



Educamy Scholarship & Aptitude Test

IIT JEE | NEET UG | Class 10 - 11

STUDENTS PRESENTLY STUDYING IN
CLASS-11th (Medical)

SAMPLE TEST PAPER

₹5CRORE SCHOLARSHIP
REWARD

Exam Pattern: Phy : 10 | Chem : 10 | Bio: 10 - Total Question: 30

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EDUSAT (EDUCAMY SCHOLASTIC APTITUDE TEST)

Course for NEET 2027-2028

SAMPLE TEST PAPER

[For Students presently in Class 11th going to Class 12th]

DURATION : 150 Minutes

M.MARKS : 320

General Instructions:

1. This Question paper contains FOUR Parts, I to IV (Physics, Chemistry and Biology).
2. This Question Paper contains 8 pages including the cover page.
3. This question paper contains total **30 questions** (20 questions each in **Physics, Chemistry, and Biology**).
4. The Question Paper has blank spaces at the bottom of each page for rough work. No additional sheets will be provided for rough work.
5. Blank papers, clip boards, log tables, slide rule, calculators, cellular phones, pagers and electronic gadgets, in any form, are NOT allowed.
6. The **OMR** (Optical Mark Recognition) sheet shall be provided separately.

Answering on the OMR

7. In all the parts, each question will have **4 choices** out of which **only one choice is correct**.
8. Darken the bubble with **Ball Pen (Blue or Black) ONLY**.

Filling OMR

9. On the OMR sheet, fill all the details properly and completely, otherwise your OMR will not be checked.

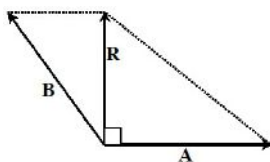
Marking Scheme:

10. For each question you will be awarded **(+4) marks** if you darken the bubble corresponding to the correct answer. There is no negative marking.

Name :

SECTION-I (PHYSICS)**STRAIGHT OBJECTIVE TYPE**

- A force of 6 kg and another of 8 kg can be applied together to produce the effect of a single force of
(A) 1 kg **(B)** 11 kg **(C)** 15 kg **(D)** 20 kg
- Two vectors have magnitudes 3 unit and 4 unit respectively. What should be the angle between them if the magnitude of the resultant is:
 (i) 1 unit (ii) 5 unit (iii) 7 unit
(A) 180°, 90°, 0° **(B)** 80°, 70°, 0° **(C)** 90°, 170°, 50° **(D)** None of these
- The resultant of two vectors $\vec{A}$ and $\vec{B}$ is perpendicular to the vector $\vec{A}$ and its magnitude is equal to half the magnitude of vector $\vec{B}$. The angle between $\vec{A}$ and $\vec{B}$ is:



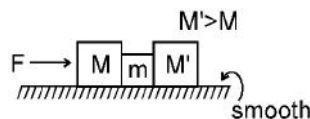
- (A)** 120° **(B)** 150° **(C)** 135° **(D)** None of these
- The displacement is given by $x = 2t^2 + t + 5$, the acceleration at $t = 5$ sec will be
(A) 8 m/s² **(B)** 12 m/s² **(C)** 15 m/s² **(D)** 4 m/s²
 - For a moving particle
(A) $|\vec{V}_{av}| < V_{av}$ **(B)** $|\vec{V}_{av}| > V_{av}$
(C) $\vec{V}_{av} = 0$ but $V_{av} \neq 0$ **(D)** $\vec{V}_{av} \neq 0$ but $V_{av} = 0$
 - In a projectile motion the velocity
(A) is always perpendicular to the acceleration
(B) is never perpendicular to the acceleration
(C) is perpendicular to the acceleration for one instant only
(D) is perpendicular to the acceleration for two instants

SPACE FOR ROUGH WORK

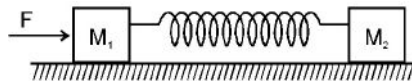
7. Which of the following option is incorrect. Action and reaction
- (A) act on the same object (B) have equal magnitude
(C) have opposite directions (D) have resultant zero
8. Two blocks are in contact on a frictionless table. One has mass m and the other $2m$. A force F is applied on $2m$ as shown in the figure. Now the same force F is applied from the right on m . In the two cases respectively, the ratio of contact force between the two blocks will be:



- (A) same (B) 1 : 2 (C) 2 : 1 (D) 1 : 3
9. A constant force F is applied in horizontal direction as shown. Contact force between M and m is N and between m and M' is N' then



- (A) N or N' equal (B) $N > N'$
(C) $N' > N$ (D) cannot be determined
10. Two blocks of masses M_1 and M_2 are connected to each other through a light spring as shown in figure. If we push mass M_1 with force F and cause acceleration a_1 in mass M_1 , what will be the acceleration in M_2 ?



- (A) F / M_2 (B) $F / (M_1 + M_2)$ (C) a_1 (D) $(F - M_1 a_1) / M_2$

SPACE FOR ROUGH WORK

SECTION-II (CHEMISTRY)**STRAIGHT OBJECTIVE TYPE**

11. What will be the mass of 100 atoms of hydrogen?
- (A) 100 g (B) 1.66×10^{-22} g
(C) 6.023×10^{23} g (D) $100 \times 6.023 \times 10^{23}$ g
12. How many neutrons are there in ${}^{88}_{38}\text{Sr}$?
- (A) 38 (B) 50 (C) 126 (D) 88
13. How many electrons in an atom have the following quantum numbers?
 $n = 4, m_s = -1/2$
- (A) 32 (B) 18 (C) 8 (D) 16
14. Which of the following elements will have highest ionisation energy?
- (A) $1s^2 2s^2 2p^6 3s^1$ (B) $1s^2 2s^2 2p^6 3s^2 3p^3$
(C) $1s^2 2s^2 2p^6 3s^2 3p^4$ (D) $1s^2 2s^2 2p^6 3s^2 3p^1$
15. Which of the following species has unpaired electrons?
- (A) N_2 (B) F_2 (C) O_2^- (D) O_2^{2-}

SPACE FOR ROUGH WORK

16. 1-Butene and cyclobutane show
- (A) position isomerism (B) ring-chain isomerism
 (C) functional isomerism (D) metamerism
17. Which of the following alcohols on dehydration gives most stable carbocation?
- (A) $\begin{array}{c} \text{H}_3\text{C} \\ \diagup \\ \text{CH}-\text{CH}_2-\text{CH}_2\text{OH} \\ \diagdown \\ \text{H}_3\text{C} \end{array}$ (B) $\begin{array}{c} \text{CH}_3 \\ | \\ \text{CH}_3-\text{C}-\text{OH} \\ | \\ \text{CH}_3 \end{array}$
 (C) $\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{CH}_2\text{OH}$ (D) $\begin{array}{c} \text{CH}_3-\text{CH}-\text{CH}_2\text{CH}_3 \\ | \\ \text{OH} \end{array}$
18. Which of the following carbanions is expected to be most stable?
- (A) $p\text{-NO}_2\text{C}_6\text{H}_4\bar{\text{C}}\text{H}_2$ (B) $o\text{-NO}_2\text{C}_6\text{H}_4\bar{\text{C}}\text{H}_2$
 (C) $o\text{-CHOC}_6\text{H}_4\bar{\text{C}}\text{H}_2$ (D) $p\text{-CHOC}_6\text{H}_4\bar{\text{C}}\text{H}_2$
19. Identify the product for the following reaction:
- $$\text{CH} \equiv \text{CH} + \text{HOCl} \longrightarrow$$
- (A) Cl_2CHCHO (B) $\text{CH}(\text{OH}) = \text{CHCl}$
 (C) $\text{ClCH}_2\text{CH}_2\text{OH}$ (D) CH_3COCl
20. Pent-1-ene with HCl gives
- (A) 3-chloropentane (B) 2-chloropentane
 (C) 1, 2-dichloropentane (D) 1-chloropentane

 SPACE FOR ROUGH WORK

SECTION–III (BIOLOGY)

STRAIGHT OBJECTIVE TYPE

21. The amount of blood filtered by kidneys per minute is equal to which of the following?
(A) Inspiratory reserve volume (B) Vital capacity
(C) Residual volume (D) Total lung capacity
22. Which of the following is not correct representation of cardiac output?
(A) Cardiac output = Beat volume $\times$ heart rate
(B) Cardiac output = Stroke volume $\times$ heart rate
(C) Cardiac output = (EDV – ESV) $\times$ heart rate
(D) Cardiac output = (ESV – EDV) $\times$ heart rate
23. Total amount of carbon di-oxide carried by plasma is?
(A) 70 % (B) 7 %
(C) 77 % (D) 3 %
24. Which of the following is correct representation of Blood group showing classic example of co-dominance?
(A) I^0I^0 (B) I^AI^0 (C) I^AI^B (D) I^BI^0
25. Choose the odd one out of the following?
(A) Ischium (B) Ileum (C) Pubis (D) None of the above

SPACE FOR ROUGH WORK

26. Consider the following statements about meiosis:

1. It involves one cycle of nuclear division.
2. It involves one cycle of cell division.
3. It involves recombination between sister chromatids of homologous chromosomes.
4. Prophase I is typically longer and more complex than prophase of mitosis.

How many of the above statements are correct according to the given content?

- (A) One (B) Two (C) Three (D) Four

27. Choose the incorrect statement?

- (a) At resting state axonal membrane is more permeable to potassium ions (K^+) and impermeable to sodium ions (Na^+)
- (b) A synapse is formed by the membranes of a pre-synaptic neuron and a post synaptic neuron only
- (c) The cerebral cortex is grey matter due to concentrated axons here
- (d) Cerebellum has very convoluted surface in order to provide the additional space for many more neurons

- (A) a, b and d only (B) b, c and d only
- (C) a, b, c and d (D) a, b and c only

28. Match the following correctly?

Disease		Characteristics	
(a)	Grave's disease	(i)	Disfigurement of face
(b)	Addison's disease	(ii)	High urine output
(c)	Acromegaly	(iii)	Protrusion of Eyeballs
(d)	Diabetes insipidus	(iv)	Acute weakness and fatigue
(A)	(a-iii), (b-iv), (c-ii), (d-i)		(B) (a-iii), (b-iv), (c-i), (d-ii)
(C)	(a-iii), (b-ii), (c-iv), (d-i)		(D) (a-i), (b-ii), (c-iii), (d-iv)

29. On the basis of mechanism of hormone action choose the odd one out?

- (A) Glucagon (B) Cortisol
- (C) Estradiol (D) Tetraiodothyronine

30. The appearance of recombination nodules is specifically associated with:

- (A) Leptotene (B) Zygotene (C) Pachytene (D) Diakinesis

SPACE FOR ROUGH WORK