

INTERNATIONAL INDIAN SCHOOL, DAMMAM
REVISION WORKSHEET FOR TERM -II (2017-18)

SUBJECT : BIOLOGY

CLASS : X

TOPIC : HOW DO ORGANISMS REPRODUCE

1 Mark questions

1. What is DNA?
2. Give one e.g. each for a unisexual and bisexual flower.
3. What is puberty?
4. What is the main difference between fission and fragmentation?
5. What is the mode of reproduction in humans? Where fertilization does takes place in human females?
6. Name the part in the female reproductive system which provides the path for entry of sperms.
7. Define germination.
8. Differentiate between fission in Amoeba and Plasmodium..
9. Name the causative agent of the disease, 'Kala -Azar' and its mode of asexual reproduction.
10. List down any two conditions favorable for the spores to germinate.

2 Mark Questions

1. What is the function of prostate gland and seminal vesicles?
2. Differentiate between binary fission and multiple fission.
3. Mention any two functions of human ovary.
4. State two functions of testis.
5. What are the two advantages of sexual reproduction?
6. List down any two disadvantages of asexual reproduction.
7. What are the functions of uterus and Fallopian tube in a human female?
8. Reproduction is one of the most important characteristics of living beings. Give two reasons in support of your answer.
9. In which asexual reproduction two individuals are formed from a single parent and the parental identity is lost. ? Draw the initial and final stages of this type of this type of reproduction to justify your answer. Write the event with which this process starts.
10. Give reasons for the following:
 - (a) Changes are seen in boys and girls at the time of puberty.
 - (b) People adapt contraceptive methods.
11. If a woman is using copper -T, will it help her in protecting from STD's? If not why?
12. A student is observing a permanent slide showing sequentially the different stages of asexual reproduction taking place in yeast. Name this process and draw diagrams, of which he observes in a proper sequence.
13. Write the full form of IUCD , AIDS , HIV & OC
14. What is pollination? Write its significance.
15. Distinguish between unisexual and bisexual flower with an e.g. for each.

3 Mark Questions

1. (a) Why are testes located outside the abdominal cavity in a sac called scrotum?
(b) What are secondary sexual characters in humans? Name one such character of male and female.
2. List and describe three methods of birth control.
3. (a) Define the term 'double fertilization' in plants.
(b) After fertilization name the part in each case which develops into (i) fruit (ii) seeds
4. Draw a sectional view of human male reproductive system and label the following parts.
(i) Testis (ii) Seminal vesicle (iii) vas deferens
5. Variation is beneficial to the species but not necessarily for the individual.
Give three reasons to justify it.
6. Differentiate between zygote, embryo and foetus.
7. What are STD's? Name any two diseases. Which one of them damages the immune system of humans.
8. In a germinating seed, which parts are known as the future shoot and future root?
Mention the function of the cotyledon.
9. Draw a longitudinal section of a flower and label the following parts.
(a) Part that develops into fruit.
(b) Part that produces pollen grains
(c) Part that transfers the male gametes
(d) Part that is sticky to trap
10. What is binary fission in organisms? With the help of neat labeled diagrams describe the mode of reproduction in Amoeba.
11. Distinguish between pollination and fertilization. Mention the site and product of fertilization in a flower.
12. What is placenta? Mention its role in human females. (OR) Explain how the embryo gets its nourishment inside the mother's body?
13. Explain the sexual reproduction in plants.
14. What is reproduction? Mention the importance of DNA copying in reproduction.
15. How do organisms, whether reproduce sexually or asexually maintain a constant number of chromosomes through several generations. Explain with the help of suitable example.
16. List down the advantages of vegetative propagation.
17. Mr. X was suffering from various types of diseases presently. He went for thorough health

Check-up and was diagnosed to be HIV +ve. Soon this news spread in his neighbourhood and on account of this , he faced social isolation. Answer the following questions

- (i) Do you think people's indifference towards HIV +ve people is justifiable? What kind of approach should we have toward the persons suffering from AIDS ?
- (ii) How can one protect oneself from this disease?
- (iii) What values are not promoted by Mr. X neighbours ?

5 Mark Questions

1. (a) Name one organ in female and male reproductive system which plays a role of endocrine gland along with the production of germ cells. Name one hormone secreted by each of them.
(b) State two advantages to the development of the embryo in the mother's womb.
(c) Where does fertilization occur in case of human female and name the place where fertilized eggs get implanted.
2. (a) Give an e.g. of a bisexual flower. What is its female reproductive part known as?
(b) Draw a diagram of its longitudinal section showing the process of germination of pollen on the stigma and label the following in it.
(i) Male germ cell (ii) Female germ cell (iii) Ovary (iv) Pollen tube
(c) Pollination may occur without fertilization. But fertilization will not take place without pollination. Give reason.
3. (a) Describe the female reproductive system in humans with the help of a labeled diagram.
(b) What is implantation?
4. (a) Describe menstrual cycle.(OR) What happens if the egg is not fertilized?
(b) Name and explain the method by which Rhizopus reproduce.
5. List four points of significance of reproductive health in a society?
Name any two areas related to reproductive health which have improved over the past 50 years in our country.
5. Some plants do not produce seeds. For such plants parts like roots, stem and leaves are used to develop into new plants.
(a) Identify the process.
(b) Is it sexual or asexual mode of reproduction? Answer with reason.
(c) Give any two e.g. of this process.
6. (A) For pollination to take place, pollen grains need to be transferred to the stigma.
(i) Which part of the flower produces the pollen grains?
(ii) Give the property of stigma due to which it receives the pollen grains.
(iii) Pollen grain transfer can be to the stigma of the same or different flower. Name the type of these flowers. .
(B) Draw a labeled sketch of a flower.
7. Describe the artificial methods of vegetative propagation.

INTERNATIONAL INDIAN SCHOOL, DAMMAM
REVISION WORKSHEET FOR TERM -II (2017-18)

SUBJECT : BIOLOGY

CLASS : X

TOPIC : HEREDITY AND EVOLUTION

1 mark questions

1. Define heredity
2. What is meant by variations?
3. Name the father of Genetics.
4. What is evolution?
5. Define the term fossils.
6. What is a sex chromosome?

2 mark questions

- 1 How are variations useful to organisms?
2. Differentiate between homologous and analogous organs.
3. Why are characteristics acquired during the life time of an individual not inherited?
4. How do fossils tell us about the process of evolution?
5. Why are traits acquired during life time of an individual not inherited?
6. How is the equal genetic contribution of male and female parents ensured in the progeny?

3mark questions

1. What is DNA copying? State its importance
2. List three distinguishing features in tabular form between acquired traits and the inherited traits.
3. How do Mendel's experiments show that characteristics are inherited independently?
4. What factors give rise to speciation?
5. Why are human beings despite their great variety in terms of height colour and other features considered to belong to the same species?
6. Outline the mechanism of sex determination in human beings.
7. How will we prove that the phenotypic ratio of 3:1 in F_2 generation is in fact a 1:2:1 ratio of TT, Tt and tt, where T represents tallness and t represents dwarfness.
8. Some dinosaurs had feathers but could not fly using these feathers. Why?

5 mark questions

1. In a breeding experiment, a pure breeding black guinea pig was crossed with a pure breeding white one. All the F_1 offsprings were black.
 - a) Explain this by means of a genetic diagram.
 - b) If F_1 offsprings were allowed to inbreed, what would be the phenotypic and genotypic ratios in the f_2 generations?
2. a) How do Mendel's experiments show that the traits may be dominant or recessive?
 - b) Traits are inherited independently?

INTERNATIONAL INDIAN SCHOOL, DAMMAM
REVISION WORKSHEET FOR TERM -II (2017-18)

SUBJECT : BIOLOGY

CLASS : X

TOPIC : OUR ENVIRONMENT

1 MARK QUESTIONS

- 1** Why is it necessary to conserve our environment?
- 2** Which 2 of the following are bio degradable : Tomato leaves , Aluminum wire , Synthetic Fiber and Wool
- 3** What is the function of ozone in the upper atmosphere?
- 4** List 2 biotic components of biosphere?
- 5** Name 2 decomposers
- 6** Write an aquatic food chain.
- 7** Draw a food chain with 4 trophic levels.
- 8** The first trophic level in a food chain is a green plant. Why?
- 9** Write the full name of the group of compounds mainly responsible for the depletion of ozone layer.
- 10** List 2 examples of natural eco system.
- 11** List 4 common waste disposal methods.

2 MARKS QUESTIONS

- 1) Why bacteria and fungi are called decomposers?
- 2) Which of the following belongs to the same trophic level: Grass, Hawk, Rabbit, Frog and Deer.

- 3) In a lake contaminated with pesticides, which one of the following organisms will contain the maximum amount of pesticides: Small fish, Zooplankton, Big fish, Phytoplankton.
- 4) Why does a food chain consist of 3 to 4 steps?
- 5) State any 2 practices which can help in the protection of our environment.
- 6) The number of malarial patients in a village increased tremendously when large number of frogs was exported from the village. What could be the cause for this?
- 7) Why are crop fields known as artificial eco systems?
- 8) Suggest 1 word for each of the following statements/definitions
 - a) The physical and biological world where we live in
 - b) Each level of food chain where transfer of energy takes place
 - c) The physical factors like temperature, rainfall , wind and soil of an eco system
 - d) Organisms which depend on the producers directly or indirectly for food

3 MARKS QUESTIONS

- 1) Differentiate between bio degradable waste and non bio degradable waste with 1 example each. List 2 changes in habit that people must adopt to dispose non bio degradable waste for saving the environment.
- 2) Give reasons to justify the following :
 - a) The existence of the decomposers is essential in a biosphere
 - b) Flow of energy in a food chain is unidirectional.

- 3) Give 2 differences between food chain and food web.
- 4) Why does vegetarian habit help us in getting more energy? In terms of energy that is at an advantageous position (a vegetarian or a non vegetarian) why?
- 5) Calculate the amount of energy available to tiger in the following food chain if plants have 30,000 J of energy available from the sun. Plant ---- Deer ---- Tiger
- 6) How is ozone formed in the upper atmosphere? What causes its damage?
- 7) What are the advantages of cloth bags over plastic bags during shopping?
- 8) Give 3 characteristic of food chain.

5 MARKS QUESTIONS

- 1) Name the waste which is generated in your house daily. What measures would you take for the disposal?
- 2) What is biological magnification? Will the levels of this magnification be different at different levels of eco system?
- 3) Explain some harmful effects of agricultural practices on environment?
- 4) Suggest any 5 activities in daily life which are eco friendly.

INTERNATIONAL INDIAN SCHOOL, DAMMAM
REVISION WORKSHEET FOR TERM -II (2017-18)

SUBJECT : BIOLOGY

CLASS : X

TOPIC : MANAGEMENT OF NATURAL RESOURCES

1 MARK QUESTIONS

1. Name the major programme started to replenish forests.
2. What is the most common practice of recharging ground water?
3. Although coal and petroleum are produced by the degradation of biomass, even then we need to conserve them. Why?
4. State one reason for the conservation of forest and wildlife.
5. How does increasing demand for energy adversely affect our environment?
6. What does presence of coliform in water indicate?

2 MARK QUESTIONS

1. What is siviculture? What are its advantages?
2. Why should we conserve forest and wildlife?
3. Give one example to show how the participation of local people can lead to the efficient management of forests.
4. "We need to manage resources". List two reasons to justify this statement.
5. What is chipko movement? Why should we conserve forests?
6. Write two advantages of sustainable management of natural resources. Out of the two- reuse and recycle-which is better and why?

3MARK QUESTIONS

1. What are the three R's to save the environment? Explain with one example of each
2. Write a short note on chipko andolan (hug the trees movement).
3. Explain briefly, how rainwater harvesting is done from open spaces around the buildings in city areas?

4. Why must we conserve our forests? List any three causes for deforestation to take place.
5. Write any five ways in which the locals and tribal are dependent on the forest.
6. a) why is reusing even better than recycling? List any two reasons.
b) Give any three examples of human activities leading to destruction of forests.

5MARK QUESTIONS

1. a) What is rainwater harvesting? Name some of the ancient structures used for rainwater harvesting by the rural people.
b) What are the various advantages of water stored underground?
2. State the advantages of constructing dams across the rivers.

Describe some of the problems associated with the construction of dams

3. There are two important fuels A and B both of which are extracted from deep inside the earth. Fuel A is a thick, dark, foul smelling liquid whereas fuel B is black solid. Combustion of both the fuels produces products C, D, E and F. The product C makes rainwater only slightly acidic but it is mainly responsible for causing global warming. The product D is neither acidic nor basic. It is harmless and does not affect the environment in any way. Both E and F attack breathing system of humans and are mainly responsible for causing acid rain. In addition to combustion of fuels A and B, the product F is also formed when lightning occurs in the sky.

- a) What are fuel A and fuel B?
 - b) Name C, D, E and F.
 - c) What is the process of formation of F during lightning known as?
 - d) Which fuel supposes to be exhausted sooner: A or B?
 - e) Which fuel is mostly used for generating electricity at thermal power plants?
4. What are fossil fuels? Give two examples.
- b) Diagrammatically represent the khadin system of water harvesting.

INTERNATIONAL INDIAN SCHOOL – DAMMAM
CLASS X – WORKSHEET (PHYSICS- CHAPTER 10)- (2017-2018)
LIGHT – REFLECTION AND REFRACTION

1. If an object is placed at the focus of a concave mirror, where is the image formed?
2. The angle between an incident ray and the mirror is 40°
 - a) What is the angle of incidence?
 - b) What is the angle of reflection?
 - c) What is the total angle through which the ray of light turns?
3. What is meant by power of a lens?
4. An object is placed 80 cm from a converging lens of focal length 25 cm. What is the nature of the image?
5. How can you distinguish between a plane mirror, a concave mirror and a convex mirror without touching them.
6. State the laws of refraction of light. If the speed of light in vacuum is 3×10^8 m/s, find the absolute refractive index of a medium in which light travels with a speed of 1.4×10^8 m/s.
7. State the two positions in which a concave mirror produces a magnified image of a given object. List two differences between the two images.
8. The magnification produced by a spherical mirror is +3. Analyse this value and state the
 - i) type of mirror
 - ii) position of the object with respect to the pole of the mirror.Draw ray diagram to show the formation of image in this case.
9. How are power and focal length of a lens related. You are provided with two lenses of focal length 20 cm and 40 cm respectively. Which lens will you use to obtain more convergent light.
10. Distinguish between a convex and concave lens.
11. If the image formed by a mirror for all positions of the object placed in front of it is always erect and diminished, what type of mirror is it. Draw a ray diagram to justify your answer. Where and why do we generally use this type of mirror?
12. Suppose you have three concave mirrors A, B and C of focal length 10 cm, 15 cm and 20 cm. For each concave mirror you perform the experiment of image formation for three values of object distance of 10cm, 20cm and 30 cm. Giving reasons, answer the following:-
 - a) For the three object distances, identify the mirror/ mirrors which will form an image of magnification -1.
 - b) Out of the three mirrors, identify the mirror which would be preferred to be used for shaving purposes / make up.
 - c) For mirror B, Draw a ray diagram for image formation for object distances 10 cm and 20 cm.
13. An object 2 cm high is placed at a distance of 16 cm from a concave mirror which produces a real image 3 cm high.
 - a) Find the position of the image.
 - b) What is the focal length of the mirror.

14. A student has focused the image of a candle flame on a white screen using a concave mirror. The situation is as given below:
 Length of the flame = 1.5 cm
 Focal length of the mirror = 12 cm
 Distance of flame from the mirror = 18 cm
 If the flame is perpendicular to the principal axis of the mirror, then calculate the following:-
- Distance of the image from the mirror
 - length of the image
 - If the distance between the mirror and the flame is reduced to 10 cm, then what would be observed on the screen. Draw ray diagram to justify your answer for this situation.
15. Size of the image of an object formed by a mirror having a focal length of 20 cm is observed to be reduced to $\frac{1}{3}$ rd of its size. At what distance the object has been placed from the mirror. What is the nature of the image and the mirror.
16. A truck uses a convex mirror as rear view mirror whose radius of curvature is 2m. A maruti car is coming behind the truck at distance of 10m. What will be the position of the image of the car and the size of the image of the car when observed by the driver of the truck through the convex mirror.
17. Define absolute refractive index of a medium. Refractive index of water with respect to air 1.33. What is the value of refractive index of air with respect to water.
18. The refractive indices of glass and water with respect to air are $\frac{3}{2}$ and $\frac{4}{3}$ respectively. If speed of light in glass is 2×10^8 m/s, find the speed of light in water.
19. An object 3 cm high is placed 20 cm from a convex lens of focal length 12 cm. Find the nature, position and height of the image.
20. A 5 cm tall object is placed on the principal axis of a convex lens of focal length 50 cm at a distance of 40 cm from it. Find the nature, position and size of the image.
21. An object kept at a distance of 60 cm from a lens gives a virtual image at a distance of 20cm over the same side of the lens. What is the focal length of the lens. Is the lens converging or diverging.
22. A convex lens can form a magnified erect as well as magnified inverted image of an object placed in front of it. Draw ray diagram to justify this statement stating the position of the object with respect to the lens in each case.
23. An object of height 4 cm is placed at a distance of 20 cm from a concave lens of focal length 10 cm. Use lens formula to determine the position of image formed.
24. Two thin lenses of focal length +10 cm and – 5cm are kept in contact. What is the focal length and power of the combination.
25. A convex lens has a focal length of 10 cm. What is its power?
26. Name the type of the mirror used in the design of solar furnaces. Explain how high temperature is achieved by this device.
27. Draw a ray diagram to show the path of refracted ray in each of the following cases. A ray of light incident on a concave lens is
- passing through its optical centre
 - parallel to its principal axis
 - directed towards its principal focus

28. Explain the following terms related to spherical lenses:-
- Optical centre
 - centres of curvature
 - principal axis
 - aperture
 - principal focus
 - focal length
29. List the sign conventions that are followed in case of refraction of light through spherical lenses.
30. a) Why is the magnification produced by a concave lens always than 1?
 b) An image $\frac{2}{3}$ rd the size of the object is formed by a convex lens at a distance of 12 cm from it. Find the focal length of the lens.
31. An object 3 cm high is placed perpendicular to the principal axis of a concave lens of a focal length 7.5cm .The image is formed at a distance of 5cm from the lens. Calculate a) distance at which object is placed b) size and nature of image formed .
32. What is lateral displacement. Explain with the help of a diagram.
33. Draw ray diagrams to show the formation of image of an object by a concave lens when the object is placed
- at infinity
 - between infinity and optical centre of the lens.
34. An object is placed at the following distances from a concave mirror of focal length 10 cm
- 8 cm
 - 15 cm
 - 20 cm
 - 25 cm
- Which position of the object will produce a) a diminished real image b) a magnified real image c) a magnified virtual image d) an image of the same size of the object.
35. An object 2 cm in size is placed 30 cm in front of a concave mirror of focal length 15 cm. At what distance from the mirror should a screen be placed in order to obtain a sharp image. What will be the nature and size of the image formed. Draw a ray diagram to show the formation of the image in this case.
36. An object is kept in front of a concave mirror of focal length 20 cm. The image formed is three times the size of the object. Calculate the two possible distances of the object from the mirror.

International Indian School

Revision Worksheet(CHEMISTRY)

Class X

Topic : Metals and Non metals

- 1) Arrange the following metals in the decreasing order of reactivity with water
Ca, Al, Mg and K
- 2) Why calcium does not catch fire when dropped in water? Write chemical equation for the reaction.
- 3) What type of reaction give reactivity evidence with regard to metals? How is this information obtained?
- 4) Why do ionic compounds have high melting point?
- 5) Define the following terms :- Minerals, Ore, Gangue
- 6) Show the formation of Na_2O by the transfer of electrons
- 7) Give the properties of ionic compounds
- 8) Hydrogen gas is not evolved when a metal reacts with nitric acid –Why?
- 9) Give reason – Metals are regarded as electropositive elements
- 10) Give reason – Articles made of Aluminium do not corrode even though Aluminium is an active metal
- 11) Why Zinc oxide is considered as amphoteric oxide?
- 12) How metals towards the top of the reactivity series is extracted ?
- 13) Explain what corrosion of iron means? How is corrosion of iron prevented by coating it with a layer of oil?
- 14) What is an alloy? Mention the constituents and two properties of each of the following alloy
 - i) Stainless steel
 - ii) Brass
- 15) Describe with examples the following steps associated with extraction of metals from their ores
 - i) Roasting of an ore
 - ii) Calcination of an ore

- 16) Explain Refining of impure metals with diagram
- 17) What is thermite reaction?
- 18) Compare the physical properties of Metals and Non metals
- 19) Give the reaction involved during extraction of Zinc from its ore by roasting of zinc ore and calcination of zinc ore
- 20) Which metals do not react with water at all?
- 21) What is anodizing?
- 22) How metals in low in the activity series is extracted?
- 23) Define – alloying , galvanisation
- 24) What is aqua regia?
- 25) Differentiate metals and non metals on the basis of their chemical properties

WORKSHEET 2017-2018

CLASS 10

CARBON AND ITS COMPOUND

Q1. A compound X is formed by the reaction of a carboxylic acid ($C_2H_4O_2$) and an alcohol in the presence of a few drops of H_2SO_4 . The alcohol on oxidation with alkaline $KMnO_4$ followed by acidification gives the same carboxylic acid as used in this reaction. Give the names and structure of

A) CARBOXYLIC ACID

B) ALCOHOL

C) THE COMPOUND X. ALSO WRITE THE REACTION

Q2. What happens when ethanoic acid reacts with

A) MAGNESIUM

B) SODIUM CARBONATE

C) SODIUM HYDROXIDE

Write the necessary chemical reaction in each case

Q3. What happens when

A) ETHANOL REACTS WITH PHOSPHOROUS PENTACHLORIDE

B) ETHANOL REACTS WITH HYDROGEN BROMIDE IN THE PRESENCE OF CONCENTRATED

C) ETHANOIC ACID REACTS WITH SODIUM HYDROGEN CARBONATE

Q4. A sweet smelling substance A of a molecular formulae $C_4H_8O_2$ on hydrolysis with dilute sulphuric acid produces two substances B and C. B on oxidation with $K_2Cr_2O_7$ gives substance C. Identify A, B and C

Q5. Explain the given reactions with the examples

A) HYDROGENATION REACTION

B) OXIDATION REACTION

C) SUBSTITUTION REACTION

D) SAPONIFICATION REACTION

E) COMBUSTION REACTION

Q6. Explain the mechanism of cleaning action of soap.

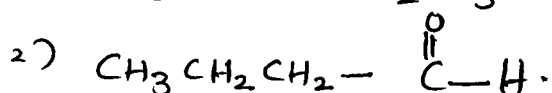
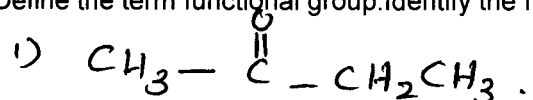
Q7. Two carbon compounds A and B have the molecular formula C_3H_8 and C_3H_6 respectively which one of the two is most likely to show addition reaction? Explain with the help of a chemical reaction, how an addition reaction is useful in industries?

Q8 what special name is given to compounds having the same molecular formula but different structural arrangements of atoms in them ? give the name of one such compound with its two structural formula?

Q9 A mixture of ethyne and oxygen is used for welding. Can u tell why a mixture of ethyne and air is not used?

Q10 Distinguish between esterification and saponification reactions of organic compounds?

Q11 Define the term functional group. Identify the functional group present in the following compounds



Q12 How does emulsification caused by soap help in cleaning dirty clothes?

Q13 What are micelles? How does the formation of micelles help to clean the clothes?

Q14 Distinguish between diamond and graphite?

Q15 The reaction between ethene and chlorine forms only one product. Name the type of this reaction.

Q16 What are homologous series of carbon compounds? write the molecular formula of two consecutive numbers of homologous series of aldehydes. State which part of these compounds determines their physical and chemical properties?

Q17 Explain the formation of a molecule of each of the following using electron dot diagram

A) Water

B) Ammonia

Q18 What is fermentation process? Name the gas evolved during the fermentation process.

Q19 Explain why are unsaturated hydro carbons more reactive than saturated hydrocarbons?