

Answer **all** the questions.

Each question is followed by four options lettered **A** to **D**. Find the **correct** option for **each** question and shade in **pencil** on your answer sheet the space which bears the same letter as the option you have chosen. Give only **one** answer to **each** question. An example is given below.

Which of the following substances is **not** an element?

- A. Aluminium
- B. Ammonia
- C. Oxygen
- D. Sodium

The correct answer is Ammonia, which is lettered **B** and therefore answer space **B** would be shaded.

☐ A ☐

☒ B ☐

☐ C ☐

☐ D ☐

☐ E ☐

Think carefully before you shade the answer spaces. Erase completely any answer you wish to change.

Do all rough work on this question paper.

Now answer the following questions.

1. The egg from the ovary is released into the fallopian tube during
 - A. ovulation.
 - B. sperm production.
 - C. fertilization.
 - D. menstruation.
2. When Benedict's solution is used to test for sugar, the colour changes to
 - A. red.
 - B. violet.
 - C. brick-red.
 - D. blue-black.
3. Oxygen gas is represented by the chemical symbol O_2 . This symbol represents two
 - A. ions of oxygen.
 - B. atoms of oxygen.
 - C. elements of oxygen.
 - D. molecules of oxygen.
4. Farmers prefer organic fertilizers to inorganic fertilizers because organic fertilizers
 - A. are environmentally friendly.
 - B. produce crops with excellent flavour.
 - C. have low drainage ability.
 - D. have high rate of erosion.
5. Endoparasites of farm animals can be controlled by
 - A. drenching.
 - B. dusting.
 - C. spraying.
 - D. hand-picking.

6. Two atoms of the same element with symbol ${}^{12}_6\text{X}$ and ${}^{14}_6\text{X}$ are different in their
- electron numbers.
 - proton numbers.
 - neutron numbers.
 - atomic numbers.
7. Nitrogen deficiency in the soil causes
- fruit drop.
 - yellowing of leaves.
 - poor seed formation.
 - purple colouration of leaves.
8. Which of the following statements describes a second class lever? The
- pivot is between load and effort.
 - effort is between load and pivot.
 - load is between pivot and effort.
 - effort and load are always equal.
9. The **hardest** part of the human tooth is the
- enamel.
 - dentine.
 - cement.
 - pulp.
10. A girl who was accidentally trapped in a cupboard died because
- only nitrogen was left in the cupboard.
 - greater part of the oxygen in the cupboard was used up.
 - carbon dioxide run short in the cupboard.
 - all the air in the cupboard was used up.
11. The **simplest** unit of protein is
- vitamins.
 - glucose.
 - fatty acid.
 - amino acid.
12. The **main** reason for stirring soil surfaces of garden beds is to
- ensure penetration of air.
 - promote growth of seedlings.
 - promote soil compaction.
 - limit activity of micro-organisms.
13. Which of the following diseases affects **both** cattle and humans?
- Typhoid
 - Buruli ulcer
 - Tuberculosis
 - African swine fever

14. The combining powers of sodium and oxygen atoms are 1 and 2 respectively. The chemical formula of a stable compound formed between sodium and oxygen is
- A. NaO .
 - B. Na_2O .
 - C. Na_2O_2 .
 - D. NaO_2 .
15. Which of the following devices is a simple machine?
- A. Tractor
 - B. Motor cycle
 - C. Sewing machine
 - D. Wheel and axle
16. Which of the following statements is **correct** about anions? They contain
- A. less protons than electrons.
 - B. more protons than electrons.
 - C. the same number of protons and electrons.
 - D. the same number of protons and neutrons.
17. A ball of mass 2.0 kg rolls with a velocity of 10 m/s. What is its kinetic energy?
- A. 5 J
 - B. 10 J
 - C. 20 J
 - D. 100 J
18. Hand trowel is used in farming to
- A. remove weeds.
 - B. level soil surface.
 - C. transplant seedlings.
 - D. turn manure during compost-making.
19. Which of the following substances contains natural acid?
- A. Vinegar
 - B. Wood ash
 - C. Saliva
 - D. Bile
20. Absorption of the end-product of digestion in the ileum is aided by the presence of the
- A. bile.
 - B. villi.
 - C. enzymes.
 - D. peristalsis.
21. An example of a fruit vegetable is
- A. cabbage.
 - B. carrot.
 - C. onion.
 - D. tomato.

22. A common method of sowing seeds on a nursery is by
A. broadcasting.
B. transplanting.
C. pricking out.
D. ridging.
23. The standard unit of length is the
A. centimetre.
B. decimetre.
C. metre.
D. millimetre.
24. Which of the following heavenly bodies is a source of heat and light?
A. Mars
B. Sun
C. Moon
D. Earth
25. The instrument used to measure electric current is
A. ammeter.
B. barometer.
C. voltmeter.
D. thermometer.
26. Why are some seeds nursed before transplanting?
I. For proper care to be given.
II. Some of the seeds are too small.
III. It reduces competition for soil nutrient.

A. I and II only
B. I and III only
C. II and III only
D. I, II and III
27. Which of the following types of manure is from an organic source?
A. Compost
B. N. P. K
C. Urea
D. Muriate of potash
28. Which of the following substances is a mixture?
A. Silver
B. Gold
C. Air
D. Hydrogen

29. The method of controlling the population of **both** larvae and pupae of mosquito is
- I. environmental.
 - II. chemical.
 - III. biological.
- A. I and II only
 - B. II and III only
 - C. I and III only
 - D. I, II and III
30. Determine the mass of a substance if its volume is 5.0 cm^3 and it has a density of 5.0 g cm^{-3} .
- A. 1.0 g
 - B. 5.0 g
 - C. 10.0 g
 - D. 25.0 g
31. Water that **does not** lather readily with soap may contain
- A. Ca^{2+} .
 - B. H^+ .
 - C. OH^- .
 - D. SO_4^{2-} .
32. The bottom of a pool of water appears closer to the surface than it is. Which of the following properties account for this observation?
- A. Rectilinear propagation
 - B. Transparency of water
 - C. Refraction
 - D. Reflection
33. What happens during the eclipse of the moon? The
- A. moon comes between the earth and the sun.
 - B. earth comes between the moon and the sun.
 - C. sun comes between the moon and the earth.
 - D. sun moves round the earth.
34. The appropriate apparatus for the separation of a mixture of water and kerosene is
- A. separating funnel.
 - B. evaporating dish.
 - C. filter funnel.
 - D. condenser.
35. The movement of dissolved plant nutrients from the upper layer to deeper layers of the soil is termed
- A. aeration.
 - B. capillarity.
 - C. erosion.
 - D. leaching.

36. When three resistors of different resistances are arranged in parallel, which of the following statements is/are **correct**?
- I. The same current flows through all of them.
 - II. Their effective resistance is greater than any one of them.
 - III. The current through them is not the same.
- A. I only
 - B. I and II only
 - C. II only
 - D. III only
37. Which of the following substances are **not** raw materials for photosynthesis?
- I. Chlorophyll
 - II. Carbon (IV) oxide
 - III. Water
 - IV. Oxygen
- A. I and IV only
 - B. I and III only
 - C. II and IV only
 - D. I, II and IV only
38. The component of air that supports burning is
- A. oxygen.
 - B. nitrogen.
 - C. hydrogen.
 - D. carbon dioxide.
39. Which of the following farming systems can lead to total crop failure?
- A. Crop rotation.
 - B. Mixed farming
 - C. Mixed cropping
 - D. Mono cropping
40. Balance the following chemical equation.
- $$\text{SO}_2 + \text{O}_2 \rightleftharpoons 2 \text{SO}_3$$
- A. 2
 - B. 1
 - C. $\frac{1}{2}$
 - D. 3

END OF PAPER