VENUS WORLD SCHOOLS

Academic Session-2021-22
SUMMATIVE ASSESSMENT-1

Grade -X **Time -90 min**
Sub – Science **Max Marks- 40**

PHYSICS

General Instructions:

1. The Question Paper contains three sections.
2. Section A has 8 questions. Attempt any 6 questions
3. Section B has 8 questions. Attempt any 6 questions
4. Section C has 4 questions. Attempt any 2 questions
5. All questions carry 1 mark.
6. There is no negative marking.

SECTION A

Q1. Rays from Sun converge at a point 15 cm in front of a concave mirror. Where should an object be placed so that size of its image is equal to the size of the object?
(A) 15 centimetre in front of the mirror
(B) 30 centimetre in front of the mirror
(C) between 15 centimetre and 30 centimetre in front of the mirror
(D) more than 30 centimetre in front of the mirror

Q2. A student obtains a blurred image of a distant object on a screen using a convex lens. To obtain a distant image on the screen he should move the lens
(A) away from the screen
(B) towards the screen
(C) to a position very far away from the screen
(D) either towards or away from the screen depending upon the position of the object

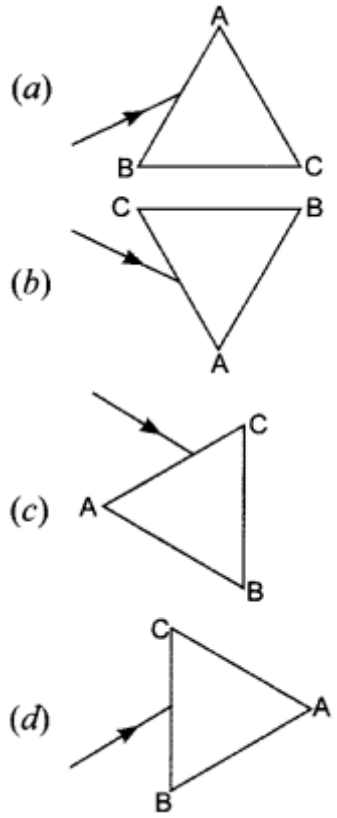
Q3. To determine the approximate focal length of the given convex lens by focusing a distant object (say a sign board) you try to focus the image of the object on a screen. The image you obtain on the screen is always
(A) erect and literally inverted
(B) erect and diminished
(C) inverted and diminished
(D) virtual, inverted and diminished

Q4. For a real object, which of the following can produce a real image?
(a) Plane mirror
(b) Concave mirror
(c) Concave lens
(d) Convex mirror

Q5. If a man's face is 25 cm in front of concave shaving mirror producing erect image 1.5 times the size of face, focal length of the mirror would be
(a) 75 cm
(b) 25 cm
(c) 15 cm
(d) 60 cm

Q6. Which of the following is a natural phenomenon which is caused by the dispersion of sunlight in the sky?
(a) Twinkling of stars
(b) Stars seem higher than they actually are
(c) Advanced sunrise and delayed sunset
(d) Rainbow

Q7. A prism ABC (with BC as base) is placed in different orientations. A narrow beam of white light is incident on the prism as shown in figure. In which of the following cases, after dispersion, the third colour from the top corresponds to the colour of the sky?



Q8. Which of the following statements is correct regarding the propagation of light of different colours of white light in air
(A) red light moves fastest
(B) Blue light moves faster than green light
(C) all the colours of the white light move with the same speed
(D) Yellow light moves with the main speed as that of the red and the Violet light

SECTION B

Directions: In the following questions, a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as:
(a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
(b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).
(c) Assertion (A) is true but reason (R) is false.
(d) Assertion (A) is false but reason (R) is true

Q9. **Assertion(A) :** Sunlight reaches as without dispersion in the form of white light and not as its components
Reason (R): Dispersion takes place due to variation of refractive index for different wavelength but in vacuum the speed of light is independent of wavelength and hence vacuum is a non dispersive medium

(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q10. **Assertion(A):** The phenomenon of scattering of light by the colloidal particles gives rise to Tyndall effect.
Reason (R): The colour of the scattered light depends on the size of the scattering particles.

(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q11. **Assertion(A)** The Sun appears flattened at sunrise and sunset.
Reason (R) : The apparent flattering of the Sun's disc at sunrise and sunset is due to atmospheric refraction.

(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q12. **Assertion(A)** A convex mirror is used as a real view drivers mirror
Reason (R) : convex mirrors have a wider field of view as they are curved outwards they also given erect although diminished image

(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q13. **Assertion(A)** The word ambulance on the hospital vans is written in the form of a mirror image
Reason (R) : the image formed in a plane mirror is same size of that object

(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q14. **Assertion(A):** Light travels faster in glass than in the air.
Reason (R) : Glass is denser than air.

(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q15. **Assertion(A):** concave mirrors are used as reflectors in torches vehicle headlights and in search lights
Reason (R) : when an object is placed beyond the centre of curvature of a concave mirror the image formed is real and inverted

(a) ◯ (b) ◯ (c) ◯ (d) ◯

Q16. **Assertion(A):** Red colour is used in danger signals.
Reason (R) : The scattering of red colour is more as its wavelength is more.

(a) ◯ (b) ◯ (c) ◯ (d) ◯

SECTION C

The spherical mirror forms different types of images when the object is placed at different locations. When the image is formed on screen, the image is real and when the image does not form on screen, the image is virtual. When the two reflected rays meet actually, the image is real and when they appear to meet, the image is virtual.

A concave mirror always forms a real and inverted image for different positions of the object. But if the object is placed between the focus and pole. the image formed is virtual and erect.

A convex mirror always forms a virtual, erect and diminished image. A concave mirror is used as doctor's head mirror to focus light on body parts like eyes, ears, nose etc., to be examined because it can form erect and magnified image of the object. The convex mirror is used as a rear view mirrors in automobiles because it can form an small and erect image of an object.

Q17**.** When an object is placed at the centre of curvature of a concave mirror, the image formed is
(a) larger than the object
(b) smaller than the object
(c) same size as that of the object
(d) highly enlarged**.**

Q18**.** No matter how far you stand from a mirror, your image appears erect. The mirror is likely to be
(a) plane
(b) concave
(c) convex
(d) either plane or convex.

Q19. To get an image larger than the object, one can use
(a) convex mirror but not a concave mirror
(b) a concave mirror but not a convex mirror
(c) either a convex mirror or a concave mirror
(d) a plane mirror.

Q20**.** A child is standing in front of a magic mirror. She finds the image of her head bigger, the middle portion of her body of the same size and that of the legs smaller. The following is the order of combinations for the magic mirror from the top.
(a) Plane, convex and concave
(b) Convex, concave and plane
(c) Concave, plane and convex
(d) Convex, plane and concave

CHEMISTRY

Q.1 The electronic configuration of chloride ion is

a) 2,8,7 b) 2,8,8 c) 2,8,6 d) 2,8,10

Q.2 Number of water of crystallization in plaster of Paris is/are

a) 1 b) 2 c) 1/2 d) 1.5

Q.3 The gas released when zinc reacts with hot concentrated sodium hydroxide is

a) O_2 b) CO_2 c) Water vapour d) H_2

Q.4 The products of reaction between copper and zinc sulphate are

a) $CuSO_4$ and Zn b) $CuSO_4$ and $ZnSO_4$

c) Both a and b d) Reaction is not possible

Q.5 Formula of ferric oxide is

a) Fe_3O_4 b) Fe_2O_3 c) FeO d) Fe_3O_2

Q.6 Milk of magnesia is

a) $Mg(OH)_2$ b) MgO c) $MgCl_2$ d) $Mg(OH)_3$

Q.7 Which of the following is not characteristic of ionic compounds?

a) Water soluble b) High melting and boiling points

c) Conduct electricity in solid state d) None of these

Q.8 The electronic configuration of Mg^{+2} ion is same as that of

a) Ne b) He c) Ar d) Both a and B

Q.9 Brine solution is

a) aq. NaOH b) aq.Na_2CO_3 c) aq. NaCl d) aq. KCl

Q.10 The correct sequence of numbers to balance following reaction is

$NH_3 + O_2$ $N_2 + H_2O$

a) 4,3,2,6 b) 3,4,2,6 c) 4,3,6,2 d) 4,3,1,6

Q.11 Which of the following metal burns in air with dazzling white flame?

a) Cu b) Pb c) Zn d) Mg

Q.12 Limestone is nothing but

a) $CaCO_3$ b) $Ca(OH)_2$ c) CaO d) $Ca(HCO_3)_2$

Q.13

Statement 1 – Zinc is ductile.

Statement 2 – Zinc is an active metal

a) Both are correct b) Both are incorrect

c) 1st is correct but 2nd is incorrect d) 1st is incorrect but 2nd is correct.

BIOLOGY

General Instructions –

Read all questions carefully.
Present your work neatly.
Revise the answer sheet before submitting it.

Q.1.Transpiration is the evaporative loss of water by plants it occurs mainly through the pores called stoma in the leaves beside the loss of water vapour in transpiration exchange of oxygen and carbon dioxide in the leaf also occurs normally stomata remain open in the daytime and closed during the night time. 2m

i) Which of the following will not directly affect transpiration.

a. Temperature
b .wind speed
c. light
d. Chlorophyll content of leaves.

ii) Which of the following is not a purpose of transpiration.

a. supplies water for photosynthesis
b .helps in translocation of sugar from source to sink
c .maintain shape and structure of plants
d .transports minerals from soil to all the parts of plant.

Q. 2.In which of the following vertebrate group Groups heart does not pump oxygenated blood to different parts of the body. 1m

a. Pisces and amphibians
b .amphibians and reptiles
c. amphibians only
d. Pisces only

Q.3 Direction : In the following Question, the Assertion and Reason have been put forward. Read the statements carefully and choose the correct alternative from the following:

Assertion (A) Liver is the smallest gland in body

Reason (R) Liver secrets salivary amylase 1m

a. Both (A) and (R) are true and(R) is correct explanation of the assertion.
b. Both(A) and are (R) true but is not the correct explanation of the assertion
c. (A) is true but are is false.
d. Both (A) and (R) is false

Q.4 Which of the following control and regulate the life process? 1m

a. Reproductive and endocrine system
b. Respiratory and nervous system
c. Endocrine and digestive system
d. Nervous and endocrine system

Q.5 Which nerves transmit impulses from the central nervous system towards muscle cells. **1m**

a. Sensory nerves
b. Motor nerves
c. Really nervous
d. Cranial nerves

Q.6 Which of the following equations is summary of photosynthesis ? **1m**

a. $6CO_2+12H_2O \longrightarrow C_6H_{12}O_6+6O_2+6H_2O$
b. $6CO_2+H_2O+\text{Sunlight} \longrightarrow C_6H_{12}O_6+6O_2+6H_2O$
c. $6CO_2+12H_2O$ + chlorophyll + Sunlight $\longrightarrow$ $C_6H_{12}O_6+6O_2+6H_2O$
d. $6CO_2+12H_2O+$ chlorophyll + Sunlight $\longrightarrow C_6H_{12}O_6+ 6CO_2+ 6H_2O$

Q.7 The ---------- is a network of tiny blood vessels located at the beginning of a nephron. **1m**

a .Renal pyramid
b. Renal cycles
c. Bowman s capsule
d. Glomerulus

Q.8 Oxygen liberated during photosynthesis comes from **1m**

a. Water.
b. Chlorophyll
c .Carbon dioxide
d. Glucose

Q.9. The inner lining of the stomach is protected by one of the following from hydrochloric acid choose the correct one. **1m**

a. Pepsin
b. Mucus
c. Salivary amylase
d. Bile

Q.10 Eating junk food results in several health problems including obesity and heart problems still lot of children prefer to eat junk food what suggestion you will give to avoid eating junk food. **1m**

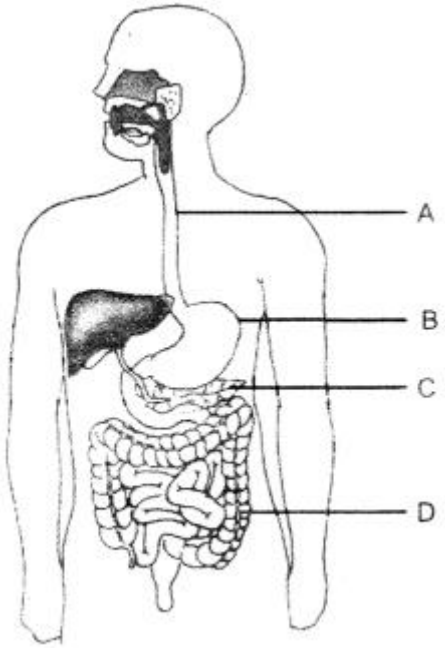
a. Enjoy pizza and burger everyday .
b. Prefer and enjoy eating fruits and vegetables.
c. Choose a diet that provide enough calcium and iron and proteins to meet their growing bodies requirement.
d. Choose diet supplementary Capsules.

Q. 11 .Om and Rohit and Kishore always remain in a hurry, one day , during lunch hour they are quickly gulped food and went out a play. Om suddenly developed stomach ache while playing. what according to you might have gone wrong with him. **1m**

a .Om developed stomach because he had not chewed his food properly.
b . drinks plenty of water while eating .

c. Always chew food properly for their healthy digestion.

Q. 12 . From the given picture of the digestive system, identify the part labelled as gastric gland. **1m**



(a) A
(b) B
(c) C
(d) D