

# HIGH AIMERS SERIES STANDARD EIGHT - 2022

## SCIENCE

#### READ THESE INSTRUCTIONS CAREFULLY.

- 1. You have been given this question booklet and a separate answer sheet. The question booklet contains 50 questions.
- Do any necessary rough work in this booklet.
- When you have chosen your answer, mark it on the ANSWER SHEET, not in the question paper.

### HOW TO USE THE ANS SERIES Use an ordinary pencil only. 5, Make sure that you have written on

YOUR INDEX

YOUR NAME NAME OF YOUR SCHOOL

- 6. By drawing a dark line inside the correct number of the mark your full index number (i.e. school code Number and the three -figure candidate's Number in the grid near the top of the answer sheet.
- 7. Do not make any marks outside the box
- 8. Keep your answer sheet as cl
- ered A.B.C.D. In each case For each questions 1-50 four an Only One of the four answers
- 10. On the answer sheet show the correct answer by drawing a dark line inside the box in which the letter you have chosen is written.

### HIGH AIMERS SERIES

#### Example In the question Booklet:

- 4. A meal that has all the nutrients requirements is known as
  - A. a palatable meal
  - B. a complete meal
  - C. a special meal
  - D. a balanced meal

The correct answer is **D** (a balanced meal)

On the answer sheet:
4. [A] [B] [C] [D]

14. [A] [B] [C] [D 24.[A] [B] [C] [D] 34. [A][B][C][D]

- In the set boxes numbered 4, the box with letter **D** printed in it is marked.

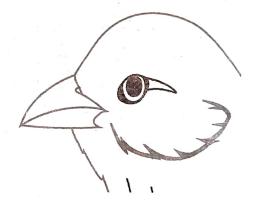
  11. Your dark line Must be within the box. Make your line as dark as possible.
- 12. For each question Only One box is to be marked in each set of four boxes.

Candidates should check the question papers to ensure that all questions are printed.

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- The bending of light ray as it passes from air to water is referred to as:
  - A. refraction
  - B. dispersion
  - C. diffusion
  - D. reflection
- Which one of the following are both reasons of lighting a house?
  - A. Warming and cooking
  - B. Drying and safety
  - C. Discourage pests and read comfortably
  - D. See clearly and warming
- 3. When breathing in;
  - A. diaphragm flattens
  - B. lung cavity decreases
  - C. diaphragm becomes domeshaped
  - D. ribs cages move downwards and inwards
- 4. Which one of the following is the main mode of HIV transmission from an infected person?
  - A. Blood transfusion
  - B. Deep kissing
  - C. Sharing body piercing tools
  - D. Sexual intercourse
- 5. Which one of the following is a sign of unhealthy crop?
  - A. Reduced yields
  - B. Transmission of diseases

- C. Poor quality products
- D. Curled leaves
- 6. Which one of the following materials is non-magnetic?
  - A Steel
  - B. Tin
  - C. Copper
  - D. Nickel
- When two balloons are inflated and rubbed on the same materials they;
  - A. become magnetic
  - B. repel each other
  - C. burst loudly
  - D. attract each other
- 8. The diagram below is of a beak.



The bird likely feeds on;

- A. fish
- B. flesh
- C. nectar
- D. grains

9. Which one of the following has been correctly matched?

### Good conductors Poor conductors

A. Silver

Graphite

B. Glass

Rubber

C. Copper

Wax

D. Plastic

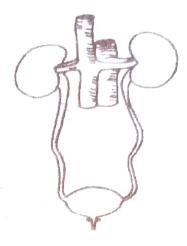
Wood

- 10. Which one of the following is not the best way of conserving energy? Using;
  - A. biogas for generating electricity
  - B. a wind mill to pump water
  - C. improved jiko when cooking
  - D. traditional jiko for cooking
- In the food chain below X would best be represented by;

 $Plants \rightarrow Grasshoppers \rightarrow X \rightarrow Snake$ 

- A. Squirrel
- B. Hawks
- C. Lizard
- D. Caterpillar
- 12. Which one of the following is a good source of fibre in the diet?
  - A. Beef and poultry
  - B. Whole cereals
  - C. Beans
  - D. Fresh fruit juice

The diagram below shows an excretory system.

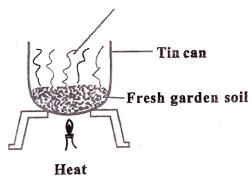


Which one of the following wastes is not excreated by the above?

- A. Urea
- B. salts
- C. Water
- D. Carbondioxide
- 14. Which one of the following materials are both opaque?
  - A. Mirror and fresh milk
  - B. Paper smeared with oil and frosted glass
  - C. Fresh milk and frosted glass
  - D. Mirror and paper smeared with oil
- 15. Which of the following planets are in the 2<sup>nd</sup> and 6<sup>th</sup> positions from the sun?
  - A. Venus and Saturn
  - B. Earth and Saturn
  - C. Venus and Jupiter
  - D. Mars and Jupiter

- 16. Splash erosion can be prevented by;
  - A. Mulching
  - B. Terracing
  - C. Contour farming
  - D. Use of gabions
- 17. Newton is the unit for measuring;
  - A. mass
  - B. pressure
  - C. weight
  - D. volume
- 18. A farmer practicing stall feeding is likely to feed on animals on;
  - A. pasture and fodder
  - B. pasture and concentrates
  - C. fodder and concentrates
  - D. concentrates only
- The set-up below can be used to investigate the presence of a certain component of soil.





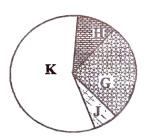
The soil component investigated is;

- A. air
- B. water
- C. organic matter
- D. mineral salts

- 20. Heat is transferred through a vacuum by;
  - A. convection and conduction
  - B. conduction and radiation
  - C. radiation only
  - D. convection only
- 21. The following are processes that take place during birth in human beings.
  - i) Dilation of cervix
  - ii) Contraction of the uterus
  - ili) Bursting of the amniotic bag
  - iv) Pushing out of the baby
  - v) Cutting of the umblical cord

Which of the following is the correct order of the processes?

- A. (i) (iii) (ii) (iv) (v)
- B. (i) (iii) (iv) (ii) (v)
- C. (ii) (i) (iii) (iv) (v)
- D. (ii) (iv) (iii) (i) (v)
- 22. The pie chart below shows proportions of G, H, J and K that represents the composition of air.

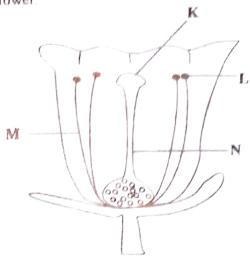


Which proportion correctly represents a gas used in fire extinguishers and a gas used in an electric tube?

fire extinguisher	electric tube
A. K.	Н
B. G	K
C. J	Н
D. G	J

- 23. Which of the following pairs of food is preserved by smoking, salting and drying?
  - A. Meat and mushroom
  - B. Meat and fish
  - C. Mushroom and beans
  - D. Beans and fish
- 24. Which of the following groups of sources of energy are renewable?
  - A. Charcoal, kerosene, sawdust
  - B. Water, firewood, animal dung
  - C. Diesel, wind, natural gas
  - D. Biogas, petrol, coal
- 25. The reason why improved jiko have a clay lining is to;
  - A. make charcoal light faster
  - B. reduce the amount of heat loss
  - C. make the jiko last longer
  - D. reduce the space for charcoal

The diagram below shows some parts of flower.



The parts representing the stigma and filament are;

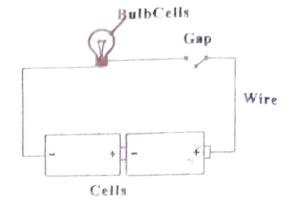
- A. Land N
- B. K and L
- C. K and M
- D. N and M
- 27. The following processes are involved in the formation of a zygote in plants;
  - i) Growth of pollen tube
  - ii) Pollination
  - iii) Fusion
  - iv) pollen tube breaks

The correct order of process is;

- A. (ii) (i) (iv) (iii)
- B. (i) (ii) (iv) (iii)
- C. (ii) (i) (iii) (iv)
- D. (iv) (i) (iii) (ii)

- 28. A disease characterised by discharge of grey-yellow pus and burning sensation during urination is.
  - A. syphilis
  - B. gonorrhoea
  - C. chancroid
  - D cholera
- 29. Which one of the following animals moves by flying and hoping?
  - A. Mite
  - B. Cricket
  - C. Flea
  - D. Cockroach
- 30. Ability to do work is;
  - A. force
  - B. energy
  - C. motion
  - D. effort
- 31. Which one of the following practices can reduce the pollution of both soil and air?
  - A. Proper stocking
  - B. Mulching
  - C. Use of incinerator
  - D. Burying solid waste

32. The diagram below represents a set-up that can be used to investigate good and poor conductors of electricity



Which one of the following materials when connected to the wire at the gap will not make the bulb to light?

- A. Razor blade
- B. Pencil tip
- C. Keys
- D. Thread
- 33. Which one of the following weeds cannot be effectively controlled by uprooting?
  - A. Black jack
  - B. Oxalis
  - C. Wandering jew
  - D. Mexican marigold
- 34. The following are characteristics of a certain type of cloud except;
  - A. has a flat base
  - B. is dark grey in colour
  - C. indicates fine weather
  - D. appears high in the sky

- A plant with deep and widespread root system is also likely to have;
  - A. flexible stem
  - B. thin cuticle
  - C. thick cuticle
  - D. many stomatas
- 36. The diagram below shows a set-up that is used to investigate a certain aspect of light.



Candle

Which aspect of light was being investigated?

- A. How light travels
- B. Passage of light
- C. Uses of light
- D. Formation of shadows
- 37. The correct foetal development process in human beings is;
  - A. Baby → foetus → embryo → zygote
  - B. Zygote → baby → embryo → foetus
  - C. Zygote →embryo →foetus→ baby
  - D. Zygote  $\rightarrow$  foetus  $\rightarrow$  embryo  $\rightarrow$  baby
- 38. The following steps are followed when making a rainbow but not in correct order;
  - i) Tilt the mirror under water to reflect light
  - ii) Take a basin and half fill it with water

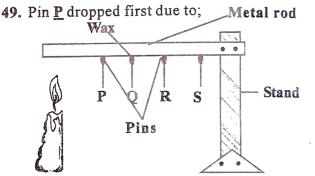
- iii) Place the mirror at the bottom of the basin in a tilted position
- iv) Place the basin on a stool near a window

Which is the correct order?

- A. (iv) (ii) (i) (iii)
- B. (iii) (ii) (iv) (i)
- C. (i) (iii) (ii) (iv)
- D. (ii) (iii) (iv) (i)
- 39. Fertilization in plants occurs in the;
  - A. ovules
  - B. stigma
  - C. style
  - D. ovary
- 40. The main reason that makes a matter to float in water is;
  - A. its mass and size
  - B. its mass and shape
  - C. the type of material and shape
  - D. the type of material and its mass
- 41. Class seven pupils found out that an invertee glass pushed in water does not fill with water. They concluded that;
  - A. air occupies space
  - B. water occupies space
  - C. air has no definite volume
  - D. water has no definite shape

- **42.** The gas that constitutes approximately 1% is used:
  - A. during burning
  - B. by legumes to make proteins
  - C. in hot air balloons
  - D. to preserve soft drinks
- **43.** All the following are methods of softening hard water except;
  - A. distiling
  - B. adding chemicals
  - C. filtering
  - D. boiling
- **44.** Green bananas and yams provide the same food nutrients as;
  - A. bread and chips
  - B. milk and eggs
  - C. spinach and avocado
  - D. fish and beans
- **45.** Which one of the following processes requires increase and decrease in temperature respectively?
  - A. Evaporation and melting
  - B. Melting and evaporation
  - C. Condensation and evaporation
  - D. Evaporation and freezing
- 46. Avoiding working very close to the toes is a safety precaution when using;
  - A. spade
  - B. hammer
  - C. hoe
  - D. saw

- 47. Which of the following liquid will form one layer when mixed?
  - A. Kerosine and cooking oil
  - B. Water and cooking oil
  - C. Fresh milk and kerosine
  - D. Kerosine and water
- 48. The following are ways of managing industrial wastes except;
  - A. converting waste into compost manure
  - B. Re-using
  - C. Recycling
  - D. Incineration



#### Heat

- A conduction and convection
- B. convection
- C radiation
- D. conduction
- 50. Which of the following media is the most effective method of educating the masses about HIV and AIDS?
  - A. Newspapers
  - B. Television
  - C. Radio
  - D. Video