a) Protein (b) Carbohydrates (c) Lipids (d) Minerals
- 23. Copper is used in preparation of wires as it is _____.**
 (a) Good conductor of electricity and malleable
 (b) Malleable and ductile
 (c) Good conductor of electricity and ductile
 (d) Anti corrosive and ductile
- 24. Froth floatation method of concentration of ore is used for _____ type of ore.**
 (a) Sulphide (b) Oxide (c) Sulphate (d) Hydrate
- 25. Calcium oxide reacts with sand to form _____**
 (a) Gangue (b) Residue (c) Slag (d) None of these
- 26. Out of the total elements are non metals.**
 (a) 92 (b) 22 (c) 114 (d) 11
- 27. N_2O is _____ oxide.**
 (a) Acidic (b) Basic (c) Neutral (d) Amphoteric

- 28. Makethe correct pairs from below mentioned (X) and (Y)**

(X)	(Y)
(a) Sulphurous acid	(1) H_3PO_4
(b) Sulphuric acid	(2) $H_2S_2O_7$
(c) Oleum	(3) H_2SO_3
(d) Phoshphoric acid	(4) H_2SO_4

- (a) (a-2) (b-3), (c-1), (d-4) (b) (a-4) (b-2), (c-1), (d-3)
 (c) (a-3), (b-4), (c-2), (d-1) (d) (a-2), (b-3), (c-1), (d-4)

29.	Which of the following is not a property of petroleum?	(a) Viscous	(b) Black	(c) Dense	(d) Not flammable
30.	Which of the following is used as fuel?	(a) Coal tar	(b) Coal gas	(c) Water gas	(d) Ammonia
31.	The presence of _____ in mineral is very harmful.	(a) Nitrogen	(b) Phosphorous	(c) Sulphur	(d) Carbon
32.	_____ is used as pollution free fuel in automobiles.	(a) SNG	(b) PNG	(c) LPG	(d) CNG
33.	What is called the compounds possessing (-CHO) functional group ?	(a) Amide	(b) Aldehyde	(c) Ketone	(d) Alcohol
34.	Oxidation of ethanol gives _____	(a) Acetic acid	(b) Formic acid	(c) Propanoic acid	(d) Butanoic acid
35.	Which of the following is the use of propanone ?	(a) To remove nail polish	(b) Antiseptic	(c) Antibiotic	(d) As preservative
36.	The main fundamental functions performed by living organisms to maintain their life are called _____ ?	(a) Nutrition	(b) Respiration	(c) Life Processes	(d) None
37.	Which type of blood flows through all arteries?	(a) Impure	(b) Pure	(c) Toxic	(d) With nitrogenous waste
38.	What is the excretory organ in human being ?	(a) Bowman's capsule	(b) Nephron	(c) Urinary bladder	(d) Kidney
39.	Which plant tissue translocates carbohydrates, essential substances and plant hormones?	(a) Xylem	(b) Translocation cells	(c) Sieve pores	(d) Phloem
40.	Kidney is divided into and	(a) Cortex ; Medulla	(b) Nephrons ; Bowman's capsule	(c) Cortex ; Nephrons	(d) Medulla ; and Nephrons
41.	The movement of plant toward the gravity is called _____	(a) Hydrotropism	(b) Geotropism	(c) Chemotropism	(d) Phototropism
42.	By which process is the hand withdrawn when the prickle of rose pricks?	(a) Autonomous action	(b) Reflex action	(c) Thigmonastic action	(d) Photonastic action
43.	A multicellular organisms which reproduce by budding is:	(a) Amoeba	(b) Yeast	(c) Paramecium	(d) Hydra
44.	In asexual reproduction, offsprings are produced similar, because	(a) only one parent involves in it.	(b) two parents involve in it.	(c) reproductive cells are involve in it.	(d) reproductive cells does not involve in it.

45. **When Mendel crossed Tall plant with Dwarf plant what was the ratio of dwarf plants in F₂ generation?**
(a) 75% (b) 25% (c) 60% (d) 40%
46. **Which radioactive element (isotope) is used to determine the age of fossils?**
(a) ¹⁴C (b) ¹⁸O (c) ¹²C (d) ¹⁶O
47. **First order consumers are _____.**
(a) Carnivores (b) Herbivores (c) Decomposers (d) Omnivores
48. **In the food chain comprising of a frog, snake, grass, grass-hopper, which organisms is at third trophic level in it ?**
(a) Snake (b) Frog (c) Grass (d) Grass-hopper
49. **In which year Amrita Devi Bisnoi sacrificed her life for the protection of Khejri trees ?**
(a) 1731 (b) 1763 (c) 1783 (d) 1873
50. **Which of the following activity is not helpful for the protection of environment?**
(a) Social forestry (b) Rotation of crops
(c) Recycling of used water (d) Deforestation



GSEB Batch : 10 th Std. Eng. Medium	MAHESH TUTORIALS SUBJECT : Science & Technology(011) Third Preliminary Exam Question Paper	Date: Marks : 50 Time: 2 Hrs.
---	--	-------------------------------------

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. "Nanotechnology plays by different rules." Explain the statement. OR 1. "Carbon forms backbone of biology of life on earth". Justify. 2. Give points of difference: Series and Parallel connection of resistors. 3. Write short note on preparation of ethene by cracking method OR Explain cracking reaction.	3. State the properties of ethyne gas. 4. Disntinguish between Stars & Planets. 5. How are acids formed ?	
SECTION - B		
Answer the following questions : [2 marks]		10
6. Explain the flow of blood in heart. 7. Explain the detail structure of nerve cells. 8. Name compounds responsible for depletion of ozone layer. 9. What are fossils ? OR 9. In what way homologous organs give evidence for evolution ? 10. Note down the serious effects of Deforestation.		
SECTION - C		
Answer the following questions : [3 marks]		15
11. Explain the formation of rainbow with a neat figure. 12. Describe the principle, construction and working of an electric motor along with figure.	12. Give the characteristics of magnetic field resulting from a solenoid ? 13. Write a short note on industrial preparation of dihydrogen gas. OR 14. Explain Silver mirror test. 14. Explain formation and uses of polyester polymer. 15. What is the basic difference between asexual reproduction and sexual reproduction?	
SECTION - D		
Answer the following questions : [5 marks]		15
16. Explain refraction due to rectangular slab. What is lateral shift? OR 17. Write a note in detail: Refining of metals by electrochemical method. 17. Describe Bayer's method for obtaining alumina from Bauxite. OR 18. Explain Aerobic respiration. 18. Describe the process of respiration in the following parts of a plant. (a) Root (b) Stem (c) Leaves		
~~~~~ All the Best ~~~~~		