

Q47. How is speech produced?

- A. By vibration of vocal cords only
- B. By movement of tongue only
- C. By vibrations of vocal cords and movements of lips, cheeks, and tongue
- D. By air movement through trachea

Correct Answer: C

Q48. What is the function of mucus secreted by trachea and bronchi?

- A. To trap dust and bacteria
- B. To produce sound
- C. To exchange gases
- D. To pump air

Correct Answer: A

Q49. What is the function of cilia in trachea and bronchi?

- A. To produce mucus
- B. To move mucus upward
- C. To exchange gases
- D. To vibrate and produce sound

Correct Answer: B

Q50. Are breathing movements voluntary or involuntary?

- A. Completely voluntary
- B. Completely involuntary

voluntary or involuntary?

- A. Completely voluntary
- B. Completely involuntary
- C. Mostly involuntary but can be controlled temporarily
- D. Only voluntary during sleep

Correct Answer: C

Q51. Why is the percentage of respiratory disorders higher in Pakistan?

- A. Due to genetic factors
- B. Because of high altitude
- C. Due to air pollution concentration
- D. Because of cold climate

Correct Answer: C

Q52. What was the death rate of pneumonia before antibiotics?

- A. 10%
- B. 25%
- C. 33%
- D. 50%

Correct Answer: C

Q53. What is the death rate of lung cancer?

- A. 500,000 annually

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- A. 500,000 annually
- B. 800,000 annually
- C. 1 million annually
- D. 1.3 million annually

Correct Answer: D

Q54. What happens to lungs when a person stops smoking?

- A. Immediate complete recovery
- B. Gradual repair and contaminant removal
- C. No change occurs
- D. Lungs deteriorate further

Correct Answer: B

Q55. What is nicotine?

- A. A vitamin
- B. A powerful poison
- C. A lung stimulant
- D. A respiratory enzyme

Correct Answer: B

Q56. What are the observations about smoking rates by WHO?

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- A. Increasing worldwide
- B. Declining in developed world
- C. Stable in all regions
- D. Only increasing in Africa

Correct Answer: B

Q57. When is World No Tobacco Day celebrated?

- A. May 15
- B. May 31
- C. June 5
- D. April 22

Correct Answer: B

Q58. What percentage of passive smokers develop heart disease?

- A. 10-15%
- B. 15-20%
- C. 20-25%
- D. 25-30%

Correct Answer: D

Q59. How does smoking affect social life?

- A. Improves social acceptance

Mendelian inheritance follows which form of dominance relation?

- a) Complete dominance
- b) Multiple allelic dominance
- c) Incomplete dominance
- d) Co-dominance

Correct Answer: a) Complete dominance

An exception to Mendel's law is:

- a) Linkage
- b) Dominance
- c) Purity of gametes
- d) Independent assortment

Correct Answer: a) Linkage

Self-fertilization of F1 dihybrids, following independent assortment of alleles will result in:

- a) 3/16 tall, round: 3/16 dwarf, wrinkled
- b) 9/16 tall, wrinkled: 3/16 dwarf, round
- c) 9/16 tall, round: 3/16 tall, wrinkled: 3/16 dwarf, round: 1/16 dwarf, wrinkled

**Correct Answer: c) 9/16 tall, round:
3/16 tall, wrinkled: 3/16 dwarf, round:
1/16 dwarf, wrinkled**

 **Biological Sciences**

Phenotypic ratio of single trait inheritance:

- a) 1:2:1
- b) 3:1
- c) 1:2
- d) 1:3:2

Correct Answer: b) 3:1

As a result of cross-fertilization of true breeding pea plant having purple-colored flowers with that of white colored flowers, the offspring will have flower with:

- a) $\frac{1}{4}$ purple and $\frac{3}{4}$ white
- b) All purple
- c) $\frac{1}{4}$ white and $\frac{3}{4}$ purple
- d) All white

Correct Answer: b) All purple

 **Education**

Incomplete dominance:

- a) Different alleles of a gene are both

Incomplete dominance:

- a) Different alleles of a gene are both expressed in heterozygous condition
- b) One allele is completely dominant over the other
- c) The phenotype of the heterozygote is intermediate between phenotypes of the two homozygotes
- d) Gene mutations may produce many different alleles of a gene

Correct Answer: c) The phenotype of the heterozygote is intermediate between phenotypes of the two homozygotes

ABO blood system is an example of:

- a) Polygenes
- b) Multiple alleles
- c) Multiple genes
- d) Multiple mutation

Correct Answer: b) Multiple alleles

 **Educational Resources**

Which one of the following is multiple allelic character?

- a) Length of stem in pea plant
- b) Blood group of the human being
- c) Shape of seed in pea plant

- b) Blood group of the human being
- c) Shape of seed in pea plant
- d) Colour of flower in pea plant

Correct Answer: b) Blood group of the human being

If Sara has blood group O. The genotype of her mother and father is possibly:

- a) Bi X BB
- b) BB X BB
- c) Bi X Bi
- d) BB X Bi

Correct Answer: c) Bi X Bi  **Army**

Blood group which is known as universal donor is:

- a) A+
- b) O+
- c) AB+
- d) O-

Correct Answer: d) O-

All of the following are properties of respiratory surfaces EXCEPT:

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- b) Good blood supply

All of the following are properties of respiratory surfaces EXCEPT:

- a) Permeable
- b) Good blood supply
- c) Thick (more than 1 mm)
- d) Larger surface area

Correct Answer: c) Thick (more than 1 mm)

The human nose is composed of:

- a) Bone
- b) Cartilage
- c) Fibro-fatty tissues
- d) All of these

Correct Answer: d) All of these

Cilia move trapped substances into the _____ for removal:

- a) Larynx
- b) Nasal cavity
- c) Nose
- d) Pharynx

Correct Answer: d) Pharynx

The part of the pharynx found between the base of the skull and soft palate is the:

- a) Laryngopharynx
- b) Oropharynx
- c) Nasopharynx
- d) Both a & c

Correct Answer: b) Oropharynx

Sound is produced by the:

- a) Larynx
- b) Voice box
- c) Sound box
- d) All of these

Correct Answer: d) All of these

The trachea is approximately _____ cm long:

- a) 10
- b) 11
- c) 12
- d) 2.5

Correct Answer: c) 12

Which of the following is lined by ciliated mucus membranes?

- a) Trachea

- b) Bronchi
- c) Nasal cavity
- d) Both a & c

Correct Answer: d) Both a & c

In which structure are C-shaped rings present but flattened?

- a) Trachea
- b) Bronchi
- c) Bronchioles
- d) Esophagus

Correct Answer: b) Bronchi

There are about _____ million alveoli in the lungs:

- a) 500
- b) 700
- c) 900
- d) 300

Correct Answer: b) 700

Surfactants released by alveolar walls:

- a) Increase surface tension
- b) Decrease surface tension
- c) Kill bacteria
- d) Both b & c

Correct Answer: d) Both b & c

The functional unit of the lungs is the:

- a) Alveoli
- b) Air sacs
- c) Terminal bronchioles
- d) Both a & b

Correct Answer: b) Air sacs

Moist squamous epithelium is present in the:

- a) Bronchioles
- b) Nose
- c) Nasal cavity
- d) Alveoli

Correct Answer: d) Alveoli

The walls of alveoli are about _____ micrometers thick:

- a) 1
- b) 2
- c) 0.1
- d) 0.2

Correct Answer: c) 0.1

Allergy, infection, blockage of Eustachian tube and nutritional deficiency cause:

- a) Tuberculosis
- b) Asthma
- c) Lung cancer
- d) Otitis media

Correct Answer: d) Otitis media

Tobacco smoke weakens the walls of:

- a) Alveoli
- b) Bronchi
- c) Bronchus
- d) Bronchioles

Correct Answer: a) Alveoli

BCG vaccine is used for:

- a) Lung cancer
- b) Emphysema
- c) Tuberculosis
- d) Otitis media

Correct Answer: c) Tuberculosis

The permanent and irreversible destruction of alveoli is called:

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- b) Pneumonia

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- a) Emphysema
- b) Pneumonia
- c) Tuberculosis
- d) Asthma

Correct Answer: a) Emphysema

Pneumonia is caused by:

- a) Streptococcus
- b) Mycoplasma
- c) Both
- d) None

Correct Answer: c) Both

Water enters plants by a pressure known as:

- a) Osmotic Pressure
- b) Turgor Pressure
- c) Root Pressure
- d) Capillary Action

Correct Answer: b) Turgor Pressure

Rain droplets are spherical due to:

- a) Gravity
- b) Surface Tension
- c) Air Resistance

c) Air Resistance

d) Viscosity

Correct Answer: b) Surface Tension

The scientist who produced the first vaccine was:

a) Louis Pasteur

b) Edward Jenner

c) Robert Koch

d) Alexander Fleming

Correct Answer: b) Edward Jenner

Plants need how many types of nutrients (besides light) for photosynthesis?

a) 2

b) 3

c) 4

d) 5

Correct Answer: b) 3

In histology, we study:

a) Cells

b) Tissues

c) Organs

d) Organ Systems

Correct Answer: b) Tissues

d) Organ Systems

Correct Answer: b) Tissues

The functional unit of the lungs is the:

- a) Bronchus
- b) Alveoli
- c) Trachea
- d) Diaphragm

Correct Answer: b) Alveoli

Rapid expansion of compressed hydrogen causes:

- a) Respiratory Disease
- b) Frostbite
- c) Explosion
- d) No effect

Correct Answer: a) Respiratory Disease

The organ surrounded by a sac is called:

- a) Cristae
- b) Nucleus
- c) Mitochondrion
- d) Ribosome

Correct Answer: a) Cristae

Cytosol is present in: