

PHYSICS

1. In Transmission Electron Microscope (TEM) _____ is used to magnify the objects.
 (A) Light (B) Optical Lenses
(C) Electrons (D) Scanner

2. The Respiratory quotient value for glucose is
 (A) 0.5 **(B) 1.0** (C) 1.5 (D) 2.0

3. Projectile motion is a combination of horizontal motion with constant _____ and vertical motion with constant _____.
 (A) Acceleration, velocity **(B) Velocity, acceleration**
 (C) Displacement, velocity (D) Velocity, displacement

4. Nuclear force is
 (A) charge dependent
 (B) spin independent
 (C) both charge and
(D) spin independent in dependent but charge independent

5. The oxidation of SO_3^{2-} to SO_4^{2-} ion by oxygen $SO_3^{2-} + \overset{\cdot\cdot}{O} \rightarrow SO_4^{2-}$, in this reaction which is Lewis acid and Lewis base?
(A) SO_3^{2-} is Lewis acid and oxygen is Lewis base
 (B) Oxygen is Lewis acid and SO_3^{2-} is Lewis base
 (C) Both are Lewis acids
 (D) Both are Lewis bases

6. Calculate the dimensions of Planck's constant 'h', using the equation $E = h\gamma$, where $E \rightarrow$ energy and $\gamma \rightarrow$ frequency
 (A) MLT^{-1} **(B) $ML^2 T^{-1}$** (C) $ML^{-1} T^{-2}$ (D) $ML^{-2} T^{-1}$

7. Which one of the organic pesticides that contain phosphorous?
 (A) DDT (B) BHC (C) 2, 4-D **(D) Parathion**

8. Match the following :

(a) Mixed fertilizer	1. DAP
(b) Complex fertilizer	2. NPK
(c) Bio fertilizer	3. Oil cake
(d) Organic nitrogen fertilizer	4. Algae

(a)	(b)	(c)	(d)
(A) 1	2	3	4
(B) 2	1	4	3
(C) 3	2	1	4
(D) 4	3	2	1

TNPSC – GROUP 2A

GENERAL STUDIES - 2016 (ENGLISH)

9. Which country physicists created a new form of Hydrogen? (Negatively charged hydrogen cluster)
 (A) India **(B) Austria** (C) Australia (D) China

CHEMISTRY

10. A _____ is often drawn as a guide, so that a frequency polygon can be drawn over the top.
 (A) Frequency **(B) Histogram**
 (C) Cumulative Frequency (D) Rectangle

ZOOLOGY

11. Which one of the following is correctly matched?
 1. Gregor Mendel - Neurospora
 2. T.H. Morgan - Drosophila
 3. C.B. Bridges - Garden pea
 4. J.H. Muller - Mice
 (A) 1 **(B) 2** (C) 3 (D) 4
12. Which one is wrongly matched pair in their characters?
 (A) Pancreas - Glucagon
 (B) Small intestine - Stomatostatin
(C) Testis - Estrogen
 (D) Adrenal gland - Glucocorticoids
13. Which of the following hormone stimulates contraction of uterine smooth muscle?
 (A) Epinephrin (B) Insulin **(C) Oxytocin** (D) Glucagon
14. Which one of the following matches is correct?
 (a) Thyroid hormone 1. Cushing's disease
 (b) Insulin 2. Myxedema
 (c) Corticosteroids 3. Acromegaly
 (d) Growth hormone 4. Diabetes
- | | | | |
|--------------|----------|----------|----------|
| (a) | (b) | (c) | (d) |
| (A) 1 | 2 | 3 | 4 |
| (B) 2 | 4 | 3 | 1 |
| (C) 4 | 2 | 1 | 3 |
| (D) 2 | 4 | 1 | 3 |
15. Cyanide resistant respiration is found in
 (A) Plants only (B) Animals only
 (C) Both plants and animals **(D) Plants and Microbes**
16. Male sex hormone 'testosterone' is produced by
(A) Leydig cells (B) Sertoli cells
 (C) Germinal epithelial cells (D) Spermatogonia! Cells