

NEET SAMPLE PAPER

DURATION: 3 Hours 0 Minutes

DATE: 2026-07-17

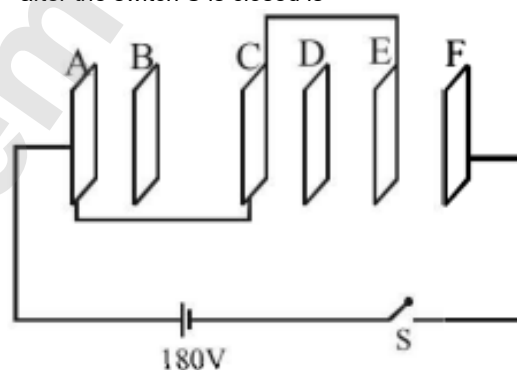
SYLLABUS

Physics:	Electrostatic Potential And Capacitance.
Chemistry:	Solutions.
Botany:	Biological Classification, Principles Of Inheritance And Variation.
Zoology:	Animal Kingdom.
Biology:	The Living World.

(Physics)

- In a cylindrical capacitor, how is the capacitance affected by increasing the length of the cylinder?
 - Capacitance increases
 - Capacitance decreases
 - Capacitance remains the same
 - Capacitance fluctuates
- What are the two main types of capacitors based on their construction?
 - Polar and non-polar capacitors
 - Parallel-plate and cylindrical capacitors
 - Ceramic and electrolytic capacitors
 - Variable and fixed capacitors
- If the voltage across a capacitor is doubled while keeping the charge constant, how does the energy stored in the capacitor change?
 - It doubles
 - It quadruples
 - It remains the same
 - It decreases by half

- A, B, C, D, E, F are conducting plates each of area A and any two consecutive plates separated by a distance d. The net energy stored in the system after the switch S is closed is



- $\frac{3\epsilon_0 A}{2d} V^2$
 - $\frac{5\epsilon_0 A}{12d} V^2$
 - $\frac{\epsilon_0 A}{2d} V^2$
 - $\frac{\epsilon_0 A}{d} V^2$
- Two identical capacitors have the same capacitance C. One of them is charged to potential V_1 and the other to V_2 . The negative ends of the capacitors are connected together. When the positive ends are also connected, the decrease in energy of the combined system is
 - $\frac{1}{4} C (V_1^2 - V_2^2)$
 - $\frac{1}{4} C (V_1^2 + V_2^2)$
 - $\frac{1}{4} C (V_1 - V_2)^2$
 - $\frac{1}{4} C (V_1 + V_2)^2$

(Chemistry)

6. What weight of glucose must be dissolved in 100 g of water to lower the vapour pressure by 0.20 mm Hg?

(Assume dilute solution is being formed)

Given : Vapour pressure of pure water is 54.2 mm Hg at room temperature. Molar mass of glucose is 180 g mol^{-1}

- A) 3.59 g
 - B) 3.69 g
 - C) 4.69 g
 - D) 2.59 g
7. Dry air was passed successively through a solution of 5 gm of a solute in 80gm of water and then through pure water. The loss in weight of solution was 2.50 gm and that of pure solvent 0.04 gm. What is the molecular weight of the solute
- A) 70.31
 - B) 7.143
 - C) 714.3
 - D) 80

8. Observe the following abbreviations $\pi_{\text{obs}} =$ observed colligative property $\pi_{\text{cal}} =$ theoretical colligative property assuming normal behaviour of solute. van't Haff factor (i) is given by

A) $i = \pi_{\text{obs}} \times \pi_{\text{cal}}$

B) $i = \pi_{\text{obs}} + \pi_{\text{cal}}$

C) $i = \pi_{\text{obs}} - \pi_{\text{cal}}$

D) $i = \frac{\pi_{\text{obs}}}{\pi_{\text{cal}}}$

9. If the various terms in the given below expressions have usual meanings, the van't Hoff factor (i) cannot be calculated by which one of the expressions

A) $\pi V = \sqrt{in}RT$

B) $\Delta T_f = ik_f \cdot m$

C) $\Delta T_b = ik_b \cdot m$

D) $\frac{P_{\text{solvent}} - P_{\text{solution}}}{P_{\text{solvent}}} = i \left(\frac{n}{N+n} \right)$

10. A dry air is passed through the solution, containing the 10 gm of solute and 90 gm of water and then it pass through pure water. There is the depression in weight of solution wt. by 2.5gm and of pure solvent by 0.05 gm. Calculate the molecular weight of solute

- A) 50
- B) 180
- C) 100
- D) 25

(Botany)

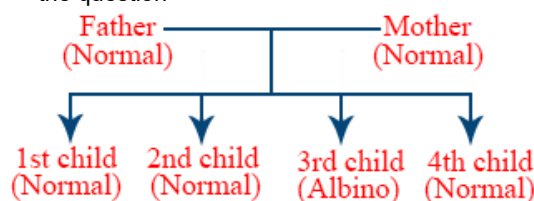
11. Which of the following statements are correct about Klinefelter's Syndrome?

- A. This disorder was first described by Langdon Down (1866).
- B. Such an individual has overall masculine development. However, the feminine development is also expressed.
- C. The affected individual is short statured.
- D. Physical, psychomotor and mental development is retarded.
- E. Such individuals are sterile.

Choose the **correct** answer from the options given below:

- A) C and D only
- B) B and E only
- C) A and E only
- D) A and B only

12. Direction: Refer the given family tree and answer the question

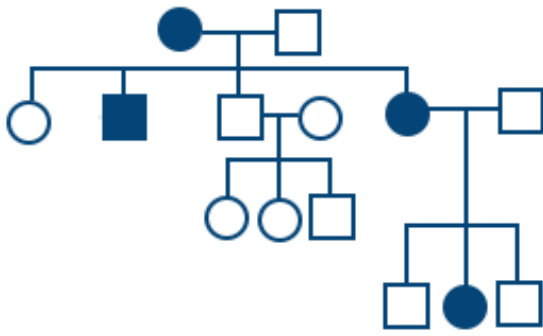


What are the chances of this couple's fifth child being an albino?

- A) 1 in 1
- B) 1 in 2
- C) 1 in 3
- D) 1 in 4

13. Study the pedigree chart of a family showing the inheritance of myotonic dystrophy.

The trait under study is



- A) dominant X-linked
- B) recessive X-linked
- C) autosomal dominant
- D) recessive Y-linked.

14. Select one of the following pairs of important features distinguishing Gnetum from Cycas and Pinus and showing affinities with angiosperms.
- A) Absence of resin duct and leaf venation

B) Presence of vessel elements and absence of archegonia

C) Perianth and two integuments

D) Embryo development and apical meristem

15. The main difference between photosynthetic and chemosynthetic bacteria is

- A) photosynthetic bacteria are seen in green plants, while chemosynthetic bacteria are seen in chemical substances
- B) photosynthetic bacteria are parasites within green plant cells, while chemosynthetic bacteria are saprophytes on decaying food substance
- C) H_2O is used by photosynthetic bacteria, but not by chemosynthetic bacteria
- D) energy of sunlight is used in photosynthetic bacteria, whereas in chemosynthetic bacteria energy is derived by the oxidation of inorganic substances

(Zoology)

16. Match each item in Column I with one item in Column II regarding and choose your answer from the codes given below

Column I (organism)	Column II (respiratory organ)
I. Nereis	1. Gills
II. Prawn	2. Parapodia
III. Earthworm	3. Skin
IV. Cockroach	4. Trachea

- A) I - 1, II - 2, III - 3, IV - 4
- B) I - 2, II - 1, III - 4, IV - 3
- C) I - 2, II - 1, III - 3, IV - 4
- D) I - 1, II - 2, III - 4, IV - 3

17. Consider the following statements:

I. platyhelminths are acoelomates and use protonephridia as excretory structures.

II. Aschelminthes are pseudocoelomates and have bilateral symmetry.

III. Adult echinoderms show radial symmetry and exhibit deuterostome type embryonic development.

Which of the above statements are true?

- A) I and II only
- B) I and III only
- C) II and III only
- D) I, II and III

18. Match the following group of organisms with their respective distinctive characteristics and select the correct option:

Organisms	Characteristics
(a) Platyhelminthes	(i) Cylindrical body with no segmentation
(b) Echinoderms	(ii) Warm blooded animals with direct development
(c) Hemichordates	(iii) Bilateral symmetry with incomplete digestive system
(d) Aves	(iv) Radial symmetry with indirect development

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

19. Which of the following is not seen in hemichordates?

- A) A tripartite body organization
- B) Stomochord
- C) Rudimentary notochord
- D) Proboscis gland

20. Match each item in Column I with one item in Column II and chose your answer from the codes given below:

Column I (animal)	Column II (phylum)
I. Loligo	1. Mollusca
II. Ophiura	2. Echinodermata
III. Beroe	3. Cnidaria
IV. Adamsia	4. Ctenophora

- A) I-1, II-2, III-3, IV-4
- B) I-2, II-1, III-4, IV-3
- C) I-2, II-1, III-3, IV-4

(Biology)

21. Select the incorrect statement out of the following.

- A) All animals belonging to various phyla are assigned to the kingdom Animalia
- B) As we go higher from species to kingdom, number of common characteristics goes on increasing.
- C) Different classes comprising fish, amphibians, reptiles, birds and mammals together constitute the phylum Chordata.
- D) Plant order Polymoniales includes the families like Solanaceae and Convolvulaceae based on the vegetative and floral characters.

22. Select the incorrect statement with respect to the taxon, 'genus'.

- A) It is a group or assemblage of related species
- B) A genus essentially possesses more than one number of species.
- C) Lion, Tiger, Leopard, Jaguar are closely related species which have been placed in the genus Panthera and are respectively named as Panthera leo, P. tigris, P. pardus and P. onca
- D) Solanum, Penicillium, Withania and Canis are examples of genera.

23. Select the mismatched pair.

- A) Panthera leo - Belongs to class Mammalia
- B) Musca domestica - The common house lizard, a reptile
- C) Entamoeba coli - Commonly occurring protozoan in human intestine
- D) Solanum tuberosum - A dicotyledonous plant

24. Select a incorrect match.

A)	Rank	Suffix
	Division	Phyta
B)	Rank	Suffix
	Class	Opsida
C)	Rank	Suffix
	Order	Ales
D)	Rank	Suffix
	Family	Phyceae

25. Anacardiaceae family belongs to the

- A) Order poales and class dicotyledonae
- B) Order sapindales and kingdom spermatophyta
- C) Order sapindales and division angiospermae
- D) Order polymoniales and class dicotyledonae