

Question Bank
Science and Technology Part 2

Q 1 A) Choose the correct option.

- 1) Transfer of information from molecules of DNA to mRNA is called _____ process.
A. translocation B. translation C. transcription. D. differentiation
- 2) Similarities in initial stages indicate the _____ evidence.
A. Connecting links B. Anatomical C. Embryological. D. Palaeontological
- 3) _____ is a vestigial organ in human beings.
A. Wisdom teeth B. Ear muscles C. Body hairs D. All the above
- 4) Nitrogenous molecules..... does not present on mRNA strands.
A) Adenine B) Guanine C) Uracil D) Thymine
- 5) Various theories about the origin and development of living organisms have been proposed so far, among which the theory of..... is the most widely accepted.
A) Use and disuse of organs B) Natural selection
C) Successive development of organisms D) Inheritance of acquired traits
- 6) The carbon dating method was developed by
A) Willard Libby B) Charles Darwin C) Lamarck D) Johann Mendel
- 7) It was asserted by that the principle of natural selection was useful in the gradual development of living organisms.
A) Willard Libby B) Charles Darwin C) Lamarck D) Johann Mendel
- 8) Protein located in bones is _____.
A. myosin B. melanin C. haemoglobin D. ossein
- 9) Which of the following vitamins is necessary for synthesis of NADH₂ ?
A. Vitamin B₃ B. Vitamin C C. Vitamin B₂ D. Vitamin K
- 10) _____ cells divide by mitosis.
A. Somatic. B. Gametes C. Stem. D. Both A and C
- 11) The first step of karyokinesis is _____.
A. anaphase B. telophase C. metaphase. D. prophase.
- 12) _____ is not a part of mitosis.
A. Anaphase B. Diplotin C. Prophase D. Cytokinesis
- 13) We get _____ energy from lipids.
A. 4 cal / gm. B. 9 cal/ gm C. 9 kcal/ gm. D. 4 kcal/gm.
- 14) In Humans there are ___ pairs of chromosomes.
A. 22. B. 23 C. 44 D. 46

- 15) In one molecule of glucose.....hydrogen atoms are present.
 A) 6 B) 12 C) 22 D) 11
- 16) Of the followingis called the energy currency.
 A) ATM B) NAD C) FAD D) ATP
- 17) The cyclic reaction 'Tricarboxylic Acid Cycle' was discovered by
 A) Parnassus B) Sir Heinz Krebs C) Meyerhoff D) Embden
- 18) An enzyme Rubisco is the most abundant type of.....in nature.
 A) Carbohydrate B) Vitamin C) Protein D) Fat
- 19) A diploid cell has.....number of chromosomes.
 A) 23 B) 46 C) 92 D) 36
- 20) Which of the following is not a type of asexual reproduction in multicellular organisms?
 A. fragmentation B. regeneration C. Budding D. binary fission
- 21) Find the odd one out:
 A. Stigma B. Anther C. Style D. Ovary
- 22) At the time of birth , there are _____oocytes in the ovary of a female foetus.
 A. 1 to 2 million B. 2 to 3 million C. 2 to 4 million D. none of these
- 23) _____modern remedial technique is used if there is a problem in implantation of an embryo in the uterus.
 A. Surrogacy. B. Sperm bank C. In vitro fertilisation. D. none of these.
- 24) Implantation of the embryo occurs in _____.
 A. uterus. B. ovary C. oviduct. D. vagina
- 25) In humans,sperm production occurs in the organ _____.
 A. testes. B. scrotum C. prostate gland. D. ovaries.
- 26) Pregnant mother supplies nourishment to her foetus through _____.
 A. uterus. B. placenta C. ovary D. oviduct.
- 27) _____twins are formed from a single embryo.
 A. Dizygotic B. Monozygotic C. Multiple zygotes. D. Zygote
- 28) Pollen grains are formed by _____division in locules of anthers.
 A. meiosis B. mitosis C. amitosis. D binary.
- 29) Asexual reproduction occurs by _____cell division.
 A. mitotic B. meiotic C. fertilisation. D. double fertilisation.
- 30) This method of asexual reproduction is seen in paramecium.
 A. transverse binary fission. B. longitudinal binary fission
 C. simple binary fission. D. regeneration

- 31) In meiosis, the number of chromosomes becomes _____.
- A. multiple times. B. triple C. half. D. double
- 32) Generally, every month, ____ ovum is released in the abdominal cavity alternately from each ovary.
- A. 1 B. 2 C. 3 D. 4
- 33) _____ is present in unisexual flowers.
- A. Both androecium and gynoecium B. Only androecium
C. Only gynoecium D. Androecium or gynoecium
- 34) Flowers without stalk are called
- A) Sessile B) Inflorescence C) Anther D) Male flower
- 35) The energy required by the sperms comes from the
- A) Mitochondria B) Fructose sugar C) Nucleus D) Proteins
- 36) In '44+XX' 44 means number of
- A) sperm cell B) egg cell C) autosomes D) sex-chromosomes
- 37) An organ called as is formed for supply of food material during the growth of the embryo in the uterus.
- A) vesicle B) gallbladder C) white corpuscle D) placenta
- 38) Painful and burning sensation during urination are the symptoms of sexual disease.
- A) AIDS B) Gonorrhoea C) Syphilis D) Hernia
- 39) _____ is a chemical factor of abiotic components.
- A. Air. B. water. C. Nutrients D. sunlight
- 40) _____ is an organic compound of abiotic components.
- A. Proteins. B. Iron. C. Sodium. D. Oxygen
- 41) _____ is a rare species.
- A. Lesser florican B. Tiger C. Giant squirrel. D. Musk deer
- 42) _____ is an indeterminate species.
- A. Red panda. B. Lion C. Lion tailed monkey D. Giant squirrel
- 43) Occurrence of diversity among the organisms of the same species is called _____ diversity.
- A. species. B. genetic C. ecosystem. D. animal
- 44) In modern civilization, ----- has become a primary need.
- A. food. B. cloth C. shelter. D. energy
- 45) Among the abiotic components of the ecosystem, is the inorganic component.
- A) Oxygen B) Carbohydrate C) Protein D) Fat

- 46) The solid component causing air pollution is
- A) C B) CO C) CO₂ D) H₂S
- 47) Of the following places not any radioactive accident has occurred in
- A) Chernobyl B) Windscale C) Three Mile Island D) Pokhran
- 48) Environmental issues were discussed in the Five Year Plan in India.
- A) first B) second C) third D) fourth
- 49) No industry, factory or person shall have the right to release pollutants into the atmosphere in excess of the prescribed limits under
- A) Forest Conservation Act B) Environment Protection Act
C) Wildlife Protection Act D) Biomedical Waste Rules
- 50) The headquarters of International Union for Conservation of Nature and Natural Resources (IUCN) is in
- A) Switzerland B) Geneva C) Norway D) America
- 51) The pink page of the IUCN's Red List shows the names of species.
- A) Endangered B) Rare C) Vulnerable D) Indeterminate
- 52) Most electric power plants are based on the principle of ____.
- A. electro induction. B. magnetic induction.
C. electro- magnetic induction D. electromagnet.
- 53) Principle of Electromagnetic induction was invented by the scientist _____.
- A. Ohm. B. Michael Faraday C. Joule. D. Newton
- 54) In the power plant based on nuclear energy ____ is used to rotate the generator.
- A. Steam turbine. B. air turbine C. water turbine D. none of these.
- 55) When a neutron is bombarded on an atom of uranium ____ neutrons generated in this process.
- A. 1. B. 2. C. 3. D. 4.
- 56) Kinetic energy in flowing water drives _____ to generate electricity.
- A. watermill. B. windmill C. turbines. D. generator.
- 57) Wind turbines with capacity are commercially available.
- A. 1 KW to 7 MW. B. 1 KW to 7 KW C. 1 KW to 7000 W D. 1 W to 7 MW
- 58) Solar photovoltaic cells convert the solar radiation energy directly into _____ energy.
- A. electrical B. potential C. kinetic. D. heat.
- 59) A silicon solar cell of dimension 1 sq.cm. generates current of about _____.
- A. 50 mA B. 30 mA C. 50 A D. 30 A
- 60) A silicon solar cell of dimension 1 sq.cm. generates _____ potential difference.
- A. 0.1 V. B. 0.5 V. C. 0.1 mV. D. 0.5 mV.

- 61) In nuclear power plants, neutrons are bombarded on atoms of _____.
 A. uranium-236. B. barium C. krypton. D. premium-235.
- 62) My body is soft and slimy, hence I am referred to as _____.
 A. mollusca B. echinodermata C. annelida D. arthropoda
- 63) Which of the following is a hermaphrodite animal?
 A. doliolum B. scorpion C. centipede D. cockroach
- 64) Which of the following animals can regenerate its broken body parts ?
 A. Frog B. Starfish C. Sparrow D. Pigeon
- 65) Which of the following is a warm blooded (homeotherms) animal?
 A. Bat B. Tortoise C. Wall lizard D. Crocodile
- 66) My body is _____shaped to minimise water resistance.
 A. pointed B. spindle C. cartilaginous D. flat
- 67) _____animal is called a friend of farmers.
 A. Rabbit B. Cat C. Leech D. Earthworm
- 68) Which of the following animals has a hard calcareous shell?
 A. nereis B. shark C. bivalve. D. herdmania
- 69) Among the following organisms in phylumshow cellular organisation.
 A) porifera B) cnidaria C) platyhelminthes C) aschelminthes
- 70) Among the following types the body symmetry is not found in animals.
 A) asymmetric B) bilaterally symmetric C) Axial symmetric D) Triploblastic symmetric
- 71) An earthworm is..... animal.
 A) an eucoelomate B) a pseudocoelomate C) a dicoelomate D) an acoelomate
- 72) Walrus belongs to the class
 A) amphibian B) pisces C) reptile D) mammal
- 73) _____ acid is used in Production of vitamins .
 A. Citric B. Gluconic C. Lactic D. Itaconic
- 74) Nowadays, _____ are used for treatment of diarrhoea and treatment of poultry also.
 A. yoghurt B. probiotics C. vinegar D. cheese
- 75) Yoghurt is a milk product produced with the help of----- .
 A. lactobacilli B. azotobacter C. corynebacterium. D. streptococcus.
- 76)----- is a powerful antibiotic against treatment of tuberculosis.
 A. Penicillin. B. Rifamycin C. Streptomycin. D. Bacitracin.
- 77)----- is used in the commercial bakery industry.
 A. Compressed yeast. B. Algae C. Bacteria D. Microbes

- 78)..... is a substance obtained by microbial processing that roles as an artificial sweetener.
 A. Nycin B. Lysine C. Xanthenes D. Xylitol
- 79) The taste of butter is due to the compound in it.
 A) Lactose B) Fat C) Diacetyl D) Acetic acid
- 80) A cheese that has hardened slightly after keeping for three to twelve months is called
 A) Mozzarella B) Parmesan C) Cottage D) Cheddar
- 81) A drink made by fermenting apple juice is called
 A) Cedar B) Brine C) Wine D) Juice
- 82) The group of bacteria used to break down oil spills is called
 A) HBD B) HCB C) HAB D) HOD
- 83) At the earliest stage of development, the organism is in the form of a mass of a cell, which are almost alike, those cells are called _____.
 A. Stem cells B. RBC C. WBC D. None of these
- 84) Which of the following is an important requirement in organ transplantation?
 A. Blood group of recipient B. Diseases of donor C. Age of donor D. All above.
- 85) Availability of _____ is an important requirement in organ transplantation.
 A. doctor B. clinic D. donor D. ambulance.
- 86) The disease related with the synthesis of insulin is _____.
 A. cancer B. arthritis C. heart disease D. diabetes.
- 87) Transgenic raw potatoes generate immunity against _____ disease.
 A. plague B. cholera C. leprosy D. TB
- 88) _____ have valuable contributions in the green revolution in the USA.
 A. Dr. Norman Borlaug. B. Dr. Swaminathan.
 C. Dr. Wargis Currian. D. Dr. Hargovind Khurana.
- 89) Methods like artificial insemination and embryo transplant are mainly used for _____.
 A. animal husbandry. B. wild life C. pet animals. D. infertile women.
- 90) Cell _____ starts from the 14th day of conception.
 A. growth. B. differentiation C. development D. division
- 91) _____ is the revolutionary event in biotechnology after cloning.
 A. Human genome project B. DNA discovery
 C. Stem cell research D. All the above
- 92) Biotechnology integrated the toxin which is fatal for ___, was produced in leaves and bolls of cotton.
 A. bollworm B. caterpillar C. sparrow D. frog

- 93) The Government of India has encouraged __ for improving productivity by launching the program NKM-16.
 A. aquaculture. B. poultry C. piggery D. apiculture
- 94) _____ are present in the umbilical cord by which the foetus is joined to the uterus of the mother.
 A. stem cells B. muscle cells C. neuron cells D. bone cells
- 95) For the purpose of preservation stem cell samples are kept in----- --.
 A. liquid oxygen B. hydrogen C. liquid chlorine D. liquid nitrogen
- 96) Phenylketonuria arises due to genetic changes in _____cells.
 A. liver B. intestine C. pancreas D. heart
- 97) _____organisms are used as biofertilizers.
 A. Thiobacillus B. Nostoc C. Saccharomyces D. Ischeria
- 98) Stem cells are not found in
- A) Umbilical cord B) Blastocyst C) Adipose tissue D) Liver
- 99) The leaves of the transgenic variety of are given to chew to prevent the cattles from contracting viral disease, rinderpest.
 A) Potatoes B) Tobacco C) Maize D) Bamboo
- 100) Dolly the sheep born through cloning technique has grown in the womb of a sheep.
 A) Scottish B) German C) Finn Dorset D) Denmarkian
- 101) The idea of using microorganisms to destroy oil spills was first suggested by an American scientist of Indian origin
- A) Hargovind Khurana B) J. C. Bose C) Rishi Sunak d) Dr. Anand Mohan Chakraborty
- 102) Alcohol consumption mainly affects the _____system.
 A. nervous B. excretory C. respiratory D. digestive
- 103) Laughter club is a remedy to drive away _____.
 A. addictions B. stress C. lethargy D. epidemics
- 104) _____helps to improve concentration in the studies.
 A. hobbies B. sports C. meditation. D. eatables
- 105) _____influence is stronger in case of adolescents.
 A. Teachers. B. Fathers C. Relatives. D. Peer group
- 106) Our _____has been changed to some extent in the age of technology.
 A. lifestyle B. habit C. circumstance D. passion
- 107) Hobbies like _____pet animals help to create a positive mindset.
 A. feeding B. transferring C. rearing D. looking

- 108) Continuous consumption of _____ substances causes carcinogenic effects, especially on the mouth and lung.
A. hot B. sweet C. spicy D. tobacco like
- 109) Alcoholic person lacks the _____ thinking.
A. straight B. rational C. universal D. spiritual
- 110) _____ may arise due to excessive use of mobile phones.
A. Headache B. Problem in vision C. Joint pains D. All above
- 111) Liquor is produced from _____.
A. alcohol B. glucose C. acid D. salt
- 112) The IT Act related to Cyber Crime came into force in the year
A) 1972 B) 1986 C) 2000 D) 2010
- 113) Salaam Mumbai Foundation runs programs for _____ in a slum area.
A. education B. tobacco C. cyber crimes D. domestic violence
- 114) The headquarters of the National Disaster Response Force is at
A) Delhi B) Mumbai C) Kolkata D) Chennai

Q1 B) I. Find an odd one out.

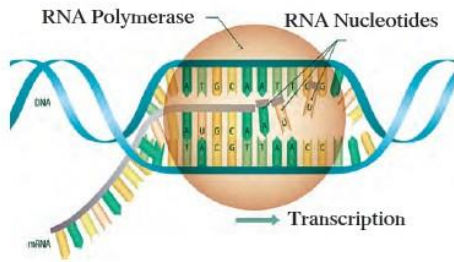
- 1) Transcription, Translation, Translocation, Mutation
- 2) Adenine, Guanine, Cytosine, Thymine, Uracil
- 3) Leaf venation, Size of seeds, Leaf petiole, Leaf shape
- 4) Position of eyes, structure of bones of hand, structure of nostrils, structure of ear pinna
- 5) Human hand, flipper of whale, cat's foreleg, wings of birds
- 6) Carrot, Raddish, Potato, Sweet potato
- 7) Budding, Regeneration, Binary fission, Fragmentation
- 8) Amoeba, Paramecium, Sycon, Euglena
- 9) Vas efferens, Prostate gland, Epididymis, Vas deferens
- 10) Prostate glands, Bartholin glands, Cowper's gland, Seminal vesicle
- 11) Stigma, Style, Pollens, Ovary
- 12) Hibiscus, Papaya, Sun-flower, Rose, Mango
- 13) Dengue, Syphilis, Gonorrhoea, AIDS
- 14) Conservation, Pollution, Prevention, Control
- 15) Grass, Nose, Tiger, Fungus
- 16) IUCN, WWF, IPCC, BNHS
- 17) Hydroelectric energy, Solar energy, Atomic energy, Wind Energy
- 18) Silicon, Uranium, Petrol, Coal

- 19) Solar Photovoltaic cell, Electricity generation using wind energy, Hydroelectric power plant, Solar thermal power plant
- 20) Water, Wind, Natural gas, Fossil fuel
- 21) Edible oil, LPG, CNG, Crude oil
- 22) Coal, Natural gas, Plutonium, Crude oil
- 23) Solar Bulb, Solar Cell, Solar Panel, String, Array
- 24) Tortoise, Crow, Lizard, Snake
- 25) Peacock, Parrot, Kangaroo, Duck
- 26) Human, Dolphin, Bat, Lizard
- 27) Cockroach, Butterfly, spider, honey bee
- 28) Star fish, Sea-urchin, Neris, Sea-cucumber
- 29) Tube -feet, Setae, Parapodia, Sucker
- 30) Penicillin, Neomycin, Isomerase, Rifamycin
- 31) Hydrolases, Lyases, Pepsin, Ligases
- 32) Bacteria, Viruses, Fungi, Plants
- 33) Khoa, Yoghurt, Butter, Cheese
- 34) Cheese, Wine, Butter, Kefir, Yogurt
- 35) *Lactobacillus*, *Acidophilus*, *Lactobacillus casei*, *Clostridium*
- 36) Frog, Earthworm, Pink bollworm, Insectivorous birds
- 37) Theophrastus, Pliny, John Ray, Linnaeus, Dobzhansky
- 38) DDT, Urea, Malathion, Chloropyriphos
- 39) Diabetes, Anaemia, Leukaemia, Thalassemia
- 40) Drying, Salting, Soaking with sugar, Cooking
- 41) D.D.T. Malathion, Chloropyriphos, Humus
- 42) Green revolution, Industrial revolution, Blue revolution, White revolution
- 43) Sodium, Aluminium, Phosphorus, Potassium
- 44) Cheese, Curd, Ice-cream, Buttermilk
- 45) *Pteris vitata*, Rice, Indian Mustard, Sun-flower
- 46) Actinomycetes, Streptomyces, Geobacter nocardia, Actinoplanes
- 47) Transport facilities, Social security, Counselling, Toilets
- 48) Tobacco, Laughter club, Alcohol consumption, Drugs

Q.1 B) II. Name the following.

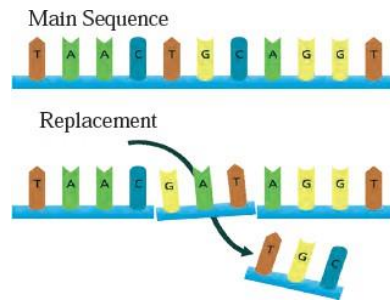
- 1) I am a connecting link between reptiles and mammals. Who am I ?
- 2) Who is the pioneer of modern genetics ?

3) Which process is shown in the following diagram ?

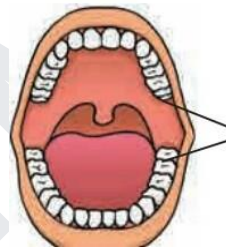


4) In which book Darwin had published this theory of Natural selection ?

5) Which process is shown in the diagram given below?



6) Name the parts shown in the diagram.



- 7) Hormones related to nervous system.
- 8) Modern technologies in reproduction.
- 9) Hormones secreted by the ovary of the female reproductive system.
- 10) The Electric Power Stations based on Thermal Energy.
- 11) Nuclear power plants in India
- 12) Major hydroelectric power plants in India
- 13) Forms of energy.
- 14) A machine/An engine required to rotate the generator.
- 15) Name any two natural gases.
- 16) Type of power generation station at Chandrapur
- 17) An enzyme obtained from fungi to produce vegetarian cheese.
- 18) Biodegradable plastic used for storing the garbage.
- 19) A clean (smokeless) fuel.
- 20) Vinegar means 4% _____
- 21) Microbes used along with artificial nitrogenase in organic farming.

- 22) Study of structure, types and organelles of cells.
- 23) Donation of organs such as eyes, heart after death.
- 24) Use of non genetic biotechnological techniques.
- 25) Genetically modified crops.
- 26) Bacterias that can be used as manure.
- 27) The number of different types of cells in the human body that are formed from embryonic cells.
- 28) Organs that can be used for organ transplantation.
- 29) Cells that are present in the initial development stage of zygote, that is formed by the union of male and female gametes.
- 30) Medicinal plant used in making medicine for coughs.
- 31) Diseases endangering social health.
- 32) Factors disturbing /affecting the social health
- 33) Name the type of disaster.

Disaster	Type
Tsunami, volcanic eruption, earthquake	_____
cyclone, snow storms, droughts, floods	_____
Forest fire, weed, fungal disease spreading	_____
Communicable virus, bacteria, bite of poisonous animal	_____
Poisonous gases, atomic test, unplanned action, accident	_____

Question 1 B) III. Relate the following.

- 1) Appendix : vestigial organ : : Peripatus : _____
- 2) Theory of evolution : Darwin : : _____ Lamarck
- 3) Changes in the nucleotide of gene : Mutation : : Changes in the place of ribosome : _____
- 4) Amoeba : fission :: Hydra : _____
- 5) Calyx : Sepals :: Corolla : _____
- 6) Bisexual : Hibiscus :: Unisexual : _____
- 7) Follicle stimulating hormone : Development of oocyte : : Luteinizing hormone : _____
- 8) Accessory whorls : Calyx and corolla :: essential whorls: _____
- 9) Earthquake : Natural factor : : Industrialization : : _____
- 10) Hydroelectric power station : Water stored in dams : : Atomic power station : _____
- 11) Stove : Thermal energy :: Sewing machine : _____

- 12) Power available from solar cells : DC :: power require to run domestic equipments : _____
- 13) Thermal power generation : Air pollution :: Atomic power generation : _____
- 14) Tapeworm: Phylum Platyhelminthes :: Intestinal worms _____
- 15) Mammals : Breathing through lungs :: Pisces : _____
- 16) Flatworms : Bisexual :: Roundworms _____
- 17) Porifera : Asymmetrical :: Cnidaria _____
- 18) Arthropoda : Largest phylum :: Mollusca: _____
- 19) Lactobacillus :Yoghurt : : Baker's yeast: _____
- 20) *Saccharomyces cerevisiae* : Ethanol : : *Aspergillus oryzae* : _____
- 21) Lactic acid: To impart acidity : : Beta carotene: _____
- 22) Gaseous fuel : Coal gas : : _____: Coal
- 23) White revolution :Increase in Milk production : : Blue revolution : _____
- 24) White revolution : Milk production : : Blue revolution : _____
- 25) Apiculture : Honey bees : : Cultivation of medicinal plants : _____
- 26) Substances leading to addiction : Drugs : : Substances leading to cancer : _____
- 27) Control on tobacco consumption : TATA trust : : Empowering children in slum area : _____

Q 1 B) IV. Write the function of

1. Generator 2. Turbine 3. Condenser

Q 1 B) V. Write whether true or false.

1. The decaying process of C-14 occurs continuously in dead organisms only.
2. Prokaryotic cells divide through mitosis or meiosis.
3. Pollen tube reaches the embryo sac via style.
4. Sometimes twins are genetically different.
5. Pollen grains from another are transferred on the stigma.
6. Environment is a broad concept.
7. The power produced from solar cells is a DC.
8. Electrical energy is generated
9. While producing hydroelectric energy , there is no pollution.
10. In a windmill, the rotating blades drive the turbine and the turbine in turn drives the generator to generate electricity.
11. In nuclear power plants, the chain reaction can not be controlled.
12. The disposal of nuclear waste safely is a big challenge before scientists.

13. Efficiency of power generation plants based on energy of natural gas is higher than that of the power generation plant based on coal.
14. In a hydroelectric power plant, the potential energy in water stored in a dam is converted into kinetic energy.
15. In nuclear power plants turbines working on solar panels are used.
16. The potential difference available from a solar cell depends on its area.
17. Tentacles are used for capturing the prey.
18. Petromyzon is an endoparasite.
19. Locomotion of starfish takes place through pseudopodia.
20. Classification of animals makes it easy to study the vast variety of animals.
21. Shelf life of yoghurt can be increased by pasteurisation.
22. Vinegar is used to bring sweetness in food products.
23. Methane gas is produced by microbial oxidation of industrial waste.
24. Spinosad is a biopesticide.
25. Sulphuric acid is a source of energy for some species of bacteria like Acidophilum.
26. Microbes have the natural ability of decomposing man-made chemicals.
27. Antibiotics cannot be obtained from a variety of bacteria and fungi.
28. Non-genetic technology involves mutations in cell genes.
29. Earlier insulin was being collected from the pancreas of horses.
30. Various essential elements like N, P, K are made available to crop by earthworms and fungi.
31. We don't have any tradition of curing disease with the help of natural resources.
32. Malaria is caused due to genetic disorder taking place in liver cells.
33. Pseudomonas bacteria can separate the hydrocarbon and oil pollutants from soil and water.
34. A gene isolated from the bacterium Bacillus thuringiensis and is integrated with the genome of cotton.
35. High class varieties of crops have been developed through the techniques of organ transplantation.
36. Genetically modified crops have low resistance for disease.
37. Vaccines produced with the help of biotechnology do not remain active for a longer duration.
38. Children who watch cartoon films may imitate the characters of those films.
39. Tobacco chewing does not cause a carcinogenic effect on the mouth and lungs.
40. Stress increases due to more laughing.

Q 1 B) VI. Match the following.

1)

Column 'A'		Column 'B'	
1	Morphological evidences	A	Tail-bone or wisdom teeth
2	Paleontological evidences	B	Leaf venation
		C	Fossils

2)

Column 'A'		Column 'B'	
1	A - vitamin	A	Beriberi
2	D - vitamin	B	Anaemia
3	K - vitamin	C	Rickets
4	B1 - vitamin	D	Night Blindness

3)

Column 'A'		Column 'B'	
1	Polluting energy	A	smoke particles
2	Environment friendly energy	B	thermal energy
		C	wind energy

4)

Column 'A'		Column 'B'	
1	Sunlight	A	Atomic radiation
2	Natural gas	B	Environment friendly energy
		C	Fossil fuel

5)

	Thermal Power Plant	State	Capacity
1	Vindyanagar	Maharashtra	4760
2	Mundra	Chhattisgarh	4620
3	Tamnar	Gujarat	3400
4	Chandrapur	Madhya Pradesh	3340

6)

	Atomic Power Plant	State
1	Kudankulam	Maharashtra
2	Tarapur	Tamil Nadu
3	Rawatbhata	Karnatak
4	Kaiga	Rajasthan

7)

Hydroelectric Power Plant		State
1)	Tehari	Andhra Pradesh
2)	Koyana	Himachal Pradesh
3)	Srisaillam	Uttarakhand
4)	Nathpa Zakri	Maharashtra

8)

Column 'A'		Column 'B'	
1)	Aspartame	a)	anaerobic respiration
2)	Fermentation	b)	microbial restrictor
3)	Niacin	c)	Vanillin
4)	Escence	d)	Sweetener

9)

Column 'A'		Column 'B'	
1)	Baker's yeast	a)	Probiotics
2)	Sauerkraut	b)	Bread
3)	Liasages	c)	Antibiotics
4)	Penicillin	d)	Microbial enzyme

10)

Column 'A'		Column 'B'	
1)	Coffea arabica	a)	Saccharomyces cerevisiae
2)	Theobroma cacao	b)	Lactobacillus brevis
3)	Grapes	c)	Candida

11)

Protein Product		Utility	
1)	Insulin	a)	Viral infection
2)	Somatostatin	b)	Cancer
3)	Erythropoietin	c)	Haemophilia
4)	Factor VIII	d)	Anaemia
5)	Interleukin	e)	Dwarfism
6)	Interferon	f)	Diabetes

12)

Living organism		Substance that absorbs	
1)	Pseudomonas	a)	Radiations
2)	Pteris vittata	b)	Hydrocarbons
3)		c)	Arsenic

13)

Living organism		Substance that absorbs	
1)	Indian mustard	a)	Radiations
2)	Deinococcus radiodurans	b)	Arsenic
3)		c)	Selenium

14)

Important Departments		Telephone Number	
1)	Police	a)	1512
2)	Fire Brigade	b)	1910
3)	Disaster control room	c)	1098
4)	Ambulance	d)	1091
5)	Women helpline	e)	102
6)	Child helpline	f)	108
7)	Blood bank	g)	101
8)	Railway help room	h)	100

Q.1-B) VII. Define.

- | | | |
|---------------------------|------------------------------|-----------------------|
| 1) Translation | 7) Regeneration | 13) Stem cell |
| 2) Translocation | 8) inflorescence | 14) Cloning |
| 3) Mutation | 9) Electromagnetic induction | 15) DNA fingerprint |
| 4) Fragmentation | 10) Nuclear fission | 16) Genetic treatment |
| 5) Vegetative propagation | 11) Vaccine | 17) Diversity |
| 6) Fertilisation | 12) Biotechnology | 18) Social health |
| | | 19) First aid |

Question 1 B) VIII. Answer in one sentence.

- 1) What is gamete formation ?
- 2) Write the types of twins.
- 3) Write any two- Sexually transmitted diseases.

- 4) What determines whether the two organisms of a species will be exactly similar or not?.
- 5) How are the sperms formed ?
- 6) How is the semen produced ?
- 7) Which are the components of pollination ?
- 8) Which parts are converted into Seed and fruit respectively after fertilisation ?
- 9) What does germination mean ?
- 10) Write the name of the type of reproduction in the following figure.



- 11) How can plants and animals save themselves from extinction?
- 12) Name the three types of asexual reproduction in unicellular organisms.
- 13) Write the functions of-
 I) ovary ii) sepals iii) penis iv) Seminal vesicle
- 14) What does ecosystem mean?
- 15) What is indicated by this symbol ?



- 16) Write any two man made factors affecting the environment.
- 17) The animal in the figure, belongs to which endangered species?



- 18) Write the advantages of the Hydroelectric Power project.
- 19) Write the problems associated with hydroelectric power projects.
- 20) Write the merits of atomic energy.
- 21) Write the demerits of an atomic energy plant .
- 22) Draw the flowchart showing generation of electrical energy.
- 23) Which substance is used as fuel in nuclear power plants?

- 24) Energy from fossil fuels and nuclear plants are not eco friendly sources, why ?
- 25) Solar promoters are important, why ?
- 26) In fuels coal and natural gas which one is eco friendly ? why?
- 27) State the importance of inverters.
- 28) Why are control rods used in nuclear reactors ?
- 29) What is green energy ? Which energy source can be called a green energy source?
- 30) Explain: Fossil energy is not an example of green energy.
- 31) Which animal has three pairs of legs ?
- 32) In how many parts is the body of Hemichordates divided ?
- 33) Write any one cold blooded animal you know.
- 34) Spongilla bears numerous pores on their body .What are those pores called?
- 35) What are the animals having vertebral columns in their body called as ?
- 36) The body of the animal in which phylum is radially symmetrical and diploblastic?
- 37) Write the name of the animal having pseudocoelom .
- 38) Which animal doesn't have a neck ?
- 39) What is the length of a hookworm?
- 40) How does the animal in the figure protect itself ?



- 41) What are the locomotory organs of the animal given in the picture ?



- 42) Which fungus is used to make soya sauce by fermentation?
- 43) Why does the process of dirt removal occur in detergents even at low temperature ?
- 44) What is added to impart thickness to instant soup ?
- 45) Which chemical substances get mixed with the soil by adding chemical pesticides and insecticides in the agricultural industry?
- 46) Which microbes convert uranium to its insoluble salts ?

47) Write the names of two chronic diseases.

48) Complete the following table.

Type of disaster	Effects
A.	Injuries, emotional and mental stress, Outbreaks of epidemics, deaths of victims.
B. Environmental

49) Correct the given statement and rewrite it.

An effect of disaster on economic leadership is that if local leadership is not strong enough, citizens get confused.

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