

SET - B

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.	Robert F. Curl, Jr., Harold W.Kroto and Richard E. Smalley discovered (a) Bucky ball (b) Bucky tube (c) AFM (d) STM
2.	The diameter of a Bucky ball is around..... (a) 1 Å (b) 10 Å (c) 100 nm (d) 10 nm
3.	In which medium velocity of light is higher, water or glass? (a) water (b) Glass (c) Both are equal (d) None of these
4.	If focal length of convex lens is 25 cm, find its power? (a) 4 D (b) 0.4 D (c) 40 D (d) 14 D
5.	Which part of the eye is responsible for varying the focal length of an eye lens? (a) Eyeball (b) Retina (c) Ciliary muscles (d) Blind spot
6.	Which colour of light scatters minimum due to atmosphere ? (a) Blue (b) Yellow (c) Green (d) Red
7.	What is the time difference between actual sunrise and apparent sunrise ? (a) 2 s (b) 20 s (c) 2 minute (d) 20 minute
8.	What is the formula of electric current? (a) $I = Qt$ (b) $I = \frac{t}{Q}$ (c) $I = V \times t$ (d) $I = \frac{Q}{t}$
9.	Who discovered electron? (a) Coulomb (b) Volta (c) Ampere (d) Thomson
10.	1 kWh = _____ joule (a) 3.6×10^6 (b) 3.6×10^3 (c) 3.6×10^{-6} (d) 3.6×10^{-3}
11.	The SI unit of electric charge is _____. (a) Ampere (b) Volt (c) Watt (d) Coulomb
12.	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.
13.	Which device is used to convert electrical energy into mechanical energy? (a) Electric generator (b) Solenoid (c) Electric motor (d) Electric iron
14.	Which type of alloy is not used in making fuse? (a) Pure tin (b) Mixture of copper and tin

	(c) Nichrome	(d) Tin and lead	
15.	_____ X-ray observatory sends the X-ray photographs of the galaxy.		
	(a) Hubble	(b) Chandra	(c) Kepler (d) Newton
16.	A tail of comet contains HCN and _____ compounds.		
	(a) CO ₂	(b) CO	(c) O ₂ (d) HCO ₃
17.	What are shooting stars?		
	(a) Comets	(b) Stars	(c) Meteors (d) Meteorites
18.	Who have rings around it?		
	(a) Terrestrial planets	(b) Jovian planets	(c) Comets (d) Asteroids
19.	Reaction of nitric acid with metal , produces _____.		
	(a) Water	(b) Salt	(c) Dihydrogen gas (d) Nitrogen dioxide gas
20.	What is added to neutralize the alkaline soil?		
	(a) Gypsum	(b) Lime	(c) Baking soda (d) Plaster of paris
21.	K_a shows _____.		
	(a) Extend of ionization	(b) Strength of acid	(c) Both a and b (d) Concentration of acid
22.	The salt of strong acid and weak base will be _____.		
	(a) Acidic	(b) Basic	(c) Neutral (d) Any of the above
23.	The solution of _____ metal is taken as an electrolyte		
	(a) Pure	(b) Impure	(c) Both (a) and (b) (d) None of (a) and (b)
24.	Metallic oxides are _____ in nature		
	(a) Basic	(b) Acidic	(c) Amphoteric (d) Neutral
25.	Pure gold is _____ carat gold and is soft.		
	(a) 18	(b) 22	(c) 24 (d) 30
26.	Hydrogen gas for industry can be prepared from _____ gas.		
	(a) Methane	(b) Ethane	(c) Butane (d) Propane
27.	Sulphur is insoluble in _____		
	(a) Ethane	(b) Benzene	(c) Water (d) None of these
28.	Dilute sulphuric acid is a _____ acid.		
	(a) Basic	(b) Diprotic	(c) Electronic (d) Alkaline
29.	The simplest hydrocarbon of alkene family is _____		
	(a) Methene	(b) Ethene	(c) Methane (d) Ethane
30.	Cracking of Hexane will produce _____		
	(a) Butane and Ethane	(b) Propane and propene	(c) Propane and propane (d) Butane and Ethene
31.	Which gas it filled in rubber balloons on kite flying day?		
	(a) Hydrogen	(b) Acetene	(c) Ethane (d) Acetylene
32.	What is used as fuel in jet planes ?		
	(a) Gasolene	(b) Diesel Oil	(c) Kerosene (d) All the given

33.	Ester has ____ smell. (a) Sweet (b) Bitter (c) Sour (d) Fruity
34.	Detergent is ____. (a) Sodium or potassium salt of higher fatty acid (b) Sodium salt of long chain of sulphonates (c) Sulphur cross links between potassium acid and sodium citrate (d) Ions of calcium and magnesium in powder form
35.	Which compound is a condensation polymer? (a) Nylon (b) PVC (c) Natural rubber (d) Teflon
36.	During respiration, the exchange of gases takes place in : (a) Bronchi (b) Alveoli (c) Bronchioles (d) Trachea
37.	The phloem consists of _____ and _____ of vascular tissue. (a) Sieve tube (b) Tracheid (c) Sieve Cells (d) Both (a) and (c)
38.	The walls of the heart are made up of which muscles? (a) Pulmonary Muscles (b) Cardiac muscles (c) Sieve cells (d) Septa
39.	How many tubules do nephrons of each kidney have? (a) 20 lac (b) 10 lac (c) 5 lac (d) 15 lac
40.	Amount of water reabsorbed depends on : (a) How much excess water is there in the body (b) How much dissolved water there is to be excreted (c) Rate of sweating (d) Both (a) & (b)
41.	Which of the following prepares our body for action in emergency situations ? (a) Testosterone (b) Growth hormone (c) Adrenaline (d) Insulin
42.	Which disease occurs due to excessive proportion of sugar in the blood and in urine? (a) Dwarfism (b) Goiter (c) Diabetes (d) Hypothyroidism
43.	The _____ is the female organ in flower which produces female gamete. (a) Carpel (b) Stamen (c) Pistill (d) None
44.	What is the period of one complete menstruation cycle in woman ? (a) 31 days (b) 32 to 35 days (c) 28 to 32 days (d) 35 to 40 days
45.	In the process of gametogenesis in the organisms performing sexual reproduction. Which process is important from the point of view of chromosomes? (a) Mitotic division (b) Meiotic division (c) Amitosis (d) Both A and C
46.	Which plant was obtained, from the sterile flowers of cabbage, by using the artificial selection technique? (a) Broccoli (b) Cauliflower (c) Kohlrabi (d) Kale
47.	The most important compound which accounts for almost 80% of the total depletion of ozone layer is _____. (a) Chloride ion (b) Sulphur ion (c) Chlorofluoro carbon (d) Magnesium ion
48.	Who made available inorganic elements such as nitrate, phosphate for producers ? (a) Herbivorous (b) Decomposers

(c) Primary Carnivorous

(d) Omnivorous

49. How much ground water is utilized at present?

(a) 10%

(b) 25%

(c) 40%

(d) 80%

50. In India _____ national parks, of which _____ national parks in Gujarat.

(a) 441, 88

(b) 88, 4

(c) 21, 4

(d) 88, 21



SET - B

GSEB Batch : 10 th Std. Eng. Medium	MAHESH TUTORIALS SUBJECT : Science & Technology(011) First Preliminary Exam Question Paper	Date: Marks : 50 Time: 2 Hrs.
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PART - B		
<p>Instructions :</p> <p>[1] There are four sections in this question paper and total 18 questions.</p> <p>[2] All questions are compulsory.</p> <p>[3] Take care of internal options in the question paper.</p> <p>[4] Draw neat, clean and labelled diagram as directed.</p> <p>[5] The number on the right-hand indicates marks.</p> <p>[6] Write the answer of questions according to the section.</p>		
<p align="center">SECTION - A</p> <p>Answer the following questions : [2 marks]</p> <p>1. Explain how nanotechnology plays an important role in security. OR</p> <p>1. Define Nanoscience and Nanotechnology in the modern context.</p> <p>2. The three resistors of resistance 5 Ω, 10 Ω and 30 Ω, are connected with a 12 V battery in parallel. Determine (a) Total current in the circuit (b) Equivalent circuit resistance.</p> <p>3. Explain the destructive distillation of mineral coal in laboratory by drawing its figure. OR</p> <p>3. Write short note on unsaturated hydrocarbons.</p> <p>4. How can an artificial satellite be used in weather forecast ?</p> <p>5. Write two chemical properties of acid.</p>		10
<p align="center">SECTION - B</p> <p>Answer the following questions : [2 marks]</p> <p>6. Explain the human excretory system in brief.</p> <p>7. Differentiate Cerebrum and Cerebellum</p> <p>8. Describe the Types of waste.</p> <p>9. Difference between Homologous organ and Analogous organs OR</p> <p>9. Does geographical isolation of individual of a species lead to the formation of a new species ? Provide a suitable explanation for your answer ?</p> <p>10. What are wildlife? Mention the significance of wildlife?</p>		10
<p align="center">SECTION - C</p> <p>Answer the following questions : [3 marks]</p> <p>11. Explain the functions of main parts of an eye by drawing a simple sketch of it.</p> <p>12. Give the advantages of using AC current. What are the disadvantages of DC current? OR</p> <p>12. Write a short note on electric bell.</p> <p>13. Explain contact process for production of sulphuric acid.</p> <p>14. Write short note on properties of ethanol. OR</p> <p>14. Give IUPAC nomenclature of carboxylic acid compounds.</p> <p>15. Difference between Vasectomy and Tubectomy.</p>		15
<p align="center">SECTION - D</p> <p>Answer the following questions : [5 marks]</p> <p>16. Obtain the lens formula for spherical lens.</p> <p>17. Explain the method of concentration of copper pyrites - the ore of copper OR</p> <p>17. Explain in brief the liquifaction method for refining of metals.</p> <p>18. Describe the exchange of gases which takes place in the leaves of a plant (i) during day time, and (ii) at night. OR</p> <p>18. Write a short note on Physical process of respiration in human.</p>		15