Academic ace

NEET (UG)

10

FULL SYLLABUS
MOCK TESTS
with Answers & Solutions

Based on Latest Paper Pattern

INCLUDES 10 OMR SHEETS

- **Contains a variety of MCQs:**
  - Assertion–Reason
  - Statement-based
  - Match the Columns
  - Diagram based

- **Replicates the format and complexity**

- **Analysis of NEET (UG) Exam Papers from the year 2013 to 2024**

As per the latest syllabus prescribed by NMC

Target Publications®

NEET (UG) MOCK TEST

Do not open this Test Booklet until you start attempting the Test.

Important Instructions:

1. The Answer Sheet is given separately along with this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars on ORIGINAL Copy carefully with **blue/black** ball point pen only.

2. The test is of **3 hours** duration and the Test Booklet contains **180** multiple-choice questions (four options with a single correct answer)**. 45** questions each in **Physics** and **Chemistry** and **90** in **Biology.**

3. Each question carries **4** marks**.** For each correct response, the candidate will get **4** marks. For each incorrect response, one mark will be deducted from the total scores. **The maximum marks are 720.**

4. Use **Blue/Black Ball Point Pen only** for writing particulars on this page/marking responses on Answer Sheet.

5. Rough work is to be done in the space provided for this purpose in the Test Booklet only.

6. On completion of the test, the candidate **must hand over the Answer Sheet (ORIGINAL and OFFICE Copy) to the Invigilator** before leaving the Room/Hall. The candidates are allowed to take away this Test Booklet with them.

7. **The CODE for this Booklet is M1**. **Make sure that the CODE printed on the Original Copy of the Answer Sheet is the same as that on this Test Booklet**. In case of discrepancy, the candidate should immediately report the matter to the Invigilator for replacement of both the Test Booklet and the Answer Sheet.

8. The candidates should ensure that the Answer Sheet is not folded. Do not make any stray marks on the Answer Sheet. Do not write your Roll No. anywhere else except in the specified space in the Test Booklet/Answer Sheet.

9. Use of white fluid for correction is **NOT** permissible on the Answer Sheet.

10. The candidates should not leave the Examination Hall without handing over their Answer Sheet to the Invigilator on duty and sign (with time) the Attendance Sheet twice. **Cases, where a candidate has not signed the Attendance Sheet second time, will be deemed not to have handed over the Answer Sheet and dealt with as an Unfair Means case**.

11. Use of Electronic/Manual Calculator is prohibited.

12. The candidates are governed by all Rules and Regulations of the examination with regard to their conduct in the Examination Room/ Hall. All cases of unfair means will be dealt with as per the Rules and Regulations of the examination.

13. **No part of the Test Booklet and Answer Sheet shall be detached under any circumstances**.

14. The candidates will write the Correct Test Booklet Code as given in the Test Booklet/Answer Sheet in the Attendance Sheet.

15. Compensatory time of one hour for examination of three hours (03:00 hrs) duration for PwBD Candidate [having a physical limitation to write] will be given, whether such candidate uses the facility of Scribe or not.

Name of the Candidate (in Capitals) : _____

Roll Number : in figures _____

          : in words _____

Centre of Examination (in Capitals) : _____

Candidate's Signature : _____ **Invigilator's Signature :** _____

Facsimile signature stamp of
Centre Superintendent: _____

1. If x = (a − b), the maximum percentage error in the measurement of x will be

(1) $\left[\dfrac{\Delta a}{a-b} - \dfrac{\Delta b}{a-b}\right] \times 100$

(2) $\left[\dfrac{\Delta a}{a-b} + \dfrac{\Delta b}{a-b}\right] \times 100$
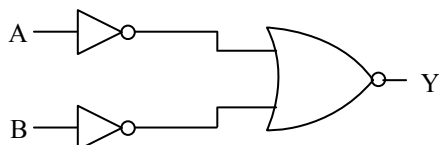
(3) $\left[\dfrac{\Delta a}{a} + \dfrac{\Delta b}{b}\right] \times 100$

(4) $\left[\dfrac{\Delta a}{a} - \dfrac{\Delta b}{b}\right] \times 100$

2. In the parallax method, if the image distance (v) is greater than the object distance (u), the device used can be _____.
   (1) concave mirror   (2) convex lens
   (3) convex mirror   (4) both (1) and (2)

3. For the logic circuit shown, the truth table is:

(1)

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

(2)

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

(3)

A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

(4)

A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

4. The value of $\gamma\left(=\dfrac{C_P}{C_V}\right)$ for hydrogen, helium and another ideal diatomic gas X (whose molecules are not rigid but have an additional vibrational mode), are respectively equal to,

(1) $\dfrac{7}{5}, \dfrac{5}{3}, \dfrac{7}{4}$ (2) $\dfrac{7}{5}, \dfrac{5}{3}, \dfrac{9}{7}$

(3) $\dfrac{5}{3}, \dfrac{7}{5}, \dfrac{9}{7}$ (4) $\dfrac{5}{3}, \dfrac{7}{5}, \dfrac{7}{5}$

5. The energy of the e.m. waves is of the order of 15 keV. To which part of the spectrum does it belong?
   (1) γ-rays   (2) X-rays
   (3) Infra-red rays   (4) Ultraviolet

6. Two particles of mass 5 kg and 10 kg respectively are attached to the ends of a rigid rod of length 1 m with negligible mass. The centre of mass of the system from the 5 kg particle is nearly at a distance of:
   (1) 50 cm   (2) 67 cm
   (3) 80 cm   (4) 33 cm

7. Two solid conductors are made up of same material, have same length and same resistance. One of them has a circular cross section of area A_1 and the other one has a square cross section of area A_2. The ratio A_1/A_2 is
   (1) 2   (2) 1.5
   (3) 1   (4) 0.8

8. Which of the following is the graph between the height (h) of a projectile and time (t), when it is projected from the ground?
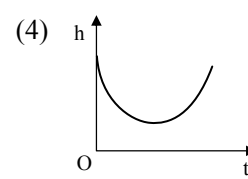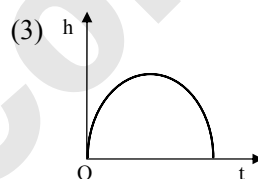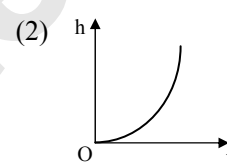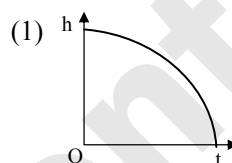
9. Two inductors each of inductance L are connected in parallel. One more inductor of value 5 mH is connected in series of this configuration then, the effective inductance is 15 mH. The value of L is _____ mH.
   (1) 10   (2) 5.0
   (3) 2.5   (4) 20

10. Given below are two statements: one is labelled as **Assertion A** and the other is labelled as **Reason R**:
    Assertion A: Only longitudinal mechanical waves can propagate in gases.
    Reason R: Gases have only bulk modulus.
    In the light of the above statements, choose the **correct** answer from the options given below:
    (1) Both **A** and **R** are true and **R** is the correct explanation of **A**.
    (2) Both **A** and **R** are true but **R** is NOT the correct explanation of **A**.
    (3) **A** is true but **R** is false.
    (4) **A** is false but **R** is true.

11. An iron rod of susceptibility 599 is subjected to a magnetising field of 1200 A m^{-1}. The permeability of the material of the rod is:
    ($\mu_0 = 4\pi \times 10^{-7}$ T m A^{-1})
    (1) 8.0×10^{-5} T m A^{-1}
    (2) $2.4\pi \times 10^{-5}$ T m A^{-1}
    (3) $2.4\pi \times 10^{-7}$ T m A^{-1}
    (4) $2.4\pi \times 10^{-4}$ T m A^{-1}

[Contd...

46. The number of radial nodes present in a given orbital is equal to _____.
(1) l (2) $n - l$
(3) $n - l - 2$ (4) $n - l - 1$

47. Enthalpy of formation of two compounds x and y are -84 kJ and -156 kJ respectively. Which of the following statements is CORRECT?
(1) x is more stable than y.
(2) x is less stable than y.
(3) Both x and y are unstable.
(4) x and y are endothermic compounds.

48. Standard electrode potential of Ag^+/Ag and Cu^+/Cu is $+0.80V$ and $+0.34V$, respectively. These electrodes are joint together by salt bridge if _____.
(1) copper electrode acts as cathode, then E^o_{cell} is $+0.45$ V
(2) silver electrode acts as anode then E^o_{cell} is -0.34 V
(3) copper electrode acts as anode then E^o_{cell} is $+0.46$ V
(4) silver electrode acts as cathode then E^o_{cell} is -0.34 V

49. In group 15 elements, _____ shows maximum tendency for catenation.
(1) phosphorus   (2) arsenic
(3) antimony   (4) bismuth

50. Select the CORRECT statement(s) from the following about empirical formula and molecular formula?
I.   Both are same
II. Empirical formula tells about percentage of various elements in a compound.
III. Molar mass can be determined from empirical formula.
IV. We cannot determine molar mass using molecular formula.
(1) I and II   (2) II only
(3) I and III   (4) III and IV

51. Find the CORRECT match.

Calcium salt of fatty acid		Dry distillation product
i.	Calcium acetate	a.	Ethanal
ii.	Calcium propanoate	b.	Cyclopentanone
iii.	Calcium formate + Calcium acetate	c.	3-Pentanone
iv.	Calcium adipate	d.	Propanone

(1) i – d, ii – c, iii – a, iv – b
(2) i – d, ii – c, iii – b, iv – a
(3) i – b, ii – a, iii – d, iv – c
(4) i – c, ii – d, iii – a, iv – b

52. In Lucas test for alcohols, the appearance of turbidity is due to the formation of _____.
(1) acid anhydride   (2) allyl chloride
(3) alkyl chloride   (4) acid chloride

53. By Wurtz reaction, a mixture of methyl iodide and ethyl iodide gives _____.
(1) butane
(2) ethane
(3) propane
(4) a mixture of the above three

54. Four molecules are given below:
I. BF_3 II. CH_4
III. BeF_2 IV. NH_3
Molecules having no lone pairs of electrons on the central atom are _____.
(1) I and II   (2) IV
(3) II and IV   (4) I, II and III

55. Which of the following does NOT represent a conjugate acid-base pair?
(1) NH_4^+ and NH_2^- (2) HNO_3 and NO_3^-
(3) HSO_4^- and SO_4^{2-} (4) HCO_3^- and CO_3^{2-}

56. $[Co_2(CO)_8]$ displays _____.
(1) one $Co - Co$ bond, six terminal CO and two bridging CO
(2) one $Co - Co$ bond, four terminal CO and four bridging CO
(3) no $Co - Co$ bond, six terminal CO and two bridging CO
(4) no $Co - Co$ bond, four terminal CO and four bridging CO

57. Which of the following amino acids is basic in nature?
(1) Valine   (2) Tyrosine
(3) Arginine   (4) Leucine

58. Match the molecules in **Column A** with the CORRECT type of hybridizations of C_1 and C_3 in **Column B**.

	Column A		Column B
i.	$\overset{1}{CH_3} - \overset{2}{CH} = \overset{3}{CH_2}$	a.	sp^2, sp^2
ii.	$\overset{1}{CH_3} - \overset{2}{\overset{O}{\overset{\|}{C}}} - \overset{3}{CH_3}$	b.	sp^3, sp
iii.	$\overset{1}{CH_2} = \overset{2}{CH} - \overset{3}{\overset{O}{\overset{\|}{C}}} - Cl$	c.	sp, sp^2
iv.	$\overset{1}{HC} \equiv \overset{2}{C} - \overset{3}{\overset{O}{\overset{\|}{C}}} - H$	d.	sp^3, sp^3
		e.	sp^3, sp^2

95. Read the statements below and select the correct option.
i. Starch can hold iodine because of its secondary helical structure.
ii. Starch and glycogen are the reserve food materials of plants and animals respectively.
iii. Right end of the polysaccharide chain is called the non-reducing end, whereas, left end of the polysaccharide chain is called reducing end.
   (1) Statements (i) and (ii) are correct.
   (2) Statements (i) and (iii) are correct.
   (3) Only statement (i) is correct.
   (4) All the statements are wrong.

96. Which of the following is the correct sequence with reference to growth in plants?
   (1) Maturation phase → meristematic phase → elongation phase
   (2) Elongation phase → meristematic phase → differentiation
   (3) Differentiation → elongation phase → meristematic phase
   (4) Meristematic phase → elongation phase → maturation phase

97. Identify the correct statement with respect to classification of flowering plants given by George Bentham and Joseph Hooker.
   (1) It only considers vegetative characters.
   (2) It considers external as well as internal factors like ultrastructure, anatomy, phytochemistry and embryology.
   (3) It considers evolutionary relationship between various organisms.
   (4) It is based on cytological information.

98. Given below are two statements: one is labelled as **Assertion A** and the other is labelled as **Reason R**:
   Assertion A: Rh incompatibility causes 'Erythroblastosis foetalis'.
   Reason R: Erythroblastosis foetalis is not due to haemolytic anaemia.
   In the light of the above statements, choose the **correct** answer from the options given below:
   (1) Both **A** and **R** are false.
   (2) Both **A** and **R** are true and **R** is the correct explanation of **A**.
   (3) **A** is true but **R** is false.
   (4) Both **A** and **R** are true but **R** is NOT the correct explanation of **A**.

99. In a dithecous anther, each pollen sac contains 1000 MMC. What is the total number of pollen-grains produced by the anther?
   (1) 16,000   (2) 4,000
   (3) 32,000   (4) 8,000

100. Match the **Columns** and opt for the correct answer.

	Column I		Column II
i.	Numbers and codes	a.	Phylogenetic classification
ii.	Chromosome number	b.	Numerical taxonomy
iii.	Chemical constituents	c.	Cytotaxonomy
iv.	Evolutionary relationship	d.	Chemotaxonomy

   (1) i – c, ii – d, iii – a, iv – b
   (2) i – d, ii – a, iii –b, iv – c
   (3) i – a, ii – b, iii – c, iv – d
   (4) i – b, ii – c, iii – d, iv – a

101. Which one of the following is commonly used in transfer of foreign DNA into crop plants?
   (1) *Meloidogyne incognita*
   (2) *Agrobacterium tumefaciens*
   (3) *Bacillus thuringiensis*
   (4) *E. coli*

102. Match the following list of bacteria and their commercially important products:

	Bacterium		Product
i.	*Aspergillus niger*	a.	Lactic acid
ii.	*Acetobacter aceti*	b.	Butyric acid
iii.	*Clostridium butylicum*	c.	Acetic acid
iv.	*Lactobacillus*	d.	Citric acid

   Choose the **correct** match.
   (1) i – b, ii – c, iii – d, iv – a
   (2) i – b, ii – d, iii – c, iv – a
   (3) i – d, ii – c, iii – b, iv – a
   (4) i – d, ii – a, iii – c, iv – b

103. In a cross performed between parents considering two contrasting characters yellow round and green wrinkled seed. In the F_2 generation progeny, the ratio of yellow and green will be _____.
   (1) 9:3   (2) 12:4
   (3) 4:1   (4) 4:12

104. Which of the following contraceptive methods do involve a role of hormone?
   (1) CuT, pills, emergency contraceptives
   (2) Pills, emergency contraceptives, barrier methods
   (3) Lactational amenorrhea, pills, emergency contraceptives
   (4) Barrier method, lactational amenorrhea, pills

[Contd...

105. Which one of the following options gives the CORRECT categorization of six animals according to the type of nitrogenous wastes they give out?

	Ammonotelic	**Ureotelic**	**Uricotelic**
(1)	Aquatic amphibians	Cockroach, humans	Frog, pigeon, lizards
(2)	Pigeon, humans	Aquatic amphibians, lizard	Cockroach, Frog
(3)	Frog, lizards	Aquatic amphibians, humans	Cockroach, pigeon
(4)	Aquatic amphibians	Frog, humans	Pigeon, lizards, cockroach

106. Sarcomere is the functional unit of contraction in a muscle fibre. Identify the portion of myofibril that constitutes a sarcomere.
 (1) The portion of myofibril between two successive 'A' band.
 (2) The portion of myofibril between two successive 'Z' lines.
 (3) The portion of myofibril between two successive 'M' band.
 (4) The portion of myofibril between two successive 'I' band.

107. Match the following:

i.	VNTR	P.	Largest gene
ii.	Introns and Exons	Q.	DNA fingerprinting
iii.	Dystrophin	R.	Bulk DNA
iv.	Satellite DNA	S.	Splicing

 (1) i – R, ii – S, iii – P, iv – Q
 (2) i – Q, ii – S, iii – P, iv – R
 (3) i – Q, ii – P, iii – S, iv – R
 (4) i – S, ii – P, iii – Q, iv – R

108. Given below are two statements:
 Statement I: EST stands for Expressed Sequence Tags.
 Statement II: EST involves simply sequencing the entire set of genome that contained all coding and non-coding sequences and later assigning different regions in the sequence with functions.
 In the light of the above statements, choose the **most appropriate** answer from the options given below:
 (1) **Statement I** is correct and **Statement II** is incorrect.
 (2) **Statement II** is correct and **Statement I** is incorrect.
 (3) **Statement I** is incorrect but **Statement II** is correct.
 (4) **Statement I** is correct but **Statement II** is incorrect.

109. Which of the following statements is CORRECT?
 (1) The ascending limb of loop of Henle is impermeable to water.
 (2) The descending limb of loop of Henle is impermeable to water.
 (3) The ascending limb of loop of Henle is permeable to water.
 (4) The descending limb of loop of Henle is permeable to electrolytes.

**110.** Which are the phagocytic cells from given diagram?
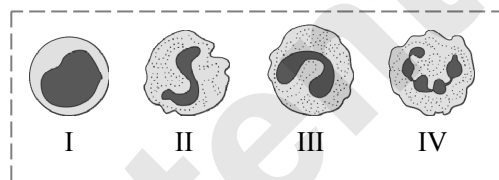
 (1) I and IV   (2) II and III
 (3) I and III   (4) I and II

111. Which of the following is NOT a characteristic function of veins of leaf?
 (1) Provide rigidity to leaf blade.
 (2) Act as channels for transport of food, water and minerals.
 (3) Provide structural framework for the lamina.
 (4) Store the food prepared by leaf.

112. The diagrammatic representation of the operation of natural selection on different traits is shown below. Identify (i), (ii) and (iii).
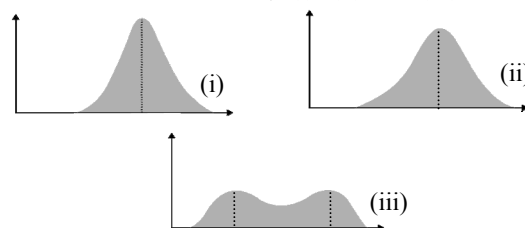
 (1) i – Stabilizing; ii – Disruptive; iii – Directional
 (2) i – Directional; ii – Disruptive; iii – Stabilizing
 (3) i – Stabilizing; ii – Directional; iii – Disruptive
 (4) i – Directional; ii – Stabilizing; iii – Disruptive

113. The sequence of meninges from outside to inside is
 (1) dura mater → arachnoid → pia mater
 (2) arachnoid → dura mater → pia mater
 (3) pia mater → dura mater → arachnoid
 (4) dura mater → pia mater → arachnoid

114. Given below are two statements: one is labelled as **Assertion A** and the other is labelled as **Reason R**:

Assertion A: Human skin colour shows variety of shades.

Reason R: The character of skin colour in human is based on three pairs of genes, each of which show quantitative effect.

In the light of the above statements, choose the **correct** answer from the options given below:

(1) Both **A** and **R** are true and **R** is the correct explanation of **A**.

(2) Both **A** and **R** are true but **R** is NOT the correct explanation of **A**.

(3) **A** is true but **R** is false.

(4) Both **A** and **R** are false.

115. A segment of DNA molecule contains 200 guanine and 200 thymine bases. What will be the total number of nucleotides in this segment of DNA?

(1) 400   (2) 200

(3) 800   (4) 100

116. Given below are two statements:

Statement I: In bacteria, the mesosomes are formed by the extensions of plasma membrane.

Statement II: The mesosomes, in bacteria, help in DNA replication and cell wall formation.

In the light of the above statements, choose the **most appropriate** answer from the options given below:

(1) Both **Statement I** and **Statement II** are correct.

(2) Both **Statement I** and **Statement II** are incorrect.

(3) **Statement I** is correct but **Statement II** is incorrect.

(4) **Statement I** is incorrect but **Statement II** is correct.

117. Which descriptions accurately match the characteristics of the Compositae family?

I. Flowers terminal or axillary

II. Resinous or milky sap

III. Stamens – 5; syngenesious

(1) I and II only   (2) II and III only

(3) I and III only   (4) I, II, and III

118. Match the following and mark the correct option.

	Animal		Respiratory organ
i.	Earthworm	a.	Moist cuticle
ii.	Aquatic arthropods	b.	Gills
iii.	Insects	c.	Lungs
iv.	Birds	d.	Tracheal tubes

(1) i – b, ii – a, iii – d, iv – c

(2) i – a, ii – d, iii – b, iv – c

(3) i – a, ii – c, iii – b, iv – d

(4) i – a, ii – b, iii – d, iv – c

119. Identify the correct statements with reference to sickle cell anaemia.

I. Due to point mutation 'glutamic acid' is replaced by 'Valine'.

II. Due to point mutation 'Valine' is replaced by 'glutamic acid'.

III. It is autosomal recessive genetic disorder and affects heterozygous individuals.

IV. It is autosomal recessive genetic disorder and affect homozygous individuals.

Options:

(1) I and IV   (2) II and III

(3) I and III   (4) II and IV

120. The roots that originate from the base of the stem are:

(1) Primary roots   (2) Prop roots

(3) Lateral roots   (4) Fibrous roots

121. Cell organelles found only in plants are

(1) Golgi complex   (2) Mitochondria

(3) Plastids   (4) Ribosomes

122. Which of the following are NOT the effects of Parathyroid hormone?

i. Stimulates the process of bone resorption

ii. Decreases Ca^{2+} level in blood

iii. Reabsorption of Ca^{2+} by renal tubules

iv. Decreases the absorption of Ca^{2+} from digested food

v. Increases metabolism of carbohydrates

Choose the **most appropriate** answer from the options given below:

(1) i and v only   (2) ii and iii only

(3) i and iii only   (4) ii, iv and v only

123. Receptor sites for neurotransmitters are present on

(1) membranes of synaptic vesicles

(2) pre-synaptic membrane

(3) tips of axons

(4) post-synaptic membrane

124. Identify the odd ecosystem from the following.

(1) Forests   (2) Grasslands

(3) Estuaries   (4) Deserts

125. Given below are two statements:

Statement I: Natural selection at population level controls the evolution of desired traits.

Statement II: Population ecology links ecology to population genetics and evolution.

In the light of the above statements, choose the **most appropriate** answer from the options given below:

(1) **Statement I** is correct but **Statement II** is incorrect.

(2) **Statement I** is incorrect but **Statement II** is correct.

(3) Both **Statement I** and **Statement II** are correct.

(4) Both **Statement I** and **Statement II** are incorrect.

ANSWERS AND SOLUTIONS

<div align="center">

M1

</div>

1. **(2)**

2. **(4)**
Image distance can be greater than the object distance when the optical device used is convergent. Concave mirror and convex lens both are convergent in nature, hence the correct option is both (1) and (2).

3. **(4)**
The given logic circuit corresponds to AND gate which produces high output only when all inputs are high. Hence, option (4) is the correct answer.

4. **(2)**
Diatomic gases have 5 degrees of freedom, neglecting vibrational mode.

∴ For hydrogen, $\gamma_1 = 1 + \dfrac{2}{f} = 1 + \dfrac{2}{5} = \dfrac{7}{5}$

Monoatomic gases have 3 degrees of freedom,

∴ For Helium, $\gamma_2 = 1 + \dfrac{2}{f} = 1 + \dfrac{2}{3} = \dfrac{5}{3}$

Considering two vibrational modes, diatomic gases have 7 degrees of freedom,

∴ For gas X, $\gamma_3 = 1 + \dfrac{2}{f} = 1 + \dfrac{2}{7} = \dfrac{9}{7}$

∴ $(\gamma_1, \gamma_2, \gamma_3) = \left(\dfrac{7}{5}, \dfrac{5}{3}, \dfrac{9}{7}\right)$

5. **(2)**

$\lambda = \dfrac{hc}{E} = \dfrac{6.6 \times 10^{-34} \times 3 \times 10^8}{15 \times 10^3 \times 1.6 \times 10^{-19}}$
$= 0.825 \text{ Å}$

∴ $\lambda \approx 1 \text{ Å}$

This wavelength value belongs to X-ray region of the spectrum.

6. **(2)**
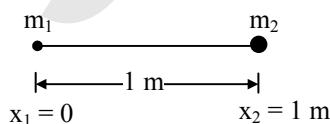
m_1 ———— m_2
|←— 1 m —→|
$x_1 = 0$ $x_2 = 1$ m

Centre of mass from 5 kg particle,

$X_{cm} = \dfrac{m_1 x_1 + m_2 x_2}{m_1 + m_2}$

$= \dfrac{5(0) + 10(1)}{5 + 10} = \dfrac{10}{15} = \dfrac{2}{3}$ m

≈ 67 cm

7. **(3)**
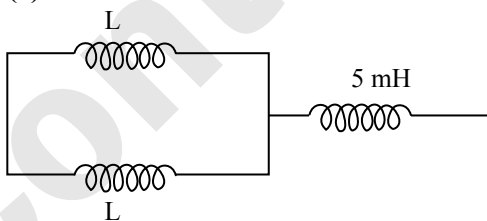Resistance of conductor,

$R = \dfrac{\rho l}{A}$

∴ $A = \dfrac{\rho l}{R}$

⇒ $\dfrac{A_1}{A_2} = \dfrac{\rho_1}{\rho_2} \times \dfrac{l_1}{l_2} \times \dfrac{R_2}{R_1}$
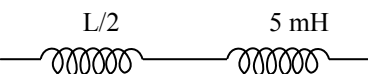
Here $R_1 = R_2$, $l_1 = l_2$ and $\rho_1 = \rho_2$

∴ $\dfrac{A_1}{A_2} = 1$

8. **(3)**

9. **(4)**

$L_{parallel} = \dfrac{L}{2}$

$L_{eff} = \dfrac{L}{2} + 5$

$15 = \dfrac{L}{2} + 5$

i.e. L = 20 mH

10. **(1)**
Gases cannot withstand a shearing stress or longitudinal stress. Hence, they do not have shear modulus and Young's modulus; they have only bulk modulus.

11. **(4)**
Relative permeability, $\mu_r = 1 + \chi$
$= 1 + 599 = 600$
Magnetic permeability,
$\mu = \mu_r \mu_0 = 600 \times 4\pi \times 10^{-7}$
$= 2.4\pi \times 10^{-4} \text{ TmA}^{-1}$

12. **(2)**
For central maximum,
Path difference, x = 0

∴ Phase difference, $\phi = \dfrac{2\pi}{\lambda} x = 0$

ANSWER SHEET

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ROLL No.

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Answer Sheet No.

DECLARATION BY THE CANDIDATE

I declare that particulars and signature on this OMR Answer Sheet are mine and are same as in Attendance Sheet. I further declare that particulars filled-in and Signature as well as the circles darkened on this ORIGINAL COPY is same as in OFFICE Copy.

Signature with time (in running handwriting)

PHYSICS		CHEMISTRY		BIOLOGY			
Q.No.	Response	Q.No.	Response	Q.No.	Response	Q.No.	Response
001	① ② ③ ④	046	① ② ③ ④	091	① ② ③ ④	136	① ② ③ ④
002	① ② ③ ④	047	① ② ③ ④	092	① ② ③ ④	137	① ② ③ ④
003	① ② ③ ④	048	① ② ③ ④	093	① ② ③ ④	138	① ② ③ ④
004	① ② ③ ④	049	① ② ③ ④	094	① ② ③ ④	139	① ② ③ ④
005	① ② ③ ④	050	① ② ③ ④	095	① ② ③ ④	140	① ② ③ ④
006	① ② ③ ④	051	① ② ③ ④	096	① ② ③ ④	141	① ② ③ ④
007	① ② ③ ④	052	① ② ③ ④	097	① ② ③ ④	142	① ② ③ ④
008	① ② ③ ④	053	① ② ③ ④	098	① ② ③ ④	143	① ② ③ ④
009	① ② ③ ④	054	① ② ③ ④	099	① ② ③ ④	144	① ② ③ ④
010	① ② ③ ④	055	① ② ③ ④	100	① ② ③ ④	145	① ② ③ ④
011	① ② ③ ④	056	① ② ③ ④	101	① ② ③ ④	146	① ② ③ ④
012	① ② ③ ④	057	① ② ③ ④	102	① ② ③ ④	147	① ② ③ ④
013	① ② ③ ④	058	① ② ③ ④	103	① ② ③ ④	148	① ② ③ ④
014	① ② ③ ④	059	① ② ③ ④	104	① ② ③ ④	149	① ② ③ ④
015	① ② ③ ④	060	① ② ③ ④	105	① ② ③ ④	150	① ② ③ ④
016	① ② ③ ④	061	① ② ③ ④	106	① ② ③ ④	151	① ② ③ ④
017	① ② ③ ④	062	① ② ③ ④	107	① ② ③ ④	152	① ② ③ ④
018	① ② ③ ④	063	① ② ③ ④	108	① ② ③ ④	153	① ② ③ ④
019	① ② ③ ④	064	① ② ③ ④	109	① ② ③ ④	154	① ② ③ ④
020	① ② ③ ④	065	① ② ③ ④	110	① ② ③ ④	155	① ② ③ ④
021	① ② ③ ④	066	① ② ③ ④	111	① ② ③ ④	156	① ② ③ ④
022	① ② ③ ④	067	① ② ③ ④	112	① ② ③ ④	157	① ② ③ ④
023	① ② ③ ④	068	① ② ③ ④	113	① ② ③ ④	158	① ② ③ ④
024	① ② ③ ④	069	① ② ③ ④	114	① ② ③ ④	159	① ② ③ ④
025	① ② ③ ④	070	① ② ③ ④	115	① ② ③ ④	160	① ② ③ ④
026	① ② ③ ④	071	① ② ③ ④	116	① ② ③ ④	161	① ② ③ ④
027	① ② ③ ④	072	① ② ③ ④	117	① ② ③ ④	162	① ② ③ ④
028	① ② ③ ④	073	① ② ③ ④	118	① ② ③ ④	163	① ② ③ ④
029	① ② ③ ④	074	① ② ③ ④	119	① ② ③ ④	164	① ② ③ ④
030	① ② ③ ④	075	① ② ③ ④	120	① ② ③ ④	165	① ② ③ ④
031	① ② ③ ④	076	① ② ③ ④	121	① ② ③ ④	166	① ② ③ ④
032	① ② ③ ④	077	① ② ③ ④	122	① ② ③ ④	167	① ② ③ ④
033	① ② ③ ④	078	① ② ③ ④	123	① ② ③ ④	168	① ② ③ ④
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037	① ② ③ ④	082	① ② ③ ④	127	① ② ③ ④	172	① ② ③ ④
038	① ② ③ ④	083	① ② ③ ④	128	① ② ③ ④	173	① ② ③ ④
039	① ② ③ ④	084	① ② ③ ④	129	① ② ③ ④	174	① ② ③ ④
040	① ② ③ ④	085	① ② ③ ④	130	① ② ③ ④	175	① ② ③ ④
041	① ② ③ ④	086	① ② ③ ④	131	① ② ③ ④	176	① ② ③ ④
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043	① ② ③ ④	088	① ② ③ ④	133	① ② ③ ④	178	① ② ③ ④
044	① ② ③ ④	089	① ② ③ ④	134	① ② ③ ④	179	① ② ③ ④
045	① ② ③ ④	090	① ② ③ ④	135	① ② ③ ④	180	① ② ③ ④

MOTHER's NAME (in running handwriting)

FATHER's NAME (in running handwriting)

CANDIDATE'S LEFT HAND THUMB IMPRESSION
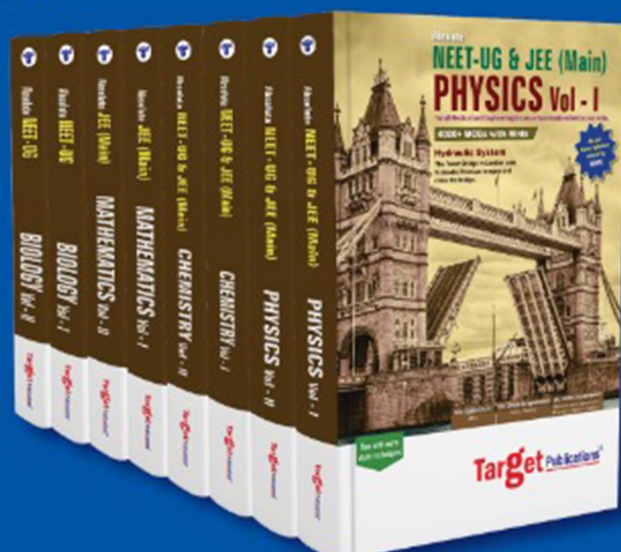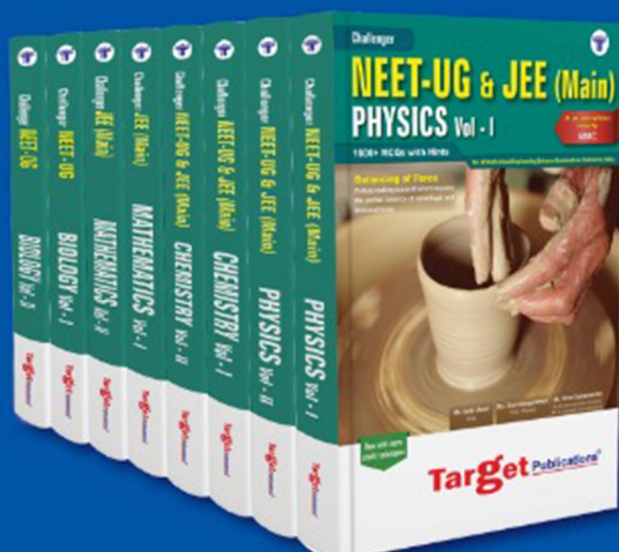
SIGNATURE OF INVIGILATOR WITH TIME

1

2