

PHYSICS

1. Arrange the following in the increasing order of their penetration powers
- I. Alpha rays
II. Beta particles
III. Gamma rays
- (A) I – II – III (B) II – I – III
(C) II – III – I (D) III – II – I
2. Match List 1 with List 2 and answer through the codes given below :
- | List 1 | List 2 |
|---------------------------|---|
| (a) Infrared spectrometer | 1. Measures the purity of sugar |
| (b) Polarimeter | 2. Test aeroplane surfaces under stress |
| (c) Barometer | 3. Study of molecular structure |
| (d) Strain gauge | 4. Measure atmospheric pressure |
- (a) (b) (c) (d)
(A) 2 4 1 3
(B) 2 3 4 1
(C) 3 1 4 2
(D) 4 3 1 2
3. Match the following and select the correct answer :
- | | |
|--|---|
| (a) Nirmal Bharat Abiyon | 1. Rural Roads |
| (b) Pradhan Mantri Gram Sadak Yojana | 2. To provide minimum basic Infrastructure to all habitations |
| (c) Rural infrastructure Scheme | 3. Rural Sanitation |
| (d) Tamil Nadu Habitation Improvement scheme | 4. To stabilise the assets created Under MGNREGS |
- (a) (b) (c) (d)
(A) 3 1 4 2
(B) 1 3 2 4
(C) 4 1 3 2
(D) 2 4 1 3
4. Find the pH of a buffer solution containing 0.20 mole per litre sodium acetate and 0.15 mole per litre acetic acid given that dissociation constant of acetic acid is 1.8×10^{-5}
- (A) 5.8697 (B) 5.1303
(C) 4.1303 **(D) 4.8697**
- CHEMISTRY**
5. Find the incorrect statement(s) from the following
- (i) 2, 4, 5 trichlorophenoxy acetic acid is a herbicide
(ii) Thallium compounds are fumigants
(iii) Organo phosphorus insectides inhibit cholinesterase
(iv) Organo chlorine insectides are stomach poisons
- (A) (i) and (iii) only
(B) (ii) and (iii) only
(C) (ii) and (iv) only
(D) (iii) and (iv) only
6. Match correctly the following Lists 1, 2 and 3 :
- | List 1 | List 2 |
|---------------------------|-----------------------------|
| (I) Ammonia | (a) White solid |
| List 3 | |
| (i) Rocket fuel | |
| (II) Basic reducing agent | (b) Hydrazine |
| (ii) Haber's process | |
| (III) Explosive | (c) Colourless volatile Gas |

TNPSC – GROUP 2A

GENERAL STUDIES - 2016 (ENGLISH)

- (iii) Hydrazoic acid
 (IV) Hydroxylamine (d) Colourless volatile Liquid
 (iv) Oxidising and reducing agent

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

- (A) I-B-iii II-C-iv III-d-ii IV-a-i
 (B) I-B-i II-C-iii III-d-ii IV-a-iv
 (C) I-B-iv II-C-ii III-d-i IV-a-iii
(D) I-B-ii II-C-i III-d-iii IV-a-iv

10. Fructose-6-Phosphate is also known as
(A) Newberg ester
 (B) Harden ester
 (C) Young ester
 (D) Paranas ester

ZOOLOGY

7. Which one of the following cells formed during gametogenesis is diploid?
 (A) Primary polar body
 (B) Spermatid
(C) Spermatogonia
 (D) Secondary polar body

8. Match Column I with Column II and III and choose the correct options :

- | | | |
|------------------------------------|---|--|
| Column I | Column II | |
| 1. Typhoid | (a) Haemophilus influenza | |
| | Column III | |
| | (i) Chronic inflammation of the lymphatic vessels | |
| 2. Pneumonia | (b) Trichophyton | |
| (ii) Dry scaly lesions on the skin | | |
| 3. Filariasis | (c) Salmonella typhi | |
| (iii) Alveoli filled with fluid | | |
| 4. Ringworm | (d) Wuchereri malayi | |
| (iv) Intestinal perforations | | |
- (A) 1-c-iv; 2-a-ii; 3-b-i; 4-d-iii
 (B) 1-c-iv; 2-b-ii; 3-a-iii; 4-d-i
(C) 1-c-iv; 2-a-iii; 3-b-i; 4-d-ii
 (D) 1-c-iv; 2-d-ii; 3-a-i; 4-d-iii

11. Match List I with List II and select the correct answer using the codes given below the Lists :

- | | |
|-------------------------------|--------------|
| List I | List II |
| (a) Fatty substance | 1. Pectins |
| (b) Manufacture of ink | 2. Suberin |
| (c) Nitrogenous waste product | 3. Tannins |
| (d) Fruit jellies | 4. Alkaloids |
- (a) (b) (c) (d)
 (A) 1 3 4 2
 (B) 3 4 2 1
(C) 2 3 4 1
 (D) 2 4 1 3

12. Select the pair, which are dimensionally alike among the following

- I. Product of force and time
 II. Product of momentum and time
 III. Product of Ariel velocity and linear density
 IV. Product of work and time
- (A) I and II only (B) II and III only
 (C) III and IV only **(D) I and III only**

BOTANY

9. Match List I with List II and select the correct option given below :

- | | |
|-----------------------|-----------------------|
| List I | List II |
| (a) Simmond's disease | (i) Thyroid gland |
| (b) Diabetes mellitus | (ii) Adrenal gland |
| (c) Cushing's disease | (iii) Pituitary gland |
| (d) Myxoedema | (iv) Pancreas |

13. Turpentine is obtained from
(A) Pinus roxburghii
 (B) Welwitschia mirabilis
 (C) Ginkgo biloba
 (D) Cycas revolute