

TGT SCIENCE

1. Who launched the 90-day campaign 'Azadi Se Antyodaya Tak'?

- (A) Amit Shah
- (B) Piyush Goyal
- (C) Kiren Rijiju
- (D) Giriraj Singh

Correct Answer: (D)

2. Which country signed agreements on training staff and IT cooperation to deepen railway cooperation In Sep 2022?

- (A) Russia-India
- (B) Ukraine-Turkey
- (C) India-Bangladesh
- (D) America-India

Correct Answer: (C)

3. The “Donbas War” is currently being fought in

- (A) Serbia
- (B) Ukraine
- (C) Syria
- (D) Lebanon

Correct Answer: (B)

4. Pedagogy is the study of

- (A) education
- (B) learning process
- (C) teaching methods
- (D) guiding students

Correct Answer: (C)

5. Dyslexia is associated with

- (A) mental disorder
- (B) mathematical disorder
- (C) reading disorder
- (D) behavioural disorder

Correct Answer: (C)

6. Which government organizations will develop guidelines for the education of gifted children?

- (A) NCERT and NCFCS
- (B) NCERT and NCTE
- (C) NCERT and NTA
- (D) NCERT and SCERT

Answer: (B)

7. A boy records that 4000 joule of work is required to transfer 10 coulombs of charge between two points of a resistor of 50Ω . The current passing through it is

- (A) 2 A
- (B) 4 A
- (C) 8 A
- (D) 16 A

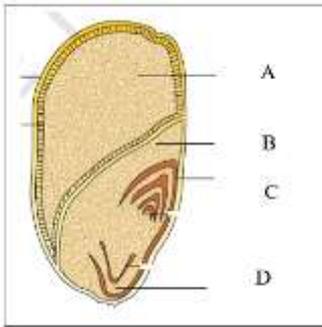
Correct Answer : (C)

8. The sequence of steps for separating a mixture of salt, sand and camphor is

- (A) Adding water, filtration, evaporation, sublimation
- (B) Adding water, filtration, sublimation, evaporation
- (C) Sublimation, adding water, filtration, evaporation
- (D) Sublimation, adding water, evaporation, filtration

Correct Answer : (C)

9. The diagram represents the L.S. of monocot seed. Choose the correct combination of labeling



- (A) (A) Aleurone layer (B) Scutellum (C) Coleoptile (D) Coleorhiza
 (B) (A) Seed coat (B) Scutellum (C) Coleoptile (D) Coleorhiza
 (C) (A) Epithelium (B) Scutellum (C) Coleoptile (D) Coleorhiza
 (D) (A) Endosperm (B) Scutellum (C) Coleoptile (D) Coleorhiza
 Correct Answer : (D)

10. Which of the following is the correct arrangement of the given metals in ascending order of their reactivity ? (Zinc, Iron, Magnesium, Sodium)

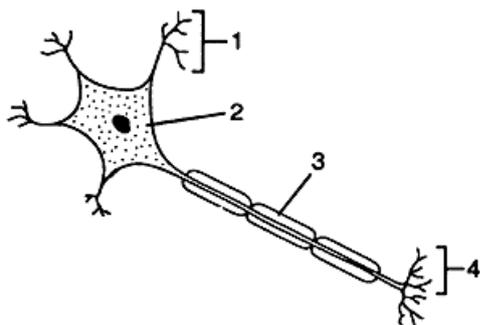
- (A) Zinc > Iron > Magnesium > Sodium
 (B) Sodium > Magnesium > Iron > Zinc
 (C) Sodium > Zinc > Magnesium > Iron
 (D) Sodium > Magnesium > Zinc > Iron
 Correct Answer : (D)

11. Match the following

- | | |
|---------------------|--|
| a. Carotid artery | I. Take oxygen laden blood from the heart to liver |
| b. Hepatic artery | II. Carries oxygen laden blood |
| c. Pulmonary artery | III. Carries carbon dioxide laden blood |
| d. Pulmonary vein | IV. Take oxygen laden blood from the heart to head |

- (A) (a- I, b- II, c- IV, d- III)
 (B) (a- IV, b- I, c- II, d- III)
 (C) (a- IV, b- I, c- III, d- II)
 (D) (a- III, b- IV, c- I, d- II)
 Correct Answer : (C)

12. Name the parts of cell as per diagram



- (A) (1- Axon, 2- Nucleus, 3- Node of Ranvier, 4- Dendrites)
(B) (1- Dendrites, 2- Nucleus, 3- Medullary sheath, 4- Axon ending)
(C) (1- Axon, 2- Nissl body, 3- Node of Ranvier, 4- Dendrites)
(D) (1- Dendrites, 2- Nissl body, 3- Medullary sheath, 4- Axon ending)
Correct Answer : (D)

13. The order of decreasing reactivity towards an electrophilic reagent, for the following :

(i) Benzene (ii) Toluene (iii) Chlorobenzene (iv) Phenol would be

- (A) (i) > (ii) > (iii) > (iv)
(B) (ii) > (iv) > (i) > (iii)
(C) (iv) > (iii) > (ii) > (i)

(D) (iv) > (ii) > (i) > (iii)

Correct Answer : (D)

14. Which of the following statements are correct in relation to photosynthesis ?

- (i) Absorption of light energy by chlorophyll.
(ii) Conversion of light energy to chemical energy
(iii) Splitting of water molecules into hydrogen and oxygen
(iv) Reduction of carbon dioxide to carbohydrates

- (A) Only (i) and (iv) are correct
(B) Only (i) and (iii) are correct
(C) Only (ii), (iii) and (iv) are correct

(D) (i), (ii), (iii) and (iv) are correct

Correct Answer : (D)

15. For Doppler effect in light, change in wavelength if source and observer moving away from each other is given by,

(A) $\lambda_{obs} = \lambda_{rest} \sqrt{\frac{1+v/c}{1-v/c}}$

(B) $\lambda_{obs} = \lambda_{rest} \sqrt{\frac{1-v/c}{1+v/c}}$

(C) $\lambda_{obs} = \lambda_{rest} \left(\frac{1+v/c}{1-v/c} \right)$

(D) $\lambda_{obs} = \lambda_{rest} \left(\frac{1-v/c}{1+v/c} \right)$

Correct Answer : (A)

16. A circular loop of wire has a diameter of 20.0 cm and contains 10 loops. The current in each loop is 3.00 A, and the coil is placed in a 2.00 T external magnetic field. Determine the maximum torque exerted on the coil by the field.

(A) 1.88 N

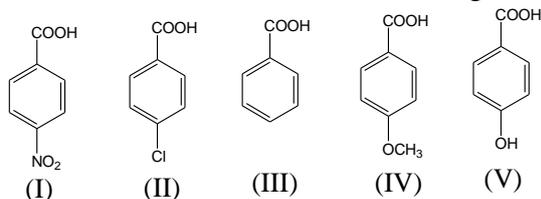
(B) 2.40 N

(C) 1.20 N

(D) 0 N

Correct Answer : (A)

17. The acidic order of the following acids is :



(A) I > II > III > IV > V

(B) I > II > III > V > IV

(C) I > III > II > IV > V

(D) II > I > III > IV > V

Correct Answer : (C)

18. In Dumas' method of estimation of nitrogen 0.35 g of an organic compound gave 55 mL of nitrogen collected at 300 K temperature and 715 mm pressure. The percentage composition of nitrogen in the compound would be (Aqueous tension at 300 K = 15 mm)

(A) 14.45

(B) 15.45

(C) 16.45

(D) 17.45

Correct Answer : (C)

19. Which of the following are pre-fertilization events

- a. Embryogenesis
- b. Gametogenesis
- c. Gamete transfer
- d. Syngamy

(A) b- Gametogenesis; c- Gamete transfer; d- syngamy

(B) a- Embryogenesis; c- Gamete transfer; d- syngamy

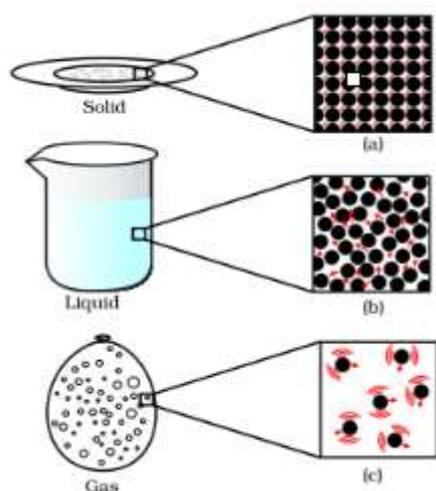
(C) b- Gametogenesis; c- Gamete transfer

(D) a- Embryogenesis; d- syngamy

Correct Answer : (C)

CASE STUDY BASED QUESTION:

Gases are highly compressible as compared to solids and liquids. The liquefied petroleum gas (LPG) cylinder that we get in our home for cooking or the oxygen supplied to hospitals in cylinders is compressed gas. Compressed natural gas (CNG) is used as fuel these days in vehicles. The liquid takes up the shape of the container in which they are kept. Liquids flow and change shape, so they are not rigid but can be called fluid. Solids and liquids can diffuse into liquids. The aquatic animals can breathe underwater. The rate of diffusion of liquids is greater than solid.



20. Why Compressed natural gas (CNG) is used as fuel these days in vehicles?

- (A) due to its high compressibility
- (B) large volumes of a gas can be compressed into a small cylinder
- (C) transported easily
- (D) all of these

Answer: (D)