8th All India RPS OLMPIAD

Online & Offline Mega Event

QUESTION PAPER (PHASE – I)

CLASS - IV

RPS SCIENCE LEAGUE

Choose the correct option.

Q1. Which of the following statements is /are true?

(A) Plants perform the process of photosynthesis.

(B) Plants perform the process of transpiration.

(C) Plants perform the process of respiration.

(D) All of these

Q2. Which of the following parts of a leaf absorbs the sunlight?

(A) Petiole (B) Stomata (C) Lamina (D) Leaf apex

Q3. The extra food in plants is stored in the form of _____.

(A) sugar (B) starch (C) glucose (D) all of these

Q4. Which of the following gases acts as a by product in the process of photosynthesis?

(A) Carbon-dioxide (B) Oxygen (C) Carbon monoxide (D) Nitrogen

Q5. Which of the following plants does not have chlorophyll?

(A) Cactus (B) Croton (C) Wolffia (D) Moulds

Q6. Which of these substances do veins transport to and from leaves?

(A) Water (B) Minerals (C) Nutrients (D) All of these

Q7. Which of the following is/are necessary ingredients for photosynthesis?

(A) Air (B) Water (C) Sunlight (D) All of these

Q8. Which of the following statements is not correct about the mammals?

(A) They feed milk to their young ones (B) They have hair on their body.

(C) They breathe through their lungs. (D) All mammals live on land.

Q9. The part of an egg which is rich in fat, vitamins and minerals is _____.

(A) Eggshell (B) Yolk (C) Albumen (D) Embryo

Q10. Which of the following is/are egg laying mammals?

(A) Duck billed platypus (B) Anteater (C) Echidna (D) All of these

Q11. Opaque ropes of an egg white are_____.

(A) chalazae (B) air cell (C) inner membrane (D) spawn

Q12. Which of the following insects has three stages in its life cycle?

(A) Butterfly (B) Housefly (C) Grasshopper (D) Moth

Q13. Match the following

Column A	**Column B**
(i) Cockroach	**(a) Tadpole**
(ii) Butterfly	**(b) Maggot**
(iii) Frog	**(c) Nymph**
(iv) Housefly	**(d) Caterpillar**

(A) (i-d), (ii-c), (iii-a), (iv-b) (B) (i-c), (ii-d), (iii-a), (iv-b)

(C) (i-c), (ii-a), (iii-d), (iv-b) (D) (i-b), (ii-a), (iii-d), (iv-c)

Q14. Which of the following statements is not correct?

(A) Lizards reproduce by laying eggs.

(B) The eggs laid by all the birds have soft shell.

(C) Fish lay clusters of egg.

(D) The young ones of fish are called fries.

Q15. Which of the following is an example of structural adaptation?

(A) Migration (B) Hibernation (C) Camouflage (D) Aestivation

Q16. Which animal uses echolocation to navigate and hunt?

(A) Eagle (B) Bat (C) Dragonflies (D) Honeybee

Q17. Which of the following features helps birds fly easily?

(A) Heavy, solid bone (B) Hollow bone

(C) Thick layer of blubber (D) Short, stumpy wings.

Q18. The habit of some animals to sit on their eggs to keep eggs warm is called -

(A) spawn (B) metamorphosis

(C) incubation (D) moulting

Q19. Which of the following adaptations helps animals to defend themselves from predators?

(A) Hibernation (B) Metamorphosis (C) Mimicry (D) Aestivation

Q20. Select the odd one out on the basis of body covering.

(A) Lizard (B) Snakes (C) Fish (D) Polar Bear

Q21. Which of the following animals is an ectoparasite?

(A) leech (B) roundworm (C) hookworm (D) None of these

Q22. Select the odd one out on the basis of the natural moon.

(A) Europa (B) Ganymede (C) Callisto (D) Charon

Q23. If an animal's body temperature changes with the change in the temperature of the surrounding then it is called_____.

(A) Hot blooded animal (B) Warm blooded animal

(C) Cold blooded animal (D) None of these

Q24. Which planet in our solar system has the fastest rotation?

(A) Saturn (B) Mercury (C) Jupiter (D) Mars

Q25. What is the name of largest volcano in solar system, located on Mars?

(A) Mauna Kea (B) Elysium Mons

(C) Olympus Mons (D) None of these

Q26. Which of the following pairs of planets contains gas giants?

(A) Mercury, Venus (B) Earth, Mars

(C) Saturn, Uranus (D) Neptune, Mars

Q27. Which planet takes approximately 12 years to revolve around the Sun?

(A) Mars (B) Jupiter (C) Venus (D) Uranus

Q28. Which condition is not necessary for a total Lunar Eclipse?

(A) The Sun, the Earth and the Moon should be in straight line.

(B) The Moon's shadow should fall on the Earth.

(C) The Earth should be between the Sun and the Moon.

(D) The Earth's shadow falls on the Moon.

Q29. Between the orbits of which two planets is the main Asteroid belt primarily located?

(A) Earth and Mars (B) Venus and Earth

(C) Jupiter and Saturn (D) Mars and Jupiter

Q30. Revolution and the tilted axis of the Earth cause_____.

(A) day and night (B) seasons (C) weather change (D) none of these

Q31. Identify the simple machine in which two inclined planes are joined together.

(A) Wedge (B) Screw (C) Lever (D) Pulley

Q32. Identify the force which is also known as force of resistance.

(A) Gravitational force (B) Electrostatic force

(C) Frictional force (D) Muscular force

Q33. Fill in the blanks with the correct combination of words.

When a X moves an object through a distance we say Y is done.

(A) X-Work, Y-Energy (B) X-Force, Y-Work

(C) X-Work, Y-Force (D) X-Work, Y-Energy

Q34. A seesaw in a children's park is an example of which simple machine?

(A) Pulley (B) Lever (C) Wheel and axle (D) All of these

Q35. When a fan rotates, which of the following energy conversion takes place?

(A) Kinetic energy → Electrical energy (B) Electrical energy → Kinetic energy

(C) Electrical energy → Chemical energy (D) Chemical energy → Heat energy

Q36. Which of the following statement is/are incorrect.

(i) Force can change the shape of an object.

(ii) The energy that we get from the hot interior of the Earth is called the nuclear energy.

(iii) Work is said to be done only when we apply a force on an object

(A) (i) and (ii) (B) (ii) and (iii)

(C) (i) and (iii) (D) All of these

Q37. Select the odd one out on the basis of simple machine.

(A) Egg beater (B) Tweezers

(C) Ice tongs (D) Fishing rod

Q38. Hospitals have a gentle slope for moving wheelchairs to_____.

(A) make our work easier (B) show a beautiful slope

(C) both (A) and (B) (D) none of these

Q39. Two identical wet clothes are placed in different places. One is kept in humid room and other in dry air at the same temperature. Which will usually dry faster?

(A) The cloth in humid room (B) The cloth in dry air

(C) Both must dry at the same rate (D) None of these

Q40. Name the process by which water changes into water vapour on heating.

(A) Freezing (B) Evaporation (C) Condensation (D) Filtration

Q41. A student adds salt to water and stirs until no salt is visible. Which method is best for recovering the salt?

(A) Simple filtration (B) Evaporation of water

(C) Magnetic separation (D) Sedimentation

Q42. Snow / Rain or the amount of such matter that falls on the surface of a given area at a particular time is called _____.

(A) evaporation (B) precipitation

(C) water cycle (D) humidity

Q43. A blanket of cloud just above the water or land due to mixing of water vapour with cold air, is called_____.

(A) hail (B) dew (C) fog (D) snow

Q44. Which of the following factors is/are necessary for bringing change in weather conditions?

(A) Clouds (B) Wind (C) Temperature (D) all of these

Q45. Which statement about distillation is correct?

(A) It separates substances based on magnetic properties.

(B) It involves evaporation followed by condensation.

(C) It is identical to sedimentation.

(D) It works only with muddy water.

Q46. A gas changes into solid directly on _____ and the process is called _____.

(A) heating, sublimation (B) cooling, deposition

(C) heating, deposition (D) cooling, sublimation

Q47. As milk and water can mix with each other and hence called miscible liquids. Find the miscible liquids from the following.

(A) Water and Petrol (B) Paint and Turpentine Oil

(C) Water and Ghee (D) Water and Kerosene

Q48. Which of the following statements is not correct?

(A) Liquids have definite volume. (B) Liquids can flow

(C) In liquids, particles are tightly packed. (D) None of these

Q49. Which change occurs when water is kept in a freezer for a long time?

(A) Solid to Liquid (B) Liquid to Solid (C) Gas to Liquid (D) Solid to Gas

Q50. Which of these has the least freedom of movement of particles?

(A) Solid (B) Liquid

(C) Gas (D) All have equal freedom

Q51. When two or more atoms combine together chemically, what do they form?

(A) An atom (B) A cell (C) A molecule (D) An electron

Q52. After mud settles at the bottom of a container of muddy water, the clear water above it gently poured into another container without disturbing the settled mud. What is this step called?

(A) Decantation (B) Sieving (C) Filtration (D) Sedimentation

Q53. In which of the following plants does the stem performs photosynthesis?

(A) Water lily (B) Tape grass (C) Peepal (D) Cactus

Q54. This plant contains chlorophyll but its leaf does not appear green completely.

(A) Rose (B) Croton (C) Mushroom (D) Coconut

Q55. Mangroves grow in which of the following land?

(A) Marshy land (B) Deserts (C) Hill area (D) Hot region

Q56. Complete the given series.

Date palm : Desert : : Deodar : _____

(A) Marshy Areas (B) Plains (C) Lakes and Ponds (D) Mountains

Q57. Plants that are found in heavy rainfall area are_____.

(A) Rice, Watercress (B) Sundew, Pitcher plant

(C) Indian Pipe, coral root (D) Cactus, saguaro

Q58. Which of the following plants has broad leaves with waxy coating?

(A) Cactus (B) Pine (C) Banyan (D) Water Lily

Q59. Which of the following is a fixed aquatic plant that has long, hollow and flexible stems and leaves floating on water?

(A) Hydrilla (B) Water hyacinth (C) Lotus (D) Tape grass

Q60. Many plants have bright, sweet smelling flowers. How would this adaptation help the plant?

(A) It warns away predator (B) It attracts bee and other pollinators

(C) It helps the plant store water (D) It gives the plant shade